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Review on Proto-Elamite Tablets

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Abstract: In the second half of the fourth millennium BC. Southwest Asia underwent social changes, the result of which was the emergence of writing. In these developments, the cuneiform script in the south of the Mesopotamia and the Proto Elamite in the Iranian plateau progressed rapidly to such an extent that at the beginning of Elamite was scattered throughout the Iranian plateau. These writing systems were used for administrative and accounting purposes, and despite the fact that most of their signs are different from each other; there are important similarities between the two. Chalcolithic era, the best period in which you can see the idea of trading&039; s and keeping of account; for the first time in this course, tools are seen which called them Token; it seems that the tokens in a variety of forms and counting symbols refer to a specific concept. The end of this period coincides with the Proto Elamites era in the south and southwest of Iran. Domestic production in the Neolithic period gave his place to the production of a workshop in the Chalcolithic era, which causes a lot of production. In the present study, firstly, will be investigated, small clay counters and then the Proto Elamite texts.

Keywords: *Proto Elamite, Numerical clay tablets, Proto Elamite era extent, Accounting in Proto Elamite.*

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Introduction

There are different opinions about the origin of writing in Iran and the Middle East, some believe that with the progress of agriculture and rapid economic growth, due to the lack of trust in memory and attention to this issue, a lot of business and accounting information is lost when people die (Seyd Sajjadi, 2008: 183). The origin of writing is an important issue for us, because its invention is one of the basic features of our civilization. At the beginning, it attracted only a few people who were able to use it to manage warehouses and reservoirs, but its omnipresence has now made the issue of books important. About 5000 years ago, the success of this invention was not yet proven and it was not considered an important revolution (Desset, 2016: 68). One of the most important and basic foundations of archaeological studies, is the existence of writing and written works among the remnants of the survivors of the predecessors. Where there is a trace of writing among the remains relics, can be realize the existence of communications. Through the study of the places where the Proto Elamite tablets were obtained, can be achieved to route of Caravans trade. Therefore, in the Uruk era, can be consider a cultural link to trade in the region (Hessari, 1999: 1). The proto types of these tablets were obtained from Acropolis of Susa and the kingdom city (Alden, 1982: 613). The motivation for the invention of the writing was not to serve the religion or to record history, but just because of the need which was felt in office management and accounting and archives (Majidzadeh, 1997: 60). The emergence of the Proto Elamite era in Iran is not clear (England, 2005). The Proto Elamite includes a writing system which occurred in Susiana plain and the highlands of western Iran and eastern Mesopotamia from 3100 to 2900 BC (Wright and Johnson, 1975: 269). As mentioned above, the Proto Elamite is the name of the period in which a writing system was used in the plains of Khuzestan and the plateau of Iran (Alden, 1982). Recently, this term has been criticized by some researchers, for example, Francois Dosse believes that due to the use of this line in the vast area of the Iranian plateau, it has lost its descriptive value, and since this line is for a large part of Iran's land, it should be avoid using its Elamite name and use this writing system as the beginning of Iranian writing (Dosse Conference, 2020). The independent writing system invented in Iran, which followed the expansion of the knowledge of writing and some technological inventions related to it, it is traditionally called Proto Elamite because it was early believed to have preceded a writing system native to the people of the Susa Plain, which was used to write the Elamite language, originally called Enshan (Scheil, 1900: vii). At 3000 BC when the Sumerians invented a Pictogram as an auxiliary tool for keeping their accounts, this invention came quickly to their neighbors in Elamite, because immediately afterwards, we see the first Elamite Pictogram tablets in Susa, which belongs to the Uruk layer (cb) in Mesopotamia (about 2900 BC). Despite the differences in detail, there is no doubt that Elamite's picture writing is based on a pattern, and is almost simultaneously seen in the Sialk of Kashān and Tepe Yahya. This Elamite writing was at the beginning and until then, like the Sumerian writing, it was a completely imaging writing. It seems that the writing style of the two countries has affected each other, thus, the single line text in Ilam and Sumer was created, and this issue not only made trading business possible but also made it possible to express more important historical and religious personal and political issues (Hints, 1992, 33, 34, 35). The Elamite writing was also commonly used among the Achaemenids in the following periods, so that their Achaemenid inscriptions usually have an Elamite narrative (Amerians: 37).

Research method

The present research has been carried out based on the study of the documents and evidence of economic firms and administrative documents regarding the archaeological signs that have

remained since the Proto Elamite era, which includes various types of economic tablets and numerical token.

Background of archaeological studies

The first Proto Elamite texts (2 texts) were found in 1899 by Jacques Demergan, the French director of the Susa excavations. It was published a year later by Father Vincent Scheel (Grand Master of Ancient Lines), and considered them cuneiform (Scheil, 1900:130). In the excavation of 1901 (1280 AH), more clay tablets were found, and in subsequent excavations, some more were found. Until, in 1905, Shiel collected a vast collection of clay tablets including 198 manuscripts in one volume of the valuable collection of the Louvre Museum (MDP) along with 989 figures of " ideogram" (along with their variants) under the title "Proto-Elamite " published (Scheil, 1905(. He published 490 new clay tablets in 1923 (Scheil, 1923) and then 655 other case in 1935 (Scheil, 1935). In de Mecquenem excavations, a number of Proto Elamite clay tablets were found, of which he published 50 of them in 1949 along with the most complete list of Proto Elamite ideograms (sign list) with more than 5111 ideograms (de Mecquenem, 1949). Also, 15 clay tablets were found in his excavations in 1956 (de Mecquenem, 1956) and 20 clay tablets of the Proto Elamite were found in the excavations of Luberne (Vallat, 1971). In addition, 129 clay tablets were also published in the Louvre Museum in 2019 by Jacob Dahl (Dahl, 2019). A few years later (in the 1930s) after the excavation of Susa, a number of clay tablets were found in the Tepe Sialk of Kashan during the excavation of Girshman, which made the use of the Proto Elamite word for this writing system problematic; because they considered these Elamite texts to be related to pre-history, they applied the word Proto Elamite to it and hastily considered it to be a native Elamite writing system belonging to the language that was later hypothetically called "Anshani". The Poroto Elamite currently remains as the best term as a conventional name for the oldest native Elamite texts (Dahl, 2009:31).

Various efforts have been made in the field of deciphering this line since the beginning of the 20th century, and the most complete of them is the research work of Jacob Dahl; in 2005, he provided a preliminary decipherment of the terminology of sheep and goats in the early Elamite texts of Susa. His decoding is based on several observations, including: the size of the flock, the relationship between males and females, the number of lambs and kids, the relationship between mature females and refined milk production, as well as a comparison with Mesopotamian accounting operations (Dahl, 2005). In 2009, he discussed the similarity of this line with the Proto Elamite B.

