SOCIAL DIFFERENTIATION IN ÇAYÖNÜ AND ABU HUREYRA THROUGH BURIAL CUSTOMS AND SKELETAL BIOLOGY

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Approval of the Graduate School of Graduate School of Social Sciences

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ABSTRACT

SOCIAL DIFFERENTIATION IN ÇAYÖNÜ AND ABU HUREYRA THROUGH
BURIAL CUSTOM AND SKELETAL BIOLOGY

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This thesis aims to investigate the social structure of Neolithic Period. To do this, both physical anthropological and archaeological data are used, and it is sought after whether burial customs and skeleton biology can be a parameter to understand social organization of a concerned area in a given time period. For this thesis the data comes from Abu Hureyra and Çayönü.

Quantified data of burial types and grave goods are used in order to create descriptive statistical graphics. Then, correspondence analysis is employed to detect statistical significance in data sets, if exists. Anthropological data is stemmed from previous researchers. On the other hand, they were still used to investigate sex and age distributions with the same tools employed before.

As a final study two settlements are compared within and with each other to chase the clues for social differentiation.

Keywords: Pre-Pottery Neolithic, Social Differentiation, Burial Customs, Skeletal Biology Correspondence Analysis

ÖZ

ÖLÜ GÖMME GELENEKLERİ VE İSKELET BİYOLOJİSİ IŞIĞI ALTINDA
ÇAYÖNÜ VE ABU HUREYRA'DA SOSYAL FARKLILAŞMA

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Bu çalışmada Neolitik Dönemde sosyal yapı ve sosyal farklılaşma araştırılmıştır. Çalışmada hem arkeolojik hem de antropolojik verilerden faydalanılmıştır; ve ölü gömme gelenekleri ve iskelet biyolojisinin bu tip bir çalışmada birer parameter oluşturup oluşturamayacağı araştırılmıştır. Çalışmanın yapılabilmesi için Çayönü Tepesi ve Abu Hureyra yerleşimlerinin verilerinden yararlanılmıştır.

Mezar tipleri ve mezar eşyaları incelenirken veriler sayısallaştırılmış ve basit grafiklerle sunulmuştur. Daha sonra Correspondence analiz yöntemi kullanılarak verilerin arasındaki farklılıklar ve benzerlikler istatistiksel olarak araştırılmıştır. Antropolojik veriler daha önce yapılan çalışmaların yeniden yorumlanmasına dayanmaktadır; ancak yine aynı istatiksel yöntemler kullanılarak yaş ve cinsiyet dağılımları incelenmiştir.

Sonuç olarak da her iki yerleşimlerin verileri hem kendi içlerinde hem de birbirleriyle karşılaştırılarak sosyal farklılaşma ile ilgili ip uçları yakalamaya çalışılmıştır.

Anahtar Sözcükler: Çanak-Çömleksiz Neolitik, Sosyal Farklılaşma, Ölü Gömme Gelenekleri, İskelet Biyolojisi, Correspondence Analiz

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CHAPTER I

INTRODUCTION

Due to the major changes that took place in the human lifestyle, the Neolithic Period in the Near East (ca 10.000-5000 BC) is considered to be one of the most significant stages of cultural history. During this long process, human beings started to experiment with domestication, as they gradually left a mobile hunter-gatherer existence. This important transition trigged many economic and social processes which are reflected in the archaeological record. Many scholars have studied the Neolithic Period in an attempt to understand its material and social conditions. These studies encompass a wide spectrum of subjects ranging from studies on architecture, pottery, small objects and burials to living customs, role of specialization, climate, subsistence and belief systems of people of the Neolithic. This thesis aims to understand the social organization of Neolithic settlements by means of the burial customs and skeletal biology.

The term "Neolithic" is a combination of the Greek words *Neos* meaning "new" and the *Lithos* meaning "stone". It was first pronounced by John Lubbock to express the new way of making stone tools (Rouzaud 1998:20). The change of the life style of the past people was very slow and the effects of this change accumulated through the prehistory (Child 1941: 13-25). In the beginning of the Neolithic Period, men gave up his nomadic life style to settle permanently, these first shelters were round in plan and consisted of wattle and daub, and they continued the hunter gatherer life style. Then they were able to develop a mixed economy which was based on agriculture as well as hunting and gathering (Esin, 1999:14). The Neolithic era points to a global change in human life. Social, economic and technologic innovations made the Neolithic Period very important. These changes also have led to social differentiation among the members of the society. However, social differentiation in early communities might have been limited. All members of the community may have held property in common. Some anthropological works indicate that (Büyükkarakaya 2004, Erdal 2004, Molleson 1994) the position of

women in agricultural communities may have declined. Men may have taken over the critical tasks of agriculture and began to monopolize the use of new tools.

In the light of this information it is very important to understand the Neolithic Period. Social organization of Neolithic communities among all is a matter that is frequently debated. The issues that deal with the questions, "whether there were any social groups in the Neolithic Period or how the social structure was" and ways to handle these are still debated. Although social stratification is not the main aim of this thesis, social complexity will be examined throughout the chapters. Since identifying social differentiation in Neolithic communities is not easy, some archaeological materials and case studies are necessary for this kind of work. In this study burial customs and grave goods from two sites Abu Hureyra and Çayönü are going to be used in an attempt to understand the social organization (fig.1). In addition to archaeological material, anthropological data have also been included, since such studies provide a great deal of information regarding human life style. After briefly introducing these settlements, burial remains and skeletal biology of these settlements will be examined in a detail. This will be done in three steps.

Firstly, the types of burials will be examined, since the differentiation of burial types and burial rituals might be related to social status of individuals. The shape and depth of a grave may have related to the social status, gender and age of person buried. It may also reflect the degree of formality in the burial rituals. The hole or pit may serve not just as a repository for the corpse but also its shape and dimension may be constructed so that echoes other contexts (Pearson 1997).

The other aspect is the grave goods. Some of the burials, both single and multiple were accompanied by small quantities of grave goods. Grave goods may include items, which belonged to the buried, or they might have been his relatives' gift to the dead. They may have served to equip the dead for the afterlife, or to prevent the dead coming back to a new life. Grave goods are usually clothing items and related equipment, containers and remains of food and drink. Quality and quantity of grave goods may give some clues on social differentiation. First, the grave goods will be categorized and then percentages of grave goods in male, compared to female and child burials will be analyzed.

The last aspect is skeletal biology; the study of human skeletons and teeth can produce much more than just the description of the physical attributes of the individuals, represented. It may provide insights into social structure and cultural values of society in which those individuals lived. The bones might reveal details of the daily life of Neolithic groups whose members had made the transition from hunting gathering to an agricultural economy. The marks of life style can be imprinted on the bones and teeth, as deformations of those. One can learn about the role of women and men in the society within the context. So this type of study might help one to understand the social organization in the society. To do this, anthropological studies will be used.

To evaluate these aspects, some simple descriptive statistics were employed so that some formal understanding can be developed. Some statistical charts were also used for a pictorial view of the data, where the data was better summarized. Some hypothesis testing procedures were used in order to compare the sites, or even zones within any site. "Correspondence Analysis" was used to understand the relationship between age and gender; and differentiation the grave goods through the strata. Finally, in the light of this information the aim of thesis has been to identifying parameters to help us understand social organization in Neolithic communities.

CHAPTER II

NEOLITHIC PERIOD

In the Near East Late Glacial had dated between the 20.000 and 14.500 BC. Climate was cold and dry (Akkermans and Glen, 2003: 10). In 20.000-18000 BC, the cold peak was 8-10 °C lower than today. Glaciers had probably formed in the mountains of the Lebanon-Anti Lebanon. The sea level in the Mediterranean was 100-120m below the present level. In 16.000 BC temperatures began to increase. And around 14.500 to 11.000 BC, Early Holocene started and precipitation increased.

The Ice Age population was very small and widespread. They mostly lived in places in the Northwest of Damascus and the Syrian Desert. It is assumed that the conditions were wetter and warmer in this period.

In the Epipaleolithic (16.000-10.000 BC) two groups were identified; Kebaran and Natufian, a division based on their tool technology (Akkermans and Glen, 2003: 20-40).

The Kebaran culture is examined in two periods. The first period is Kebaran Culture. Kebaran culture (18.000-14.500 BC) was named after a cave site in Palestine, but is a culture frequently observed in south-western Syria (fig2).

About 16000-12.500 BC, Geometric Kebaran culture was identified in Negev, Sinai, and the deserts in Southern Levant, Jordan, El Kown and Palmyra regions in Syria.

Small size occupation deposits showed that camps were not used for a long time. Geometric Kebaran was similar to Kebaran occupations in size but had much wider distribution. Geometric Kebaran was distinguished with its rectangular blades and bladelets (fig.3).

The end of the Epipaleolithic introduced the Natufian culture with significant changes in hunter-gatherer life style. They began to live in permanent settlements with substantial architecture, and they also had rich material culture. The Natufian culture was named after the discovery of Shukbah Cave in the Wadi al-Natuf in the Judean Hills. 12.500 years ago they absorbed the geometric Kebaran culture; this was a gradual transition, but not a sudden break. Although there is no clear evidence on the cultivation and domestication, Natufian people were able to control wild species to some extent (Bar-Yosef, 1993:159-175). In other words, these first permanent settlements had nothing to do with agriculture, although there may have been some control of herds of animals that, ultimately, were not domesticated.

Natufian is also examined in two periods,

• Early Natufian 12.500-11.500 BC
• Late Natufian 11.500 BC.

In Early Natufian, the pattern of settlement was similar to that of the preceeding period. The 16.000-11.000BC settlements showed certain characteristics such as low population density, small and dispersed groups and fluctuating occupation, as well as exploitation of local resources. All Natufian sites were located in the woodland, where oak and pistachio was dominant.

Some changes began to take place in the Late Natufian Period. Climate may have forced Natufians to live in a fragile, semi-arid environment. Natufians lived on the bank of the Euphrates and settlements pattern fit the Euphrates' shape. The Natufian sites are characterized by semi-subterranean structures used as workshops and dwellings (fig.4). The foundations were built of stones and wooden poles; there is no evidence of the use of mud-bricks or wattle and daub.

In this period, evidence indicates that they adopted sedentary life. Since there was an abundance of wild resources, they did not need to range over large territories. In the settlements some small finds and architecture provided clues to sedentary life, such as substantial architecture, extensive storage areas, thick cultural materials, and high

artefact densities, circular and semi-circular houses (Ain Mallaha, Nahal Oren, and Abu Hureyra) (Bar-Yosef, 1993:161).

In Natufian architecture, wood was preferred to stone. Cultural debris indicated that Natufians sites were long-lasting sites. The house mice, rats and sparrows showed that they lived in year round houses. Variety of food and gazelle hunting may have impacted continuous occupation such as in Abu Hureyra. Natufians, living as hunter-gatherers, were prelude to the appearance of the earliest farming communities of the ninth millennium.

Chipped stone was predominant, elaborate worked bone and ground-stone tools were the other types of tools, technologically lithic assemblages were standardized but typologically they were different because of their usage in different activities. They were multi-platform cores, short and wide bladelets, flakes, geometric microliths. Abu Hureyra, Ain Mallaha, el Wad finds indicated that lunets were used as arrowheads (fig.5). Silica polish of the sickle blade indicated that these were associated with cutting grass and cereals. Fishing tools, small mortars, stone bowls, grooved, whetstone, querns, grinders, pestles are other types of tools. The abundance of ground stone indicates greater reliance on wild cereals and permanence of settlements (Akkermans, 2003: 27).

Pendants, bracelet and beads made of bone and shell, were sometimes found near the skeletons. Grave goods in the burials of Southern Levant may be related to social ranking to some degree; but this issue is still subject to discussion. The art objects included in burials may be linked to ritual and ceremony (Kuijt, 1996:313-334).

There has been much speculation on the degree of complexity of the Natufian communities. In a permanence of settlement, the intensification of food collecting and objects of art and complex burial customs indicated that the degree of elaboration of the society increased (Akkermans, 2003: 28).

Between 11.000 BC and 10.300 BC, there were some changes in climate, defined as the Younger Dry during when Near East got colder and drier. There were some changes observed; a decrease in the natural production of plants, such as the cereals and a

reduction in the geographic distribution of natural stands of wild cereals. Pluvial conditions returned around 10.300 BC In the early tenth millennium small groups of people who were engaged in hunting and gathering occupied the region. Some of these groups have already chosen sedentary life. This process is known as the "Neolithic", which began in Syria in c. 10.000 BC, and lasted until about 5.300B.C. (Kuijt and Morris, 2002: 361-365).

Neolithization

The Neolithic process has two major aspects domestication and settlement. There are many theories regarding the reasons and origins of Neolithization, each seeking answers to the questions of why and how, from a different point of view.

One of these is the "Oasis Theory". According to Childe (1928; 1934) sedentism and domestication must have take place simultaneously. He developed this theory to explain domestication in terms of changing environmental conditions. According to his theory, the decrease in suitable lands for living creatures caused the contact between human and plants, and resulted in observation and understanding of them. This might have lead to domestication of plants.

Braidwood and Willey *(1962)* proposed that agriculture is the result of a long process of cultural differentiation and specialization, where the knowledge was accumulated for a long period of time through the cycle of the environmental changes.

In 1963, Binford stated that the population was not the motive of domestication, but it was a 'trigger'. When there was no room for the hunter-gatherers to move, sedentism became the solution, and the new sedentary people started to exploit the sources around, especially the aquatic ones. Binford (1968) raised the problem in a different manner. According to him the overlapping territories of hunter-gatherers led to the problem of scarce resources. The previous equilibrium was disturbed, and the population of any or some region passed the carrying capacity of that region.

Redding (1988) claimed that food production began as a need for greater resource security. The first places of domestication were the ones having severe and unpredictable fluctuations in food resources. Also the increase in population accelerated the process.

More recently, Hodder (1990) claimed that controlling the wild is a mechanism to control the society. In this view, the nature is transformed to culture by means of human action. The dominators of the Upper-Palaeolithic, sought a way to continue the domination, and this resulted in domestication.

Hayden (1993) proposed that the 'accumulators' in the society continued their tradition of gift giving and feasting to protect their accumulating status with the help of small-scale domesticated food consumed at the feasts, which was later transformed to large scale agriculture activity.

According to Bar-Yosef (1993), intensification of wild cereals resulted in sedentism, and increasing territoriality. The stress imposed upon these groups by the climate provided motivation for planting in particular territories.

According to M. Özdoğan (1997) sedentarism began long before the plant cultivation and even after cultivation, hunting continued for a while.

The theories explaining the Neolithization process, begun by Child, do not cover the process completely due to the lack of excavations at Neolithic sites. Some of these theories that explained the Neolithic process together with domestication lost their validity but generally some aspects all of the presented theories, which are supplementary for each other. After the 1960's increasing excavations carried out in North Iraq, Mesopotamia, South-eastern Turkey, and especially the Palaeolithic and Epipaleolithic Period excavations in Syria and Levant showed that sedentism began with Kebaran and Natufian cultures, sedentism was emerging before the Neolithic Period. In the beginning of the Pre-pottery Neolithic A, they were still hunter-gatherers, only in the middle of Pre-Pottery Neolithic, they were able to develop a mixed economy which was based on agriculture and hunting and gathering. In the light of this new information

many of the archaeologists developed new theories. They argued that Neolithic period had started with sedentism and domestication is an aspect that was observed later.

These theories are not discussed in detail this work, but they are very important to understand the Neolithization. The neolithization process of Syria is not independent from these discussions. The sedentary life had existed in Syria since the Natufian Period; but the reasons of this process are not clearly understand.

The Neolithic of Syria is divided into two main periods (Kuijt, 2000:7), Early and Late, each of which is in turn sub-divided into two. The traditional division falls around the appearance of pottery so that the early Neolithic is named as Pre-Pottery Neolithic (PPN) by the K. Kenyon after her excavation at Jericho (Kenyon, 1957). Different researchers examined PPN in different phases;
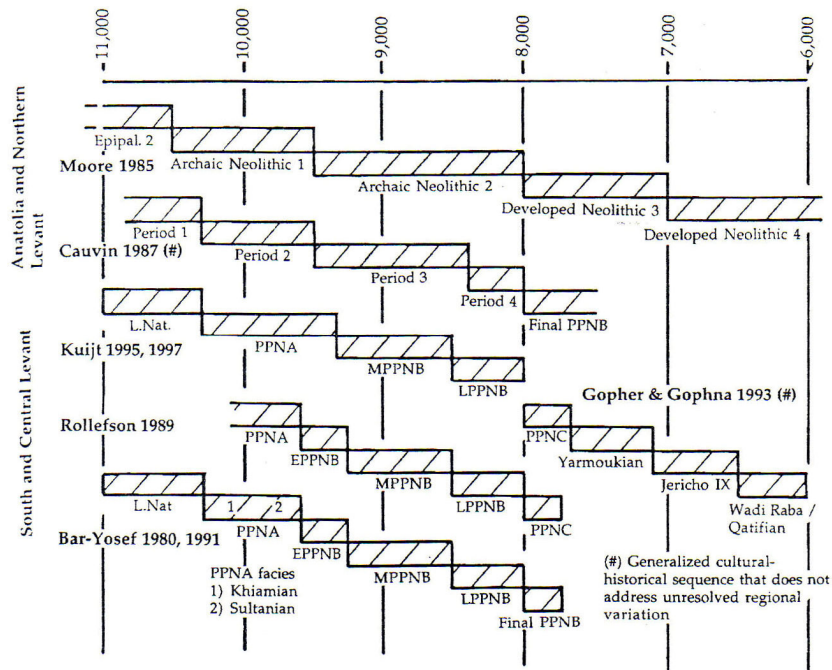
(Kuijt, 2000:9)

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Pre-Pottery Neolithic A

The character of settlements had much in common with their Epipaleolithic precedents, but there was a slow transformation from the foraging society into agriculturalist. Settlements were small and dispersed. The earliest buildings were circular, semi-subterranean and single roomed; they gradually evolved into oval and rectangular, multi-chambered buildings. They used the pisé technique. Roofs made of mud, and wooden posts lifted the roofs. Walls and floors were plastered and sometimes painted. Hearths were placed inside of the buildings. In addition to private architecture, there is a lot of evidence that indicate the existence of public buildings (Akkermans, 2003: 48) (fig.6).

The economy of PPNA was based on consumption of cereals and hunting. The finds showed that many seeds and fruits were utilized and several of them cultivated. During the PPNA, people relied on hunting such as gazelle, cattle, caprine, wild boar and fox. In contrast to evidence of cultivation, there is no clear evidence of animal husbandry (Kuijt and Morris, 2002:371).

Pre-Pottery Neolithic B

The PPNB represents the result of this slow process of development and change. By this time, people had become totally sedentary (Akkermans, 2003: 57-80). They lived in rectangular houses of mud or stone, with plaster floors and complex architectural features (fig 7). Their villages were large and they supported themselves through a combination of agriculture, herding of domesticated sheep and goat, and hunting and collecting wild plants. They had elaborate disposals of the dead and a number of aspects of their material culture suggest they were fairly involved in spirituality as well. They had a culture, which spread from southern Jordan up into the southern part of Anatolia. Items were traded or exchanged widely and the people of the PPNB were highly skilled craftsmen. This period of early village life continued throughout the 7th millennium BC, coming to an end throughout Western Asia around the beginning of the 6th millennium BC.

CHAPTER III

MATERIAL EVIDENCE ON BURIALS

Burials can be used as a source of cultural, social and demographic information, in the reconstruction of the lives of past population. Men, women, and children, or people, who have special status, could be determined through burial customs such as the form of the burial structure, and the assemblages of grave goods. And these rituals may be considered indicators of social position of these sub groups because burial customs may reflect hierarchy of age, gender and other types of classes in early agricultural communities. Thus, biology of a skeleton could help the archaeologist understand the social stratification of the Neolithic communities, since most activities, diseases and deficiencies leave their traces on bones.

In this thesis, burial customs are examined in three parts:

1. Types of Burial
2. Grave Goods
3. Physical Anthropology

1. Types of Burial

The shape and depth of a grave may relate to the social status, gender and age of the person buried. The hole or pit may serve not just as a repository for the corpse but also its shape and dimension may be constructed so that it echoes other contexts. In Neolithic Period there were two types of burials; single and multiple, and both were buried under the floors of houses and in shallow pits outside of the houses. The collective burials consisted of a number of individuals buried together, usually in shallow pits (Fig 8). Locations of burials give some clues regarding of the status of the individuals. But disposals did not have to be a burial. Sometimes they were used for display.

In this period, in addition to primary burials, secondary burials were also practiced. At this point, there were some unique treatments. For example, after flesh had been decayed, or scraped off or eaten by vultures past people separated some parts of the skeletons, especially the skulls. Separation of skulls was a common practice. Some burials consisted of only skull or skulls. Skulls were not always buried. Sometimes skulls had embellishment and embellished skulls were displayed in houses (fig.9).

In the Near East, there were different types of containments of houses. These containments had complete skeletons, parts of skeletons and skulls. This type of house is interpreted as the "house of death". The house of death may indicate some religious practices or may have social differentiation. For example, the burials in these houses might have belonged to people who had a special status in the society.

In some cases, there were unusual treatments. Some skulls were covered with bitumen, cinnabar or some other minerals. Sometimes they waited for defleshing, but in other cases, they used other methods to rib the flesh off, such as scraping. The other unusual treatment was the position of the skeletons and the way of the face of the burials. Commonly, the skeletons were put in the graves in a flexed position. But in some cases there were unique positions. For example, the skeletons were put in the graves in lined position or sitting position. The other unusual position was the way the burial faced. Generally, at the same site all of the burials faced the same direction, but sometimes, it was observed that, some burials faced different ways. This may have been explained as the special status or any other religious custom. Those unusual treatments may indicate social stratification.

2. Grave Goods

Grave goods may include items which belonged to the buried, or they might be his relatives' gifts to the dead (fig.10). They may serve to equip the dead for afterlife, or prevent the dead coming back to a new life. Grave goods include clothing and related equipment, containers and remains of food and drink, etc.
Quality and quantity of grave goods may also provide some clues on social stratification.

Burials with standard grave good assemblages can be compared in terms of wealth and then with different standard grave good assemblages. Sometimes more grave goods may be an indicator of a rich person or a person who had some special status, such as a priest.

When one investigates the social differentiation by looking at the burial customs and grave goods, it is important to make some functional analysis of the assemblages which accompanies the graves. Through this analysis, one can understand the way of life of the dead person, whether he or she was a craftsman, warrior, priest, farmer or chief, if these statuses exist. Two things here, one is the function of the grave goods in terms of burial ritual and belief, the other is the function of the goods in everyday life together with an indication that these represent activities in the life of the deceased.

In agricultural communities there were some differences between men and women according to their productivity activities. Men were mostly engaged in agricultural works. And one can understand this from the grave goods. Generally, the tools which were used in agricultural activities and hunting were found in the male graves such as the sickles in men burials at Çatalhöyük. Women were engaged in sewing, needles in female graves in Çatalhöyük, basket making, weaving, knitting and food preparation tools (Alekshin 1983:4). This can be also detected in grave goods.

The grave goods of many Neolithic communities indicate Neolithic economic activities. For example, hunting played an important role and usually men carried out this job. We can understand this from the grave goods (sling in male burials of Ali Kosh; flint arrowheads and spear heads in male graves of Çatalhöyük) (Alekshin 1983:4).

