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A Comparative Study of the Weapons of the First Half of the First Millennium BC in Western Iran (a Case Study of Jobji, Arjan, Kalmakareh, Ziviyeh, Kol Tarikeh, and Hasanlou IVb)

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Abstract: The first millennium BC is very important from the point of view of archeology and the study of the cultural developments of the Iranian plateau. In the time range of the first half of the second millennium BC to the first half of the first millennium BC, the simultaneity and closeness in time and place of the New Ilam, Samatore and Manna governments and the geographical area of the western belt of the Iranian plateau has caused that these governments undoubtedly Different artistic, social and political influences have left each other and the works discovered by these regimes have not been devoid of these influences and impressions. In this research, which is a type of descriptive-analytical study and to collect its data, reference-field methods were used, to study and compare the metal weapons of these governments and the influence of each of them on the other and that in each The rule of what kind of metals are used and also what aspects and applications of the exposed metals in each of them have been discussed. In this study, the weapons examined in the northwestern areas under the Manna government had differences in terms of shape and form from other areas in the west of Iran at that time. Its kind of metalworking art has had more effects on the type of metalworking of Samatore governments directly and Manna government indirectly.

Keywords: *First Millennium BC, Manna, Kalmakre, Ilam, Metals, Weapons.*

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1. Introduction

In terms of technology and decorations, the metalwork art of western Iran in the first millennium BC has had a tremendous impact on the metalwork art of the following period. The study of these objects is important and vital because the main foundation of the Achaemenid metalwork art was built on it and the arena It will open a new field in metalworking studies in western Iran. These objects are not only simple works of art, but in the existence of each of them lies a world of thoughts, beliefs, industry, art, ways of life, etc. Their unique feature is the introduction of a new government dynasty in the west of Iran in the first millennium BC, which plays a very important role in the archeological researches of the early historical period of Iran. The existence of various mines and metal deposits in a wide area of Iran's geography has been one of the factors for local residents to access all kinds of metals. In the first half of the second millennium B.C. to the first half of the first millennium B.C., in the Zagros mountains and the western regions of the Iranian plateau, there were many princely settlements and khans from which the Assyrian kings used to extort money during their campaigns in these regions. Sometimes they united with them against their enemies. The report of the Assyrian campaign is the most important source that was available for the reconstruction of the political and social structures as well as the historical geography of these kingdoms and small and large states. Ramhormoz from the era of New Ilam in recent years is an important topic that should be given special attention by researchers. The Ilamites were a group of ethnic groups that ruled over a large part of southwestern Iran from the 4th to the 1st millennium BC.Area of Ilam included Khuzestan, present-day Lorestan, Poshtkouh of Ilam and Bakhtiari mountains. The country of Ilam consisted of two parts, mountainous and plain, which were administered in a federal form, and independent and self-governing governments were formed centered on its big cities. But whenever the power of the central government increased, it united these independent governments and brought them under its command. It should be mentioned that our incomplete information about the historical geography of Ilam, especially during the era of New Ilam, is due to the lack of documents, written documents, and lack of familiarity with all the lands of this kingdom, and it is still not possible to determine the exact location of a small number of Ilamite cities that are located in some The old texts mentioned about them, determined it correctly. On the other hand, in the ancient sources and texts, the geographical extent of Ilam is not always mentioned in the same way, according to the political conditions and the approach of the writers of that time, and they mentioned the boundaries of this territory differently. The mountainous areas of Ilam, including modern-day Lorestan and the Bakhtiari mountains, were not well known in Susa because no systematic and scientific research has been done in these areas. (Figure 1)

The documents related to the civilization of ilam, which covers more than three millennia, have several important breaks in between, and the history of the New Ilam period begins with such a break (the New Ilam I period around1000 to 744 BC) and until the middle It takes the 8th century BC for Akkadian and Ilamite sources to provide any important information about the political situation(Waters, 2000:25). As we can see from the Babylonian calendar, the government of Ilam does not reappear on the stage of history until 742 BC, when "Shah Humban-Nikash" ascended the throne. This new dynasty of the kingdom of Ilam reigned for a little more than a century. The history of this dynasty was characterized by two events: the first feature was the effort of Ilam against Assyria, which had recently become the dominant power in Mesopotamia and its conquest had turned the traditional rivalry between Ilam and Babylon into a close alliance, and the second event was the emergence of the Medes and Persians. It was in the mountains of Iran. Two events, the continuous attacks that Ilam made against Assyria and the gradual capture of

Figure1- Geographic map of Ilam government (Taken from Vallet2002)

its eastern territory by the Persians, weakened the late kingdom of Ilam to such an extent that it eventually surrendered to Assyria under Banipal in 646 BC. (Hintz, 2007:163) Considering the artistic fields, probably the Ilamites, especially the middle Ilam metalsmiths, were among the pioneers of this art during the 14th to 13th centuries BC in Khuzestan. Also, the nobles and rulers of Hasanlu during the time period of Hasanlu VI (714/800-1000 BC) and Marlik officials were related to the major centers of metalwork, especially the master craftsmen of the golden patterns technique. (Negahban, 1989: 126-138)

One of the independent and self-governing local governments in the south of Lorestan, the land of Samatura and its rulers (the kings of Samatura, the owners of the Kalmakareh treasure) who were independent states in the Neo-Ilam period, which were known to us through the inscriptions on the treasure objects of the Kalmakareh cave. The treasure of their kingdom was accidentally discovered in Kalmakareh Cave, which contained hundreds of unique items of silver and gold in 1368 in Poldakhtar, Lorestan, and a large number of them were smuggled out of the country. (Map 2) The construction technique and the presence of inscriptions in the script and language of New Ilam on some objects reveal their connection with the cultural horizon of New Ilam. The reading of the carved inscriptions on these objects by Mr. Rasul Bashash, François Vala and Lambert revealed the name of an unknown local dynasty. Samatoreh is the name of one of the Ilamite kingdoms in the area of the Simre River in the south of Lorestan, which was ruled by the local kings of Samatoreh during the 7th and early 6th centuries BC. The names of five generations of these rulers are engraved on these objects. The heads of this family gave the title of the king of Samatura to the second generation(Amprish) and most of the objects belonging to this king belong to this dynasty. Probably, Samatura was the name of one of the small kingdoms of Lorestan, which existed during the seventh and early sixth centuries BC. It was ruled by the local kings of Samati, which at that time had a privileged position among the numerous political territories of Zagros. (Calmeyer, 1983:138) François Valla mentions them as Samati rulers. However, their land is considered in a broad material sense. While they were Ila-