The emersion of the Proto Elamite era

The name of first phase of the Protohistory period is (Uruk IV-VI); in this period, we face an uninterrupted advancement. A new type of seal was created in this period. This seal is a cylindrical seal. The name of the second phase of Sumer Protohistory is Jamdat Nasr, which is taken from the name of the small site near Kish and Babylon. If we progress step to step with the development of the writing in the clay tablets found from Jamdat Nasr, we find that this name refers to the Uruk II-III layers (Mort Gat, Sarraf and Basti, 1998, 22, and 20). Proto Elamite era in Iran is at the same time as Jamdat Nasr and the first stage of the ancient dynasties of Mesopotamia (Abdi, 2003: 150). The beginning of the Proto Elamite era in Iran is not clear and it is likely that occurred in 3300 BC and apart from the emergence of writing in the Mesopotamian (England, 2005). The Proto Elamite is a system of writing that appeared in the Susa plain and the highlands of western of Iran and the east of Mesopotamia from 2900 to 3100 BC (Wright and Johnson, 1976: 269). We know that the Proto Elamite writing appeared almost simultane-

ously with the Sumerian writing on the clay tablets. Since the Elamites were direct neighbors of the Sumerians, it is not surprising to imagine that the Elamite writ had been influenced by the Sumerian writ or was simultaneously invented by them. Since the invention of the writing, that was possible the recognition of linguistic ties in ancient Iraq until this country lost its political independence, the Sumerians, the Babylonians, the Chaldeans in the south, the Assyrians, the Horids, and the Aramaeans in the north and west, were the most important Mesopotamians occupiers; they were invaders who could to dominated parts of Mesopotamia at some time. Several writing evidence remains of them. The first comprehension written evidence in Mesopotamia (from Uruk and Jamdat Nasr) is by Sumerian language. Sumerians were most likely not the inventors of language, but it borrowed from older native people or other foreign nations (ibid, 66 to 64).

Proto Elamite sites:

Today, there are various sites from the Proto Elamite period in the Iranian plateau, some of which have been explored, but out of them, Proto Elamite clay tablets have been found in 8 sites so far (picture 2). These eight sites include 1. Susa (Scheil, 1900 - Scheil, 1095 - Scheil, 1923 - De Meqneuem, 1949) 2. Sialk (Girshman, 1938) 3. Tele Geser (Alizadeh, 2014: 45) 4. Tepe Yahya (Damerrow and Englund, 1989) 5. Tele Melian (Stolper, 1976, 1985) 6. Shahre-e-Soukhteh (Amiet and Tosi, 1987: 20) 7. Tepe Uzbaki (Majidzadeh, 2001) 8. Tepe Sofalin (Hessari, 2011: 43-44). And recently, the inscriptions of the Poroto Elamite have been reported in the Qoli Darvish site (Alizadeh et al, 2015:161), but since they are very damaged, it is not possible to recognize their number or the Proto Elamite. 88% of the Proto Elamite clay tablets that have been published so far came from Susa. Regarding the distribution area of the Proto Elamite, it should be noted that they are spread in a much wider range of cuneiform documents (figure 1) which were limited only to southern Mesopotamia. It also seems that these two writing systems have excluded each other, because so far both have not been found together in the same ancient site. The meaning of this mutual exclusion is still unclear, whether the reason for this was that the use of two different systems in the same place would be meaningless due to redundancy, or whether it reflected an identity boundary?

The domain of expansion of Proto Eilamite

Extension of the Proto Elamite era in Iran consist of: levels b14-16 in Group Susa (Dittman, 1986a; 173-75; 1986b; 374; LeBron, 1971), Tepe Yahya IVC (Damerow and England 1989, Lamberg Karlovsky; 1971), Silk IV2 (Ghrishman, 1938), Malian new Bunche period (Sumner, 1986, Dittman, 1986b; 334-37; Nicolas, 1990), Shahr-e Sukhteh I (Tosi; 1983), Uzbaki (Majidzadeh, 2000) and Jiroft (?) (Basello, 2006) (Hessari and Yousefi, 2009: 6). Also, Qoli Darvish, which was excavations by Siamak Sarlak, Chagamish, Tepe Sofalin, which was excavated by Hessari and Yousefi Zashk, and the Tepe Hissar are also in this range.

Content of the clay tablets:

The main textual content of the Proto Elamite clay tablets is the production, storage and distribution of food, and then it includes the management of human labor and animal flocks. Dietary issues recorded in the literature are mostly limited to grains and plant products and dairy products, and based on possible conclusions, meat. Texts related to food products include planting and harvesting, rations for labor groups engaged in field work, and texts for recording goat and sheep herding. The texts on food storage do not directly refer to details such as grain storage or storage spaces, but contain sufficient implicit information for the food that is stored and recorded. Cereals and cereal products are distributed among the upper and lower members of