There were some differences in quantity as well. In some graves there were no grave goods but in other graves, large quantities of grave goods were found. The burials, which lacked grave goods or which are poorer than the other graves may have resulted from poor preservation or generated from the cause of dead. Nor does the existence of wealthy burials necessarily indicate presence of social differentiation. Wealthy burials of children for example, may occur for special religious reasons and may not directly relate to social class, wealthy burials of women may attest to the presence of sex discrimination (Alekshin 1983:6-8).

3. Aspect of Physical Anthropology

When types of burial and grave goods as archaeological data do not give sufficient clues for understanding social stratification, we may consult physical anthropological data.
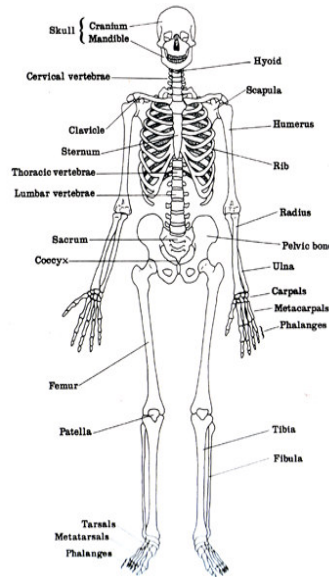
(Mays, 1998:2)

The study of human skeletons and teeth can produce much more than just the description of the physical attributes of the individuals represented.

It may provide insights into the social structure and cultural values of a society in which those individuals lived. Anthropologists state that teeth and bones are accepted to be one of most important data for interpreting lives of the past people. Analyzing human skeletons may help archaeologists understand the environmental conditions, health, diet, role specialization, economic devices, social organization, and within the light of these, the social stratification.

The bones might reveal details of the daily life of Neolithic groups, whose members faced the transition from hunting gathering to an agricultural economy. It is possible to understand the change of diet or differentiation in labour with their marks printed on the bones.

One can learn about the role of women and men in the society within this context. Thus, this type of study helps one understand the social organization in the society. The study of human remains adds another dimension to the past which the study of the material culture cannot usually provide namely, the health and physique of a population.

The study of human skeletons shows us the human condition and behaviour. Skeletal and dental tissues from archaeological sites reveal life history at both individual and population levels (Clark, 1972: 15-25).

The basic requirements of the archaeologist dictate the major aspects of work carried out by the archaeological human bone specialist:

- Age and sex structure of a population,
- Physical size and appearance,
- General stresses and strains of daily life, and
- Diseases in the past (*Paleopathology*) (Chamberlain, 1994).

Anthropologists often obtain data on health, disease, and death from ancient populations using the methods of paleopathology, the study of ancient disease. Paleopathology not only gives us a glimpse into conditions in ancient populations. It also contributes to our evolutionary perspective of disease. By looking at populations in different environments over time, we may be able to gain insights into the long-term relationship of human biology, culture, and disease.

Disease
  — Congenital
  — Acquired
      — Infections
      — Neoplasms
      — Disease due to metabolic and dietary imbalances or deficiencies
      — Arthropathies
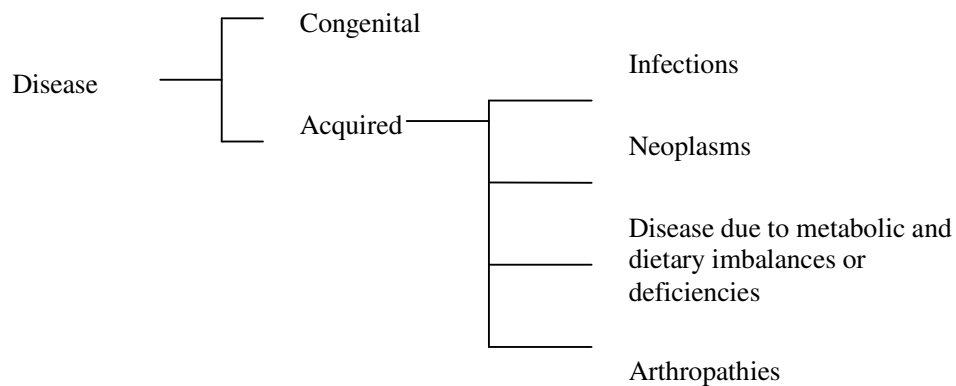
(Mays, 1998:123)

One of the most important indicators of health conditions and diet is stress. Human skeleton is sensitive to impoverished environment or poor nutrition, especially from infant to juvenile years. As a consequence of poor nutrition, population aggregation and infectious diseases, stress indicators on skeletons and teeth occurred, and as a matter of fact, many of the anthropologists try to measure these stress indicators on human skeletons (Larsen, 1997:6).

The best indicators of the diet are jaws and teeth. The anthropologist found evidence of changes that may be related to the adoption of cultivated cereal crops and possibly to the transition from a reliance on wild animals to the products of domesticated sheep and goats. When their diet had contained abrasive food, teeth were rapidly worn down and roots broken by hard participles in food and lost prematurely (Larsen, 1997: 64-65).

In the history of humankind, populations were exposed to many infectious diseases which were caused by bacteria and viruses, parasites *(worms, flukes, and amoeba)*.

Other kinds of diseases also existed which originated from poor nutrition such as *iron deficiency anaemia, rickets, and scurvy.* Pathogenic micro-organisms produce infections. Infection, takes place in soft tissues or in the bone, and results in inflammation.

Many of the diseases are caused by poor diet and dental caries and lead to early death. Dental caries also show us the eating habits of a population; for example whether the diet was carbohydrate diet or protein diet. These diseases also show us the social dynamics in the populations. For example, the caries rate that differentiates between the males and females indicate differential access to the foods and the goods, so that there might have also been differences in quality of life and health conditions. (Larsen, 1997: 64-77).

In prehistoric populations, the dental caries were more frequently observed in females than males. The differences in food consumptions may have caused this difference between the males and females. Males may have consumed more meat than females, and females may have consumed more plant and carbohydrates than males, and, this suggests a certain social organization and role distribution. Women may have been responsible for most plant gathering and agricultural activities such as planting, harvesting, and

grinding as well as food preparation. Men may have been responsible for hunting. This discrimination may have been also imprinted on the long bones, vertebra, knees and toes. It can be understood that, the marks on these bones were caused by the working position; for instance, when women were grinding they were performing the work on their knees and big toes and as a result of this deformations of toes of those and one some prints on their vertebra (Molleson, 1994: 70-75).

The skeletal remains have provided direct evidence for intensive labour activities among the people. They have provided clear indications of role specialization and division between the genders. While males were more involved in hunting and procuring the meat, the females especially were occupied in the preparation of food (Molleson 1994:70-75).

Within the same gender, there may have been some differences in dental caries, caused from different types of food consuming tradition. It might also show social differentiation, and one can understand a vague difference by looking at stress indicators on the tooth. These also show the change in the environmental conditions, so it can provide clues on the character of the population, such as gender role specialization, social organization and food consuming tradition by looking at the dental caries, bone deformations and differences in nutrition (Molleson 1994:70-75).

As a conclusion, bones might reveal details of the daily life of societies. The marks of life style can be imprinted on the bones and teeth. Thus, this type of study helps one understand the social organization in societies. It may provide insights into social structure and cultural values of societies in which those individuals lived.

III.1 Sites

III.1.1 Abu Hureyra

The archaeological site of Abu Hureyra, which is located in Northern Syria, was first excavated in 1972 and 1973. Andrew M.T. Moore supervised the excavation, shortly before the site was flooded by the reservoir (Lake Assad) for the Tabqa Dam (Moore 2000:10) (fig.11).

Abu Hureyra was located in the valley of the Euphrates River in modern Syria. It was inhabited between c. 11.500 in 7.000 BP in radiocarbon years (Table 1). The village was founded by a group of hunter and gatherers who adopted agriculture in c. 11.000 BP, becoming the first known farmers in the world. Following the development of farming, the population grew and the village of Abu Hureyra expanded until it became one of the largest settlements of its age in the Middle East (Moore 2000:10).

Abu Hureyra is significant because it documents the transition from foraging to farming in one of the world's primary centres of agricultural development. Abu Hureyra was inhabited during the transition from Pleistocene to Holocene, a major climatic event that caused significant environmental change. The village was occupied for over 4.500, an extraordinary span of continuous habitation that has provided a unique record of early village life. Because Abu Hureyra was occupied for so long, archaeologists have been able to study the impact of the changes in climate and environment on the development of a farming way of life at a single site. The adoption of agriculture had profound effects on the community of people that lived there and was largely responsible for the extraordinary growth of the village (Moore 2000:10).

Abu Hureyra was populated in two periods. The first period spanned between 11,500 in 10,000 just before the development of agriculture.

Abu Hureyra 1 (BC 11.500-11.000)

The location of Abu Hureyra was very convenient, because it was very near the surface water and had access to wild plants. It was also very close to the migration route of the gazelle. Such a good place in the region to settle was very rare. And this may have caused long-term settlement (Dow, Olewiler, Reed, 2004) (Fig12).

Abu Hureyra 1 was the settlement of a sedentary hunter-gatherer society. Their economy was based on gathering wild plants and hunting gazelle. Since they lived on the route of the gazelle migration, it was a plentiful source of economy. The people of this time lived by gathering wild seeds, such as barley, lentils, rye, hackberries, pistachios and also hunted gazelles that migrated towards the Euphrates River in spring (Felman 1994:1-4).

In Phase 1 they lived in sub-circular houses, 2-2.5 diameter, up to 0.70m deep with timber poles to hold a roof on an area of 49 m^2. Querns, stone tools, animal bones were usual small finds of this period.

In Phase 2 (11000-10400 BP), houses were tightly grouped. Hearths were placed in the houses. Stone and other tools were found frequently. They still continued the hunter gather life style.

In Phase 3 (10.400-10.000), the village got widely spaced floors. They built numerous hearths. Year round occupation is probable and a wide variety of resources, including gazelles and many different plant types were present.

Burials of Abu Hureyra 1 consisted of teeth, vertebrae and bones however; there were no complete skeletons, except a skull of a mature adult. Its intentional burial suggests ritual separation of skull from the body (Molleson 2000:301-324).

Abu Hureyra 2

The second period is Abu Hureyra 2 dated to between 9.400 and 7.000 BP (fig.13). During this time, settlers who had cultivated a variety of domesticated seeds, such as oats, barley, chickpeas, emmer and lentils, inhabited Abu Hureyra. These plants required preparation before they could be eaten, thus, needed much more labour and time (Fellman 1994:1-4) (fig.13).

Settlement was located on a low mound. In 2A, hunting gazelle was still the primary activity. There is a reduction in wild plants and greater reliance on agriculture. They found larger quantities of plant remains. Domesticated cereals were wheat, rye, and barley. Pulses were lentil and peas. Gazelle hunting continued (Fellman 1994:1-4).

In the times of 2C and 2B gazelle hunting declined. Flocks of sheep and goats increased. Moore found saddle querns in the rooms of the houses. These tools were used to grind the grains with the help of a cylindrical pestle (Moore 2000:482-484).

It was the grinding of grain for eating that was the most strenuous and labour-intensive activity of the inhabitants of Abu Hureyra. The grain had to be produced every day because the seeds would not keep once they were de-husked. The de-husking with mortar and pestle and the grinding in a saddle quern would have taken many hours. What was found with the bones indicated that long hours were spent at such labour. Querns and rubbing stones found at Abu Hureyra indicate how such wear and tear came about. The querns were set directly on the ground rather than mounted on a plinth or other raised structure, a practice followed in later times. Thus, the individual using the quern would have had to kneel (Moore 2000:482-484).

III.1.2. Çayönü Tepesi

Çayönü Tepesi is a low mound, around 4.5m high, with dimensions of approximately 160m north-south and 350m east-west, situated on the North bank of the Boğazçay stream in the Ergani Plane in Diyarbakır (Çambel and Braidwood 1980:44) (fig.14).

Discovered in 1963 by Çambel and Braidwood, a total of 16 excavation seasons took place between 1964 and 1991, with subsequent further study seasons. Çayönü is especially valuable archaeologically due to the large area uncovered by the excavation, over 8000 m^2, and the good standard of architectural preservation (A. Özdoğan 1999: 37). It is a Neolithic Period settlement that was inhabited beginning in 10.000 BC and still existed during 7.500 BC. Transformation from nomadic life to a settled pastoral life with the evidence of the architectural elements, settlement patterns, monumental buildings etc. can be seen with an uninterrupted sequence in Çayönü (Table 2).

The area excavated in Çayönü is much larger than most of the other Neolithic sites, it provides us an understanding of development in the Neolithic. Because of this reason, Çayönü has a very unique place in Anatolian archaeology (Özdoğan and Özdoğan 1998: 590).

The well-preserved architecture and the uninterrupted sequence are important to understand the Neolithization in this long period. By means of the significant collection

of finds, it is easy to understand the daily life and social organization at Çayönü (Özdoğan 1993:103-116).

In the light of this information, A. Özdoğan examined the development of Çayönü in four stages (Özdoğan, 1999:40).

- First Stage: Dated to PPNA. Began with the Round Building Phase and continued with the Grill Building g1-4 (fig. 15-16).
- Second Stage: Dated to PPNB. It existed from Grill Building g5 to Channeled Building ch1-3 (fig.17).
- Third stage: Dated to PPNB. From the Cobble Paved Buildings cp1-3 to Cell Buildings cp1-3a (fig.18-19).
- Fourth Stage: Dated to PPNC. From the Cell Buildings c3b to Large Room Buildings lr1-6 (fig.20).

First Stage

The community was hunter-gatherer. The village was constructed near the Pleistocene lake. The earliest occupation consisted of small round or semi round huts. The need for larger place to live resulted in Grill Building Phase (A. Özdoğan, 1999:43).In this stage, the economy mostly depended on hunting and gathering. They hunted boar, red and fallow deer, cattle, wild sheep and wild goat. Among the plants, wild lentils (lens) and wild vetch (vicia) were the most important (Özdoğan, 1999:45).

Second Stage

Life style differed. The village expanded. There were some developments in the specialization of handicrafts. Long distance trade was observed in this stage. Other developments were observed in ritual cermonises. The Skull Building began to be used frequently (Özdoğan, 1999:46). They still continued hunting and gathering. In the Grill Building Phase, wild emmer and wild einkorn were observed (Özdoğan, 1999:48).

Third Stage

In this stage some major innovations were observed in architecture and settlement organization. The settlement was organized according to strict rules (Özdoğan and Özdoğan, 1993: 145-160). The arrangement and function of the open spaces indicated new concepts and this was the result of controlled organization. According to Özdoğan (1999:48) the social differentiation and settlement organization started at this stage.

In the Cell Building Phase, there was increasing number of domesticated animals, especially sheep and goats (Hongo-Meadow 1999). And wild einkorn was cultivated in the earlier part of this stage (Van Zeist and de Roller, 1994:95).The increase in grinding slabs, sickles and "V" shaped artefacts indicate that cultivated plants had become more important in the diet.

Fourth Stage

In this stage, the strict rules in settlement organization had disappeared and finally, there was no longer homogeneity in the settlement plan and orientation. The clay figurines, such as sheep and goats, also disappeared but there is a remarkable increase in small clay tokens and this might show that there was a change in communal ownership to personal ownership (Özdoğan, 1999: 53). In this stage, economy fully depended upon the domesticated animals. The sheep and goat were still the most important domesticated animals (Özdoğan, 1999:54).

During the Pre-Pottery Neolithic Period, the architecture of Çayönü consisted of simple "Round Huts" which had stone bases and mud brick walls. The interesting property at Çayönü, which was absent at the other Neolithic sites, is that each layer in Çayönü presented only one type of house architecture, and all layers of Çayönü showed the same tradition.

The earlier phases were built in the same orientation. In Grill Building Phase Skull Building and domestic houses were built in NW-SE direction, Channelled and Cobble Paved Building Phase domestic houses were built in NE-SSW and Skull Building was

built in the same direction again. In the Cell Buildings Phase, domestic buildings were built on the north of the plaza in NNE-SSW direction, and the Terrazzo Building was built on the north of the Skull Building in NW-SE direction (Özdogan and Özdoğan1993:107).

The house architecture changed in all layers. Pre-Pottery Neolithic in Çayönü presented six layers and each layer had its own building type. These layers were named according to their building types. The chronology of Çayönü is based on this categorization (Özdoğan and Özdoğan 1993:103-116).

In addition to the domestic buildings, Çayönü had the so called "cult buildings" in each layer, except the Large Room Building Phase and the Pottery Neolithic Phases. All cult buildings were placed at the southeast part of the mound (Özdoğan and Özdoğan 1993:103-116).
In Çayönü, there were two types of cult buildings. The first type had no artefacts associated with it so the function is not clear. Second type is related to death. The example of this type of building is the so-called "Skull Building" (Özdoğan and Özdoğan, 1998:581-602).

At the end of the Round Buildings Phase there was found one building, which showed same architectural plan as the other buildings, but this building had some different properties and was built in the same place as the other later cult buildings. In the light of this information, Özdoğan thought that this building might have been a cult building. Skull Building also might have belonged to the Round Buildings Phase (Özdoğan and Özdoğan, 1998:581-602).

The oldest cult building that was certainly identified is the "Flagstone Building". The second is the "Bench Building" and the third is the "Terrazzo Building" (Özdoğan and Özdoğan, 1998:581-602).

With the first stage of Çayönü, especially in Grill Building Phase, the regularity of settlement was achieved with certain rules. The clear indicator of this situation is that in a certain layer, houses were constructed with similar and arranged plans and other phases

all houses were changed all together and this situation continued in all layers (Özdoğan 1993:103-116).

M. Özdoğan (1993:103-116) examined the rigid arrangements in order to understand the social model, which had its roots in the Palaeolithic Period. The big change in the settlement began with the entrance of domestic animals into the village. The domestic animals disturbed the regularity, and caused disappear of the rigid rules, and changes in burial customs and burial cults. With the domestic animal herds and decline in the hunted foods, standard settlement plan disappeared. Before, the settlement was kept clean but after domestication settlement turned into rubbish area. Especially in the Pottery Neolithic Period settlement turned to today's haphazard developing villages, in which whoever built her/his house wherever he wanted and added rooms if he needed. Now the complexity had dominated the settlement plan.

With this change the statue or cult goods declined and they began to primarily use functional goods. Surprisingly a decline in the population size was also observed and in a short time, Çayönü village got smaller. This situation was not observed only in Çayönü, but in all Neolithic sites in the Near East. The reason of this is not unclear. This may have originated from an epidemic disease, which was caused by the new style of nutrition or the new life style that depended on herdsman ship. With this new life style there must have been some changes that occurred in social structure as well (Özdoğan 1993:103-116).

III.2 Burial Remains

III.2.1. Abu Hureyra

The bones and skeletal remains divulged details of daily life at Abu Hureyra along with the social activities and details of other Neolithic cultures that had made the transition from hunting and gathering to agriculture-based economy. By comparing the changes in shapes of bones and teeth among the people of Abu Hureyra, examinations have provided ample information about their major activities and social responsibilities.

In Abu Hureyra skeletons were detected in trenches B, D, E, and G.

120 skeletons in total were found; 52 of them were juveniles (their sex cannot be identified) 50 of them were adult (26 females, 24 males). 70% of these skeletons belonged to the Neolithic Period (Abu Hureyra II). Small number of burials belonging to Abu Hureyra I was detected in Trench E (Moore-Molleson, 2000: 258-300).

Adults were small but wiry rather than robust. According to Molleson (2000:296) similarities between Neolithic and modern skeletons may have been caused by environmental conditions.

The people of Abu Hureyra were shorter than their contemporaries. The women were between 1.55-1.60m and men were around 1.62-1.65m. In Jericho, the height of the women is 1.58-m and men were 1.71m (Molleson 2000: 301-324).

In fact, they lived quite well. An analysis of the human skeletons found at the site, most of which were buried under the floors of the mud-brick houses, showed that the average lifespan approached to 60, "not much different," says Moore, "from that of 19th century rural populations in Europe" (Moore-Molleson, 2000: 258-300).

In the 2A people were above the height for their sex meaning, but this decreased in 2C. According to Molleson (2000:278) this reduction may have been caused from the change in diet.

When Abu Hureyra was inhabited, crop cultivation, cereal preparation, domestication were still quite new, so environmental and nutritional effect can be detected on the skeletons. The differences of role specialization and division of labor between Epipaleolithic and Neolithic Periods can also be detected easily. For example, the skeletal remains suggest that women carried out most of the daily food preparation (food stuff and food processing method also can be detected especially in Abu Hureyra II) (Moore-Molleson, 2000: 258-300).

Families lived in individual houses for several generations, and buried their dead where they lived so there is lineage. Remains from different trenches and stratigraphic horizons provided an indication of homogeneity of the population.

In Trench B (Abu Hureyra II) many of the burials were secondary, consisting of separated heads. According to Molleson (1994:35-48) the process of separation took place in the houses and skull or other parts of body were kept there either for display or interred (fig.21).

Abu Hureyra 1

In this phase they found teeth, vertebrae and bones. According to Moore, some corpses had been buried in the settlement and then disturbed in the subsequent reworking of the deposits. Moore believed that there must be more human remains, but they were able to excavate only small part of Abu Hureyra, so the information of Abu Hureyra is not reliable (Moore-Molleson, 2000: 256).

Abu Hureyra 2

The inhabitants of Abu Hureyra 2 buried their dead in their houses, under the floors of rooms or in the fill of rooms. Two types of burials were found; single and collective. Single burials were made in just big enough pits. In collective burials, two or more people were buried together, in a shallow pit, which were reopened again. Forty percent of burials (single and collective) have grave goods, which consists of beads, bone and flint tools (Moore-Molleson, 2000: 258-300).

Both types of burials were found often incomplete. Bones were placed tightly together, sometimes placed in a cloth bag or on a mat (fig.22). They perpetrated the body for burials like this way; corpses were exposed to the air until the flesh decayed and then they separated some parts of the skeleton especially the skulls. Some burials consisted of skulls with few or no bones. It is common burial practice in Abu Hureyra 2 (Moore Molleson, 2000: 258-300).

There are three important burial trenches in Abu Hureyra 2 where the great amounts of skeletons were detected, Trench B, Trench D and Trench E.

Trench B

Most of the burials in Trench B come from the Phase 8 building. In this building there were two burial locations. One was Pit 144 under the floor of room 2 and the other was the Charnel Room. There was a group of burials in Pit 144 and consisted of 25-30 individuals. Over 50% of them were children and adolescents (Moore and Molleson, 2000: 258-300) (fig.23).

According to Moore and Molleson the presence of so many children, adolescents and young adults are unusual since they would not expect those age classes to have had the lowest mortality rates in family or community in pre-modern village (Moore and Molleson, 2000:304).

Several of these skeletons had grave goods, such as four butterfly beads, a number of beads of baked clay, turquoise beads and bone points (fig.24). These skeletons could be identified as belonging to adult females (Molleson 2000: 301-324).

Moore and Molleson (2000:280) claimed that, the people of Abu Hureyra 2 may have buried members of the same family in the same pit. Because of the rate of children and adolescents they think that in Pit 144, people may have died from an infectious disease.

The process of burials at Abu Hureyra can be understood from the skeletons at Charnel Room. There were three main types. They flexed the burials, left the flesh to decay and separated some parts of the skeletons, especially the skulls. In the Charnel Room one skull was coated with bitumen and there was an impression of a mat on it. In this room, none of the corpses had grave goods. In this room there were at least 24 skeletons, 80% of which were adults. In contrary to the other trenches and phases in Charnel Room, most of the corpses were buried in the middle of the room rather than corner or sides of room (Moore-Molleson, 2000: 258-300).

