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The Civilizational and Economical Importance of Bones in the Civilization of Mesopotamia through the Archeological Discoveries.

**By**

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**Introduction**

The civilizational and economic importance of bones to discover the ancient civilizations and their stages of developments , specially the Mesopotamia is as important as pottery, cylindrical seals and even the cuneiform texts or any other important material sources that helped archeologists and researchers to study and discover important stages of the ancient civilizations. Especially if we know that most archeological techniques in many archeological sites don't state any results related to human beings or even animals skeletons and how it is important to discover the secrets of these civilization. Therefore, this paper is designed to investigate the civilizational, historical and economic importance of bones.

This study divided into two parts: the first, focuses on the civilizational and historical importance of bones; while the second discusses the economic one with giving a special focus on the developmental and civilizational significances of discovering such human beings and animals skeletons. Through they were used as raw materials in some industries in the ancient ages through what the archeological excavations in many of the sites in Mesopotamia.

This study is based on some Arabic and foreign sources to shed light on the main parts of this topic such as: History of Assyria (Olmstead:1964); Early Mesopotamia Society and Economy at Dawn of History (Post gate: 1994); Mesopotamia Civilization (Potts, D.T); Ancient Religious Thought (Taqi Dabagh) and Prehistoric Ages(Taqi Dabagh and Waleed Al-Jader), in addition to many other sources. Finally, I hope that I have achieved this work according to the applied methodology to get the intended results.

**Chapter I**

**Civilizational Importance of Bones:**

The Ancient Stone Age represents the oldest image of the presence of man on the earth, which can be dated back to more than a million year. Though, the monuments of that age are very rare, however, those who are interested in studying the monuments of man at that age, his instruments and tools that were made of stone, bone and wood beside studying and analyzing the discovered skeletons, they can determine the dominant race and its features. In addition to studying animals through investigating their skeletons that were found in the sites where that man lived. All these things gives us much more to know the types of animals that lived during that period.

The materials remnants of man who lived at that distant era like instruments and tools that were made of stone, bone and wood, in addition to the man skeletons at that era represent a complete and developed life style. It can be considered a line between the ancient stone ages and a distinguished line for each one of that ages. Furthermore, it gave the researchers an enough accuracy about these periods and the economic changes that take place during that immemorial times.

Though the great troubles that man faced at that ages to get food, he achieved a very important technology. Though the development was very slow in the Ancient Stone Age, it was very important since man moved from using natural tools to manufacturing them from stone and animal bones. Tools were made for various purposes and in different ways. This can be considered an obvious growth in the mentality of that man as development can be measured according to what man uses and makes of tools and instruments to satisfy his needs.

The type of man that lived at that immemorial ages was a (human-animal) or (man-monkey) type. The skeletons of that man, its features and the shapes of that skeletons' indicate that the sort of that man was totally different (The Era of the Extinct Man). The standing man appeared after a long time of that era; it is the man who made his tools and instruments by himself. The archeologists discovered his tools, instruments without finding anything of his skeletons. These skeletons were discovered lately in some caves to disclose the secrets, qualities and shapes of that man who lived at these ages.

Accordingly, we can say that the inability of founding bones of that type of man had been replaced by discovering the tools that he made. Furthermore, the skeletons that have been discovered lately removed the obscurity about those periods of time. Such ancient documents increasingly appeared in various forms like bones of dead people and human being skeletons. They can be dated back to (70.000 – 50.000) B.C. Like Skulls and jaws. The existence of such buried bones interprets that that the man of those ages paid attention to their dead to keep them nearby there might be religious reasons what indicates the appearance of the early beginnings of thoughts and notions of those ages man.

We have enough evidences which confirm that type of man lived in Mesopotamia during the Ancient Stone Age. These evidences were found in a number of caves like (Zerzi, Hazaz Mard, Bali Kora and the oldest one Shanidar). The stones tools related to that man were discovered beside bones of elephants and wild ibex. This, undoubtedly, confirm that these animals were much more than the human beings themselves. Previous studies stated that the remains of bones of these animals at those sites and at that specific period of time indicate that man mainly depended on the hunting of big animals to get his food.