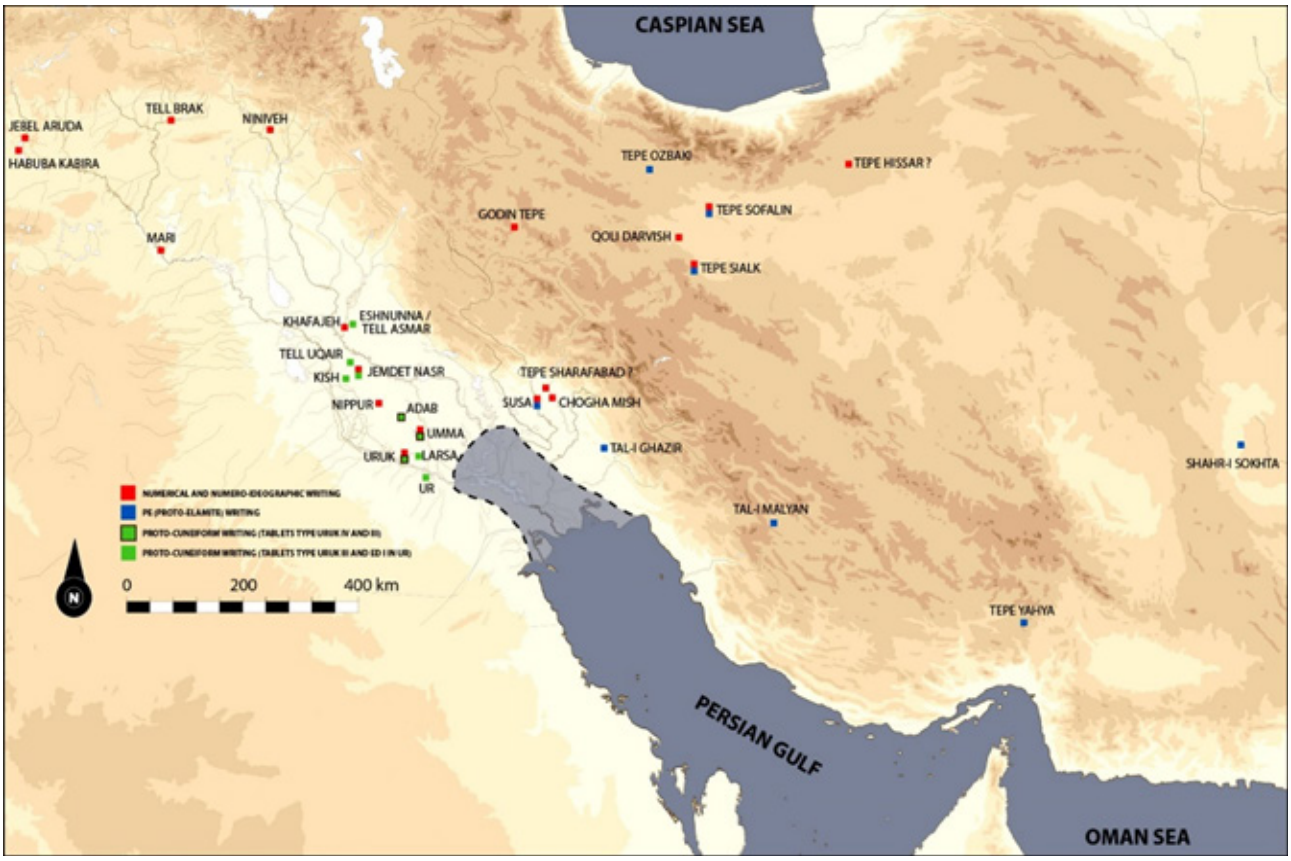

Figure 1. The archaeological map of the places where numerical clay tablets and proto Elamite clay tablets have been found, the Proto Elamite sites are shown in the form of blue squares and the cuneiform sites are shown in the form of green squares (Desset, 2016: 69)

the society in an apparent form of rationing. Dairy products being distributed are not recorded. Except for dairy, most of the texts related to the production, storage and distribution of food are likely to be related to cereals, the texts record animal herding of sheep and goat herds, the production of products by processing sheep and goat milk, as well as other products such as wool and leather. It is interesting to note that there is no mention of cow in the contents of the text of the Proto Elamite clay tablets obtained from Susa (Dal, 1399: 169).

Accounting in the Proto-Elamite era

Token

Tokens were obtained in Iran, Syria, Turkey, and Palestine from 3000 to 8000 BC (Budja, 1998). Tokens were the first appliance to record numbers and calculate economic affairs. Probably about 8,000 years ago, in the Near East have been created to record the calculations before the invention of the writing, which this simple invention caused the creation of the early writing. The evolution of these tokens led to the creation of numerical clay balls, and then another invention was made, clay tablets which there were signs on them. These signs are seen before on the clay balls (Figure 2).

These clay tablets firstly had only an economic aspect, but in the short time they developed and evolved according to the needs of the community and became the first writings. Normally, numerical symbols in the southwest of Asia were the same and not the difference between them, but the pictorial signs of clay tablets that includes one or more groups of signs,such as the signs of sheep, Beer, dried fruit, wool and oil jug; are common in different regions. Such

Figure 2- Hessari and Yousefi (2009: 20)

signs usually create a connection between the numerical symbols and the chain lines (Hessari and Akbari, 2004: 289, derived from Scheil 1905). There are only a few complete pieces, among the more than 1500 pieces of the Proto Elamite tablets. Approximately 80 to 90 percent of the writing sings of the Proto Elamite is not legible, and are readable just because they are similar to some of Mesopotamian characters (Firoozmandi and other, 1396: 253).

Bullae

In The older time and before the invention of clay tablets, were used from a bulla. In fact, these were counting hollow spherical pockets (or transactional), and their usage, which were added to the goods, was management of transferred cargo; and their representative identified by the effect of seals (Carter and Stolper, 1943: 5). In this way, the countable beads which appear in various forms such as small cylinder, dip, circular plate, small and large cone, they put in some bullae that were rotated on its surface one or two cylinders' seal. In the event of a protest against the transaction or in order to investigation in the inspection, was broken the clay balls (Figure 3).

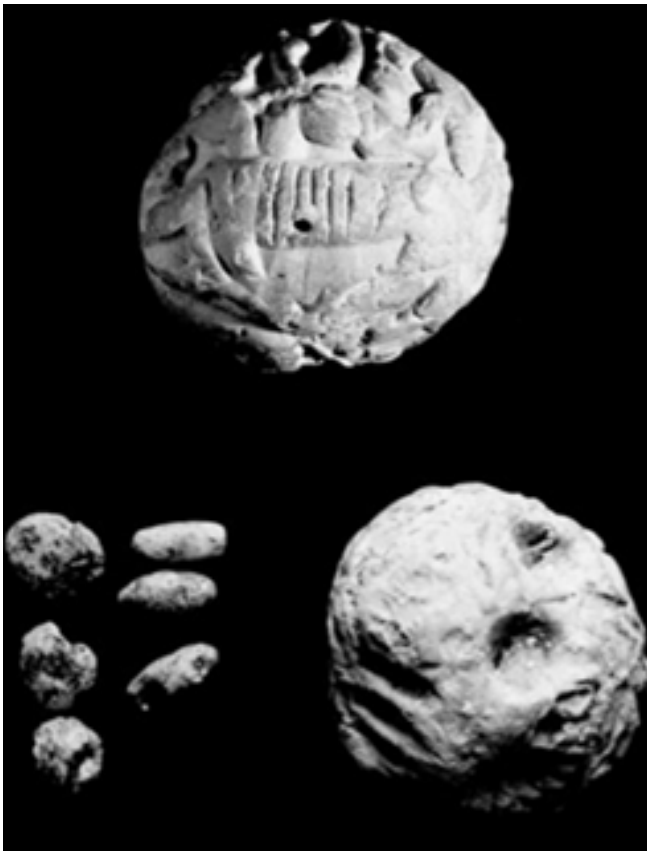

Fig 3- In the upper bullae, is seen the effect of the seal and in the lower case the location of the token inside it (England, 2004: 120)