Another collective burial pit was found in the fill of room 1 of Phase 9, which replaced the Phase 8 building. This pit had 6-7 individuals (adults and juveniles). There were no incomplete skeletons.

In Phase 10 there was one unusual burial, which belonged to twelve aged people. The skeletons were covered with gypsum plaster. The surface of the plaster had been covered with cinnabar. This mineral doesn't exist in Abu Hureyra. It may have been imported from Asia Minor. Why they imported this mineral from such a long way and covered the skull is a significant issue (Moore-Molleson, 2000: 258-300).

Trench D

The same ritual was continued. First the flesh was left to decay and then the bones were gathered up. One burial pit is interesting. It had two juveniles, which were put in the pit with a rectangular plan (fig.25). And the burials in this pit included some grave goods, such as pair of greenstone pear drop beads and another pair of stone beads. The skeletal remains and grave goods indicated special treatment of these individuals (Moore-Molleson, 2000: 258-300).

Trench E

There were no mass burials; one pit had maximum one or two individuals. Many of the burials were incomplete; their skulls were buried separately. In this trench, there was one unique skull, in a small pit outside the wall of the main house of Phase 4. This skull was painted red. This type of treatment may also be an indicator of a certain role or status. Another unusual burial belonged to a woman who was buried seated upright in the grave (fig.26). This was a unique position for Abu Hureyra.

Two skeletons were buried one on top of the other in Trench E, Phase 6. One of this was a 25-year-old female, who was buried with an agate butterfly bead, a green butterfly bead and a bone tube. The other was an 18-year-old male, who had a dark green serpentine butterfly bead (Moore-Molleson, 2000: 261).

Another burial group in Trench E was found in the Center House. These burials were found in three rooms (Rooms 1, 4, 5). Cut marks on the skeletons in Room 4 indicate that the skeletons were fresh when they were cut off (fig.27). The other example is very interesting, because the skeleton was buried to the left side (Molleson 2000: 301-324).

The other unique burial belonged to a young man. He had an arrowhead in his chest cavity, and he died from this injury (fig.28). This is the only example to death by violence. May be for that reason, they buried him with the arrowhead in his chest or this burial symbolized something like bad death. (Moore-Molleson, 2000: 265).

In Phase 8 the form of settlement changed, and they also modified their burial practices. Several burials were found in the open area. The reason why such a difference in practice is observed is worth investigating. May be we can answer the question through changing economic activities. The customs of incomplete burials continued (Moore-Molleson, 2000: 258-300).

Thirty seven percent of the skeletons were buried in the corner of the room. Similar percentage is observed for the end or side of the room. Only two burials were found in the centre of the room. In Trench B, Phase 8, Charnell Room there was a different percentage. Eighty percent were found in the centre and 20% at the corner and the end of the room. The room can be interpreted as an intermediate place, where the corpses were prepared for final burial (Moore-Molleson, 2000: 272).

Some burial practices resisted change while others did not (separation of skulls). In Period 2C the majority of the individuals were buried outside of houses (Trench B Phase 10, Trench E Phase 8).

The ratio of women to men was 2:1. May be the women were found more frequently because they were buried under the floors of room. Molleson claimed that men might have been buried elsewhere in the settlement depending on their working area.

Some of the burials, both single and collective, were accompanied by small quantities of grave goods consisting of beads, stone tools and bone. Animal bones were found in a few graves (horn cores of cattle and caprine and caprine jaws). Ornaments were usually found with women and it might show a distinction of gender in burials. There was only one exception, 18-year-old young man was found with serpentine butterfly bead and a 25 year old woman had an agate and green stone butterfly bead. Forty-four percent of PPN burial 2A-2B had a grave good. In 2C there were no grave goods (Moore-Molleson, 2000:258-300).

Perinatals and infants were buried with little ceremony but older children and adults were buried with complex rites and their burials were delayed, since they were accepted as members of the society. In Levant and Asia Minor there were same delayed burials at Mureybit Phase III, Tell Aswad, Tell Ramad and Jericho (Molleson, 1994: 35).

52 juveniles were detected in Abu Hureyra, but this identification depended on isolated bones rather than complete skeletons; so that the growth pattern consists of the dental development, not skeleton.

In 2B most of the infants were recovered in Trench E. They came from Rooms 2, 4 and 5. Some of them (newborns) were found under the floors of the rooms. Others were found in disused buildings.

In Phase 8 of 2C neonates were recovered from deposits of occupation. One was found in a pit. Two of the neonates were found from Trench B associated with adult remains. Skeletons in Phase 8-9 (2B), 10 (2C) were found associated with mud brick and mud brick wall deposits in a large pit (Moore-Molleson, 2000: 258-300).

Trench E, Period 8 neonates were less clearly associated with living rooms and by end of 2B and 2C there was less concern to keep those who died near birth within the houses. The shift in burial practices correlates with the change in the layout of the settlement in period C (Moore-Molleson, 2000: 258-300).

Physical Anthropology

Children at the age of weaning are vulnerable to diseases. Both protein deficiency and cereal rich diet could lead to retardation in growth. Dental development generally is not seriously effected from weaning; indicator of growth is long bones. In Abu Hureyra when children were compared with the modern ones there was found no significant differences in nourishment, this and the lack of wear on the teeth of 2 or 3 year old children indicated that children were not weaned abruptly and the time of weaning was late (Molleson 2000: 301-324).

Enamel hypoplasia indicates change in diet. In Neolithic Abu Hureyra hypoplasia is apparent; the frequency is low about 2% throughout, with only a hint of a reduction in 2B. The lowest ratio of hypoplasia is in Trench E and the highest frequencies are in Trench B. This difference possibly shows us different living conditions (Molleson 2000:301-324).

Several deficiency diseases, such as rickets, scurvy, anaemia leave some traces on the bones; and it is possible to detect them especially in juveniles. In Abu Hureyra neither rickets nor scurvy were detected, but in a few cases iron deficiency anaemia were detected. And in one case cribra orbitali of a child (from Trench B in Phase 8) was detected exacerbated by a parasitic infection or an infantile diarrhoeal condition. Other mineral deficiencies such as of calcium and zinc are less easy to detect (Molleson 2000:301-324).

Reduction in tooth size in Palaeolithic and Early Neolithic of Levant is related to calcium lacking dietary as cereal became an important part of the diet (Smith, Bar-Yosef and Sillen 1984). In Abu Hureyra, cereal became one of the most important components of diet, but they did not find the same condition.

The best indicators of diet of adults are the jaws and teeth. In Abu Hureyra, some evidence for change in diet that may be related to adaptation of cereal crops, and switch from gazelle to the domesticated sheep and goats on the teeth and jaws was detected. In Abu Hureyra 1 and 2A Phases, features and pits on the teeth increased compared to the previous phases. This indicated that the food was both harder and coarser in the Neolithic Period. The wear patterns on the teeth showed that the Epipaleolithic food was soft and acidic (fig.29).

In 2B, people could control the damaging effects of the food and the methods of preparing them. In Late 2B, the discovery of pottery possibly had an impact on diet. Cooking might have reduced the particles in the food, which lead to wearing (Molleson 2000:258-300).

The people of Abu Hureyra were engaged in some strenuous activities, such as hunting, fabrication of mud bricks, construction of houses, and plastering of floors. According to Molleson (1994) burden on the individuals such as preparing food could be regulated and tasks varied. After the invention of cultivation, some activities were added to the daily jobs such as preparation of soil, planting the seed, harvesting the grain and pulses, and organizing their storage. Detecting these activities on the bones is not easy, because some activities, stress injury or different positions, which are taken up to perform similar tasks or variety of tasks may have had a similar effect on the muscles and bones.

In Abu Hureyra 1, there were usual activities. In this period, people had adopted the sedentary life and they went out to hunting gathering and returned their sites carrying heavy products (Moore-Molleson, 2000: 258-300).

Another important activity at Abu Hureyra 1 was the construction of houses. They lived in sub-circular houses, 2-2.5m diameter up to 70 cm deep. They constructed the houses from mudbrick and used wooden post so they had to carry wood and clay to their houses. The transportation process required considerable effort and these types of efforts left their traces on the bones (Moore-Molleson, 2000: 258-300).

Anthropologists easily detect effort, which was caused by carrying loads, building or any other hard activities. In Abu Hureyra, Molleson found some changes on the shape of the vertebrae of young adults and adolescents, and these must have been caused from labour, which necessitated physical power (Molleson, 1994:27). *Spondylolisis* in young adult skeletons' in Trench B was also detected, and according to Molleson it was caused by load bearing.

It was also suggested that the inhabitants carried loads on their head. The vertebral bodies of the cervical spine were curved, providing a buttressing support for the neck, which must be the result of carrying heavy loads (fig.30). In some cases, degenerative changes of the cervical vertebrae may have caused the injury, when carrying load (Molleson 1994: 25-30).

In Abu Hureyra 1, there were 2 querns found in-situ, and according to the excavators they were used on the ground and not raised on any material. Kneeling for many hours puts strain on the toes and knees while grinding causes some deformation on the hips and the lower back. Pressure is also exerted on toes, which are curled under the foot for pushing off at the beginning of a grinding stroke. The flattening of the heads of the first two metatarsal that was observed on the foot bones from Abu Hureyra 1-2 levels were attributed to pressure on the ball of the foot. Further, articular surface of the heads of the two metatarsal was extended onto upper surface of the foot. Squatting is the position during grinding. It would have caused the plane of the proximal articulation of the toe phalanges to be more than usually inclined toward the upper surface of the foot (Molleson 1994: 25-30) (fig. 31). This type of deformation was observed mostly in females in Abu Hureyra. Women carried out most of the food preparation activities.

According to Moore and Molleson (2000: 258-300) not all the individuals were involved in food preparation. Well-made ornaments showed that there was craftsmanship. Such activities were also the consequence of the permanence of dwelling place.

There is evidence of a different kind of specialization, which was something new in human history. Some of the teeth were grooved, and these marks were similar to those found in other parts of the world among native weavers who would thread canes through their teeth while making baskets (fig. 32). Researchers suspected that, at Abu Hureyra, some of the villagers were using this "technology" to make woven sieves that could separate small stones from grain kernels (Molleson 2000:301-324).

Fortes (1970: 242-249) argued that hunting was probably the cooperative activity and meat was shared among the people according to certain rules. Every one had a share of meat even men who did not join the hunt. But women did not share the vegetables.

The genetic variation is very limited in Abu Hureyra. According to Molleson (2000) sedentism and year round occupation reduced the relationship between people of Abu Hureyra and other contemporary groups. This effected the genetic variation at the site. Because of lack of evidence, it is difficult to examine the genetic isolation in Abu Hureyra; the team used skeletons and dental data as the best source of information.

Small teeth of two individuals who were buried in the same room in succeeding phases (2-3) in trench D indicated that the members of the same family were buried in the same place, and the house was occupied by the same family in time of 2A.

A similar situation was detected in trench B. Three groups from Room 2 indicated that the members of the same family were buried in the trench. Similar teeth were recovered from the room.

The strongest evidence showing family ties was found in Trench E. In Phase 5, Room 1 there was females who had the third molar anomalies. This showed that these females were the members of the same family. And they were also related to another female buried in the equivalent room in Phase 6 and a mature adult in Phase 4 (Molleson 2000:258-301).

In 2B, the ratio of female burials is more than the male burials. The reason to have such a ratio might be the burial customs. If men and women were buried where they worked, it would be hard to find male burial because it is the settlements that are excavated totally.

The burial patterns of 2A and 2C were very similar. Neonates were recovered from the fill of the houses, not in graves, and it seems that some of the family members were disposed of elsewhere. There were a few foetuses and newborn babies (one year old). Children often died when they were weaned and began to get in contact with infective organism (Molleson 2000: 280).

In Abu Hureyra 50% of the Neolithic burials belonged to sub-adults and this condition was caused by two reasons. First of all, because finding sub-adult burials are easier than adult burials since sub-adults were buried in the domestic area. The second reason is the high birth rate. Molleson compared the mortality rate of infants (0-1 year 20%) and juveniles (2-19 years 31%) with today's' mortality rates. Result is that the rate of Abu Hureyra burials is higher than the present day hunter- gatherer groups, and similar to the third world countries (Molleson 2000: 282).

In 2A adolescent mortality got higher. The rate might have been high because they were buried in the domestic zones and so it was easy to find them. If this is the reason we might apply the same to all juveniles. However, mostly adolescents and not young juveniles were found. Also generally, this age group is the least represented group in prehistoric burials. Molleson claimed that the reason for this might be the consequences of an initiation ritual; such as a circumcision that led to death (Molleson 2000: 290). They also recovered a large number of adolescents in 2B from Phase 8, pit 144 of Trench B. Phase 9 in Trench B and 2B levels of Trench E did not contain an exceptional number of adolescents, in fact only one (Molleson 2000: 290-300).

Period 2C with the four neonates and 3 children had the highest proportion of sub adults. But the sample size is very small. Trench B and Trench E was greater than earlier periods. This may be an indication of the declining population size in 2C (Molleson 2000: 301-324).

III.2.2. Çayönü Tepesi

First Stage

In the Round Huts Phase the bodies were buried either in pits in the open area or under the floors of houses, generally lying N-S on their right sides in flexed position, sometimes surrounded by stones. Generally, burials had no gifts, however, sometimes-small red ochre pieces were scattered over and beside the bodies (Özdoğan, 1999:44).

The tradition of raising the living floors above ground level in the grill buildings must have had an effect on the burial practices, and the existence of the first Skull Building might be the result of this necessity (Özdoğan, 1999:46). The most significant building that provides information on the burial customs and belief systems of the people of Çayönü is the Skull Building. Since in the last phase, approximately 70 skulls were found in the building, they called this building the "Skull Building" (Schirmer 1990: 379-381) (fig. 33).

Among the cult buildings, Skull Building is one of the earliest; there are at least 5 phases of construction, from the Round Building Phase (PPNA 8200-7400) to Cell Building Phase (LPPNB) in the 800 years. Approximately 450 burials were found in the Skull Building (Özdoğan and Özdoğan, 1998:581-602).

Çayönü sub-phases	Period	Cult Buildings
Round Building	PPNA	Earliest Skull Building (BM1c)
Grill Building	PPNA-Early PPNB	BM 1a-1b two round building
Channeled Building	Middle PPNB	BM2c early rectangular phase
Cobble Paved Building	Middle PPNB	BM2a-b-two rectangular phase
Cell Building Phase	PPNB	-

BM1c: First building phase. Because of the destructions of later building phases, only northern area survives. In this phase, Skull Building showed double walled apsidal structure. Isolated primary or secondary burials within the burnt fill of some of the round huts might belong to early Grill Building Phase (Özbek 1997). Primary burials under the "central rooms either between the grill "walls" or in the small cellular divisions, first made their appearance in the latest grill buildings of the second stage (Özdoğan, 1999:44).

Second Stage

In this stage, dead were buried under the central room or in between the walls of Grill Buildings. Both single and collective burials were laid on their right side in a flexed position, which were accompanied by red ochre pieces, ground stone objects or personal ornaments such as strings of beads as gifts. The burials, which were found in the courtyard, lay NE-SW whereas the burials between the grill walls lay E-W. In the GBb building under the plaster floor, between the grill walls a dog burial and boar skull were placed close to a male burial. (Özdoğan, 1999: 47).

Two shallow pits contained primary and secondary burials, all without any specific order. Auroch (a type of a cow) and horns were found but without any identifiable

association, all were sealed under a properly made earth floor in BM1c. End of the BM1c layer was sealed and this was a repeated process (Özdoğan 1999: 47) (fig. 34).

The second pit contained 15 individuals. One skull belonging to adult male had some cut marks. According to Françoise Le Mort et al (2000) cuts in the same length and same depth were made by an obsidian blade. These marks indicated different burial customs (fig. 35). In the burnt fill, above the floor of BM1a, there were also many individuals accompanied by various objects, including some isolated beads and flint knife (Özdoğan 1999: 47) (fig. 36)

In the first stage of Round and Grill Buildings Phases, the common burial practice was primary burial.

Third Stage

Numerous burial practices were detected in this stage. In the first half of the stage (during the Cobble Paved Building Phase), the skull building that functioned as the house of dead displayed different burial practices that may hint at presence of certain status in the society.

Aside from the skull building, pits full of human bones or isolated secondary burials mainly infants and children were by no means rare in the open areas. BM2c. BM2c has several building phases. In this phase, the building consisted of series of cells (fig. 37). Stone slabs were used to cover the rooms. The floor area was surrounded by walls in north, east and west, with a courtyard or large room to the south. (Schirmer, 1990: 380-381).

In the middle cellar, disarticulated bones and a female with new-born infant were found, there were also found some isolated stone and malachite beads, shells, and a pendant. Other cell had only one female burial. She was buried with newborn infant. The third one contained many bones (fig. 38). A skilfuly worked copper bead was recovered within this fill. It seems that in this level of the building, the western room had the priority (Özdoğan, 1999:51-52). All the cellars had human remains. In the western

cellars more than 90 skulls were oriented to either east or west with the long bones (Schirmer 1990: 380-381).

BM2b contained secondary burials without the skull, usually accompanied by gifts such as a fancy boar tusk, stone beads, etc (fig. 39). The only decapitated primary burial was laid under the pavement of the western room of BM2a. In the final building phase a total of 49 burnt skulls were recovered. More than half of them were concentrated in the east room together with some animal bones. All of them were found fallen on the floor from "shelves" and smashed under heavy debris of burnt mud brick. No artefacts were found in these cells (Croucher, 2002:1-20).

In BM2b, the Northern space was divided into 3 chambers. In BM2a, floors of the northern chambers were raised again. This change is the result of a long change reflecting the building use (Croucher, 2002:1-20).

The northern floor was always constructed of stone. Croucher (2002:1-20) claimed that using limestone was related to labour and resources, the result of large-scale community organization. Garfinkel (1987:70-72) discussed this in detail. According to him, the differential thickness of plaster floors in PPNB indicated access to resources, labour and specialization, which may reflect status, or a communal aspect. Investment in a building, structure's functions and duration may relate to sufficiency of the floor. Plasters may also be connected to ritual, sealing as it does burials and pits of human and animal remains.

Both in the Skull Building and domestic architecture in earlier Grill Buildings Phase, there was a division of space into northern and southern sections. The public area was in the southern and private was in the northern area. Northern area had raised floor, and rectangular rooms in the middle with fireplace. In the room with fire place plastered floors were in the south (Croucher, 2002:1-20).

After the abandonment of the Skull Building, Terrazzo Building was built (Schirmer, 1990:384-385). Its orientation was also the same with the Skull Building. In Çayönü, special buildings were orientated in NW-SE (Bıçakçı, 1998:143).

Cell Buildings: There seems to be a link between the architecture and the treatment of bodies. There were grave goods in the Grill and Cell Buildings, especially ground stone (Bruck 2001: 152). Ground stone is vital for production, and they are symbols of fertility and productivity. Both people and architecture may reinforce the link between death, fertility and regeneration (Croucher, 2002:1-20).

Skull Building played an important role in the social life of Çayönü. In the beginning, BM1 might have been a "unique" building for the burials. In the following second phase (BM2); some of dead must have been transferred with each renewal of the building. Some skeletal parts, especially the skulls and sometimes long bones, received special treatment. The building would have been prepared for secondary burials; this is suggested by the presence of a huge slab, "altar" and large quantities of scrap bone swept into the cellars and pits (Özdoğan, 1999:51-52).

After the "burial" of the Skull Building, the floors of the Cell Buildings were used as graves. All the early Cell Buildings (c1) have graves. The dead were buried under the floors of the NW cells or NW rooms as primary burials, either singly or collectively, close to each other. Burials, either tightly or semi-tightly flexed, were laid on their right or left side in a NE-SW or SW-NE orientation, sometimes with rich, but generally with moderate gifts. Funerary offerings of food, meat and/or plants were common. CA (west) and CX (east) buildings displayed distinct burial practices: The number of dead is greater than in other Cell Buildings, and they were buried with personal ornaments and/or artefacts made of different materials. A boar's jaw wit the tusks still in it had been carefully placed on to the clean earth over two burials in one cell of CX (Özdoğan, 1999:51-52) (fig. 40).

In the second layer of sub phase (c2) the only burial recovered was in one bench. No significant changes in mortuary practices were detected in the last layer (c3), but the type of gifts decreased (Özdoğan, 1999: 51-52).

During the Channelled Buildings Phase and in the Cobble Paved Buildings Phases, "the cult of dead" must have had much stronger significance in the spiritual life of Çayönü. The burial of BM might imply radical changes in the beliefs and taboos of the settlers. With the beginning of the Cell Buildings Phase, new concepts arose within the daily and spiritual life that must also have affected the organization of the community (Özdoğan, 1999:53).

Fourth Stage

Considering the large size of the excavated area, the absence of human remains both inside and outside of Large Room Buildings Phase indicates either that extramural cemeteries had been established, or as a speculation, there was another "Skull Building" not yet discovered. A similar tradition seems to have continued in the following Pottery Neolithic period (Özdoğan, 1999:54).

There is also anthropological research held at this Pre Pottery Neolithic site. The 626 skeletons collected in Çayönü excavations have been studied. This skeleton group provided a large variety from unborn fetus, babies, and children to adults. More than half of this Pre-Pottery settlement's population was recovered from the Skull Building. In order to analyze the skeletal remains, researchers used macroscopic, microscopic, histological, radiological, DNA and constant isotope analysis (Özbek, 1989:161-172). Apart from these scientific methods, some explanations might be cognitive thus hard to understand.

Physical Anthropology

According to this study, life expectancy in men was 37 and in women 33. Çayönü people were Mediterranean. Their nose was narrow and nose ridge was straight. Their face was narrow and long and their lower jaw was in harmony with this frame. They were svelte and frail. Mean length of women was 1.56m and men were 1.71m (Özbek 1989:161-172). Health is placed in the intersection point of the genetic structure and natural environment in which people lived. The health profile of an ancient community gives some clue of process of congruity of bio-culture.

Diseases that were observed in the teeth and jaws give information about the individuals' genetic formation, nutritional behaviours, and growth disorder. In Çayönü, the ratio of carries is %4 (fig. 41). Carries generally increase as a result of nutrition that contains greater carbohydrates. In Çayönü, the carries in the milk tooth were very few, and this indicated that carries increased with weaning. Abrasion is generally related to the type and preparation process of food. We can define the style of nutrition by means of the shape of abrasion. In Çayönü, abrasion started in 2 year old babies. This might also relate to weaning. The high rate of baby death also belongs to this age group. Abrasion is increased at age of 30 and till 40-50 all teeth of Çayönü people, both women and men were abraded (Özbek, 1994:637) (fig. 42).

Anaemia was observed especially in the babies (0-5 age) of the Çayönü. Distortion of iron metabolism in body causes some changes in the skull and long bones. Anaemia occurs because of the inefficient absorption of iron in the intestines, and this brings lack of iron in the body. Finally oxygen does not reach the tissues. Deficiency of iron decreases the resistance of the body to the microbes so to the diseases. One of the problems that occurred because of deficiency of iron in the body is a porous tissue in the ceiling of the eye socket (fig.43). Small holes sometimes join together and form a cleft. If a deformation is observed no matter what her/his age is, we can say that she/he had a disease that caused serious deficiency of iron in a definite period or had a chronic nutrition insufficiency for some time. (Özbek 2004:24-32).