mites, they had friendly relations with the Assyrians. (Vallat, 1996: 3) The discovery of the Kalmakareh treasure and the study of these works led to the revelation of the name of an unknown Iranian local dynasty, which created a new field in the archeology studies of the historical era. "Ampirish", whose name is engraved on most of the Kalmakareh dishes, was one of the kings of Ilam and the king of the Samti land. The discovery of the Kalmakareh treasure and the study of these works led to the revelation of the name of an unknown Iranian local dynasty, which created a new field in the archeology studies of the historical era. "Ampirish", whose name is engraved on most of the Kalmakareh dishes, was one of the kings of Ilam and the king of the Samti land. (Bashash, 23:2004) The use of cuneiform inscriptions and Ilamite personal names shows a very close relationship with the cultural horizon of New Ilam. The names of the people who presented the silver cups indicate the fusion of different traditions because some names such as Samatura and Tabala belong to Indo-Iranian languages and another group of names that are descendants of Tabala belong to the Ilamite language. have Their specific names allow us to attribute these objects to a treasure trove of precious objects gathered in a local royal family, but the names of these rulers and the location of the land of Samatura are not known correctly to this day, but from the point of view of the wording, it is very similar to the name Sarnataoro is the name of a place in the Caucasus mountains where Cimmerian artifacts were found. Probably, the names Samatauru and Samatura were derived from the same root. These names conjure up one name in the mind, and that is the name of Cimmerian. If we say that the herdsmen of Lorestan were very similar to the Cimmerians, then it is not considered that you have followed the wrong path." Herdout considers them to be the first inhabitants of southern Russia, who call the Bosphorus, the Karaj Strait, and other places after them." In Assyrian sources, they are referred to as Gimira1 and their name is considered the same as Gomer, which is mentioned in the Torah. In Assyrian and Greek documents, the Cimmerians were sometimes identified with the Scythians. (Callican, 1971: 28) According to Annie Kobet, they were most likely descendants of Iranian desert horsemen who gradually conquered the entire region and gave their name to it, and since they did not have a written culture, they referred to other industries, especially the Ilamite industries. They did and got used to the difficulties of the cuneiform line (Cubet, 1995:81). Some other Cimmerians allied with the Urartu people in the early 8th century BC. At the same time, a group of them were fighting for the Assyrians as mercenary soldiers. The existence of Cimmerians in Lorestan is accepted as a historical fact. The folds of Zagros, its narrow and separated valleys, made it very unfavorable for the tribes whose main work was raising horses and sheep to live in this area. There are many similarities between the discovered objects from the Caucasus and Lorestan. Also, common mythological or religious themes can be seen between these two areas. They worshiped the same gods who are the oldest Iranian gods. (Girshman, 1967: 42) Therefore, it is not unlikely to find such objects and artifacts in this area, while the name of the old city of Simre and the modern Simre River, evoke the name of the Simree people. Of course, it is obvious that at this historical moment, due to the formation of the Achaemenid Empire and the decline of the government of Ilam and Assyria, the famous name of the local rulers in this region should not be mentioned. and it seems quite logical that the main origin of these rulers is the Samataoro region in the Caucasus, where the ruling class used this name as a title in any land they ruled, without the name and if they applied there, they were referred to the same place.

Manna kingdom, a government that continued its cultural and political life for 300 years in the first millennium BC. This civilization was first mentioned in Assyrian inscriptions in 834 BC, but there were many more. (Barnett, 1956:188) Manna had a kingly government system where the son's son succeeded the father. The king did not run the country alone but sought cooperation

Figure 2- Access route to Kalmakareh Cave (Google Earth)

from local rulers, nobles, and elders. The land of Manna was divided into states, a few of which had a semi-independent status. (Boehmer,1988:95) Manna is the name of the government that was mentioned for the first time in 843 BC in the report of Shalmaneser III's Assyrian campaign. (Luckenbill,1926:209) This date is related to the first recorded encounter of the Assyrians with the government of Manna, and we can be sure that they were present in the region long before this date and started to form a government. According to archeological data, the history of the arrival of new tribes in the region goes back to at least the middle of the second millennium BC and the beginning of the Iron Age 1 (1450 BC). It seems that the Mannas gradually formed a government during the Iron Age 1 and continued their independent political life with ups and downs during the Iron Age 2 and 3. Finally, in the last years of the 7th century BC, they became subjects of the Median government, and gradually they became part of the great Median society and lost their independence.

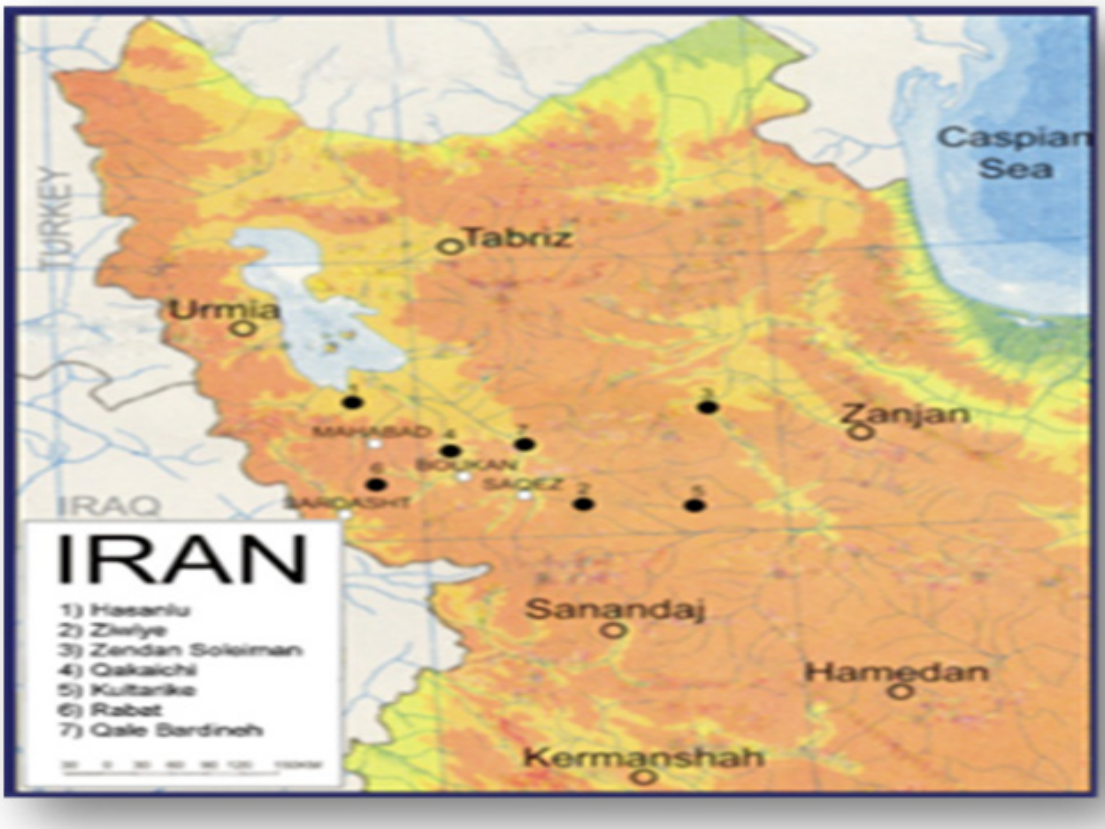
Northwest of Iran in the first half of the first millennium BC witnessed the emergence of a government called Manna. Assyrian written sources tell about the settlement of the Manna tribes in the southern and eastern parts of Lake Urmia with an almost semi-independent government next to the powers of new Ashian, Urartu, Saka, Media, and Babylon Field investigations and scientific archaeological excavations show that the central core of this government coincides with the surrounding area of the current Saqqez and Bukan cities, and the famous and prominent sites of Mannai such as Ziviyeh, Qalaichi and other sites are located in it. In 815 BC, when the Aryans poured from Parsava in the west of Lake Urmia to the Zagros valleys in Ilam, they found a new homeland in the northeast of Susa, a short distance from the Ilamite land of Anzan, and in memory of the land they had called Turks, they just called themselves Parsumash. In Azerbaijan and the West of Iran, Medes and other newly arrived Iranians encountered the ma-