Proto Elamite clay tablets

Clay tablets include the figures and symbols which used to record and maintain their accounts (Caldwell, 1967). (Hessari & Yousefi, 2007: 6; derived from England, 1998, 2003). In the archaeological reports of Susa, we see an equal progression with Uruk. So it is surprising that Susa was under the where influence and infiltration? The most significant feature of the new Uruk era is the common use of seals in the development of writing as an administrative tool. An ancient cuneiform has been adapted from a prehistoric East system using the little flower markers that H. Nissen calls them token (England, 2004). The motivation behind the invention of the writing was not to serve the religion or to record history and literature, but simply to be felt in the administrative organization for accounting and archives. To do this, the shape of the objects in question, along with numerical marks, was shaped with a device like a straw with a scratch on a piece of pillow clay. Many samples are obtained from these tablets in the 4th layer of the Uruk. Some of the elements in this image writing belong to the creatures or objects that rarely could have been related to the properties of a temple. After that, clay in Mesopotamia, forever, remained the most important material for writing. Since the oldest form of the writing is entirely visual, it is impossible to know that the Inventors of the writing in Mesopotamia have spoken by which language in the Uruk period. The oldest texts are written in the Sumerian language, and in this writing it's like the Chinese writing, one is a measure or meaning equal to a sound and a sign. So the first line of images has been numerous (over 2000) and it is easy to detect some of these signs and symptoms, such as agricultural tools, vessels, boats, and heads of animals or parts of the human body. While the other signs are supposedly entirely contractual, what we know is that they are signs for economic records (list of workers), list of merchandise items, re-

Figure 4: A numerical clay tablet from Chogamish from the Uruk era (Algaze, 1954: 136)

Figure 5 - The clay tablet of Uruk with a pencil as a divider (England, 2004: 127).

Figure 6. Numerical clay tablet of Godin Tepe, 3100 BC (Schmandt, 1992: 24)

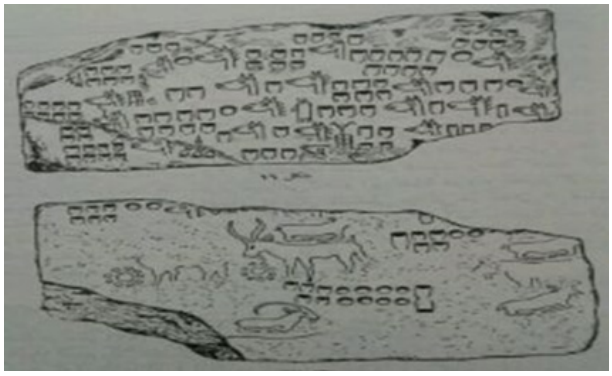

Figure 7 - Pictographic clay tablet with horse-list pictures (Hints, 1997: 35).

Figure 8- Clay tablet of Sialk (Girshman, 1993: 36)

Figure 9- Pictoghrapic clay tablet from Uruk 4 (Algaze, 1954: 137)

ceipts and so on (Majidzadeh, 1997: 60). During the evolution of these clay tablets, was created the Elamite writing (3300 BC, the beginning of the historical period in Iran). The prototypes of these clay tablets have been obtained from Susa Acropolis and Shahr-e Shahi. In form of crusty forms with counting marks, first, in the form of clay bullet-shaped, then almost rectangular clay tablets have one-and two-digit symbols, like pressing the sixth finger as a unity sign, in the form of a circle to represent the decimal, a symbol similar to the two conversely fingers represent the hundreds and in more advanced forms of pictography or symbolism, and thus the people go ahead of their history and enter a new stage in their history (Alden, 1982: 613). Similarly, the clay tablets were obtained in Mesopotamia from the Uruk (Brun, 1982). (Pictures 4 to 9).

In the Iranian plateau, Susa was the origion for Elamite era, and from the Susan A derived the relic of this period (Steve, 1971). The first clay tablets of Susa were obtained from the 19th Acropol layer. These clay tablets are rough and contain counting signs (Brun, 1982). Similar to these clay tablets obtained from Uruk in Mesopotamia. An economic counting machine was invented at the end of the chalcolithic era, and it was discovered clay tablet a for registering cultivars from Arsalan Tepe VI A and a Tell el-Burak. The clay tablet from the Warka / Uruk from the Uruk IV period has been used to count the flocks (Algaze, 1954: 137), which can be dating from 3400 to 3000 BC. In the form of imitation images, objects were drawn from a pen of a straw on a wet flower (Pavel and Najaf Abad, 1995: 41).

In Sumer, the progress of writing was similar to Elam, and it seems that the written training of the two countries has affected each other (Hinets, 1992: 35). A porch shape building was transferred storeroom to the surface of ground, but according to a mathematical document found in Susa, there were also storerooms, some sections of it were located in the basement. Accountants were located near the storerooms to record on their plate any wheat bags that were delivered (ibid, 30, and 31) (Figure 10), and clay tablets containing figures and symbols for recording and keeping accounts (Caldwell, 1967).

From the shahr- e- shahi I of the, layer 18 B and, from the higher layers of the Girshman excavations, in the northern parts of the hill, fount the clay tablet with the design of men and monkeys (?) involved in the storage scene (Sumner, 1972: 345). The cuneiform writing was originally a pictorial writing, and signs were images of various material objects, that useed for words which have a corresponding or connection with the meaning of images (Karimar and Rasayee, 2004: 219). In this era, we have the clay tablets on the one side at the edge of the Iranian plateau on the Tepe Sialk, Godin and Kangavar, and on the other side in the Hoboa Kabirah, and in Syria and Mesopotamia. Which represents a centralized economic relationship and it is possible to search the route of the caravans as well, and is also determined not only the quantity of goods but also the receiver and the sender of the goods. Therefore, in the period known as Uruk, one can consider a kind of cultural-based business in the region. Therefore, it can be to consider the existence of primary clay tablets which classified within the framework of economic organization, as a kind of commercial cultural communication. And the various places which was found the initial economic clay tablets of them, considered as different places that caravans have traveled on their paths (Hessari, 1999: 1, derived from Lenzen, 1961). (Fig11).