In the Neolithic Period, nutrition was mainly based on cereals, which are weak in iron. Dense and permanent settlement results in an unhealthy environment with itself. This environment is an important threat to babies and the pregnant women's health (Özbek 2004:24-32).

As we all know, Çayönü reflects the so-called "*Neolithic Revolution*" very precisely. All the changes in physical environmental can be followed. Today, we know that Neolithic people were not only survivors, but much more than that with their complex social organization, beliefs, rituals, and interrelations with other Neolithic settlements. At this point, examining human adaptation to this new kind of life, problems, and diseases is also important (Özbek 2004: 42).

CHAPTER IV

ANALYSIS

In order to understand the distributions and differences in burials and grave goods from the strata of Çayönü and Abu Hureyra, some simple descriptive statistics were employed. In this way data were summarized systematically and charts were used for visual presentation of the data. The evidence that was presented in previous chapters was converted to numerical data.

IV.1 Pie Charts

Firstly, the data of Çayönü were examined. The burial data were separated into two main spatial categories, BM (Skull Building) and Domestic Area. The distribution of age and sex of burials were examined. During this examination raw data were used. The distribution of burials was examined with respect to strata. The distribution ratio of number of burials between the Skull Building and Domestic Area, the general age of death or determination of choice of burial places, was tried to be understood through these studies (Table3).

At the Skull Building, at least six phases of construction was observed, chronologically encompassing an era from the end of the Round Building Phase to the beginning of the Cell Building Phase, with approximately 450 burials. BM has 34, BM1a has 56, BM1b has 77, BM2a has 75, BM2b has 35 and BM2c has 155 burials.

The distribution of burials of BM with respect to strata of Domestic Area is as such;

-BM: Round Building Phase (r)
-BM1a-1b: Channeled Building Phase (ch-ch4)
-BM 2a-2b-2c: Cobble Paved Building Phase (cp)

Domestic Area, 17 strata with a total of 220 burials has been studied.

During the period when the BM was in use, the distribution of burials in BM and Domestic Area had comparable ratios; in the Skull Building the lowest percentage belonged to BM and in Domestic Area, the same ratio belonged to Round Building Phase. In BM1a and b the number of burials is very few; the same percentage is true for ch and ch4 in Domestic Area. In BM2a-b-c there is fluctuation in the number of burials, the same situation is true for Cobble Paved Building Phase of Domestic Area. In the Cell Building Phase of Domestic Area, in which BM was not used anymore, the number of burials has the highest percentage.

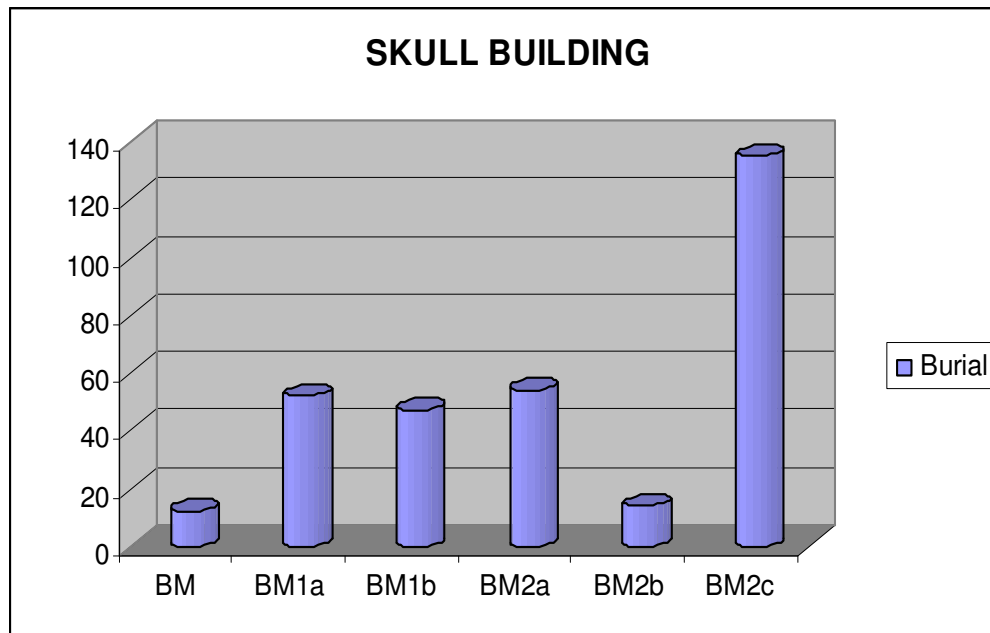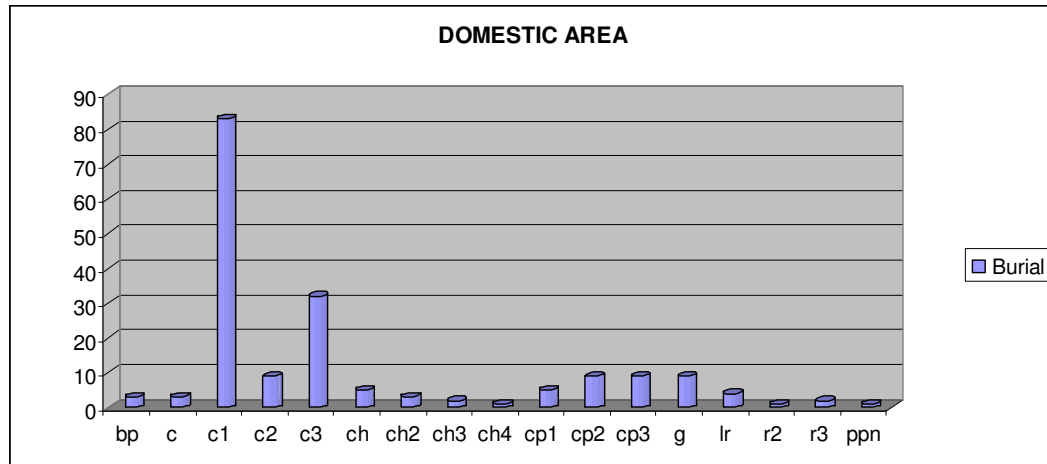Table 3.1 Total burials in the Skull Building

Table 3.2 Total burials in the Domestic Area

When looking at the number of burials, the distribution ratio between the BM and Domestic Area is very similar. It can be inferred from this that BM, which is considered to have been a special building, is not different in terms of number of burials from the rest of the site.

Skull Building

In the following analysis, burials are divided according to sex and then the sex distribution throughout ages. In terms of sex, burials were examined in four groups, male, female, unknown, and child. Unknown indicates the burials which were adult, but their sex could not be identified. Child indicates the burials that were under the age of young adult; in this group, sex could not be identified because of their age.

The numerical representation indicated that there was no foetus in the BM. Infant, child and adolescents were observed in all the strata of BM and they had high percentages. The value of male and female changed throughout the strata.

Especially in the strata which had mostly unknown burials (BM and BM2c) the number of male had the highest ratio, on the contrary, the strata which had few or no unknown

burials (BM1a, BM1b and BM2c) the number of female had the highest ratio. Other than these strata, the ratio between the male and female was nearly equal.

When we looked at the number of children, we have observed that it varied but this was observed in each stratum. The number of male, female and children are changing throughout the strata but all categories have been represented in the Skull Building. This condition indicated that the main determinant was not sex or age in choice of burial places but may be it was social status.

The number of the unknowns made it difficult to understand the ratio between the male and female in BM. The number of children was very low in this phase. All of the children were infants.
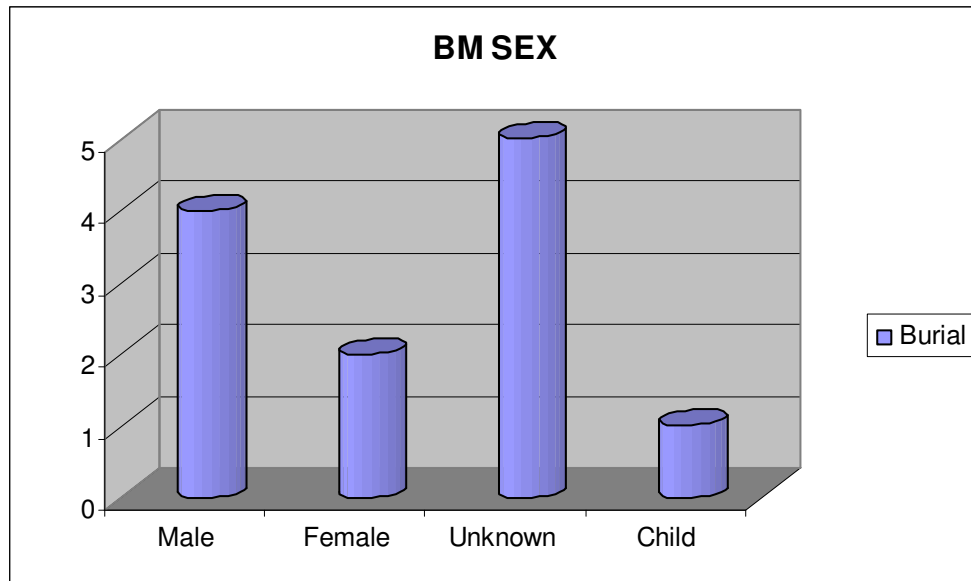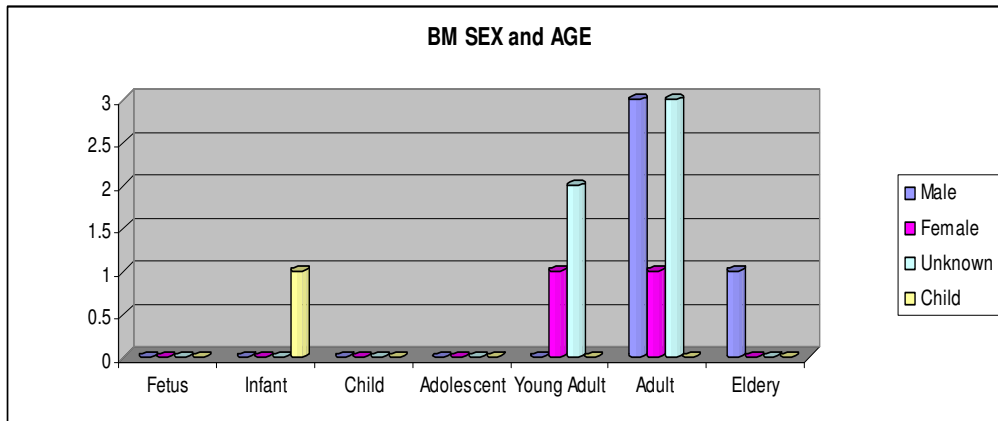
Table 4.1 Sex distribution of BM

Table 4.2 Age distribution of BM

BM SEX and AGE

In the BM1a the ratio between the male and female was very similar to BM and the number of children was more than the previous phase; it can be deduced from this that females mostly died in their adult age and some males reached an elder age. Most of the children died in their infant age; but very few adolescents and children were observed.
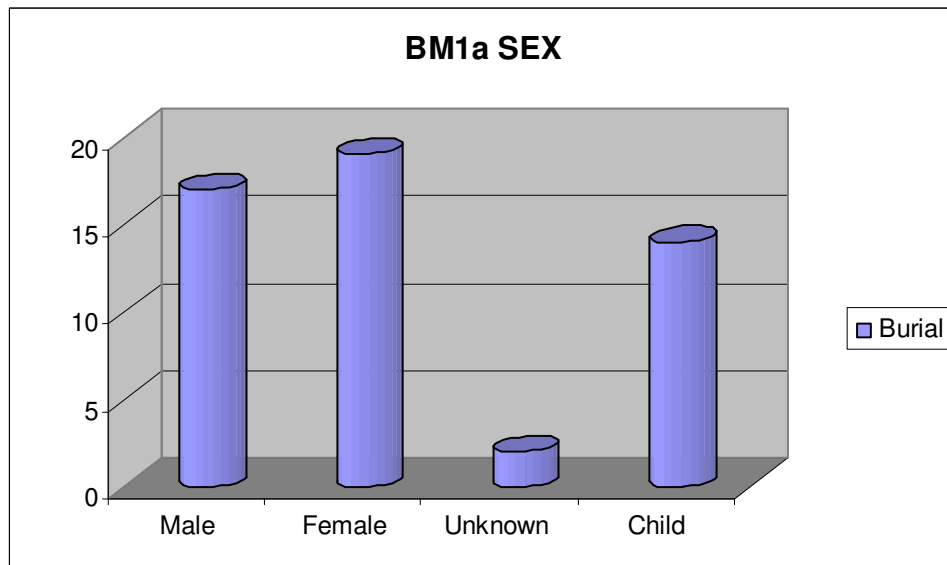
Table 5.1 Sex distribution of BM1a

BM1a SEX

Table 5.2 Age distribution of BM1a

BM1a SEX and Age

In BM1b, the number of the male and female is almost equal and there were quite a few children; the age distribution of males and females is very similar. Most of the children died in their infant age; but very few adolescents and children were found.

Table 6.1 Sex distribution of BM1b

BM1b SEX
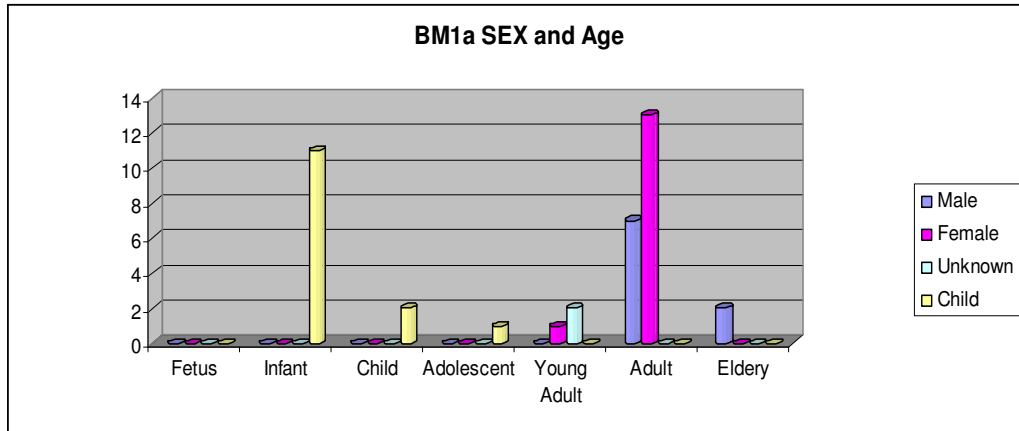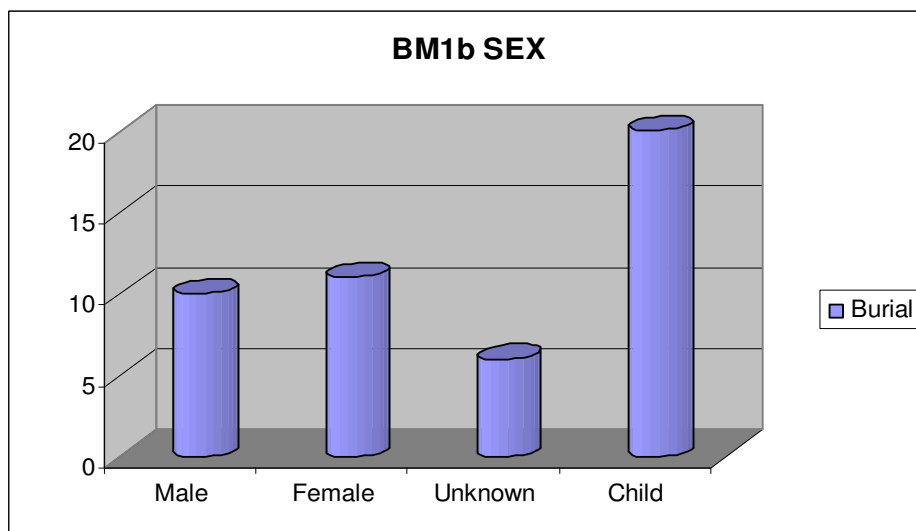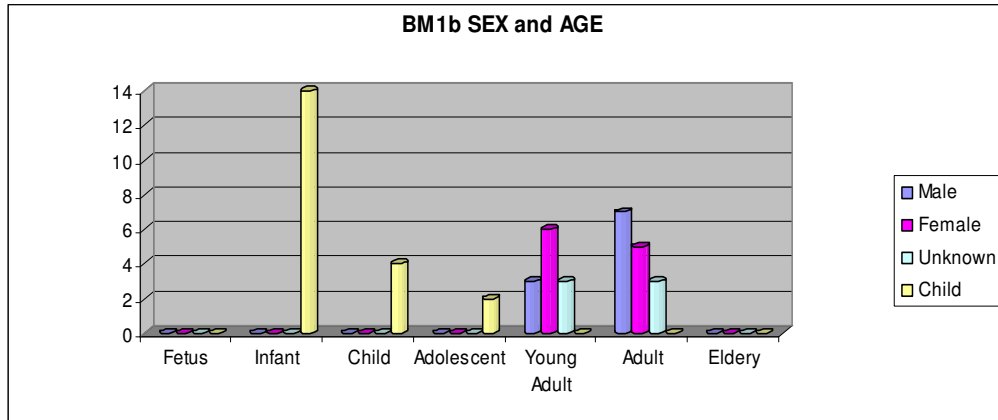
Table 6.2 Age distribution of BM1b

BM1b SEX and AGE

Bar chart showing sex and age distribution. Categories on x-axis: Fetus, Infant, Child, Adolescent, Young Adult, Adult, Eldery. Series: Male, Female, Unknown, Child. Infant Child bar ≈14, Child Child bar ≈4, Adolescent Child bar ≈2, Young Adult Male ≈3, Female ≈6, Unknown ≈3, Adult Male ≈7, Female ≈5, Unknown ≈3.

In the BM2a, the highest number of death occurred among the males. The number of females is nearly half of males; and the number of unknowns is very low. Males mostly died in their adult age, and female mostly died in their young adult age. The number of children is also very low, and they mostly died as infant or child.

Table 7.1 Sex distribution of BM2a

BM2a SEX

Bar chart with categories Male, Female, Unknown, Child and series "Burial". Male ≈32, Female ≈15, Unknown ≈3, Child ≈8.

Table 7.2 Age distribution of BM2a

BM2a SEX and AGE
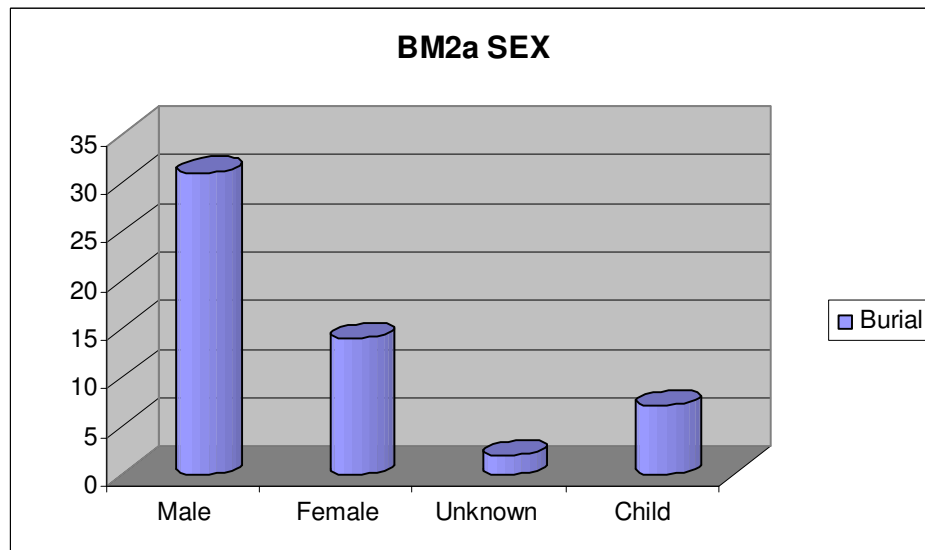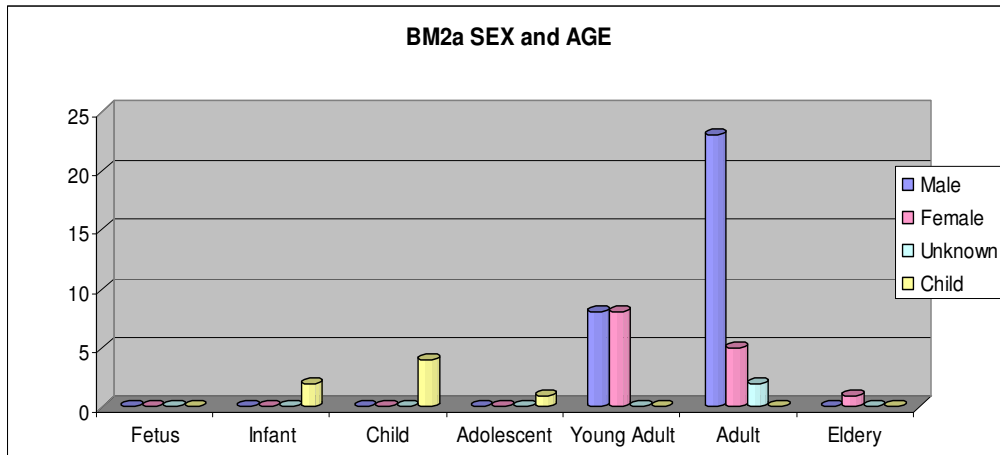
In BM2b, most of the burials belonged to females, and the number of males is very low. There are no unknown burials in BM2b. There are many child burials here. Most of them died in their infant age, in this phase some adolescents are also observed.
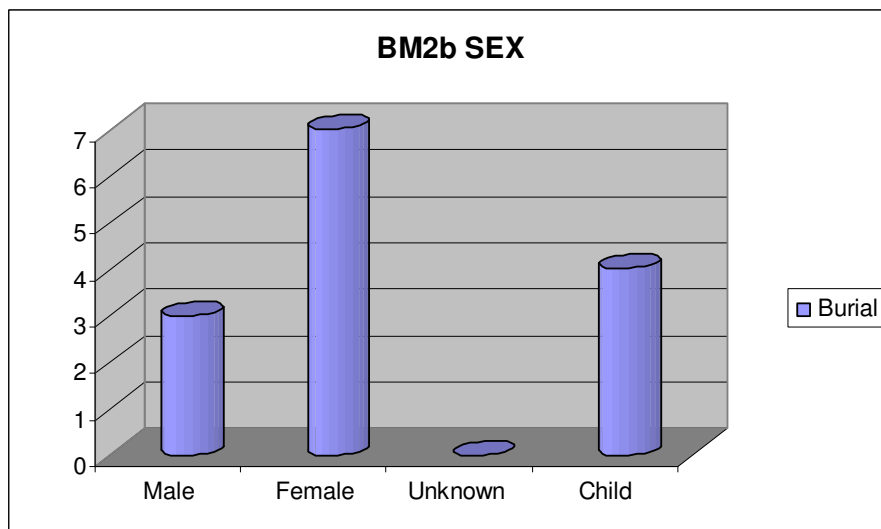
Table 8.1 Sex distribution of BM2b