jority of natives who spoke a non-Indo-European language, such as Urartos, Mannas, Horis, and others. These latter tribes spoke a language that seems to have a connection with the ancient Caucasian or the modern Yaphet language that is spoken by a group in the Caucasus. It can be assumed that there was a solid racial and cultural bond among all the people living in Iran in the second millennium BC. The finding of terracotta works of the same shape in Nahavand and Silk Hill in Kashan may indicate that there was at least a similar and uniform culture in these areas. (Behzadi, 1992:1045-1046)

The science that deals with determining the geographical boundaries of past civilizations is historical geography. Historical geography is a scientific discipline that can provide a suitable field for archaeological studies and operations. Without this proper context and in the absence of written and enlightening documents, the identification and belonging of many ancient sites and cultures will be accompanied by many ambiguities. Regarding the Manna civilization, it can be said that although it is not possible to determine the exact borders, but we know that in the first half of the 1st millennium BC, from the north to Tabriz, from the west to the border mountain range of Iran and Iraq, and from the east to the region of Talash and the western highlands of Zanjan, as well as extended from the south to Bijar region. (Molazadeh, 2009:45) (Figure 3). Manna sources can be divided into two categories: historical data and archaeological data. Historical data includes Assyrian, Urartian, Babylonian, and Hebrew sources. Unfortunately, no inscriptions or writings containing historical knowledge have been found from manna itself. However the texts and sources of Manna's neighboring and simultaneous governments contain a lot of information based on which the political history and historical geography of this kingdom can be reconstructed. Among these sources, Assyrian texts have a very prominent place, and the reconstructions are mostly based on these sources. The territory of Manna is better known than the other mentioned settlements. Manna, the most powerful kingdom of western Iran in the New Assyrian period, included a large area in the south, southeast, and east of Lake Urmia and the northern half of the current Kurdistan province. This regime existed in these regions and adjacent to Urartu and Assyrian regimes in the time frame of the first half of the millennium BC, and includes many monuments and sites such as layer IVb of Hasanlu, Ziviyeh, Qalaichi, and other discovered sites of this regime. Since the most important study sources of Manna civilization are related to the inscriptions, annals, and reports of Assyrian and Urartian civilizations, the history of Manna will automatically be reread by the history of these civilizations. The name of Manna was mentioned for the first time in 843 BC and among the lands that were on the route of Shalmaneser III's campaign. (Luckenbill,27:1926) Manna is the largest and most famous state that was formed before the Median kingdom in northwestern Iran. The date 843 is related to the year when the first encounter between the Assyrians and the Mannaeans was recorded, otherwise, the Manna government was present in the region before this date, which unfortunately we do not have any written documents about. As a summary of Manna's political history, it can be said that according to archaeological data, the Mannai tribes entered the region in the middle of the second millennium BC and appeared for the first time in the middle of the ninth century BC among the historical data. Manna has had a more advanced level of culture and civilization than other tribes and governments living in the region. In Assyrian texts, the ruler of Manna is always referred to as the king, while the ruler of other states is sometimes referred to as the ruler of the city, etc (fales,2003:341). According to the documents and texts of Assyria, Manna was never subject to Assyria and was only forced to pay tribute at times. In most cases, the Assyrians viewed Manna as a valuable local ally rather than a tributary state. (Diakonov, 1992:195) In the administrative documents of the 8th and 7th centuries BC, which were obtained from Colcho and Nineveh, there are not many references to the messen-

gers of Manna. Based on this, it can be said that the manna mentioned in the Assyrian sources was more of a supplier of horses for Assyria than a tribute payer(Postgate,1987:341). Despite numerous failures, this government never subjugated and occupied Urartu completely, and the Urartu people have never made such a claim. In the last years of the 7th century BC and perhaps the early years of the 6th century BC, Manna was annexed to the territory of the Medes and was gradually integrated into the Medes and then the Achaemenid society.

The simultaneity and proximity in time and place of the New Ilam, Samatore, and Manna governments in the time range of the first millennium BC and the location of the western belt of the Iranian plateau has caused that these governments have undoubtedly had an impact on various artistic, social and political fields. And the discovered metalworks of these regimes were not devoid of these effects and impressions, and by studying and comparing the metalworks of these regimes, one can understand their similarities and effects. To study the metal works of the New Ilam regime, in this research, such things as the works of Susa, the treasure of Jobji, and the treasure of Arjan have been considered. To study the metal works of the Samatoreh regime, the study of the Kalmakareh treasure works is done, and to study the metal works of the Manna government, the metal works of the Ziviyeh treasure, the layer IVb works of the Hasanlu area, and the metal works of the Kol Tarike cemetery are studied. In this research, some questions were raised. 1- According to the temporal and spatial proximity of the governments of New Ilam, Samatore and Manna, which one had more influence in making weapons? 2- What are the aspects of exposed metals in the research areas in each of these governments? 3- What types of metals did the most metals used in the construction of works in the governments under study



Figue 3- Geographical extent and important areas of the Manna government(Hassanzadeh,2011:270)

include? The importance and purpose of this research is to compare and study the war weapons of these three regimes broadly and specially, whether these three regimes had similar metalworking art and what was the type and construction of war weapons in these three regimes.