By studying the skeletons discovered in the cave of Shanidar, it can be clear to say that man who lived at that period in the Noth of Mesopotamia was Neanderthal. By using the atomic radiation to analyze the discovered skeletons (Carbon 14) the period of that cave was determined between (60.000 -45.000) years B.C. On the other hand, the archeological excavations and the remains of animal bones at that site signify the presence of numerous types of animals lived at those caves beside the Neanderthal during the Ancient Stone Age; some types are still, while many others are extinct now.

Neanderthal is an important stage of mankind development stages where to skeletons were discovered in the cave of Shanidar belong to two adults. By studying and analyzing these two skeletons, the qualities of that type of man, who lived in caves in the North of Mesopotamia during the Ancient Stone Age, were determined. That man was short, no more than (5 feet) with a huge body, long and low skull of thick bones. The size of its brain is (1600 Cm3) which is more than the modern man's brain. The brows are thick and protruding with wide and circle quarries. The face is long and bunchy forward with a retarded front and strong low jaw without palate. Look figure No. (1)

Through the qualities that have been discovered by studying and analyzing the skeletons, it was clear that there is a difference between the Neanderthal that lived in the ancient stone ages and the man of reason that appeared lately in the (Modern stone age). The Neanderthal was shorter that the man of reason with a less developed and more complicated mind

According to the studies of bones and skeletons, the Anthropologists assure that the actual mankind (man of reason) is not of Neanderthal type. The Neanderthal could be developed to another type from which the actual mankind was generated lately. Another assumption states that the Neanderthal development might be deviated or extinct to the end of the ancient stone age without leaving any genetic marks or traces to be noticed among the living human beings.

The presence of buried skeletons in the caves where the Neanderthal lived in the North of Mesopotamia represents the first conscious practices of that type of man who buried his dead in ceremonies without looking their bodies as cadavers. The dead were buried with their tools and instruments that made of stone, bones and horns. This can be regarded as an evidence that Neanderthal believed in life after death.

Based on what has been stated above, we can say that the importance of the skeletons discovered in the cave of Shanidar lies in offering sights of the human communities in different periods by comparing shapes, qualities and features of that skeletons to determine their type.

The study of skeletons, at the beginning of 19th century, has taken a new trend in offering the civilizational, historical and scientific information. Therefore, such studies moved from being a mere description of the shape and nature of skeletons to an analysis to understand man and animal life in the ancient ages.

The development in these studies appeared clearly in studying and analyzing the buried bones discovered in the archeological sites belongs to the Modern Stone Age in the North of Mesopotamia to be sure of the authenticity of information talking about the domestication of animals to distinguish the domestic animals of not. Bones of domestic animals were accurately distinguished by applying the principle of statistics; i.e. registering the number of animal's bones that lived in a specific period of time in an archeological site. The analysis of these statistics indicates the human moved from depending on the hunting animals in the ages before domestication to a complete domination on some animals through the increase in the rate of bones of the domestic animals that were discovered in the location where The principle of statistics applied.

This principle employed in a number of archeological sites in the North of Mesopotamia especially that sites that represent the Modern Stone Age. The excavation in the village of Jermoa and Hassonah showed a number of skeletons and bones of animals. Bones of sheep and goats were more than any other animals that were discovered in the sites. This absolutely confirm that sheep and goats were the first animals that domesticated at that sites which considered the oldest agricultural villages in the ancient world.

On the other hand, the rate of zebra bones in Um Al-Dabaghia site, which was the highest percentage of the other remains of wild animals bones at that site, which can be dated back to the Modern Stone Age. This is a clear evidence that zebra lived in Mesopotamia since the ancient ages. It was considered a local animal because the remains of its bones were found in Jermo village that dated back approximately to ( 70.000 B.C). This, undoubtedly, support this idea. On the other hand, the rareness of several animals bones and skeletons at those sites; and the lateness of the appearance of such bony remains until the late periods, as is the case of horses where they found to the end of the 3rd Oor ancestry (2113-2006 B.C) and the beginning of Isen and Larsa ancestries (2017-1792). As a result, we can confirm the non-existence of horses in Mesopotamia during ancient ages period. The reason might be referred to the geographical environment that did not help in breeding such type of animals. However, the remains of this animal started appearing in the Subsequent periods starting from the Acadian era onward (2371-2230 B.C.)