BM2b SEX

Table 8.2 Age distribution of BM2b
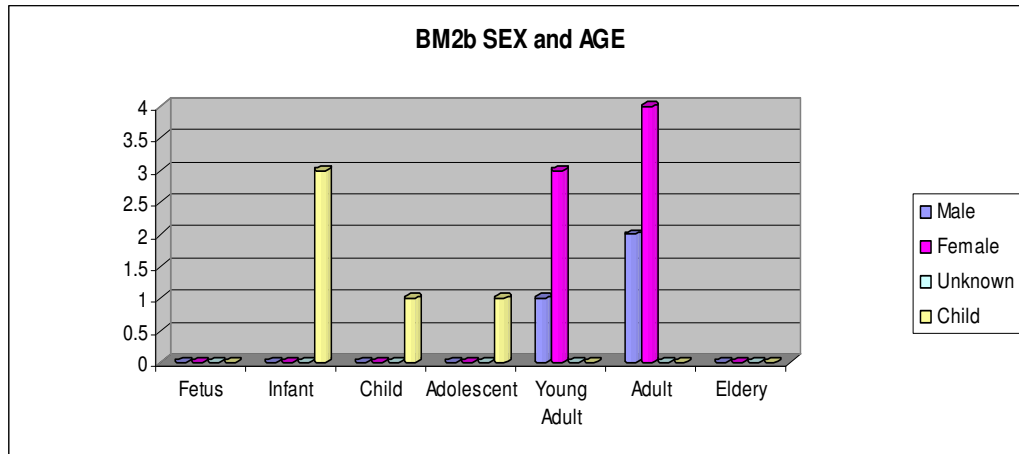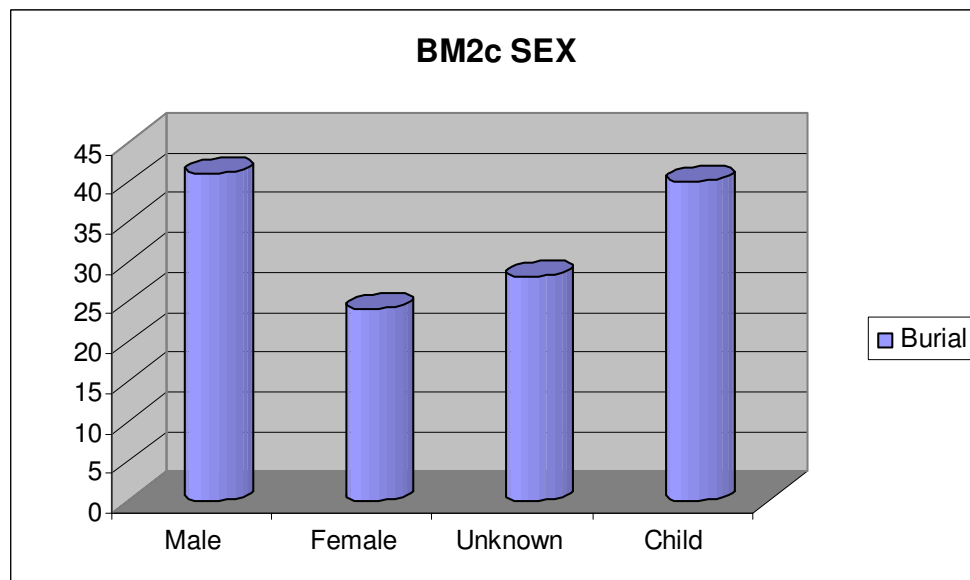

Table 9.1 Sex distribution of BM2c

Table 9.2 Age distribution of BM2c
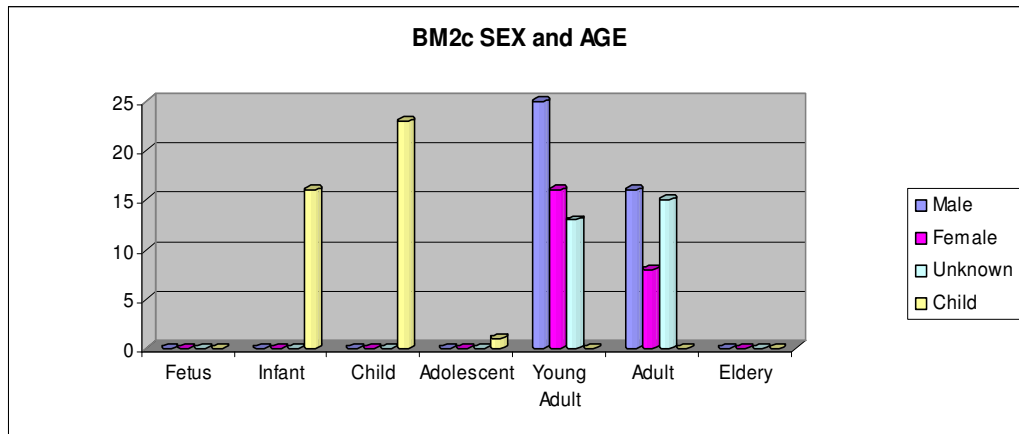
Domestic Area

Domestic Area is introduced in the same way. The series of charts were chronologically arranged. Some strata are not represented in these charts because of lack of sufficient data. One of these is the Round Building Phase; in this phase, only one adult male was found. By means of the charts, the differences between the age and sex and distribution of number of burials throughout the strata and general death age are examined.

When looking at the strata of Domestic Area, it was observed that there were some changes in the age and sex of the burials according to strata. But this change was not constant. This might have originated from the number of burials which were found during the excavation. In the Grill Building Phase, females were frequently found but some of them had died as young adults; whereas the males had lived long and none of them had died before the adult age. Infants and children had high percentages in the burials of this phase burials.

Table 10.1 Sex distribution of stratum of g
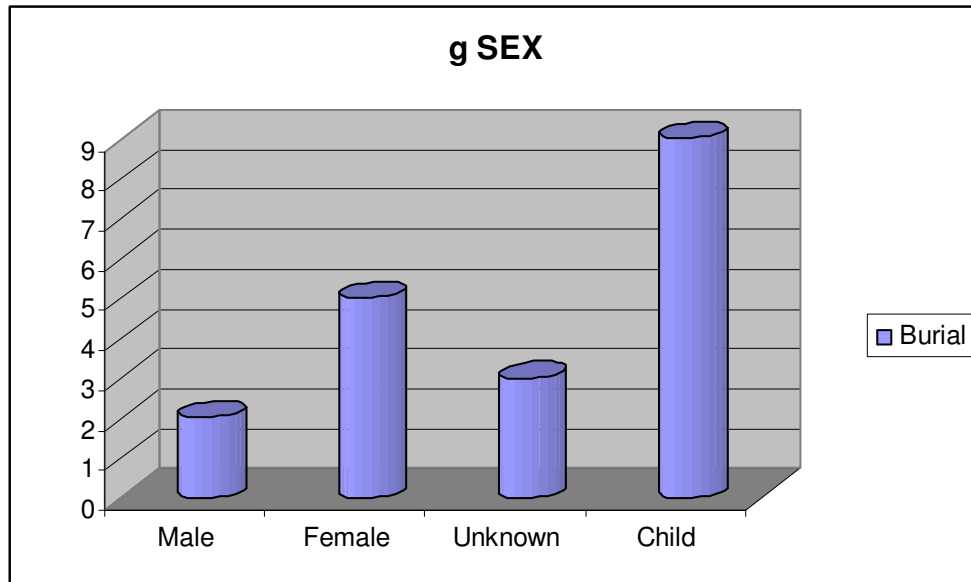
Table 10.2 Age distribution of stratum of g
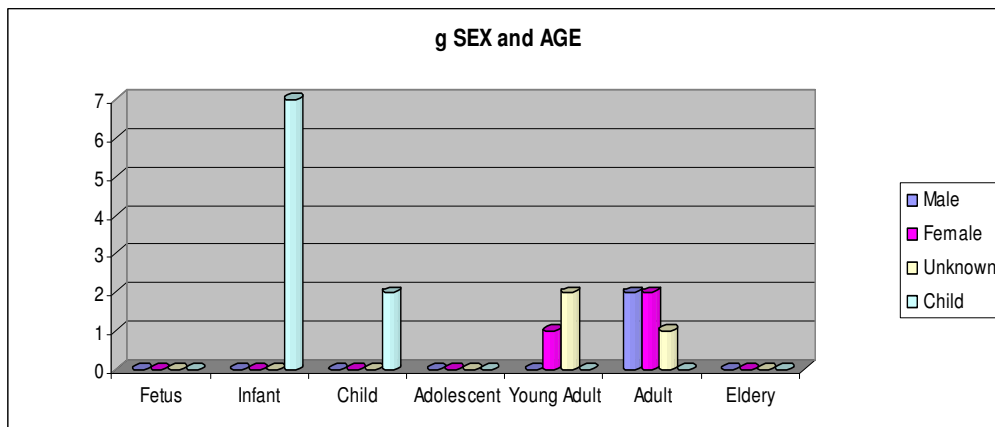
The Channelled Building Phase provides different results. In the burials of this phase, male had high percentages, but like the Grill Building Phase, none of them had died before they reached adulthood. In this phase, infants and children had high percentages too.

Table 11.1 Sex distribution of stratum of ch
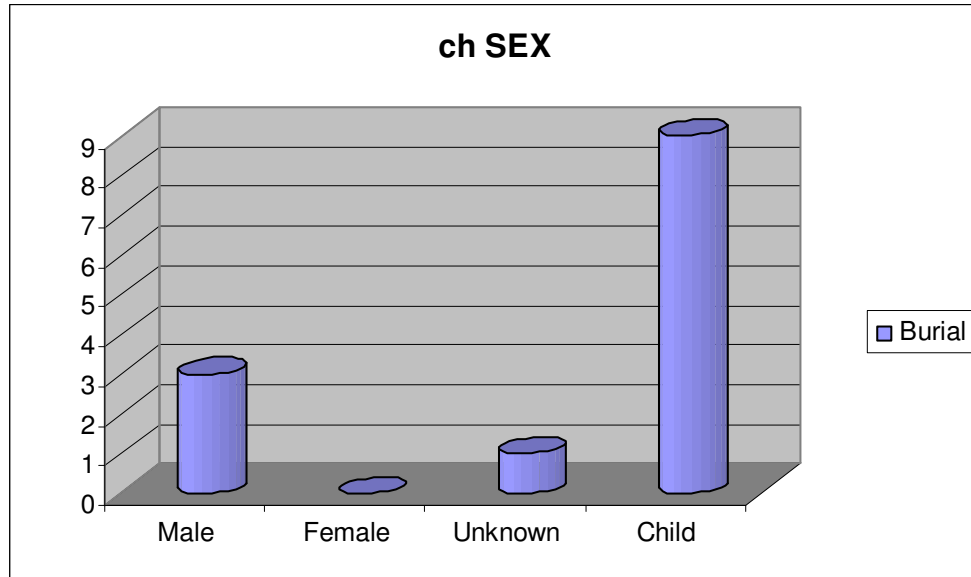
Table 11.2 Age distribution of stratum of ch
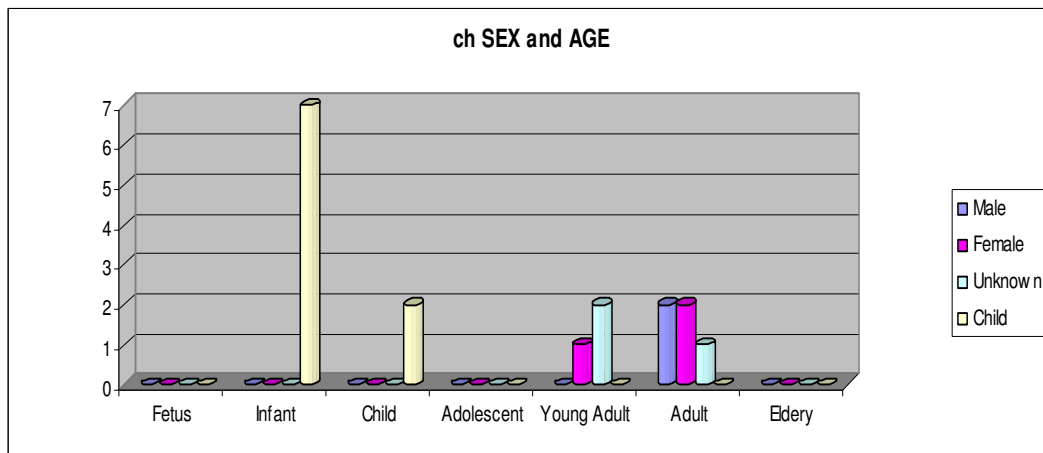
The Cobble-Paved Building Phase has some sub-phases (cp1-3), but here only cp2 and cp3 are represented because of the lack of data from the other sub-phases. In cp2, the ratio between the males and females look equal; but in this phase there were a lot of "unknown" which makes it difficult to interpret this material. But it is clear that the highest percentage belongs to the infants.

Table 12.1 Sex distribution of stratum of cp2
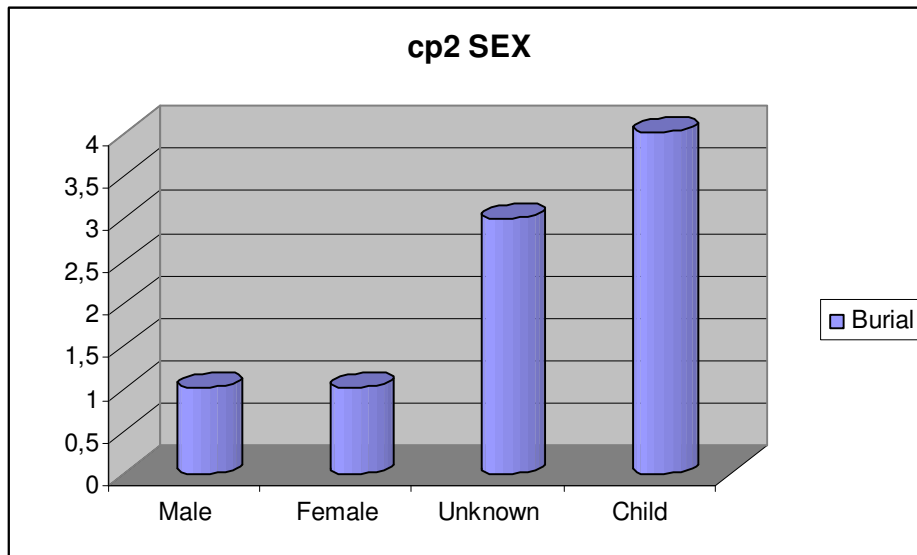
Table 12.2 Age distribution of stratum of cp2
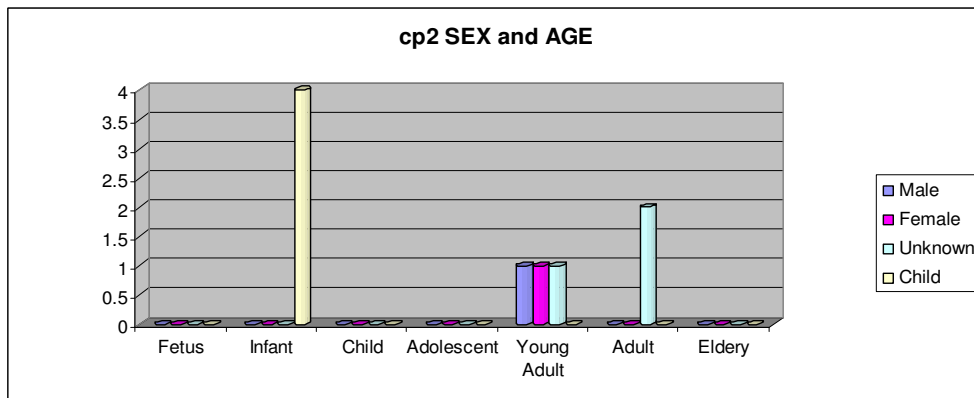
In cp3, infants and children have the highest ratio. In this sub-phase, the number of young adults and adults is very few. In these burials men has the highest percentage; however, there are many unknown burials.

Table 13.1 Sex distribution of stratum of cp3
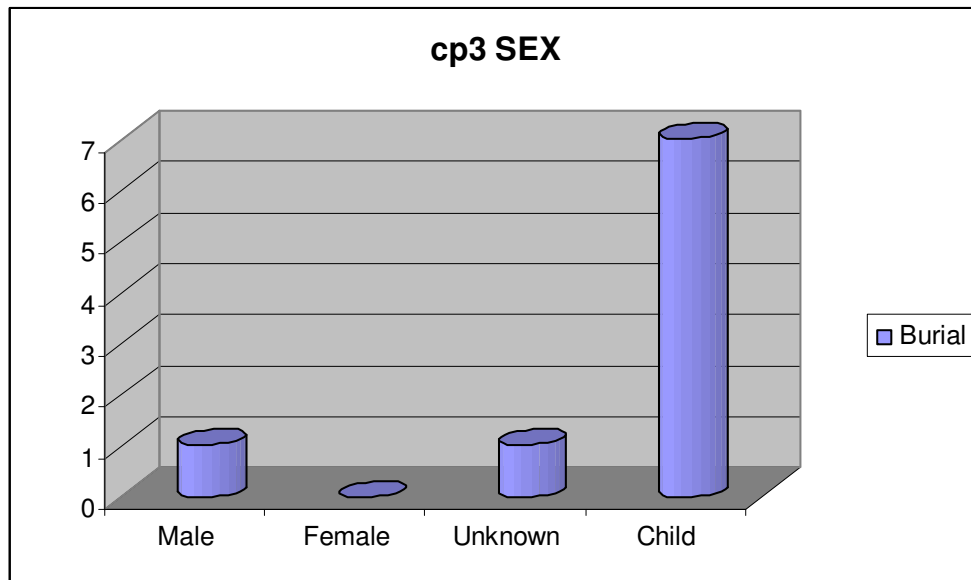
Table 13.2 Age distribution of stratum of cp3
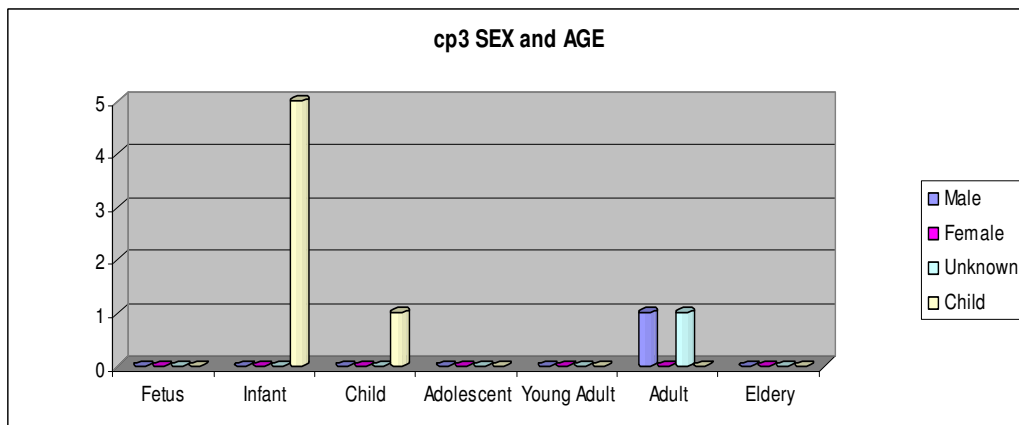
The Cell Building Phase is examined in three sub-phases (c_1, c_2, c_3). In c_1 ratio of females is nearly twice the males, and children have the highest percentage. In this phase, the foetus burials were detected.

Table 14.1 Sex distribution of stratum of c_1

c1 SEX

Male ~15, Female ~23, Unknown ~7, Child ~43 (Burial)
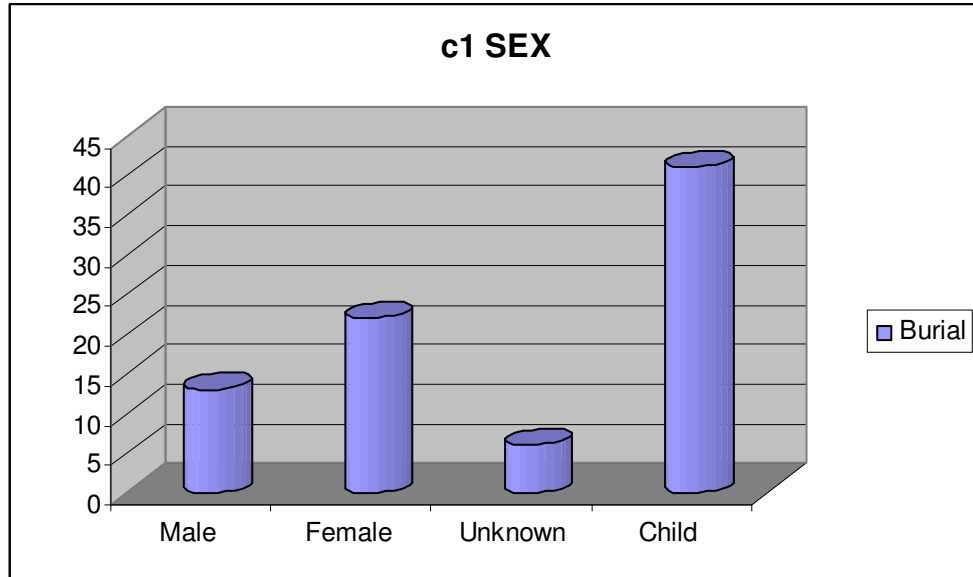
Table 14.2 Age distribution of stratum of c_1

c1 SEX and AGE

Legend: Male 1, Female 2, Unkno 3, Child 4

Categories: Fetus 0, Infant 1, Child 2, Adoles 3, Young Adu4, Adult 5, Eldery 6
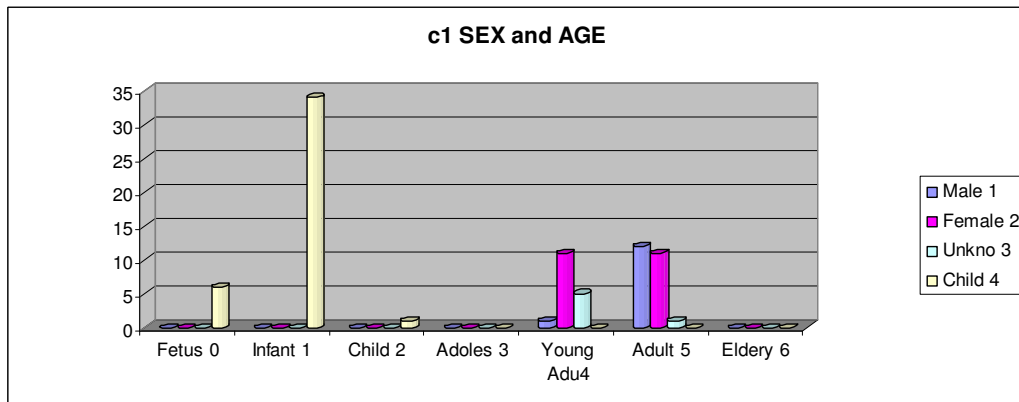
In c2, the highest percentage belongs to the males, and the ratio of the females is similar to unknowns. In c2 the number of children is very few, and there is no infant burial.