Research Questions and Methods

This research is a descriptive-analytical method, which is a collection method in the form of a library and field observation, which is used for the collection of a survey tool. The method of analysis in this method is qualitative. The conceptual model is the basis on which the overall design of the research is based. This framework or model is a network of relationships between variables that have been identified based on the research background. The questions raised in this research are: 1- According to the temporal and spatial proximity of the governments of New Ilam, Samatore and Manna, which one had more influence in making weapons? 2- What are the aspects of exposed metals in the areas under research in each of these governments? 3- What types of metals did the most metals used in the construction of works in the governments under study include?

Research Background

Many articles, theses, and books have been published regarding Iran's Iron Age weapons; Kalmayer in his book entitled Dateable Bronzes of Lorestan and Kermanshah (Kalmayer, 1997) has dated different types of Lorestan war weapons. In a part of the book Iran in the Iron Age, Archeology and Art of Iran in the first millennium BC, Medvedskaya has given various explanations of the weapons of this period. Talaei, in his book Archeology and Art of Iran in the first millennium BC, has divided the weapons into different groups based on their use and shape (Talaei, 2011). Manouchehr Mushtaq Khorasani in his article titled "Bronze and Iron Weapons from Lorestan" (Khorasani, 2009) has investigated the bronze weapons of Lorestan. In a part of his article (Murray, 1971), Murray has stated scales for distinguishing daggers and swords from each other, and Amie Baron in his doctoral dissertation titled Late Assyrian Weapons and Armor: Art vs. Artifact from the University of Toronto, Canada (Amie Baron, 2010) has studied the classification and typology of late Assyrian weapons. Other articles and theses have been written about the Iron Age war tools, such as the article examining the theories about Lorestan bronzes written by Abulqasem Dadour and Nusrat al-Maluk Misbah Ardakani, the thesis entitled "Research and classification of Lorestan bronzes" Niloufar Mirmohammadi Tehrani and the thesis entitled Review, Analysis and Classification of Iran's Iron Age Weapons written by Resat Mahmoudi.

The Aspect of Innovation and Newness of Research

Many works have been written about these three regimes, especially the New Ilam regime, and their metalworking art has been discussed in detail, but no special work has been done regarding the comparison impact, and impressions of the metalworking of these three regimes. The research is new and will help in clarifying the dark corners of the governments of the first millennium BC in the Iranian plateau.

Introduction of Research Areas

Ziviyeh Castle: Zaviyeh Castle is located 45 kilometers southeast of Saqez city and in the north of a village with the same name. During the scientific excavations conducted by Dyson and Crawford in 1964 and also in 1355 AH by Motamadi in Ziviyeh, a castle was discovered; Motamadi introduced this castle as Mannai. In terms of architecture, Ziviyeh has a three-story building. (Goff, 1978:42)

Hasanlu area: This area is located 12 km southwest of Urmia lake and 9 km northeast of Naqdeh city between Amin Lo and Hasanlo villages and is called by the same name. According to the remains found in the layers of Hasanlu hill, Dyson has identified the settlement period in this area. It has continued from the Neolithic period with pottery to the Islamic period. Period X is the oldest and period I is the newest of these periods (Dyson and Muscarella ,1989:199:20). Kool Tarike Cemetery: It is located one kilometer southwest of Yuzbash Kandi village. This village is located 5 km from kerefto cave and 50 km north of Divan Dere city. Kool Tarikeh cemetery was identified during the first season of field research around Karfto Cave in the fall of 1379. (Rezvani and Roustaei ,2007:184) The explorer suggests the date of the first half of the first millennium BC and the period of presence of Manna for the Kool Tarikeh cemetery. Tomb of Jobji: The tomb that was accidentally discovered and mostly destroyed was hidden in the heart of an ancient hill in the north of Jubaji village. Jubji tomb is a stone and rectangular structure with stone slabs of various sizes that belong to the New Ilam period and many metal artifacts of different types were discovered from the two coffins of this tomb (Shishegar, 1912: 21-28, Astani et al, 2023). Arjan's tomb: This tomb was located in Behbahan, Khuzestan province. The architecture of Arjan tomb has a rectangular plan with dimensions of 136 x 88 x 250 centimeters. Its side walls are raised by almost regular stones in about 11 rows of Chinese stone with plaster mortar. A coffin like a bathtub was found in this tomb, and various metal works were discovered along with the coffin, including the famous Arjan fire pit (Alizadeh 49:1992). Kalmakareh Cave: It is located in Lorestan province, 20 kilometers northwest of the central part of Poldakhtar (Ghazanfari, 26:1997). In addition to the discovered metal objects, there is evidence such as hand-made porcelain walls with stone, plaster, straw, and scattered pieces of pottery in this cave, which show works related to the rule of Samatore (Khosravi, 2013: 20).

Weapons Obtained from Hasanlu

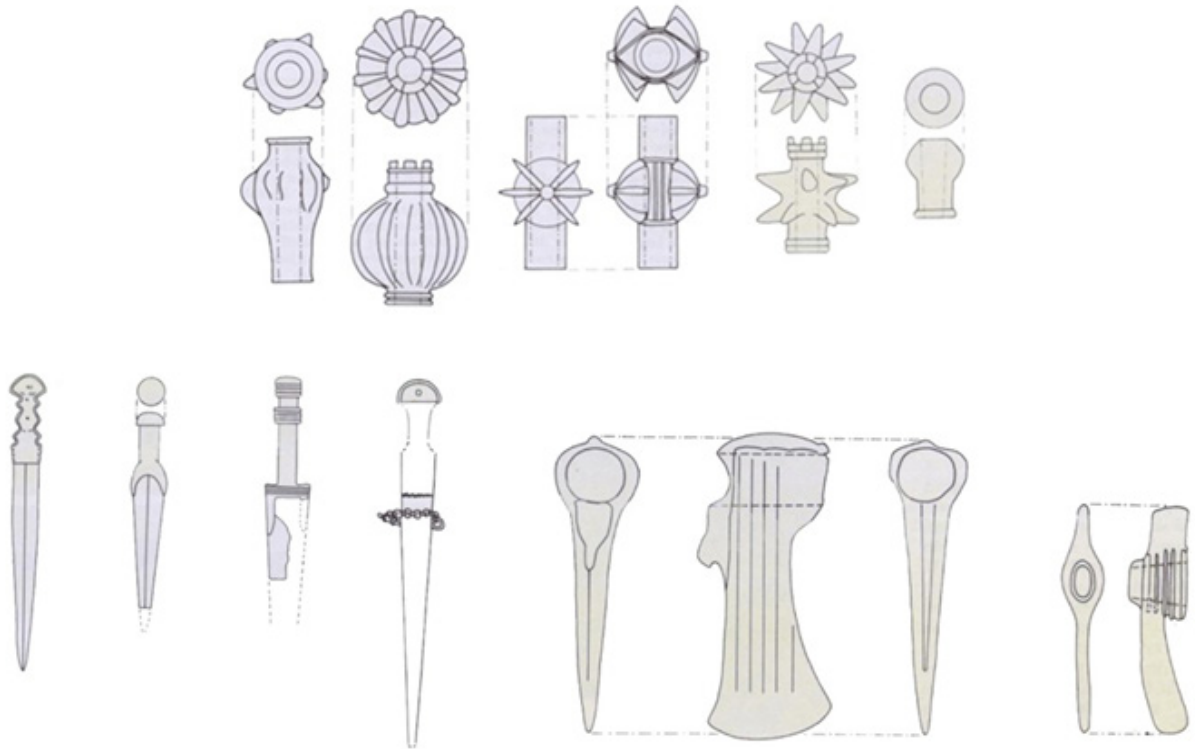
Weapons have been discovered in all parts of Hasanlu Citadel, which belong to the fourth period of this area, inside and outside the buildings. In some cases, the quantity and arrangement of weapons indicate that these weapons were found as they were stored and were not used in the final battle. Other individual weapons were apparently either discarded or lost from their owners in the heat of battle. According to the collection of discovered weapons, the most common weapons in Hasanlu were speared with sockets, some of which were made of bronze, but most of them were made of iron. (Figure 4) An iron spear with a socket attached to a wooden rod can be seen. This spear is the most commonly exposed weapon from Hasanlu. Iron weapons were mostly broken, but an intact example was found in the burnt building of VI. These spearheads are likely to be ceremonial weapons rather than actual war weapons because they are attached through nails and therefore fragile. (Smith, 1972.119-120) In the same picture (b), a bimetallic spear with a bronze blade can be seen, which is hammered into an iron socket and the middle rod of a nail. From the weak structure and the small number of these types of weapons, it follows that they had a ceremonial function rather than a practical one (Dyson and Waite, 2007: 67).