In the first whole picture, scientists can recognize their numbers and their totals, this has led them to consider them as business documents such as bills or receipt. This is confirmed by the fact that in some of these tablets we discovered in Silk, they crossed a rope through which they could connect the tablets to the goods. As the bean of writing, the use of cylindrical seals became commonplace and its effect on the soft clay tablets represented the owner's signature (Girshman, 1993: 36). However, most of these clay tablets are incomplete, such as the writings

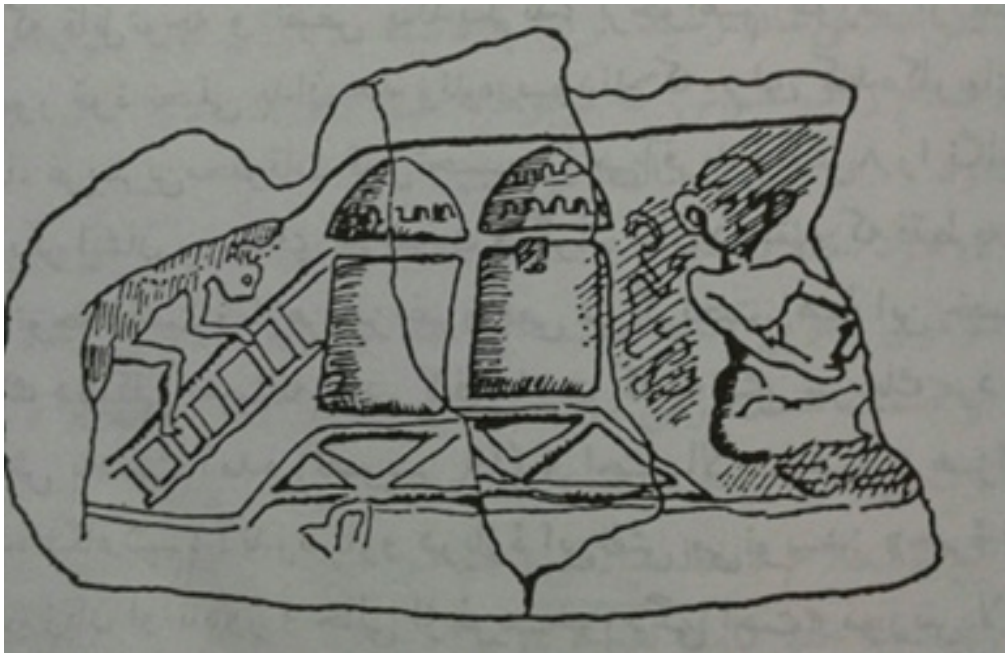

Figure 10- Accountants near the storeroom in state of delivering cargo and registering on clay tablets (Hinets, 1997: 31).

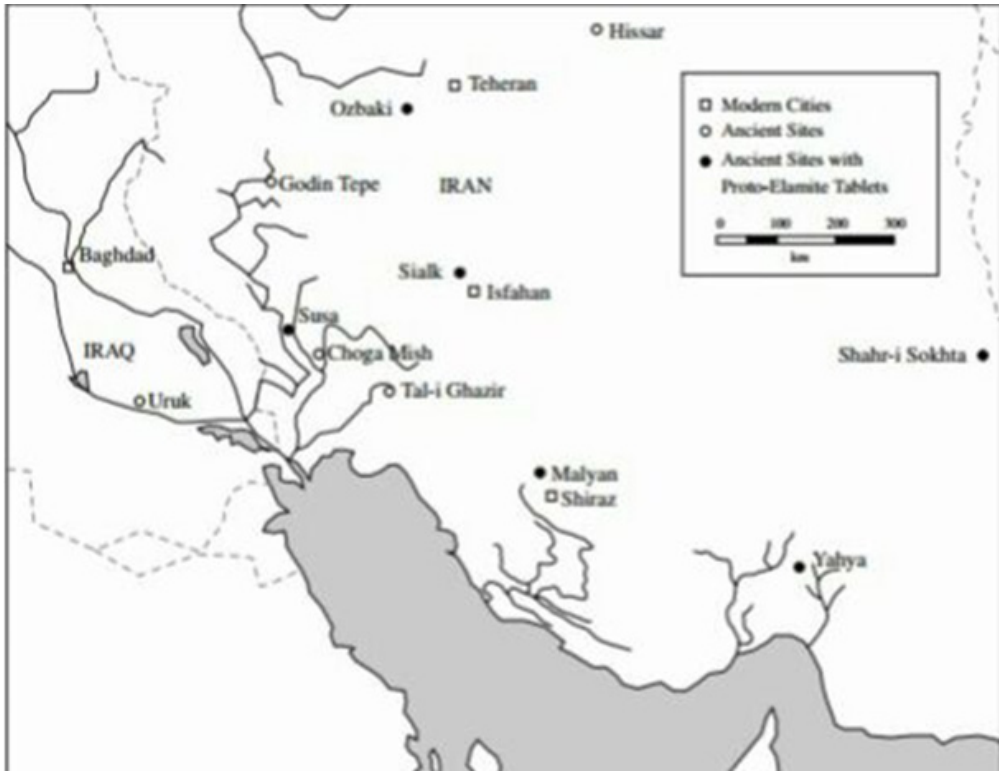

Figure 11- Early Elamite Places in the Uruk Period in Iran (Algaze, 1954: 103).

obtained from Susa, Shahdad at the edge of the Lut desert, northeastern Kerman and the proximity of Persepolis (Potts, 1999: 126). Alden considers the Proto-Elamite era as a widespread cultural phenomenon throughout the Iranian lands, which began in 3300 BC and continued until 2800 BC. Between 2700 and 2500 BC it represents a complete cultural chain of societies that have covered entered the Lorestan Mountains. These cultural relations could reflect the political relationship between Susa and Plateau. This conjunction may have been a response to the military threats posed by Mesopotamian states during the beginning of the second and third dynasties (Akbari, 2002: 22). This Elamite single-line writing was probably created in the middle of the third millennium BC, but what remained of the twenty-third century, which it contains 6 writing on pottery shade, 11 writing on the stone and one on a silver pot. It seems that nothing left more than this. It seems that the Elamite writing has about 80 signs in its final stage, and so far, it has been fifty-five of them recorded on the stone. Since the original native monorail inscriptions were compsed of almost all of several syllables, the Elamites assumed that the Akadi writing should, as far as possible, be a shadow, and thus the Elamite carvings disregard all the visual writings and all the indistinct signals that their Mesopotamian neighbors had preserved as Sumerian heritage with a conscious and logical nature. This nature is also one of the characteristics of the Elamites. The engravers in Susa used all of the cuneiform possibilities, simplifying it and extending to the alphabetic font border, though they never went beyond it (Hinets, 1992: 44 and 43).