Table 15.1 Sex distribution of stratum of c2
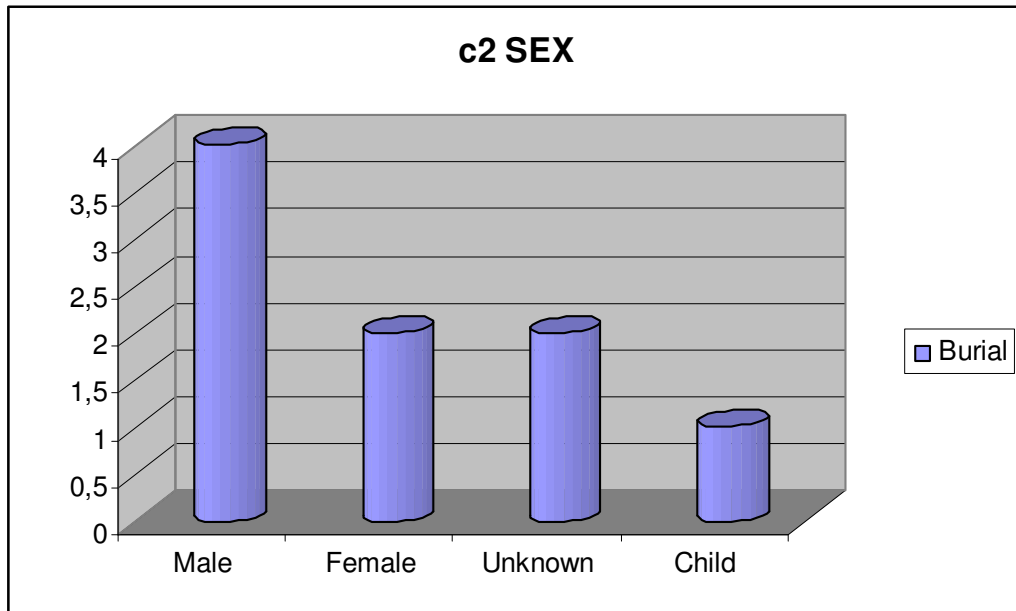
Table 15.2 Age distribution of stratum of c2
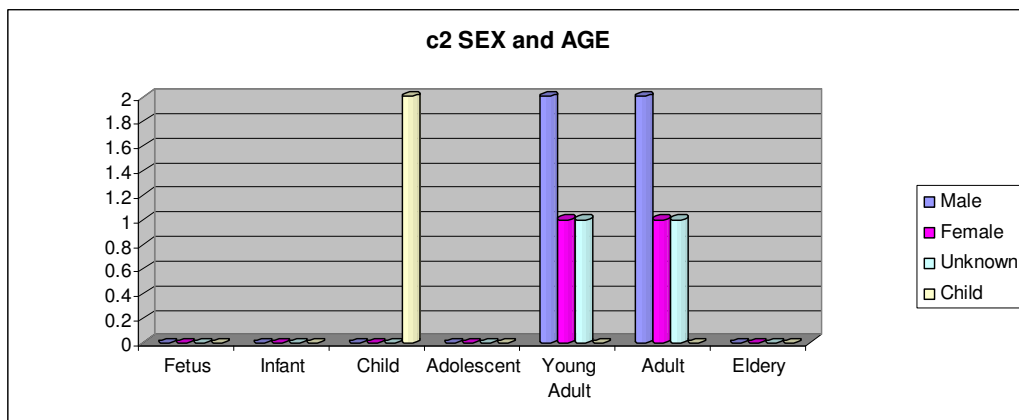
In c3, the ratio between the male and the female is nearly the same. In this sub-phase, children once more have the highest ratio. In this group, the infants have the lowest percentage. And adolescent burials are observed for the first time.

Table 16.1 Sex distribution of stratum of c3
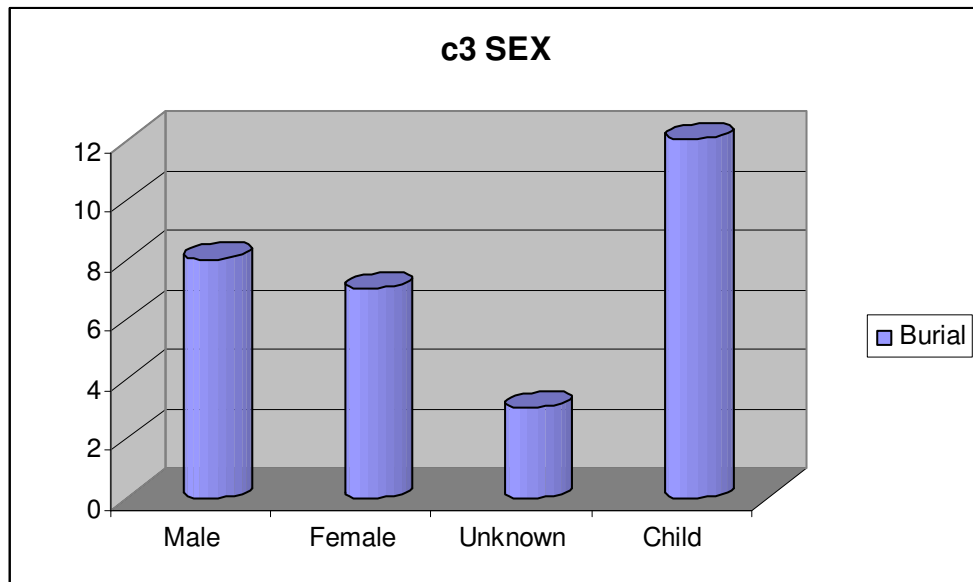
Table 16.2 Age distribution of stratum of c3
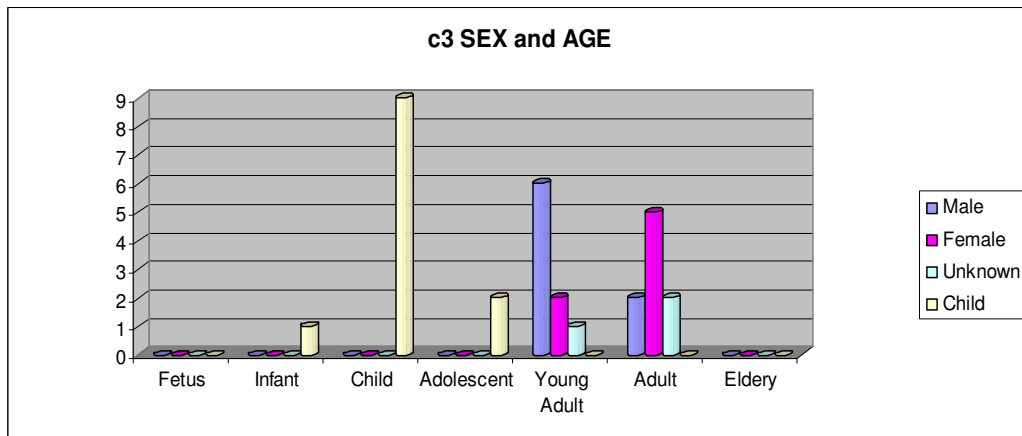
The charts indicated that foetus burials were found only in Cell Building (c1). BM was not used in this period, so the absence of foetus burials in BM can not be related to a differentiation of age during burial.

While generally children burials were foetus, this condition changed in the Cell Building Phase (c1-3). In this phase, the child burials are intensified. In male and female categories, most of the young adult burials belonged to the females. But this condition also changed against the males in the Cell Building Phase. All of these observations indicate that, there were some changes in the Cell Building Phase. These changes in burials might be explained with an increase in the domestication process and as a result changes in their diet. As it was mentioned before economy in this phase is fully depended on domesticated animals. And in this stage, Skull Building was not used.

Like in the BM, in the Domestic Area all gender and age categories are represented with a different ratio in different strata.

When the distribution of males and females is examined, no significant difference between the BM and Domestic Area can be observed. As a result, it can be understood from the charts that age and sex factors were not taken into consideration in BM.

Grave Goods

In addition to burials, distributions of grave goods were also examined in charts. These charts show distribution ratios according to male, female and child categories.

Since the objects which were found in the graves are identified as grave goods or gifts that might be related to the social statues, or activities of the person, they are very important for this study.

Sex of the buried in some of the strata of Domestic Area burials have not been identified and some only have one or two burials, so were not represented in these charts. The grave goods of BM burials are not represented either, because the burials had been put in clusters in BM and the grave goods were placed near these clusters. Therefore, it is

practically impossible to understand which types of grave goods belonged to which person.

Grave goods were examined in five categories according to their function and material:

- **P1:** Ornaments: Necklace, Bracelet, Beads, Bone Needle
- **P2:** Obsidian, Flint and Stone Tools
- **P3**: Utilization Tools: Spatula Knife, Celt, Hand Stone, Gnoove, Abraider, Pounder, Rubbing Stone, Pestle, Basalt Vesicular, Grind Stone, Chip Disk, Bone awl
- **P4:** Animal Bones: Antler and Animal Bones
- **P5:** Raw Materials: Un-worked Malachite and Stone Sphere

The grouped grave goods are examined according to male, female and child categories. Although P1 category existed in female graves, it was mostly found in male and children graves. It might explain that male and children as well as the female used the ornaments frequently. P2 category was found in all the graves, but it was also found mostly near the male graves. It can be inferred from this that, that type of grave goods were used both for females and males. P3 is mostly found near the female burials, and it indicated that females generally used this type of goods. P4 and P5 are characteristic grave goods of females.

Table 17 Grave goods distribution according to sex and age

GRAVE GOOD DISTRIBUTION
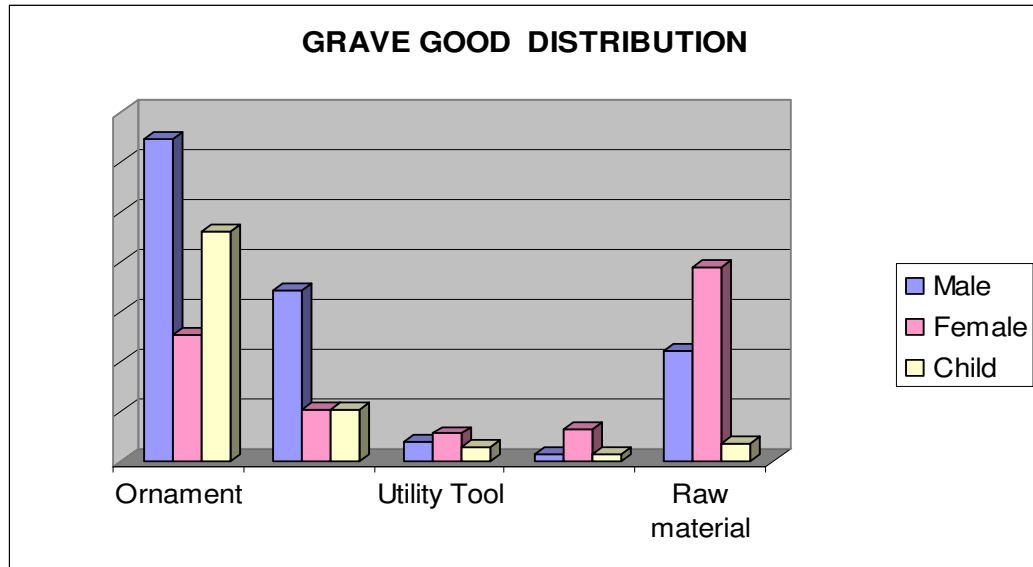
Abu Hureyra

A similar study for Abu Hureyra is rather difficult because sex identification is limited to only one phase and the age distribution is not specified for most of the phases. As result, the data of Abu Hureyra is examined in the child and adult categories.

Trench E Phase 5 is one of the Phases for which ages can be identified. In this trench, most of the burials belong to adults, and a few numbers of burials belong to children. But it is very difficult to interpret this data, since it is not possible to compare with the other strata.

Table 18 Age distribution of Trench E Phase 5

Trench E Phase 5

Legend:
- child
- adult
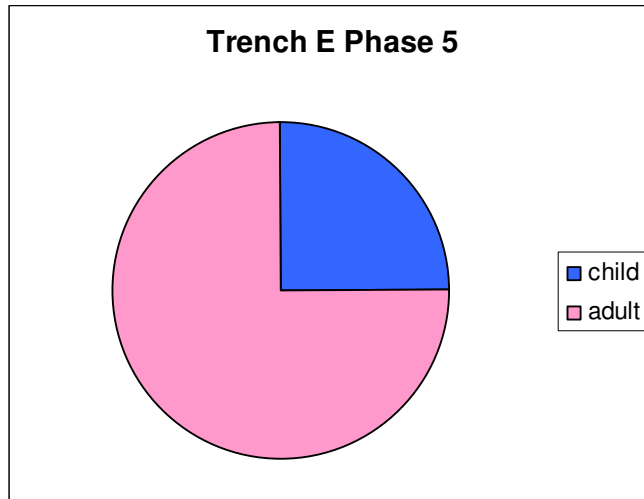
In table 19 and 20, two burial locations that belonged to the same phase were represented. The charts indicated that there were different percentages in age groups. Moore and Molleson (2000) claimed that, in Pit 144, people may have died from an infectious disease.

In the Charnel Room there were at least 24 skeletons, 80% of which were adults. In this room one skull was coated with bitumen and some impression of mat was found over it. In the Charnel Room, none of the corpses had grave goods. Contrary to the other trenches and phases in the Charnel Room, most of the corpses were buried in the middle of the room rather than at the corner or sides of the room (Moore-Molleson, 2000: 258-300).

Table 19 The Age and Sex distributions of Charnel Room

Trench B Phase 8 "Charnell Room"

Adult
Child

Trench B Phase 8 "Charnel Room"

Infant
Child
Adolescen
Adult
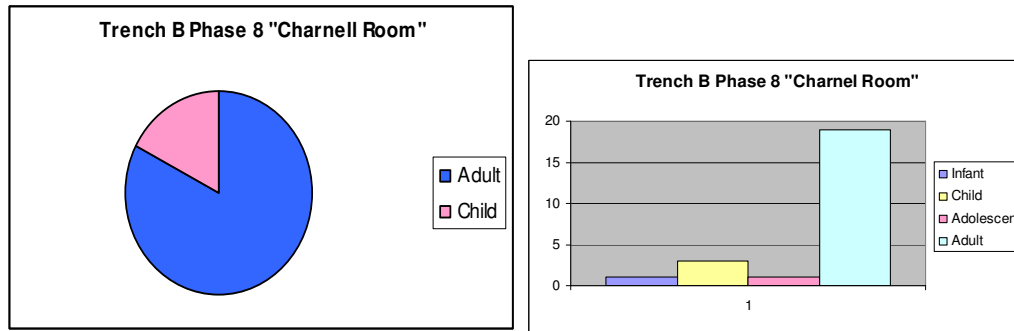
Table 20 The Age and Sex distributions of Pit 144

Trench E Phase 8 "Pit 144"

Adult
Child

Trenc B Phase 8 "Pit 144"

Perinatal
Child
Adolescent
Adult
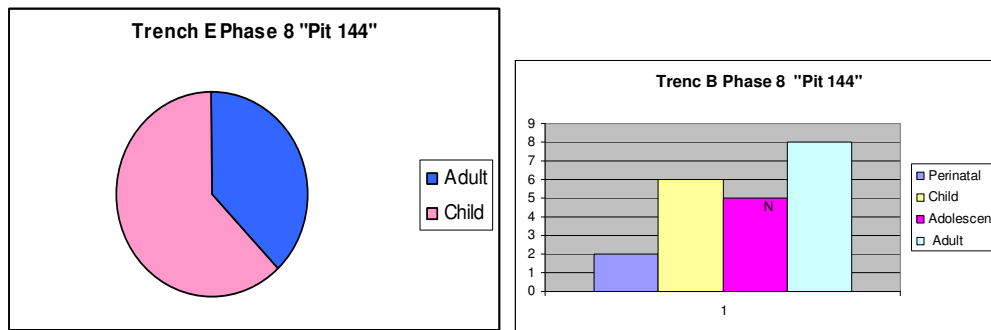
Another collective burial pit was found in the fill of Room 1 of Phase 9, which replaced the building of Phase 8. This pit had 6-7 individuals, and most of them were children and adolescents. Since children are most affected by the socio-economic conditions, the burial of children may indicate low socio-economic conditions.

Table 21 The Age Distribution of Trench E Phase 9
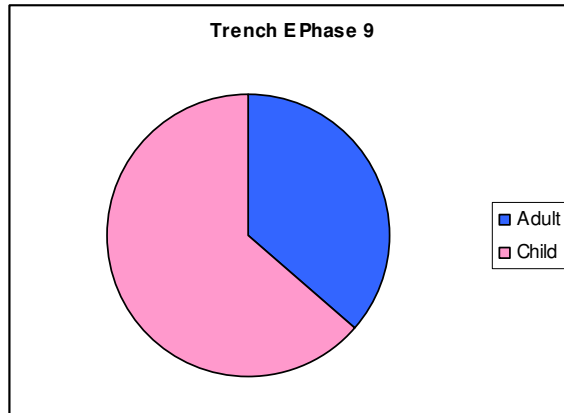
IV.2 Correspondence Analysis of Archaeological Data

In order to understand whether there is any significant relation between the strata and grave goods and sex and age distribution, and relation among them, Correspondence Analysis was applied.

The aim of the Correspondence Analysis is to transform a table of numerical information into a graphical one. The results provide information which is similar in nature to those produced display, facilitating the interpretation of this information (Greenacre1994:1).

There are two primary reasons for advocating the use of correspondence analysis as a method of data reduction and exploration. First, the technique assumes that all values in the matrix are positive (zeros are acceptable), and second, it assumes that all row and column totals are greater than zero. In a typical correspondence analysis, a cross tabulation table of frequencies is first standardized, so that the relative frequencies across all cells sum to 1.0. One way to state the goal of a typical analysis is to represent the entries in the table of relative frequencies in terms of the distances between individual rows and/or columns in a low-dimensional space.

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The technique is examining the data for their relationship among them and represents this relation in a two dimensional chart. To do the analysis, numbers were given to each stratum and prevent the any confusion these numbers were standardized and were used throughout the study. On the circumstance that the strata are fixed, the differentiation of age, sex and grave goods throughout the strata are examined. To do this, as it mentioned before, the aspects, which are examined, are separated in categories.

First the data were entered to the SPSS 14, and then strata were hold fixed and the numbers of group that are examined were distributed by weight case. And then the strata were listed in the rows and groups were listed in columns, and the ranges of these were defined. After this process, correspondence analysis, which is placed in SPSS 14, was used.

The distribution between the points in the Correspondence Charts expresses the correlation between them. To explicitly define, chi-square test and Bertin Graphics is employed.

Chi-square test is used to detect whether the distribution shown as "a" contingency table is statistically meaningful or not (Shennan, 1997:140). The conventional formulation ($x^2 = \sum_i \sum_j (O_{ij} - E_{ij})^2 / E_{ij}$) does not allow us to detect local over/under representation. So as to shed light on distinctive characteristic of archaeological data a "signed" variant of this tool is used. The interpretation of this index is straight forward "+" signs relate to over, "-" signs relate to under representation. Values near "0" are not particularly important (Greenacre, 1994:18).

ÇAYÖNÜ

Çayönü data were first considered; sex, age and grave goods were examined according to their distributions throughout the strata. BM and Domestic Area regions were regarded separately during the examination.

When considering sex distribution, unknown (3) and child (4) categories were formed besides male (1) and female (2) categories. The term child was used as a category for

which the age is below the critical age of sex determination. To carry out the analysis, different numbers were given to each stratum, for which these numbers were held constant throughout the analysis.

ch3	1	g	8
c1	2	c	9
c2	3	r3	10
c3	4	r4	11
ch	5	r2	12
ch2	6	cp3	13
cp2	7		

Firstly sex distribution of BM, and then Domestic Area data was considered.

Table 22 Correspondence Analysis of Sex Distribution of BM
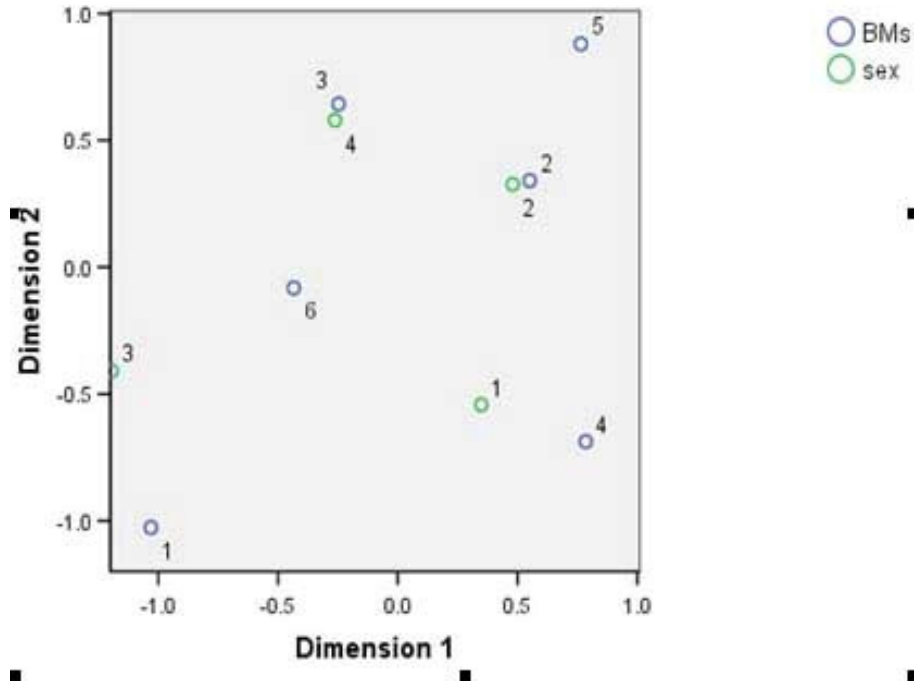
As the table indicates, the strata are not close to each other. The stratum of 2 is correlated the second categories, and the third stratum is correlated with the fourth categories.

Tables which were made by a Chi Square test were used for the two mentioned region comparison. The relationship between the strata is examined and correlated ones are grouped.

Table 23 Chi-Square Test of Sex Distribution of BM

Chi-Square Test				
	3	4	1	2
1	**6,770125**	-1,61002	-0,00145	-0,31219
6	**5,101242**	**0,30425**	-0,38777	-2,372
3	-0,03521	**3,830932**	-2,23049	-0,03097
2	-3,72481	-0,00775	-0,02516	**2,963203**
5	-1,92949	**0,005154**	-0,64859	**3,636946**
4	-3,97978	-4,17661	**8,727705**	0

After the chi-square test, the strata of 1 and 6 and 2 and 5 appeared to be correlated with each other. To explicitly define, some tables are drawn.

Table 24 Sex Distribution of BM (Bertin Graphic)

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When the table is examined, it can be seen that in BM/BM2c unknowns and children have higher chi-square value. If male and female are considered, a relatively higher chi-square value belongs to male. There is a more balanced distribution in BM1b. In BM1a/BM2b and BM2a no unknown is observed, values of chi-square are the same in male and female. Same analysis is carried out for the Domestic Area.