As a result, there is a civilizational and historical importance for bones especially the animals bones that can be seen as one of the most important evidences of domestication in Mesopotamia. Further, it can be considered as a great material evidence that cannot be ignored to discover the significances of the Modern Stone Age in the archeological site where human being lived. There are some difficulties that researchers and archeologists faced to distinguish between the bones of animals as their remains are similar to each other because they can be found fragmented with other archeological items. Accordingly, it was difficult to distinguish between the remains of goats bones to those of sheep. Archeologists tried to overcome this difficulty by depending on fingers and horns beside the experience they have in this field. The mail goats that were domesticated by Jermo inhabitants are distinguished by their smooth and twisted horns. Nowadays, this type of goats are still ranching in the North of Iraq.

Concerning sheep, the first remains of bones of this animal were found in the cave of Shanidar what confirm that this animal lived and breed in the caves of ancient human being in the North of Mesopotamia. The discovered remains of bones determine their ages in no more than one year and a half. Therefore, this site and based on discovered remains of bones represent the first stage of breeding sheep. Though the remains of sheep bones appeared in Jermo settlement, the reports of researchers pointed out that they were of wild type and not of the domesticated ones. Accordingly, if we get back to the principle of statistics, it can be clear that these remains of bones belong to the domesticated goats for the large quantity of their horns in comparison with those of the sheep. Based on this assumption, we can assure that goats were domesticated before sheep

The importance of bones and skeletons manifested in studying some archeological sites. These studies revealed that the oldest inhabitant of Mesopotamia is the Neanderthal in the cave of Shandra. It is known that Neanderthal was the first man who buried dead with respect by putting a wreath of flowers on their graves. The evidence for that is the discovered skeletons under homes in that cave. They were 9 bodies among of which two of babies. They can be dated back to about (60.000 B.C).

The Neanderthal sculpted statues of women; they were made of bones, ivory and stones where genitals were exaggerated to refers to fertility. Many of these statues appeared in the sites of Ancient Stone Ages in the North of Mesopotamia such as in the village of Jermo and Hassona. The archeologists called these statues the "Mother God". This can be seen as a clear evidence of the appearance of religious thought and its first developments in the prehistory era where man believed in the supernatural powers and Gods. Man at that era put the first form of religious believes, rituals and ceremonies to worship Gods; therefore, they sculpted their Gods of stones and bones.

On the other hand, man of prehistory had buried his dead in simple graves under homes. The discovered skeletons revealed that burring process took the fetal status in a mother's womb as the situation in Al-Dabaghiah and Hassoona villages. Many children's skeletons were discovered there; they were buried in a fetal status as the discovered skeletons showed.

Burying people in this way, as the discovered skeletons show, indicates that the man of that era created the first rituals and funeral ceremonies that we apply today. Furthermore, the nature of the discovered skeletons in the archeological sites indicates as well to the appearing of the religious thought by the man of the ancient ages.

**Chapter II**

**Economic Importance of Bones:**

Bones are considered to be a significant raw material used in Mesopotamia in fabricating tools and instruments which found in the archeological sites of ancient stone ages. Human beings at that ages used these tools and instruments in their daily life like the spoons that made of bones which were found in the settlement of Jermo. In addition, the knitting needle made of bones also found there. It is a clear evidence that man in Jermo had a good knowledge in knitting and wool yarning. Man continued in using bones to fabricate his tools and instruments until the Modern Babylonian Age (612-539 B.C) However, from the third millennium B.C. onward such tools and instruments were less used.

It can be important here to clarify that the number of the discovered bone tools are less in comparison with the other materialistic monuments. This can be referred to that bone is an organic substance which can be damaged or decomposed more than any other material things. When human beings came to know the metals during the historical ages, they decided to use them instead of bones to fabricate their tools and instruments. However, the importance of bones cannot be neglected especially for its economic importance.