Description of frequency of signs:

It is very difficult to separate and classify signs and the subset of each sign, to distinguish between single signs and compound signs used in Proto Elamite clay tablets. Relatively acceptable works have been written in this field, and among them, one can refer to the work of Dahl (Dahl, 2002: 1; 2009: 24; Englund, 2004a: 140) and also to his list of signs that is available on the CDLI website. By examining the clay tablets, about 1400 or 1900 signs of non-numerical value were identified, which were classified based on the shape and naming of these signs in the list of signs published by Meriggi (Meriggi, 1974: 8-24). Therefore, each of the signs can be marked with the letter M (meaning = Meriggi) followed by the number assigned by Meriggi in his list of signs followed (for example, M388, which is the 388th sign on the patient list). And also followed for counting, signs with the letter N (meaning numerical) followed by a number mentioned by Damerow and Englund (166:1987) in their list of signs of numerical value. This contract system has also been followed in this research. The frequent use of these signs shows an interesting pattern (Dahl, 2002: 2-3 - Englund, 2004a: 140). According to the currently known tablets, out of 1900 signs, 1050 signs are used only once, 300 signs are used only twice, 350 signs are used from 3 to 10 times, and 200 signs are used more than 10 times, also, the number of 16 signs used from 100 to 300 times, three most used signs (M218 with: 525 repetitions), (M388 with 620 repetitions) and sign (M288 with 829 repetitions) were recorded and checked (Desset, 2016 : 71). (Chart 1) (figure 12-13).

Eastern writing

This writing came about as a result of the development of Elamite civilization and culture following political conquests to Iran's plateau, and is used certainly for economic purposes. As long as the Elamite civilization remained in the center of Iran, this writing has survived, but the disappearance of this government seems to have destroyed the writing for several centuries in Iran (Girshman, 1372: 36). John Curtis states: "During the Proto-Elamit era, line writing is independent of the Sumerian, and its artistic use of indigenous resources. Pre-Elamite civilization around 2700 BC between 2800 and 2200 BC that is, from the end of the Banesh period, and

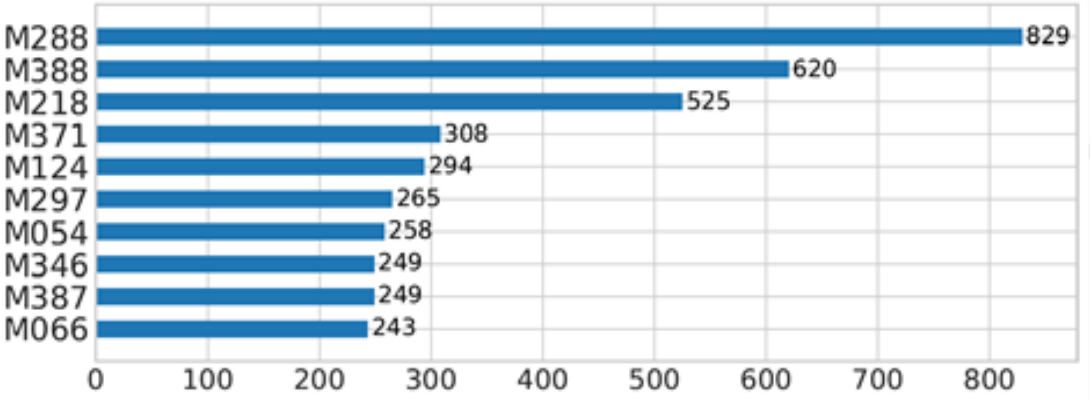

Chart 1. The frequency of repeated signs in the Proto Elamite line, image from Born et al, 2019

نام نشانه	طرح نشانه	نام نشانه	طرح نشانه	نام نشانه	طرح نشانه
M1		M54		M305	
M9		M66		M346	
M32		M157		M371	
M36		M218		M387	
M36-AD		M288		M388	
M36-TA		M297			

Figure 12. The most frequent signs of Proto Elamite (Dahl, 2002: table 3).

started the Kaftari period in 2200 BC in the southwest it's lost, and we do not know what has happened to its populations, or what has changed cussed to reduction of population, in this six hundred years' period. Sumner believes that this development may have been due to the nomadic in the region, which was motion to looking for pastureland. Perhaps, as claimed and historical evidence suggests, this is due to political developments in Mesopotamia, which has reduced population and these developments. As we know, during the reign of Sargon and his successors who ruled Mesopotamia, they could to dominate not only the land of the Elamite, which by campaign to mountainous area, some areas such as Awan and Barhashi also dominated by their own; This evidence reflects the development and changes in this region and the national area (Imanpour, 2006: 8, derived from Brentjes, 1995). The discovery of Proto Elamite clay tablets in the Tepe Yahya (Damerow and England, 1989) and the Shahr-e- sukhteh (Seyyed Sajjadi, 2001), along with the emergence of well-known vesels known as Beweld Rim Bowl in Talle Eblis, and later in the Miri Makran (Besenval, 1994), represented the pressure of Western culture in these areas is far from the Mesopotamia and Khuzestan (Seyyed Seyyedi, 2004: 69). The Proto Elamite civilization it was abandoned about 2700 BC (Curtiss, and Abdi, 1993: 111).