Table 25 Correspondence Analysis of Sex Distribution of Domestic Area
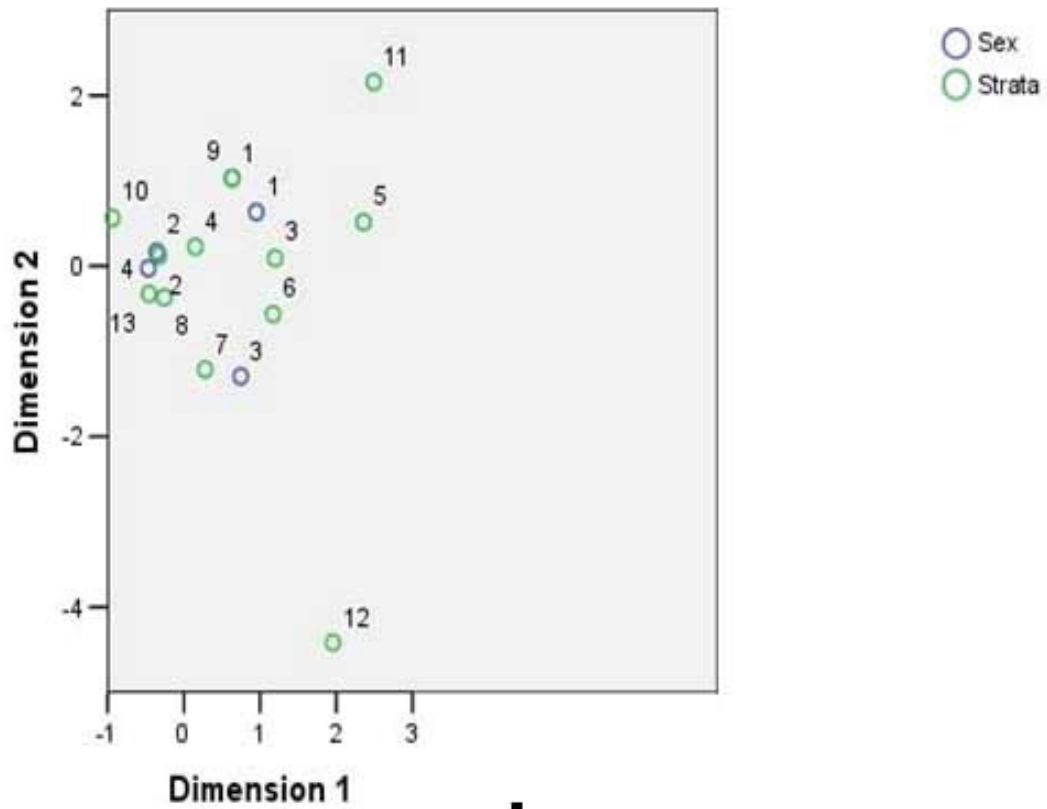
Table 26 Chi-Square Test of Sex Distribution of Domestic Area

Chi-Square Test				
	4	2	3	1
10	1,431244	-0,46243	-0,24277	6,027296
13	-3,95376	-0,56148	-0,00783	27,12283
2	-5,45894	-8,85832	0,932271	247,1191
8	-1,34197	-0,44175	-0,04069	57,25931
4	-2,89717	-2,23392	5,216222	90,40944
7	-2,20668	0,405925	-0,00783	27,12283
1	-0,87861	-0,46243	2,361822	6,027296
9	-0,87861	-0,46243	2,361822	6,027296
6	-0,07669	0,135308	1,110194	9,040944
3	-0,96545	-0,00315	7,737988	27,12283
12	-0,43931	2,556214	-0,12139	3,013648
5	-1,75723	0,006105	13,02126	12,05459
11	-0,43931	-0,23121	6,359483	3,013648

Table 27 Sex Distribution of Domestic Area (Bertin Graphic)

According to the Chi-Square Test results, strata are grouped in two and both groups are correlated different sex categories. However, both of them have homogeneous distribution.

To analyze the children distribution in Çayönü settlement, again this group is separated into categories mentioned before; fetus (0), infant (1), child (2) and adolescent (3).

BM Child

Table 28 Correspondence Analysis of Children Distribution of BM
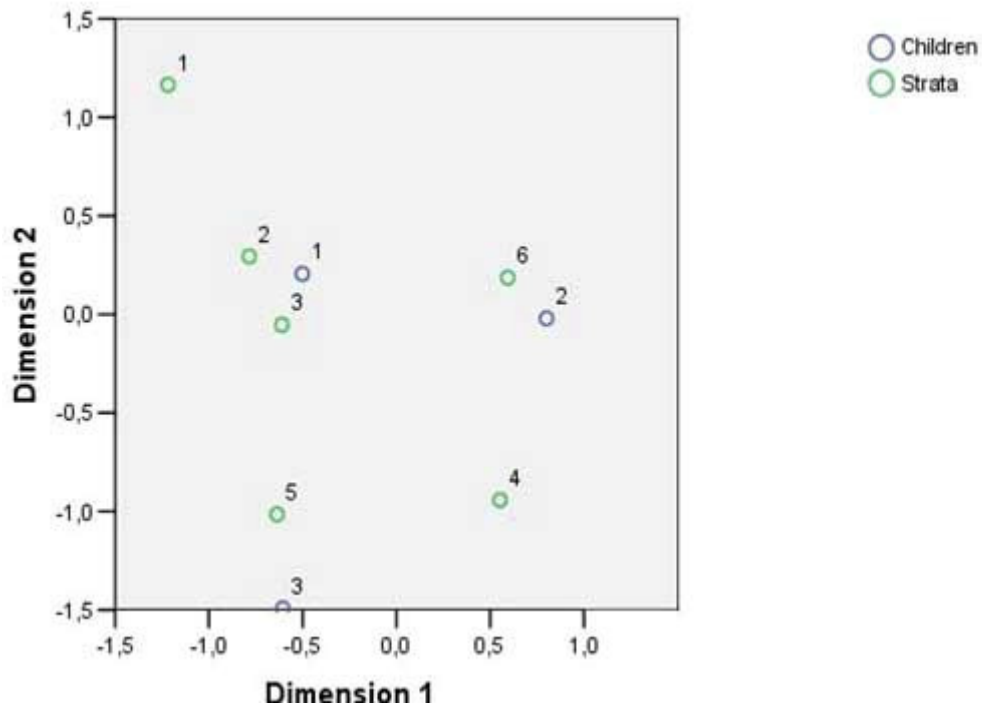
As the table indicates, stratum one is represented individually, one, two and three are grouped and they are placed near the first category of child. The sixth and fourth stratum are correlated with each other, and placed near the second category. The fifth stratum is not grouped with any other. The third category is not placed near any stratum.

Table 29 Chi-Square Test of Children Distribution of BM

Chi-Square Test			
	3	1	2
1	-0,06897	**0,391294**	-0,3908
2	0,001232	**1,561699**	-2,20236
5	**1,244828**	0,033064	-0,46579
3	0,27931	**0,945023**	-1,86315
4	0,554187	-0,83936	**0,584372**
6	-1,12112	-1,456	**3,472625**

According to the Chi-square results; first and second strata and fourth and sixth strata are correlated to each other. The fifth and third strata are not grouped with any strata.

Table 30 Children Distribution of BM (Bertin Graphic)

As it can be seen from table in BM1b adolescent and children have the highest chi-square value. In BM1b, adolescents have two times higher chi-square values than infants whereas no value for the children is observed. In BM2a/BM2c it is seen that there is a significant increase in the ratio percentage. Children have the highest chi-square values with a very high percentage. Table 29 showed that in BM/BM1a adolescents and infants have closer chi-square values whereas children are represented by lower chi-square values.

Domestic Area Children

Table 31 Correspondence Analysis of Children Distribution of Domestic Area
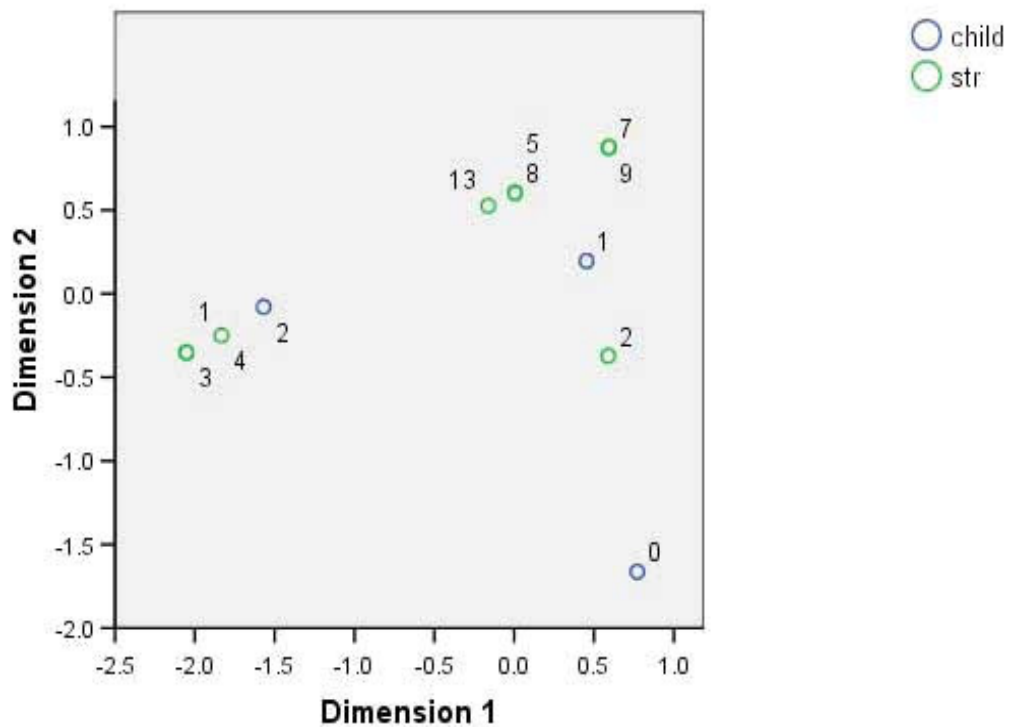
According to this table, strata one, three and four are correlated with each other and also categories two, strata thirteen and eight, five, seven and nine are correlated with each other. Category one is placed close to these strata. Second strata seemed not have correlated with any of the other strata. The category 0 is placed individually too.

Table 32 Chi-Square Test of Children Distribution of Domestic Area

Chi-Square Test		2	1	0
	1	**2,564103**	-0,69231	-0,07692
	3	**2,564103**	-0,69231	-0,07692
	4	**24,46368**	-6,42806	-0,92308
	5	-0,00285	**0,094967**	-0,69231
	8	-0,00285	**0,094967**	-0,69231
	2	-7,56723	1,110903	**2,56848**
	7	-0,92308	**0,547009**	-0,30769
	9	-0,23077	**0,136752**	-0,07692

After the chi-square test, strata one and two, thirteen and eight, five, nine and seven appeared to be correlated with each other. And the second and fourth strata are represented individually.

Table 33 Children Distribution of Domestic Area

	child	infant	fetus
ch3/c2			
c1			
c3			
ch/c1			
cp3/q			

As it is observed in Table of 33, in ch3/c2 only child category is represented, but generally this distribution is homogeneous. In c3, only child category is observed. Table 33 indicates that the c1 has the highest chi-square value, in this stratum the highest value belongs to foetus burials, the second highest ratio belongs to infants; and there is no child in this stratum. In ch/c1 only a small percentage of children burials are observed. In Table 33-e, there is no foetus burial, but it has small percentage of infants and children.

The differences in age distributions of Domestic Area areas, when taking into account that strata are not to pair off chronologically and the significances in the ratio of age groups is related to numbers of burials which were found in the strata, and the related strata of BM and Domestic Area's are not contemporary, the differences in these strata are not much significant. It must be considered that the distribution is related to the number of burials found and these strata are not in a chronological order.

Grave Goods of Çayönü

To examine the distributions of grave goods same methods are followed. As it was mentioned before grave goods are separated into five categories. But some grave goods; such as metal hook, ochre, ash and pottery fragment is represented only one example they are not put in any group. The other problem is data of BM. Since burials of BM were found in clusters, it can not be understood that which grave good is belonging to which person. Because of this reason, the data of BM not include in this analysis.

Table 34 Correspondence Analysis of Grave Goods Distribution of Domestic Area
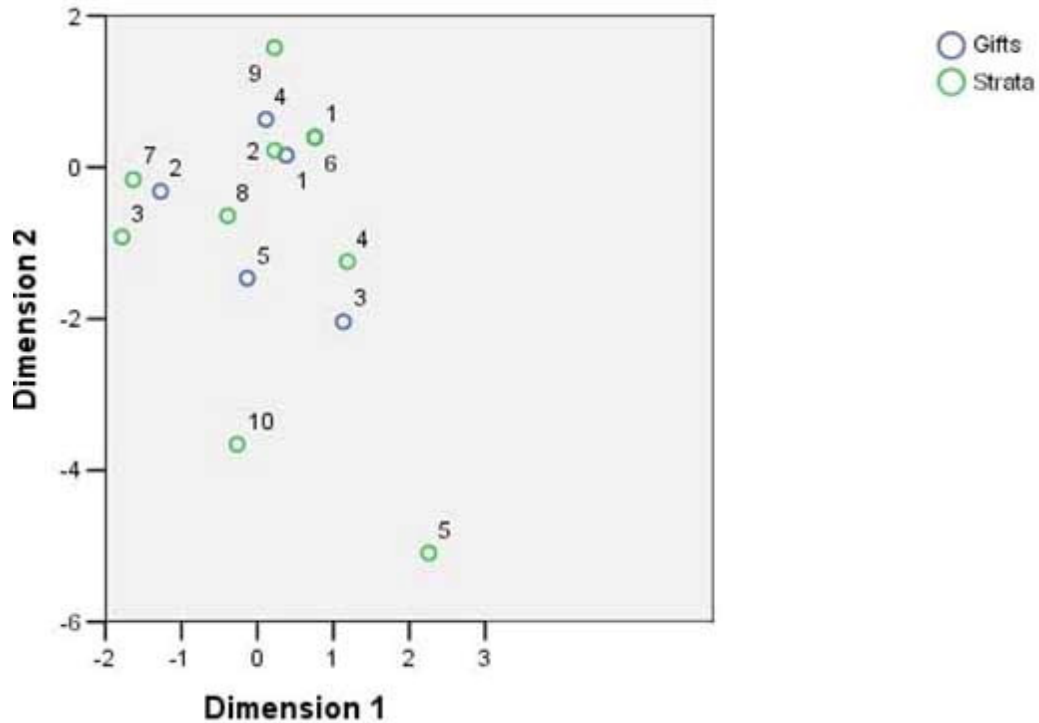
Table 35 Chi-Square Test of Distribution of Grave Goods of Domestic Area

Chi-Square Test		3	4	1	5	2
	5	45,176	-0,095	-1,481	-0,599	-0,6492
	4	25,158	2,463	0,4211	-4,391	-4,7605
	6	-0,0588	-0,032	0,5192	-0,2	-0,2164
	1	-0,0588	-0,032	0,5192	-0,2	-0,2164
	2	-1,4893	0,0913	3,5407	0,7749	-10,028
	9	-0,4706	-0,252	-3,95	25,681	-1,7311
	8	0,0074		0,0914	-6,387	3,7205
	7	-2,6471	-1,418	-14,94	0,1156	46,429
	3	0,0157	-0,473	-3,946	-2,994	23,611

Result of chi-square test is that strata of one, two and six; five and four; eight, seven and three are correlated to each other and the ninth stratum is represented individually.

Table 36 Distribution of Grave Goods of Domestic Area (Bertin Graphic)

Grave Goods of Abu Hureyra

The burials of Abu Hureyra have been examined according to trenches. But in order to apply Correspondence Analysis, the burials are separated throughout the phases. Different numbers are given to each phase, for which these numbers are held constant throughout the analysis. The grave goods are also separated into categories.

Phase	Number	Grave Goods	
2	1	**1**	Ornaments
3	2	**2**	Stone Tools
5	3	**3**	Utilization Tools
6	4	**4**	Animal Bones
7	5	**5**	Arrowheads
8	6		
9	7		
10	8		

Table 37 Correspondence Analysis of Distribution of Grave Goods of Abu Hureyra
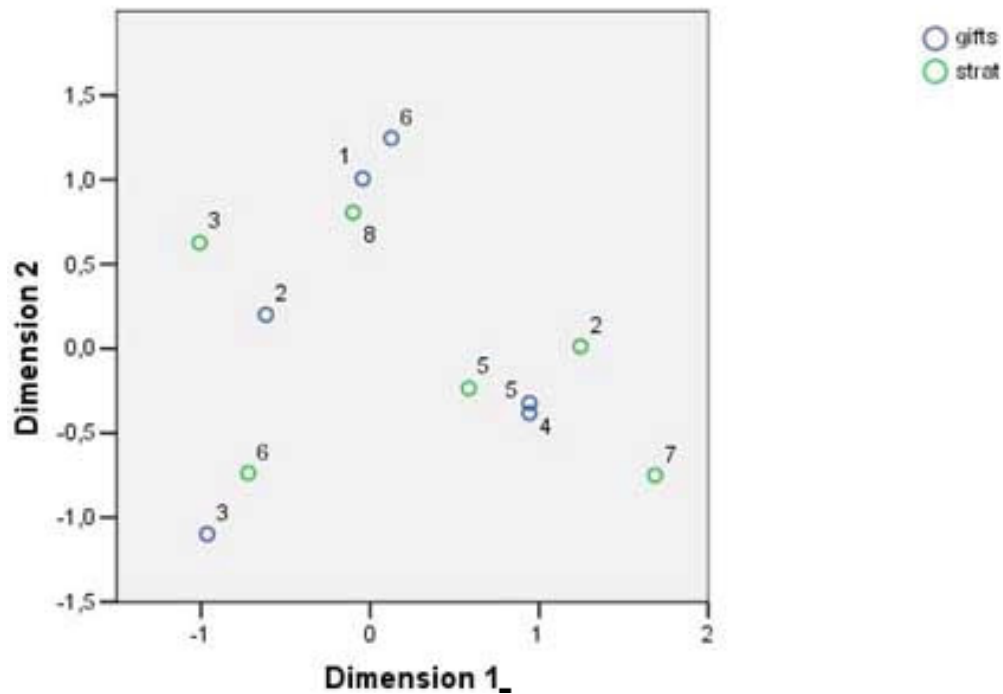
Table 38 Chi-Square Test of Distribution of Grave Goods of Abu Hureyra

Chi-Square Test						
	3	2	1	6	5	4
3	-1,5635	**13,1987**	-0,508	-0,2234	-0,2234	-3,6294
6	**22,955**	0,30865	-2,958	-1,1777	-0,0268	-4,3625
8	-2,9704	0,00208	**12,37**	**2,139**	-0,0775	-3,3267
5	-1,8985	-0,0848	-3,187	**0,099**	-0,731	**7,0051**
2	-2,2741	-4,8731	**0,396**	-0,3249	**1,403**	**6,1994**
7	-1,5635	-3,3503	-2,01	-0,2234	**2,70062**	**11,182**

Table 39 Distribution of Grave Goods of Abu Hureyra (Bertin Graphic)

In both settlements, some changes in the grave goods according to strata were observed. But since the strata which are related to each other are not contemporary, it can be suggested that this change is not chronological, explicitly it can not have been affected by the evolution of a society. But it is interesting that this change, that is not chronological, is observed in both Çayönü and Abu Hureyra.

CHAPTER 5

DISCUSSION

Between the beginning of the Neolithic Period and the end of the PPNB several rapid changes took place in settlements, technology and social structure contrary to the previous assumptions. The ubiquitous presence and distribution of *non utilitarian* objects in the excavated sites, coupled with extensive trade of obsidian and exotic materials have long been known to reflect this complex organization (Özdoğan, 1997:10). On the other hand, the accumulating evidence indicates that the social complexity of the Neolithic communities can also be observed through their ritual architecture specifically. For example, the existence of *"temple-like cult buildings"* at the sites such as Çayönü, Nevali Çori and Göbekli Tepe have recently become a major focus of discussion among scholars who study the role of belief systems and formalized rituals in the formation and maintenance of social organization.

Types of Burials

In the middle of PPNA, some indications of emerging social stratification can be observed in the settlement patterns. In Çayönü, there were specifically reserved cultic areas; in which the buildings were bigger and better built. Several objects which have been called as status *objects* were also found in these buildings, and the *elites* who lived in these houses had isolated themselves from the settlements (A. Özdoğan, 1995). The rigid order in settlement organization, intentional house burying and construction of plaster floors must have required extensive labour (M. Özdoğan, 1998).

One of the "temple" cult buildings of Çayönü is the Skull Building. This building indicates that temples reflected the burials and burials might have been part of a kind of temple economy. Pie charts and Correspondence Analysis indicated that sex and age are not the determinative factors for choosing a place to bury the death. It is

possible to say that there were other determinative factors, which might have originated from the social status of the people. The Skull Building did not reflect gender and age differentiation, in other words, all sex and age groups were represented in this building. At the end of each layer, the Skull Building was burnt. Özbek (1986:19-38) made some inquiry into understanding the degree of burning. He discovered that some skulls gave different reaction to fire. On these skulls some splits and cracks were observed. According to Özbek, this differentiation originated from the fact that some skull had flesh on them when they were buried. Besides these skulls, there were some skulls which had cut-marks. All of these indicate that the flesh on some skulls was scraped or they were buried before their flesh decayed completely. This information may suggest that, there were some certain burial times for the Skull Building and the people who wanted to put their dead in this building could not wait for their flesh to decay, or scraped them in order to catch the time of the funerary. In the light of this information, it can be said that it must have been important for the people of Çayönü to put their dead in the Skull Building; this might have brought them prestige. When considered that there were no sex and age differentiation in the burials of the Skull Building, the people who were buried in the Skull Building must have had special status or they were the members of high status families.

Beginning with the Neolithic Period and the possible appearance of the concept of ownership, the form of worship gained a new dimension. While the hunter-gatherer economy evolved into a new form, the social structure, belief system and the form of perceiving the environment must have changed. This situation must have led to a different and more complex social organization (Bar-Yosef, 2003: 124). With the changes in the Neolithic Period, new concepts of life and death might have occurred. One of these changes seems to be the *"skull cult."* In this tradition, which is observed in all of the Near East, whole skull or some parts of the skull was plastered and sometimes covered with cinnabar or embellished with shells or stones. Before this process, the flesh was separated from the skull by scraping, decaying or any other methods. The *skull cult* did not apply to all of the burials. However, it is very difficult to explain the reason for differences in burial practices; it might have been the result of differences in religious beliefs or possibly social differentiation. This practice was applied to both females and

males, which indicates there was no gender differentiation for the application of this practice (Özbek, 2005:130).

There are several theories that were developed in order to explain the skull cult:

Wright (1988:51) said that the process of plastering was applied to the people who were respected in their community. According to Yakar and Hershkovitz (1988:59) there are two reasons. First one is related to war. According to this theory, plastered skulls were the symbol of victory. But this situation does not explain why it was also applied to females. Silistreli explains this process as a *cult of ancestors* (1988:62). According to him, the process of plastering was a privilege which was applied to people who had a special status in the society.

The skulls which were found in the Skull Building can be interpreted as a component of the skull cult; this building was named already as Skull Building after the discovery of 70 skulls in its last phase. It is clear that the Skull Building is a special structure and the burials which were placed in this building must have had special religious or social status. In this context, it may be possible to say that the Skull Cult might have reflected the social status of the people of Çayönü.

Apart from Çayönü, at Abu Hureyra it is also possible to observe the *Skull Cult*. However, before interpreting the data from Abu Hureyra it must be mentioned that the data of Abu Hureyra is not very reliable, since a small part of the settlement of Abu Hureyra was excavated. In Abu Hureyra only 25 skulls were found, when compared with the other burials skulls have small quantities. Only sexes of ten skulls were identified. Four of them are males, two of them are females and four of them are children. Fifteen of them are unknown adult. Two red coloured skulls belonged to unknown adults. Except two skulls none of them had any grave goods. Near the two unknown adult skulls beads were found. There is no information regarding the place of seven of these skulls, the rest of them were found in rooms. Although there are lots of unknowns, it can be said that among the identified skulls most of them belonged to males, but since there were also female skulls it can be said that this practice did not apply only to males. This also applied to children and it indicated that this practice did not reflect age differentiation.