Man of ancient ages exploited bones in various industries; their remains were found in pre-history ages sites like Zawi- Jami and Yarim Taih. Many peaked and sharpened instruments similar to wide knives were discovered; they could be used in wooden and leathern industries. Another type of instrument which is made of long bones with a flat part was found also; it might be used for fabricating and knitting baskets. In addition, Many another items which were also made of bones like bone tools similar to small pins and slatted stone blades were found at those sites.

Almost all discoveries did not show that Mesopotamia man used a specific animal bones rather they used all types of bones without exception, foremost and utmost bones of sheep and goats beside bones of rabbits, pigs.

Van Buren asserted that bones of wild rabbit were used in bone industries in the Modern Stone Age and the subsequent ages. This usage was clear in the stamps and Wall Sculptures. On the other hand, Moorey pointed out that Camels bones and parts of their horns were also discovered in the North of Mesopotamia but these discoveries were insignificants in comparison to their numbers. However, camels' jaws were used, instead of their bones and horns, in that manual industries that discovered lately in Nineveh. This usage continued in the Era of dynasties (2800- 2400 BC) till the Acadian Era.

In addition, Camel bones in type of tools were discovered in the royal site of Tel Asmar and Ilat. They were used as heads of (see figure No.2) and handle of domestic tools in the city of Asin. The usage of camel horns lasted till the Modern Assyrian Age (911-612 BC) in the decoration of royal palaces and fabricating furniture (46).

The usage of bones in fabricating instruments and tools became more specialized in the historical ages than the previous age. These tools and instruments were used in specific areas, for instance, in the Era of dawn of history, goat bones were used in fabricating small batons and bone needles that most researchers suggested that this usage might be dated back to the Middle and Modern Stone Ages as well as using bones as maces and knives(47). What distinguishes bone tools in the historical ages is their usage in the medical field particularly in clearing eyes, in addition to fabricating some tools which were used to eat like spoons. Some other researchers mentioned that bones were used to write on clay.

Moreover, bone tools were used to fabricate trinkets and rings in the Kashi Period (1680- 1157 BC). The biggest collection of bone items were discovered in Al-Warka'a in the South of Mesopotamia. In the Modern Assyrian Era parts of bones were used to inlay furniture and ornament horses. In the Modern Babylonian Age bones were used in decoration and inlay. This usage last in the subsequent periods where bones were used in fabricating combs.

Based on what has been stated above, the importance of bones is obvious; they were used as raw material in manual industries starting from prehistory ages through historical ages until late periods of Mesopotamia.

 **Conclusion:**

In conclusion, this study reached a number of facts and results that can be summarized as follows:-

1. Bones are archeological and material sources; they are as important as any other material sources to discover the secrets of many of the Ancient civilizations particularly the civilization of Mesopotamia in the period of recording absence.
2. The skeletons discovered in Mesopotamia enabled us to know the man type who lived on the earth, his actions and behaviors, particularly in regard to the religious beliefs and the worship of superpower through shaping them in sculptures made of bones and stones.
3. The remains of skeletons in the ancient cemeteries of the stones ages clarified the way of burying dead and the applied rituals and ceremonies which show how Neanderthal was respecting and appreciating his dead.
4. Bones and skeletons have a great civilizational and economic importance in Mesopotamia. The discovered tools made of bones and stones played an important roles to determine prehistory periods (Ancient Stone Age- Middle Stone Age- Modern Stone Age). It also determined the intervals between these Ages and the development of tools and instruments' industries that participated in determining the periods and roles of each era. It were used to determine the boarders and intervals between these ages( the Near Ancient Stone Age – Middle Ancient Stone Age – the Upper Ancient Stone Age).
5. Bones as a raw material was used in many manual industries that played a significant role to facilitate ancient man life particularly Arrows, spears, scythes and knitting needles. In the subsequent historical ages, bones usage was developed to take another trend beside metals.
6. The importance of bones in everyday human life could not be neglected even with the appearance of the alternatives in the late ages of history of Iraq where they were used as tools to ornament furniture and palaces.
7. The other thing that bone remains clarified is the different types of domesticated animals in Mesopotamia, which had lived in the ancient Iraqi environment or which had been brought from neighboring areas if their bone were not found under homes of the Ancient man.

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