Hundreds of these spears were found among the debris of the upper floor of Burnt Building II, where they were apparently stored. Other weapons include: mace: 48 stone, 23 bronze, 2 iron and 3 bronze iron swords: 2 bronze, 28 iron, 9 bronze iron and 1 gold-enamelled hilt Dagger: 21 Iron number, 1 bronze number, 3 iron numbers (Figure 5).

The discovery of several arrowheads, which were sometimes found in groups inside the archers, is evidence of the use of the bow. At least three bronze beams and one iron beam with bronze decoration have also been discovered (Figures 6-7).

a b

Figure 4 - Hasanlu socket bayonets (Dyson, 2007: 67)



Picture 5- Different types of Hasanlu weapons (Dyson, Witt, 2007: 68-69)

Figure 6- Tirdan Mafarei exposed from Hasanlu (Dyson, Witt, 2007: 71)

Figure 7- Hasanlu's bronze arrowheads (Dyson, Witt, 2007: 70)

Kool Tarike Bayonets

The bayonet as a weapon of war consists of three different parts the blade, the shoulder, and the end of the bayonet. In the middle of the bayonet blade, there is often a protrusion (the part where the handle is placed). It can be seen that it is probably built for its strength and efficiency. According to the existing samples, only bronze was used in the manufacture of bayonets, considering that the manufacture of weapons from iron was very important in the beginning, iron was made in a smaller proportion of copper and bronze, and its use was mostly for the use of the ruling class. Therefore, it can be said that the bayonet had a more general use at that time

and was older than other Iron Age weapons. Regarding the manufacturing method, it should be said that all parts of the bayonet are molded and made in one piece. Compared to other bronze weapons, a limited number of this type of weapon has been discovered in Iran and the Near East, which indicates the limited use of this weapon (Talaei, 1385: 87). According to Mori's definition, bayonets are weapons that are not more than 25 centimeters long, between 10 and 25 centimeters long. In the area of Kol Tarikeh, 4 bayonet blades were found, which are between 10 and 12 centimeters long and 2 centimeters wide, with a hole at the end for It is attached to a wooden handle. These bayonets are made of bronze (Rezvani and Roustaei, 2007-188) (Figure 8).

Ziviyeh`s dagger handle

A beautiful golden scabbard, prominently decorated with numerous antelope heads carved from the front. The curves of the horns have the shape of a harp(Girshman, 2002: 141). All the pieces obtained from this dagger scabbard are decorated with antelope heads, which can be seen from the forehead, and as the sheath of the said dagger becomes narrower, the number of animal heads decreases, until it reaches the tip of the dagger, and in this place, the piece Added heavy gold is a hemispherical shape that appears to be adorned with a human head, but some believe it is two mythical Scythian-style animals facing each other. (Girshman, 1992: 116) (Figure 9) An imaginary creature with a forward claw, like a lion, whose eyes and mouth look human. The body of this creature is rotated in harmony with its surrounding circle so that its front paw and hind leg are parallel to each other, but inverted. Also, the dance of the tail is in harmony with the twisting of the nostrils but the enlargement of the face and neck with the sudden shrinking of the trunk has given a special look to the whole effect. The back-to-back roundness of the nose, the jaw, and the circle of the reins have created a charming rhythm, especially as the softness of the contours around the eyes and ears intensifies it. The eyes and their carvings, both for humans and imaginary animals and creatures, are associated with exaggeration and special attention, which is natural here considering the history of Urartu, Manna, Scythians, and Assyria. (Tamara, 2003:47) Certainly, the way of the relief leads to a simple and continuous logical skill of the shapes, and the rear part of the animal's body is represented simply, but its shape is not fossilized. He made the animal's tail spiral in front of its muzzle, placed strong claws under the animal's head and body, and created a situation that presented the shape closer to the truth (Girshman, 1992: 117) (Figure 10).

Ziviyeh`s horse saddle

One of the remarkable parts of this collection is a part of the horse saddle and leaf, made of silver and in terms of artistic style, it is very important, and on it, a leaping lion is placed between two artificial trees, which are comparable in every way. It is with Urartian lions that can be seen on some metal works. On the other hand, the most interesting of these lions, which are depicted in a completely natural way, on the bronze belts of Urartos, constantly attract attention. The position of this animal and the way it has placed its front legs horizontally show the work of Urartu artists. It should be noted that to balance his role, the artist had to imagine a date leaf upside down on one of the trees of life that he painted, and therefore he was unaware of its true meaning, and only considered its decorative aspect. (Girshman, 1992: 121) Also, two rows of embossed circular motifs are sewn on the leather around the edge, which has holes. (Rahimi, 2006: 77) (Figure 11)

Picture 8 - Bronze spearheads from Kol Tarike area (Rezvani and Roustaei, 2007-188).