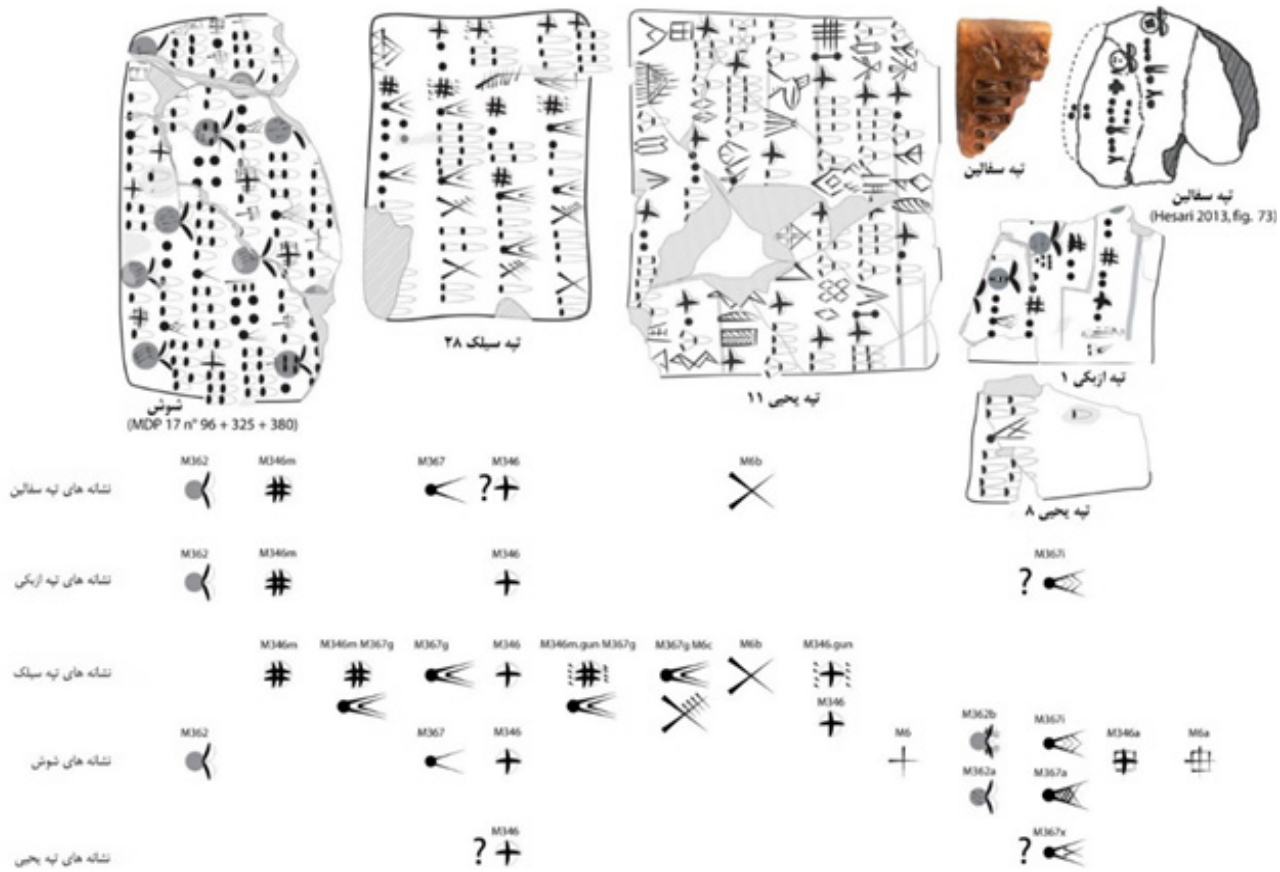

Figure 13-The sequence of Proto Elamite signs for all kinds of goats from different areas such as Tepe Sofalin, Tepe Uzbeki, Tepe Sialk, Susa and Tepe Yahya (Desset, 2016; 74).

During the excavations in Jiroft obtained the inscription bricks with the dimensions of 11 × 7 × 2 cm and 3 other tablets with an Elamite line written in the interior of the house in this area (Razani and Imami and Isfahani, 2009: 39). The largest archaeological discovery in recent decades in the southeast of Iran in the first half of the third millennium BC is that the region has entered the historic world at least at the same time with Mesopotamia. Here we find a writing that was different from the Sumerian cuneiform and was invented in a completely independent civilization of the Sumerian civilization and originated from the south-east. This inscription is very important in many ways. First, contrary to all the Proto Elamite clay tablets known as precedence in the various areas of computing and contain numbers and varieties; this finding is sole relic well-known from inscriptions which so-called King's inscriptions, and on which the name of the king that builder the monument, was written on inscriptions in various sections of the building. Another significance of this writing is that, although François Valla calls it the Proto Elamit writing, Yakub Dahl, another Ilamologist, believes that this writing is not ProtoElamit, but an Elamit writing of local Elamite type. This comment was statment after one of his lectures at European and American universities. Harvard University linguists have verbally verified and we are waiting for other comments from scholars. If proven this script is Elamit, it should be said that in the basin of Halil Rod civilization, we have reached a writing that is about 500 years older than the oldest written Elamite in Ilam, belonging to the king of Elamite Mudor-Inšhoshinak. And if so, it should look for the origin of the written Elamite line not in Ilam, which is in the basin of Halil rod civilization (Rafifar, 2003:8). According to Dr. Majid Zadeh, carbon-14 experiments show the age of the layer in which the writing was discovered in it is 2500 BC. Although these experiments have not been carried out in Mesopotamia, archaeologists have been dating

fig14- southern Konar Sandal, inscribed brick (Razani, Imami, Abed Esfahani, 2009: 39; Retrieved from Majidzadeh, 2007: 469).

the Mesopotamian line between 2,600 and 2,700 BC.And it is said that the ProtoElamit line, which is the numbers and statistic lines, coincides with the numbers line in the Mesopotamia. Archaeological excavations along the Konar Sandal destroyed many archaeological equations, and led to the discovery of the line origion. Oldest step platform in the world and the very elegant works of carvings encountered the scholars of the world to an unknown civilization in the East. According to Dr. Majid Zadeh, the Konar Sandal line fills the gap between the two lines of Proto Elamite and Pazur inshishnak Ehlamit line. Dr. Holly Pittman is a professor at Pennsylvania University, regarding the importance of line detection in Jiroft, said: The discovered line in Jiroft has no similarity to any of the discovered lines so far, and, given its newness and its periodicity with the invention of the line in Sumer, shows that we are faced with civilization in Jiroft that can be equal with the first civilization Human beings. Stein Clare, a Russian linguist, believes that the line found in Jiroft, Shahdad and Malian, should be mentioned called as Eastern Civilization, and is rejected the name of the Elamite line for this line. He is a linguist and researcher at Harvard University in his latest article on the line discovered along the Konar Sandal of Jiroft, called the East Line. Experts believe that common sense does not allow a tribe to discover a line, and after abandoning a powerful neighbor to them, they abandon the line and turn to the line of Mesopotamia. They believe that this line has gone from east to Susa (Shadjou, 178-177). (figure 14).

Conclusion

For the first time in the Chalcolithic period, there are tools that are called Token. In the Elamite period, the text reaches a decent level and records the recording with writing. The Elamite line was a mathematical and fiscal line. Expansion of trade and economic relations required this necessity. This keeping the account led to the creation of a number of signs. The line began with a sense of ownership, then the necessity of communication with neighboring regions was due to the surplus of production and necessity, and finally the registration and maintenance of trade with neighboring villages made it progress. This attitude was originally born in the form of numerical symbols and developed in the bed of time. Apparently, Eliami's scribe recruited the idea

of writing from his Mesopotamian neighbors and then applied their creativity to invent their own writing system. And later in the form of a pictogram, and then the Elamite line of writing, which, according to the scholars, was an older version of the line of Pozur Inshoshinak. About line discovered in the Konar Sandal, need to new excavation that can be brighter horizons open before us.

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Bibliographical References

Akbari, H., 2002, Elamite and Elamites, Bastan Pazhohi, No. 9, p. 29.

Alden JA.1982. Trade and Politics in Proto-Elamite Iran, Vol. 23, No. 6 (Dec., 1982), pp. 613-640 (28 pages) Published By: The University of Chicago Press

Alizadeh, A; Ahmadzadeh, L. and Omidfar M. 2014. Ancient settlement systems and cultures in the Ram Hormuz plain, southwestern Iran, Excavations at Tall-e-Geser and Regional surveys of the Ram Hormuz Area, Oriental Institute publications 140.