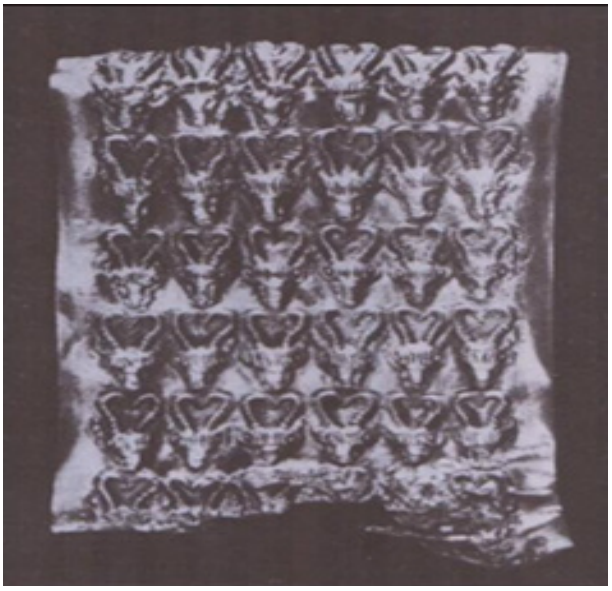


Figure 9. Dagger sheath (Grishman, 1992:116)

Figure 10. Ziviyeh gold dagger handle (Ettinghausen, 2000: 64)

Iron dagger with Arjan wooden scabbard

An iron dagger with a wooden sheath was found in this coffin, which is oxidized. This dagger has a tapestry handle made of gold and other decorations of agate stone. The length of this dagger is 31 centimeters. The handle of the dagger was made of bone, and on the top of the handle of the dagger there was a golden button, and on the sides of the bouquets of eight flowers made of agate pieces, two gems were attached. (Gunter 1982: 107) (Figure 12).

Jobji's Dagger

Dagger is a war tool and mostly for men, It has been found in the cemeteries of the 1st millennium BC in different regions of Iran in large numbers and various types, and it is among the grave goods that are mostly placed in the graves of soldiers or generals. But placing a dagger in the grave of women, that is, women from the ruling or aristocratic class of the society, does not bring to mind any other meaning than a ceremonial symbol and association of power. There is another dagger with a golden handle and an iron blade in the tomb of Jubji, which, in addition to showing the wealth of the tomb's owners, is considered a symbolic device, like the dagger with a bronze handle, and for this reason, the rare bronze-handled dagger is among ceremonial and ritual tombstones. In the Jubji collection, there are parts of dagger blades that are broken and crushed, none of the dagger blades are bronze and all of them are made of iron. According to the existing samples, it seems that the handle of the daggers is made of another metal, such as gold, wire, and bronze, and the blades are made of iron. (Shishegar, 2015: 175). Among the bronze findings, there is a significant dagger whose blade is iron and the handle of the dagger is bronze with square mesh decorations, and the inside of the meshes is filled with a decorative material such as glass paste. (Figure 13) It is similar to this dagger made of copper from Hesardamghan hill, dated 1200-1500 BC, with a mesh handle (Pope, 1977, vol.VII, (PL.23a-b)

Jobji Dagger Handle

Only the handle of the golden dagger and its blade are iron and broken, which seems that the core of the dagger handle is made of stone and then covered with plaster, and the desired shape is plastered, and at the end, it is covered with gold leaf. This dagger has three parts. The first part is a wide grooved triangular apex with two ridges on the top and four double ridges on the sides, the second part is coil-shaped, and the third part is trapezoidal. (shishegar, 2015: fig 9). (Figure 14). (Ibid.: 490) Among the items similar to this work is a bronze dagger with a similar handle, which was obtained from Marlik and belongs to the first half of the 1st millennium BC. (Negahban, 1989, 54)

Jubji Iron Dagger Blade

The blades of the bronze and iron daggers of the northern regions of Iran, from Talash River (Khalatbari, 2004, fig. 46) have similarities with the iron blades of Jubji both in terms of shape and in some aspects of the blade material. Also, another number of broken pieces of iron blades have been found from Jobji tomb (Figure 15) (Shishegar, 2015: 521).

A Bunch of Kalmakareh Daggers

3 silver and gold dagger handles, 27 cm long and 6.5 cm wide, were uncovered from the treasure of Kalmakareh, which is currently kept in the Mahbubian collection. These dagger handles are human-shaped shaped and on them are fish shapes that are swimming two by one facing each other. (Figure16)

Figure 11. Part of horse saddle decorations are made of silver (Girshman, 1992: 120).

Figure 12. Arjan dagger (google.com)

Figure13 - Dagger with bronze handle and iron blade (Shishegar, 2015: fig.27)

Figure 14. Golden dagger handles with an iron blade (Shishegar, 2015: fig9).

Figure 15 The blade of iron daggers (Shishegar, 2015: fig. 79)

Discussion

In the general production of bimetallic weapons, the blade was made of iron and the handle was made of bronze; The reason for this was the strength of the iron blade compared to bronze, as well as the shaping and design of the bronze handle, due to the softness and malleability of the bronze alloy compared to iron. In relation to the typology of Iron Age weapons, it can be said that in the Iron Age, we are faced with an increasing progress in the manufacture of war tools, and a variety of weapons were created in terms of shape, material and construction method. (Ayazi, 2008:23) Most of the weapons made in the Iron Age that were used in war are made of bronze and iron. Some of these weapons have not been very effective in the battlefields in terms of functionality and construction method, and we call them ceremonial weapons. The typology and analysis of weapons show that the traditions and metalworking methods of the region were not without influence on their shape, so that many of the weapons discovered from the northwest (Hasanlu, Ziviyeh) are comparable in terms of shape to similar objects in They are not from the western region of Iran (Jung, 2003:131). Most of the ornaments related to this age have been found in the graves of women of the Iron Age. Placing weapons in the graves of men of this period shows that the deceased was a warrior, who was buried with his weapons after his death. This indicates the emergence of the warrior class in this time period (Moshtagh Khorasani, 2009.190). Of course, there are exceptions in this case, for example, in the treasure of Jobji, which belonged to women, war tools were found, which showed the spirit of bravery and warfare of women among the tribes of this area. It is possible that putting weapons on the four sides of the grave was to drive away evil spirits (Negahban, 1968:315). Compared to the examples of the Iron Age, the weapons of the Iron Age have more advanced manufacturing technology, and also in terms of diversity, we have seen the emergence of different types of weapons compared to the Bronze Age. In terms of quantity, by comparing the weapons of these two periods, we realize that the production of weapons in the Iron Age has increased significantly compared to the previous period, and weapons have been obtained significantly from most of the sites of this period. This shows the increase of extra-regional human tensions and shows that in the Iron Age, we are faced with increasing wealth and highly class societies and the emergence of a special class of warriors. Another difference between the weapons of these two periods is the production of iron and bimetallic weapons in the Iron Age (Muscarella, 1964:133). Among the other uses of weapons in the Iron Age was its use in ritual, religious and burial ceremonies, which itself speaks of deep human beliefs at that time to win with weapons and war in all matters related to life, which is sometimes related to faith and deep beliefs. Human is tied. About ceremonial weapons and motifs carved on some weapons of this period, it can be stated as follows: there are various motifs such as human, animal, vegetable and geometric motifs on some weapons. The study of the symbolism of these motifs shows that the people of the Iron Age resorted to supernatural power to overcome their fears and terrors in the battlefields or in the face of demonic forces to rid them of evil. In nature, there are animals whose strength, courage, ferocity, and agility were discovered by man from the distant past, and by carving the images of these animals on his works, he tried to capture their power and in some way cling to these supernatural forces. It was believed to be the cause of getting rid of evil and demonic forces (Vanden Berghe, 1970.13). Animals such as the lion as a symbol of power and war, the snake as a symbol of duality (good and evil), a symbol of agility and surprise, a horse as a symbol of endurance and victory, and an antelope as a symbol of leadership and protection. Using these motifs on weapons has a certain aspect of protecting the warrior who has the weapon in the battlefields.

Figure 16- Three dagger sheaths made of silver and gold (www.mah-boubian.org)

The use of human, plant and geometric motifs also has a decorative aspect, especially geometric motifs such as squares, triangles and circles are considered as fillers and are not related to the main motif in cases that come with animal motifs. We see some of the motifs in question on weapons that are more symbolic and used as offerings and gifts. We call these types of weapons so-called ceremonial weapons. Other ceremonial weapons are weapons made of different stones, especially warheads, which according to the progress of metallurgy and metal weapon making in this period, shows that these weapons have no combat function and are mostly symbolic and ceremonial (Pigott, 1989:72) (Table 1). The art of metalworking, which has been a part of the life of the people of Iran since ancient times due to the presence of rich and abundant metal minerals in Iran. The first metal objects made by man are small hammered copper objects that date back to the first half of the fourth millennium BC. belongs to M. This period is the last Neolithic period, when man knew metal and the first metal was copper. But the history of Iran's metalworking goes back to the discovery of metal smelting in the first millennium BC. In 2700 BC, the preparations for the Bronze Age began. Gold and silver metals were discovered around 2500 BC and were used in jewelry due to their rarity, durability and use. Around 1500-2500 BC, with the discovery of tin metal, the Bronze Age began, and by combining copper and tin, craftsmen were able to achieve a more resistant raw material that also had the properties of copper. In the third millennium BC, bronze work became one of the most prominent human industries. Metalworkers of Lorestan were in contact with metalworkers of Ilam, Mesopotamia and northern Syria. Especially this communication link with Ilam has been very close. The bronzes of Lorestan are the glory of the art of metalwork and bronzework of Iran and the world.

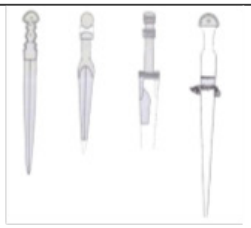
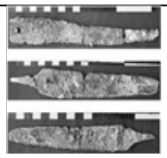
Lorestan coppersmiths have been familiar with casting and hammering. These works include horse bridle, axe, bayonet, horse mouth,arrow box cover, incense, votive pins and other objects decorated with mythical animal motifs, the combination of human face and animal body is obvious. Iron was known in Mesopotamia and Asia Minor in the first half of the third millennium BC, but due to its hardness and lack of malleability and refractoriness, it could not have a place until the transformation of iron into steel became practical. And iron was also used in making objects and tools needed by humans. And around the year 1000 BC, the making of iron tools made significant progress. The first millennium BC is very important from the point of view of archeology and the study of the cultural developments of the Iranian plateau. The beginning of this period is the discovery and familiarization of the method of metal smelting and the abundant use of iron in the early first millennium BC, which brought significant changes in the economy and life of the people living in this region. This period, like the previous period, was created following the growth of the industry and technology of the East in mining. The discovery of iron, which is a more resistant metal than copper and bronze, was a precursor to the evolution of human culture and civilization and the rise of a 4000-year-old civilization that has continued with various changes until our time and has become the present day. According to Girshman, the use of this metal in this era caused an increase in iron artifacts instead of copper. The appearance of iron caused more uninhabited and barren lands to be used for agriculture. The countries that did not have a navy were able to participate in trade exchanges with distant places by producing artefacts of this metal. In terms of technology and decorations, the metalworking art of western Iran in the first millennium BC had a tremendous impact on the metalworking art of the next era. The study of these objects is important and vital because the main foundation of the Achaemenid metalworking art is based on it and it will open a new field in the studies of ancient metalworking in western Iran. These objects are not only simple works of art, but in the existence of each of them lies a world of thoughts, beliefs, industry, art, ways of life, etc. Their unique feature is the introduction of a new government dynasty in the west of Iran in the first millennium BC, which plays a very important role in the archeological researches of the historical beginning of Iran. The method of making the studied weapons, the weapons were made in two ways: hammering and casting, most of the metal weapons are delicate objects that were prepared through casting (moulding), molding was done in three ways: open mold, closed mold, and lost wax. In an open mold, molten metal was poured into an open stone or clay mold, and after it cooled down and took shape, it was hammered to make it strong. This method was used to make weapons such as daggers and swords in the closed or double mold method. A pile of molten metal was poured into it through a hole built into the mold, and after cooling, the broken mold and the shaped weapon were taken out and processed (Moorey, 1971:66). More of this method to make war. Tools such as axes, bayonets, arrow heads and the like were used, which should have a hole for the wooden handle inside. The cavity of these weapons was formed by a die that was inserted into the mold and surrounded by molten metal. In the lost wax method, first the mold of the weapon was created in the wax, and then the wax was surrounded by a mud or sand mold so that this mold would take the shape of the weapon inside, then the molten metal was poured into the mold through an opening. From the melting of wax, the molten metal takes the shape of a weapon. This method was mostly used to make weapons that have special patterns on them (luxury ceremonial weapons). Regarding the decoration of weapons, especially bimetallic weapons, it can be said that most of the decorations were applied on their handles, the reason for this is mostly because the handle was made of bronze and bronze alloy is malleable compared to iron. And it has more shaping, so it was easier to create patterns and inlays on it. In this way, by designing and beautifying the handle and scabbard of the weapon, there was no

problem in the efficiency of its blade (Muscarella,1974:72).