Alizadeh, A., Aghili, S and Sarlak, S., 2015, "Highland-Lowland Interaction in the Late 4th and Early 3rd Millennium BC: The Evidence from Qoli Darvish, Iranian Central Plateau." Archäologische Mitteilungen aus Iran und Turan 45: 149-168

Algaze, G, 1954, Ancient Mesopotamia at the Dawn of Civilization the Evolution of an Urban Landscape, p.137.

Imanpour, M.T, 2006, Hills of Mellan and Urban Development in Anshan / Parseh, Ancient Iran History Quarterly, No. 2, p. 8.

Amiet, P., Tosi,M and Meriggi.P, 1978, "Phase 10 at Shahr-i Sokhta: Excavations in Square XDV and the Late 4th Millennium B.C". Assemblage of Sīstān. East and West 28 (1/4) (December 1): 9-31.

Amerian, Hamid, 2004 "A Look at Elamites and Their Art", Cultural Studies, Contest, No. 25.

Born, L., Kelley, K., Kambhatla, N., Chen, C and Sarkar, Anoop., 2019, "Sign Clustering and Topic Extraction in Proto-Elamite", AACL, Minneapolis. MN, USA.

Budja, M, 1998, GalyTokens accounting before writing in Eurasia, Documenta Praehistorica. XXV; 219-235.

Caldwell, J.R. 1967, Investigations at Tall-Iblis (Illinois state Mus. Prelim Report n.9) spring field.

Carter, E and Stolper, 1943, Elam, surveys and History and Archaeology University of California M.W 1943 press.

Curtis, J.,1993, "Mesopotamia and Ancient Iran: the Age of Communication and Conflict", about 3500 to 1600 AD Translation by Kamyar Abdi, London, British Museum Publication, p. 111. - Dahl, J. L., 2002, "Prot-Elamite sign Frequencies". Cuneiform digital library bulletin 2002/1:1- 3(http://cdli.ucla.edu/pubs/cdlb/2002/001.html).

Dahl, J. L. 2005b, Animal husbandry in susa during the Proto-Elamite period. Studi micenei ed Egeo-Anatolici 47:81-134.

Dahl, J. L. 2009, Early writing in Iran, arepprasal. Iran 47: 23-31.

Dahl, J. L. 2012, The marks of early writing. Iran 50:1-11.

Dahl. Jacob L., 2019, Proto-Elamite Tablets and Fragments. Textes cunéiforme du Louvre 32 (Khéops / Louvre éditions Publishing, Paris).

Damerow, P& Englund , R. K. 1989, The Proto-Elamite text from Tepe Yahya. American school of prehistoric research 39 Harvard.

De Mecquenem, R. 1949, Epigraphie Proto-elamite Memories Deal Mission Archaeologique en Iran 31. Paris.

De Mecquenem, R, 1956, Notes Proto Elamites.

Desset. F, 2016. "Proto-Elamite writing in Iran" ARCHO-NIL, n 26 June. 2016. Pp 67-105.

England, R, 1998, "Elam IV-Proto-Elamite", in Encyclopedia Iranica VIII/3 (Costa Mesa, CA, p.325.

England, R, 2004, The State of decipherment of Proto-Elamite.

England, R, 2005, The State of decipherment of Proto-Elamite.

Englund, R. K., 2004, "The state of decipherment of Proto-Elamite" [in:] Houston, S.(ed), The first writing script invention as history and process Cambridge: 100-149.

Firoozmandi, B, Niknamami, K., Mirasheh, Z., 2017, "Evidence of the activity of the economic enterprises in the Proto Elamit tablets of Susa", Archaeological studies, 9, No. 1, p. 253.

Grishman, R., 1993, "Iran from the beginning to Islam", translation by Mohammad Moein, Scientific cultural publication.

Hinets, W, 1992, The Lost World of Eilam, Scientific and Cultural Publication

Hesari, M.,1999, Proto Elamite Culture in Iran, Bastan Pazhohi, No. 5 & 6, p. 1.

Hesari, M, Akbari, H.,2004, "The emergence of the line in Iran", Iranian Studies Journal, Third Year, Sixth, p. 8

Hesari, M, Yousefi Zashk R.,2009; "The emergence of pre-state institutions in the central plateau of Iran,Proto Elamite Khan Salar in the Tepe Sofalin of Pishva", Archaeological studies Volume 1, Issue 2, p. 6.

Hessari M. 2011, New evidence of the emergence of complex societies discovered on the central Iranian plate au. Iran Archaeologe stud 1 (2).

Le Brun, A. vallat f, 1982 in Alden, J. Trade and Politics Proto-Elamite Iran, CA23.

Majidzadeh, Y.,1997, Mesopotamian History and Civilization, Volume I, University Publishing Center, Scientific and Cultural Publishing.

Mort G.A, 1998, "Ancient Mesopotamian Art", translation by Mohammad Rahim Sarraf and Zahra Basti, Samt, Tehran.

Potts, D. T, 1999, The Archaeology of Elam: Formation and Transformation of an Iranian State Cambridge University Press. P.126.

Powell, E.M, Javadi Najaf Abad,M. 1999, Cuneiform, Bastan Pazhohi, No. 7, p. 41.

Razani, M, Emami, M., Abed Isfahani, A.,2009, A Look at the Newfinde from JirofT., Archeological excavations, Year 5, Number 3.

Schmandt, B,1992. Tokens: the cognitive significance center for Middle Eastern Studies, The University of Texas Austin, USA, p.24.

Scheil, V. 1900, Textes elamites-semitiques (Premiere serie) Memories de Delegation en Perse 2. Paris

Scheil, V. 1905, Texte de comptabilite (=Memories de la Mission Archaeologique 26 ,265:)

Scheil, V,1923,. Textes de comptabilite Proto-elamites, avec liste de singes Proto-elamites. Memories de la Mission Archaeologique de perse 17. Paris.

Scheil, V. 1935. Textes de comptabilite Proto-elamites. Memories de la Mission Archaeologique de perse 26. Paris.

Seyed Sajjadi, M.,2004, "The beginning of urbanization in the eastern half of the Iranian plateau", Anthropology Letter, third year, issue 6.

Seyed Sejadi, M, 2008, The First Cities of Iran (Volume II) Tehran: Publication of Organization for Studying and Compiling Humanities Books of Universities (Samt).

Steve, M.J and Gasche, H., 1971 Acropole de Suse MDAL, XLVI.

Stolper. M.W.1985, Proto-elamite text from tall Malyan.

Wright, H, Tand G, Johnson, A,1975, Population, Exchange and Early State Formation in Southwestern Iran. Anthropology, 210: 260.

Vallat, F.1971, Les documents epigraphiques de I' Acropole (1969-1971). Chiers de la D.A.F.I.1