Conclusion:

The societies of the Iron Age are at a higher and classier level than the period before them, both militarily and socially. The mass production of weapons in this period indicates the many conflicts of this age compared to the period before it, and these extra-regional tensions are due to the discovery of iron and the use of mineral resources and horses in areas such as the plateau along with the militarization of warring states such as Assyria. It is Iran. The studied weapons in Samatoreh (Kolmakre) government are decorative and ornamental weapons, which are considered to be a part of the government treasury and were influenced by the metalworking of the Ilam government. In these metals, the decorative aspect is more visible. The weapons of Ziviyeh and Hasanlu enclosures in the Manna government were government and consumer weapons, which had a governmental and treasury aspect, just like the treasure of Kalmakareh. The areas of Kol Tarikeh, Jobji and Arjan are the type of cemetery treasures that had a burial and ritual aspect. Due to the fact that the Ilam government was stronger than other governments, in a way, the art of metalworking of this government had more effects on the type of metalworking of Samatore governments directly and Manna government indirectly. The mass production of war weapons in this period indicates the many conflicts of this age compared to the previous period, and these extra-regional tensions are due to the discovery of iron and the use of mineral resources and horses in areas such as the Iranian plateau along with the militarization of hostile states such as Assyria. Compared to the examples of the Bronze Age, the war weapons of the Iron Age have a more advanced manufacturing technology, and also in terms of diversity, we see the emergence of different types of war weapons compared to the Bronze Age. In this period, we are witnessing a full-scale industrial revolution with the prevalence of glass-making, the expansion of metalworking, and the manufacture of gold, cement, and beautiful bronze objects. The emergence of powerful governments in the west of Iran on the one hand and the rule of Assyria in the middle of the river on the other hand are among the most fundamental developments of the Iron Age. One of the most important developments of this era was the appearance of iron metal in the manufacture of decorative objects and especially in the manufacture of war weapons. At the beginning of this research, questions were asked, and in the research process, the results and answers to the questions were determined as follows. Question 1- According to the temporal and spatial proximity of the governments of New Ilam, Samatore and Manna, which of the metallurgical arts had more influence in the manufacture of weapons?The weapons studied in Samatoreh (Kolmakre) government were of decorative and ornamental metals, which were a kind of government treasury and were influenced by the metalworking of the Ilam government. In these metals, the decorative aspect is more. The metals of Ziviyeh and Hasanlu sites in the Manna state were government treasures, which, like the Kalmakareh treasure, had a government and treasury aspect. The areas of Kol Tarikeh, Jobji and Arjan were the type of cemetery treasures that had a burial aspect. According to the study, it was found that in the art of metalwork, the New Ilam, Samatore, and Manna regimes had some kind of influence on each other, and neighboring regions such as the Urartu regimes, the Mesopotamian regimes also had an impact on the type and decorations of this art in the areas concerned. have studied Due to the fact that the Ilam government was stronger than other governments, the art of metalworking of this government had more effects on the type of metalwork of the Samatore governments directly and the Manna government indirectly. Since the Ilam government was located in the southern part of Iran and was a direct neighbor of the Samatoreh government, it had more effects on the works of Kalmakareh, and the Manna government, due to being older in terms of

Table 1. Comparison between Weapons studied

Object Name	Kalmakareh	Jobji	Arjan	Kol tarikeh	Hasanlu	Ziviyeh
Dagger Sheath						
Dagger Handle						
Dagger						
Baynet						
Arrow Box						
Bayonet						
Ax						
Mace Head						

time, was a kind of connecting link between the Ilam and Samatoreh governments with the Mesopotamian governments. and have had effects on each other's metalwork. Question 2- What are the aspects of the weapons discovered in the areas under research in each of these governments? The weapons studied in the areas of Kolmakre, Hasanlu, and Ziviyeh were of the type of government treasuries. The treasures of Arjan, Jobji and the works of Kol Tarikeh cemetery were the type of burial ritual treasures. According to the belief in life after death, in the works of jobji`s treasure, the daily necessities needed by the two queens are placed next to them. Question 3- What types of metals did the most weapons used in the construction of works in the studied governments contain? The weapons used in the studied treasures included: gold, silver, bronze and iron. Question 4- What types of weapons have been found in the researched governments? The weapons of this group included all the weapons that were used in that era for defense and attack against the enemies. The works of this group include: dagger scabbard, dagger handle, dagger, bayonet. Dagger sheaths made of gold and silver have been found in the works of this group from Ziviyeh and Kalmakareh sites. Dagger handles were found from the sites of Zaviyeh and Jubji, which are made of gold. Two daggers were found from Arjan and Jobji sites. bayonet has only been found in Kol Tarikeh area. (Table 1) Many motifs on these works, in addition to their native style, were created with the influence of neighboring civilizations (Assyrian, Ilam, Scythian, Cimmerian, Hittite, Hurrian and Phoenician) and each of the motifs has a ritual meaning and reflects Mesopotamian and Ilamite myths. is The artistic style of the treasures of Kalmakareh, Arjan, Jobji, Ziviyeh, Hasanlu is based on a rich system of symbols and the role of animal motifs is used a lot. By studying these inscriptions, it is possible to determine the social rank and ideology of the owners of this treasure. The appearance of treasure objects of Kalmakareh Cave in the late 7th and early 6th century BC. M refers to the wonderful and golden period of transition and transformation. The appearance of the treasures of Kalmakareh, Arjan, continuity, and continuity of Iranian art. introduces Ilami (henkelman,2002:14). The art of these treasures is neither primitive nor simple, these objects have an artistic style that is completely local, and also this art bears the influence of several influences, and perhaps the contribution of each of the foreign methods can be explained in it. It is said that Assyria and Ilam had the greatest influence on the art of kalmakareh. The metallurgy of western Iran in the first millennium BC has an innovative institution in proportions in which it mixes elements taken from outsiders. These works show cultural communication and trade between different regions. The artistic works of western Iran are the result of the ethnic and cultural combination of the resident immigrant tribes and the integration of different cultures and religions. As well as the composite works of art, the examples of art and religions of different ethnic groups were preserved relatively independently. Sometimes these objects are simple with a decorative pattern and sometimes they are made as a very beautiful work of art with different motifs. The way of thinking, ideas, beliefs and customs of this people have had a great influence in the creation of these motifs. They believed in various gods, and each god was considered a manifestation of nature's factors, and they displayed him in some way on their objects. Although the understanding and interpretation of Lorestan's artworks is not free of problems, it has a great contribution in understanding the old customs and customs of Iran, because without the works of Lorestan, it is not possible to interpret the works of the great civilizations of the historical era such as Medes and Achaemenids. The main uniformity seen in these objects is the use of animal shapes. Animal worship or the worship of animals has been the main element and basic material of primitive religions, and in many of its manifestations it is another form of the same totemism. This worship is because animals and beasts were considered extremely effective in human life. The followers of Ahl-Haq in Lorestan still believe in the transfer of the soul from the human body to

the animal body and vice versa, i.e. in reincarnation, and they believe in giants and demons and their ilk who sometimes take the form of animals and sometimes take the form of humans. Certainly, the great nomadic horsemen were the means of transmission of this animal-oriented art.

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