When all of this information is considered, it can be said that the Skull Cult must have related to the social structure of Abu Hureyra.

The most interesting example from Abu Hureyra belongs to the skeleton of a 12 year old child. The skeleton was covered with gypsum plaster. The surface of the plaster was covered with cinnabar. This mineral does not exist in Abu Hureyra. It may have been imported from Asia Minor. Why they imported this mineral from such a long way and covered the skeleton is a significant issue. It may reflect a special treatment and this treatment could be related to special status, such as religious character of the burial or the rank of stratification.

In Abu Hureyra, there were some interesting burials in terms of their position in the graves. One of them belonged to two juveniles, which were put in a pit with a rectangular plan. These burials had some grave goods, such as a pair of greenstone pear drop beads and another pair of stone beads. The skeletal remains and grave goods indicated special treatment of these individuals. In trench E, there was one unique skull, in a small pit outside the wall of the main house of Phase 4. This skull was painted red. This type of treatment may also be an indicator of a certain role or status. Another unusual burial belonged to a woman who was buried seated upright in the grave. This was a unique position for Abu Hureyra. It is possible that this unique burial might have belonged to a woman who had some religious or administrative role in Abu Hureyra. And if is such an idea accepted, it can be said that people did special treatment to their *important* people.

Grave Goods

Apart from the burial types and graves, grave goods may also provide some clues regarding the social structure. As it was mentioned before; grave goods may reflect the social status of burials, so the grave goods of Çayönü and Abu Hureyra were examined in detail. In this thesis, the burial list of Çayönü is not given upon the request of the excavation directors, but it is possible to say that, in Çayönü, in each stratum, only small parts of the burials had grave goods and this situation may have originated from the social status of burials. Although still questionable, Davis' study suggested that the grave goods may reflect the social status.   Davis (1998:257-265) examined social differentiation in Çayönü, Cell Building c3 sub-phase. He found that the buildings which

were placed in the north part of the settlement were made with particular care and they were bigger. These buildings also had special architectural features, in these buildings, several kinds of objects and raw materials were found. According to him, in the light of this information, these buildings must have belonged to the *"elite people of society"*. The burials which were found in these houses are different from the rest of the c3 burials. Three of them were found in CV Building and one of them was found in CV Building, each of them had obsidian tools of remarkable size.

As a result of Correspondence Analysis it is possible to say that grave goods changed throughout the strata in both Çayönü and Abu Hureyra, but this change is not parallel to change in economic practice, since this is not chronological. The changes in grave goods might have originated from religious beliefs.

In Çayönü, the distribution of grave goods is represented intensely in certain groups as indicated by the pie charts. In these, P1 (ornaments) is very interesting, since they were found mostly in male and children graves, but generally ornaments are accepted characteristic goods of females. Although males and children as well as females used ornaments, it can be assumed that ornaments that were put in the graves may indicate status or prestige and then it can be said that both male and female had special status.

The other category of grave goods which were found mostly in male graves is stone tools. These were often associated with male activities.

The other category of grave goods that were mostly found in females graves is the utilitarian tools. These goods must have been mostly used by females. From this, it can be deduced that both males and females were buried with goods that were used by them when they were alive. Animal bones, un-worked malachite and stone spheres are found mostly in the females graves.

If it is assumed that grave goods had symbolic meanings, it can be suggested that stone, obsidian and flint tools were the symbols of males and utility tools, animal bones and raw materials were the symbols of females. Hodder (1990) argued in his book "Domestication of Europe" that males and females had some symbols in the settlements, and settlements were organized with respect to these symbols. According to him, male

symbolized *agrios and* female symbolized *domus* (Hodder, 1990:20). The results of analysis support his theory.

In Çayönü generally the graves which were rich in terms of grave goods belong to males and children. Just a few graves rich in utilitarian tools belong to females. This situation indicates that rich graves, except for small quantities of female graves, generally belonged to males.

In Abu Hureyra, some of the burials were accompanied by small quantities of grave goods consisting of beads, stone tools and bones. Animal bones were found in a few graves (horn cores of cattle and caprine and caprine jaws). Forty-four percent of PPN burials and 2A-2B burials had a grave good. In 2C there were no grave goods. Since sexes of most of the burials in Abu Hureyra are unidentified, it is very difficult to examine the distribution of grave goods across the sexes. But when looking at the limited data it can be seen that, in Abu Hureyra ornaments were usually found with females and bones mostly with males. There was only one exception, 18-year-old young man was found with serpentine butterfly bead. But similar to Çayönü, stone tools were generally found in males graves and utilitarian tools in female graves. This suggests that, grave goods of Abu Hureyra also reflect the sex of the dead person. However, it is difficult to identify to which sex the rich graves belonged.

Physical Anthropology

Apart from the burial location and grave goods, anthropological data, especially hypoplasia and degenerative articulation diseases are helpful to understand social differentiation in Neolithic communities.
This data is secondary, since there was no chance to examine the bones.

In the previous chapters it has already been argued what the anthropological data is and how it can be used for this kind of work. Among this data, especially hypoplasia and degenerative joint disease may provide some clues for understanding the social organization of settlements.

Hypoplasia has different representations in different groups which have a different economy and social organization. Many researchers, who examine the relationship between hypoplasia and socio-economic conditions, say that high ratio of hypoplasia is observed in people who have low socio-economic conditions (Infante and Gillespie, 1974; Goodman, 1991).

In both Çayönü and Abu Hureyra, people adopted sedentary life style under suitable climatic and environmental conditions. They first practiced domestication and cultivation. These were both transition period societies.

In Çayönü, as it was mentioned in the previous chapter, the life style of the community was based on hunting and gathering in Phase 1, and in Phase 2 they were still hunter-gatherers but wild emmer and einkorn had started to be consumed. In Phase 3 domestication and cultivation emerged. And in the last phase of Pre-Pottery Neolithic, the economy of the settlement fully depended on cultivated plants and domesticated animals.

A similar trend was observed in Abu Hureyra as well. In the final phase of Abu Hureyra 1, wild-type cereals declined and cultivated plants emerged. In Abu Hureyra 2A, this condition was still observed, yet the frequency increased. In 2B, there were cultivated cereals; such as barely, domestic einkorn and chickpeas, and the shift from wild gazelle to domestic sheep and goat occurred. In the final phase of Abu Hureyra, cultivated barley was predominant and there were very fewer wild cereals.

In Neolithic Abu Hureyra hypoplasia is apparent; the frequency is low; about %2 throughout, with only a hint of a reduction in 2B. The lowest frequency of hypoplasia is in Trench E and the highest frequency is in Trench B. This difference possibly points out to us different living conditions (Molleson 2000:301-324). Since the mentioned hypoplasia cases are apparent; the unapparent cases might not be represented.

Apparent hypoplasia ratio is 2.5%; the frequency of hypoplasia is about 45.26% in Çayönü. The ratio of hypoplasia between the sexes is that 44.2% females, 20.9% males (Erdal, 2004).

Büyükkarakaya (2004) compared Çayönü with Aşıklı Höyük. In Aşıklı Höyük, the frequency of hypoplasia is 8.68%. The ratio differentiation of hypoplasia according to sexes is 9.2% in females, 9.0% in males. In Çayönü, up to 5 hypoplasia bands in same teeth can be observed, whereas in Aşıklı Höyük only two bands on the same teeth can be observed.

Degenerative joint diseases in males are 88.2% and in females 91.7 % in Aşıklı Höyük (Erdal, 2004). From this information, Büyükkarakaya (2004:114) concluded that there were some differences between social differentiation at Çayönü and at Aşıklı Höyük.

In Çayönü degenerative joint disease in males is 84.0% and in females is 65.9% (Erdal, Ö.D., 2004). This kind of disease is more common in hunter-gatherers. It can be understood from this that differentiation between men and women is supported by certain role specialization. Women spent a lot of time in the settlement because they had to look after the children and do the housework. As it mentioned before when looking at the ratio of hypoplasia between the sexes, women had more hypoplasia than men. In the light of this information it can be suggested that in Çayönü, there is a social differentiation against women.

It can be understood from Abu Hureyra skeletal remains that people were involved in intensive labour activities. There is clear evidence showing role specialization and division between the sexes. Men were mostly engaged in hunting, obtaining meat, agriculture and construction. Generally, females were busy with food preparation (Molleson 2000:301-324).

When the house and public area is separated in a certain way, generally public activity has much prestige than house activity. As a result of this, gender differentiation may appear because men were more active in public area, women were usually gatherer; generally they became pregnant or looked after their child. The society in which hunting is an important part of the economy, men had tackled this task; in addition to this men were dominant in trade and war (Kottak, 2001).

The cult buildings, skull cults, grave goods and skeleton biology, especially gender discrimination, indicate that the Neolithic communities might have had social stratification.

CHAPTER 6

CONCLUSION

This thesis attempted to understand the factors influencing social organization during the Neolithic Period through an analysis of burial evidence. For this study, two Neolithic settlements, Çayönü and Abu Hureyra were chosen. The analyses included a study of three parallel aspects: quantitative analyses examined the spatial and chronological distribution of burials by age, sex and gift types. It has also tested the validity of the use of burials as a parameter to understand social organization of early village communities. Physical anthropological analyses focused on effects of long term nutritional and physical stress on bones, such as hypoplasia, degenerative joint disease and other possible diseases. Qualitative analyses attempted to give an interpretation of special treatment of dead and grave goods.

The main results indicate that at least two levels of social differentiation can be identified in the studied sites: gender differentiation and intra-site group differentiation.

In the quantitative analyses, burial data of the two settlements were briefly introduced and then data was transformed to numerical form in order to be presented in simple pie charts. These pie charts helped us understand the relation between age, sex, burial types and grave goods in each settlement, throughout the strata. For further examination, Correspondence Analysis was employed.

In Çayönü, there are categorically two different areas where the dead were found; the "Skull Building" and "Domestic Area". Pie charts indicated that there was no significant variation in the distribution of the number of burials through the strata, and Correspondence Analysis indicated that the spatial distributions of burials were not dependent on the sex and age factors. When the Skull Building and Domestic Area

were compared, it was observed that in both areas all categories of age and sex were represented. Following this observation, it was suggested that, apart from the sex and age, there must have been factors which may have influenced the burial location of the dead.

Here, it should be briefly noted that there are a number of other factors resulting from the excavation strategy of the mound, which has placed some restrictions on further detailed analysis and interpretation of the data. Due to its unprecedented importance, the Skull Building was excavated and studied in detail. Thus, our information about the burial evidence here is probably more complete than other areas of the mound. The rest of the mound was not excavated completely which at times makes a reliable quantitative comparison between the designated areas difficult. For example, this condition was perhaps reflected in the comparison of sex and age distributions between the studied areas, as the two areas showed different ratios within the same stratum. Despite this situation, the differentiation of the ratios should not be taken as a significant and deliberate act of burial, due to the above mentioned reasons.

The Skull Building has long been identified to have the characteristics of a temple building, and the burials that were found in this building had potential significance compared to the burials found in other areas. The scraping marks and skulls that were put in the Skull Building before their flesh completely decayed may indicate rituals as well as specific ritual times, and that people may have wanted to bury their dead in this building at those times. Placing dead in the Skull Building might have been a prestigious thing.

The people of Abu Hureyra buried their dead under the floors of the houses. The burials of Abu Hureyra mostly consisted of females and children. Excavation directors of Abu Hureyra explained this situation through the choice of burial place according to the work place. Women were buried in houses and men possibly outside but further excavation is necessary.

Abu Hureyra also demonstrated skull cult. They separated the skulls when the flesh had decayed, and sometimes covered them with plaster or bitumen. In Abu Hureyra,

25 skulls were found. Sex of half of them could be identified. In identified burials, most of them were males, but there are a few females and children. In Abu Hureyra, there were also some unique burial position, and it might have originated from the unique role of the dead person.

All of this information indicates that in Çayönü, there was a certain differentiation in the communities and this was not defined by age and sex. The reason for this differentiation might have originated from social roles. And in Abu Hureyra, there was differentiation in special treatment such as "skull cult" and this was not reflected the age and sex differentiation as well as Çayönü.

When the distribution of grave goods is examined, a differentiation throughout the strata was detected by means of statistical analysis. However in both settlements, this differentiation was not chronological. These results have led to think that the grave goods were not reflecting technological changes and they must have had symbolic meanings.

Due to lack of data, the distribution of grave goods throughout the sex and age groups in Abu Hureyra could not be examined, but in Çayönü these examinations provided some interesting results. According to these results, certain types of grave goods were placed mostly with certain sex categories. Among these, ornaments were most interesting. Generally, females used ornaments, but in Çayönü they were mostly found in male graves. This situation indicated that men used ornaments as well as women. When it is assumed that grave goods reflected status, it is possible to come to this result that both genders had some different social status. Besides ornamental goods, stone, flint and obsidian tools were mostly found in male graves, while utility tools, raw materials and animal bones were mostly found in female graves. These categories might have symbolized the daily activity of each gender.

When the anthropological data was examined, enamel hypoplasia and degenerative joint disease provided some clues to a social differentiation in these communities. In these two settlements the disease and hypoplasia were detected mostly on female skeletons. Since it is known that the good and bad conditions mostly affected males, it

may be suggested that the general conditions were not bad but the conditions of the females were bad. It can be inferred from this result that different position had a women.

Degenerative joint disease indicated that females and males were engaged different works, and these works were imprinted on their bones.

In the light of these, it can be suggested that in both settlements there was differentiation in burial types, special treatment and grave goods, and this was not originated from the sex and the age of the buried. The possible factor for this differentiation might be the social roles. These roles might have originated from gradual accumulation of social and material capital in hands of certain groups, due to developing concepts of ownership, inherited status and symbolic power in early village communities. To speculate further, certain groups or families may have arisen as more powerful than others due to their engagement in trade, assertion of land rights or protection of ritualistic knowledge. While these factors may have been important in the development of social differentiation, they are almost impossible to test through the currently studied evidence.

However, if the evidence from differentiation of grave goods and studies of physical anthropological aspects of bones can be taken as reliable indicators, one can assert that in both Çayönü and Abu Hureyra, there was a marked differentiation between the males and females, possibly due to their different duties and different work places; and probably settlement patterns were shaped in respect to this.
Anthropological data also indicated that in both settlements the conditions of the women were poorer. But burial customs, and grave goods supported with statistical analysis, indicated that there was a differentiation which was independent of sex and age.

As a conclusion, it can be said that the studies of Çayönü and Abu Hureyra burials indicate at least two different levels of social differentiation: gender differentiation and intra-site group differentiation.

Burial evidence can be used as one of the supporting parameters to understand the social structure. However, in order to understand the reason and degree of social structure in detail, all contexts must be examined. When architectural remains and the other findings as well as burials are examined together, it might be possible to reach a more accurate result. While doing this type of work, interdisciplinary study helps to reach better results.

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APPENDICES

APPENDIX A

Table 1 Chronology Table of Çayönü

Phases:	Sub-phases:	C14 Dates:	
Round Building Phase	r 1-4	10.200-9200	PPNA
Grill Building Phase			
early grills	g (1-4)	9400-9200	PPNA
late grills	g (5-6)	9200-9100	EPPNB
Channelled Building Phase	ch1-4	9100-9000	EPPNB
Cobble Paved Building Phase	cp1-3	9000-8600	MPPNB
Cell Building Phase	c1-3a-b	8600-8300	LPPNB
Large Room Building Phase	lr1-6	8200-8000(?)	PPNC
Pottery Neolithic		8000-7500(?)	PN

Table 2 Chronology Table of Abu Hureyra

Years BP	Period	The Village	Economy			
7,000	2C	7 ha mudbrick houses	Cereal and pulse agriculture		Sheep, goat, cattle and pig husbandry	
8,000	2B	16 ha mudbrick houses	Cereal and pulse agriculture		Sheep, goat, cattle and pig husbandry	
9,000	2A	8 ha mudbrick houses	Cereal and pulse agriculture		Sheep and goat husbandry	Gazelle hunting
	Intermediate Period	Timber and reed huts	Cereal and pulse agriculture	Reduced plant gathering		Gazelle hunting
10,000	1C	Timber and reed huts	Cultivation	Plant gathering		Gazelle hunting
11,000	1B	Timber and reed huts	Cultivation	Plant gathering		Gazelle hunting
11,500	1A	Pit dwellings		Plant gathering		Gazelle hunting

Figure 1 Map of Syria (www.hort.purdue.edu/newcrop/history/lecture03/fig_3-4.html last access 30.04.2006)
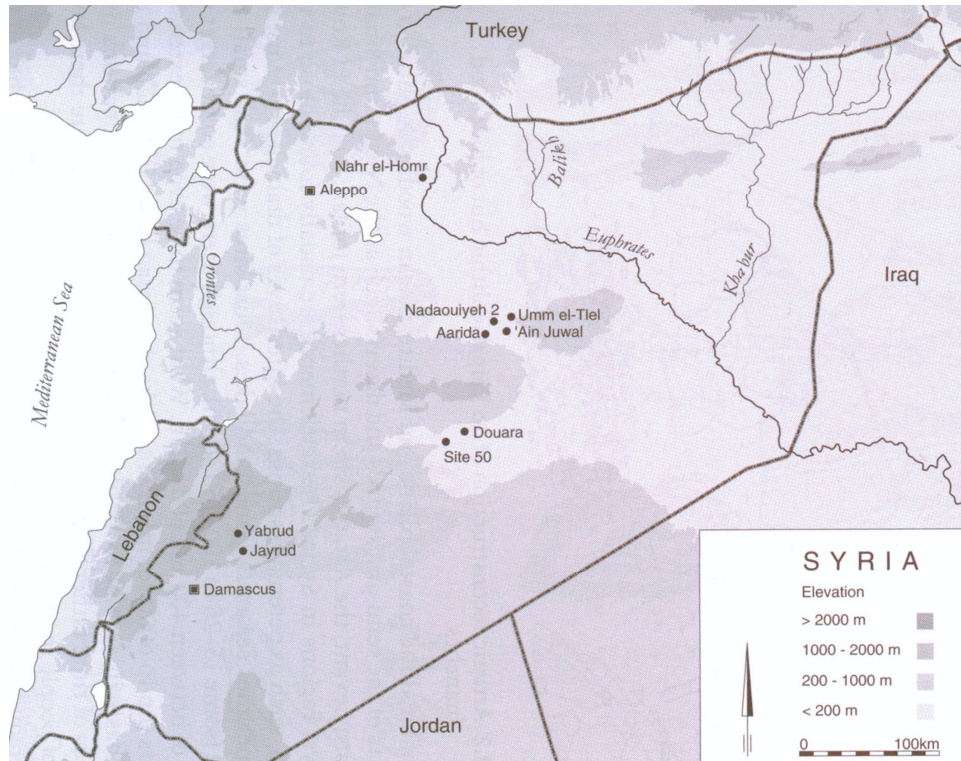
Figure 2 Kebaran Sites in Syria (Akkermans, 2003: 16)

Figure 3 Geometric Kebaran Tools (Akkermans, 2003: 19)
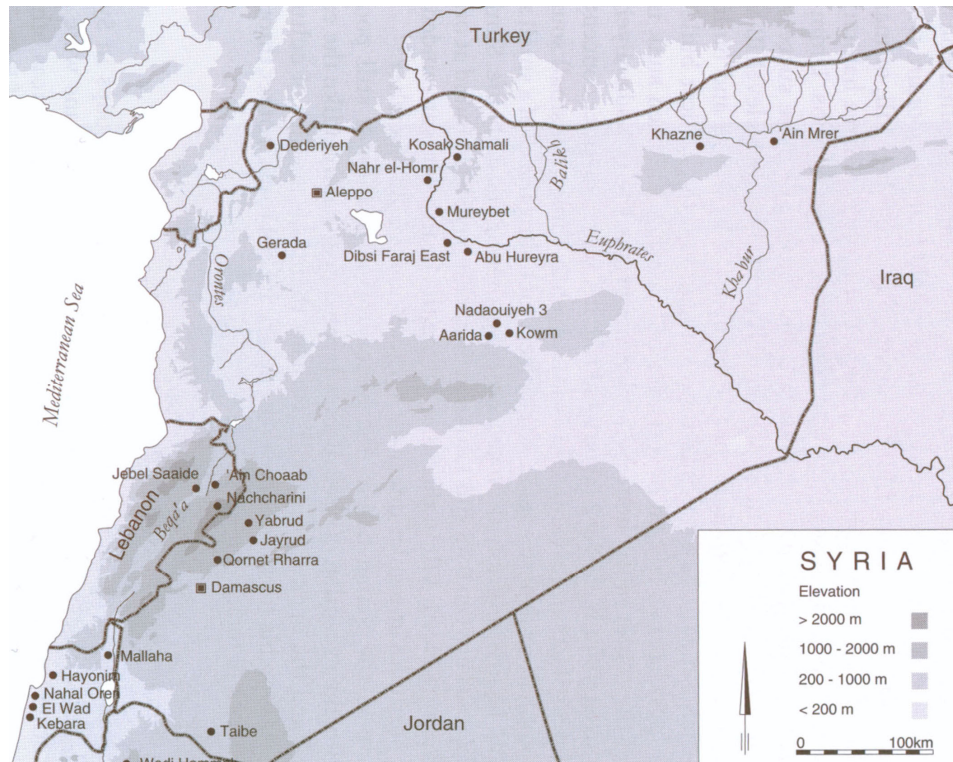
Figure 4 Natufian Sites in Syria (Akkermans, 2003: 25).
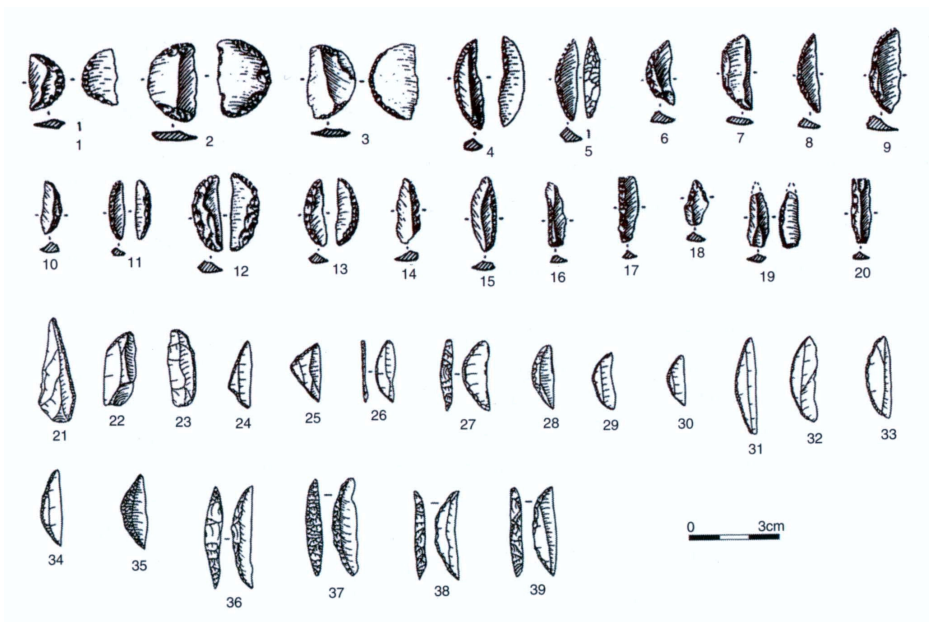
Figure 5.1 Early Natufian Tools (Akkermans, 2003: 26).
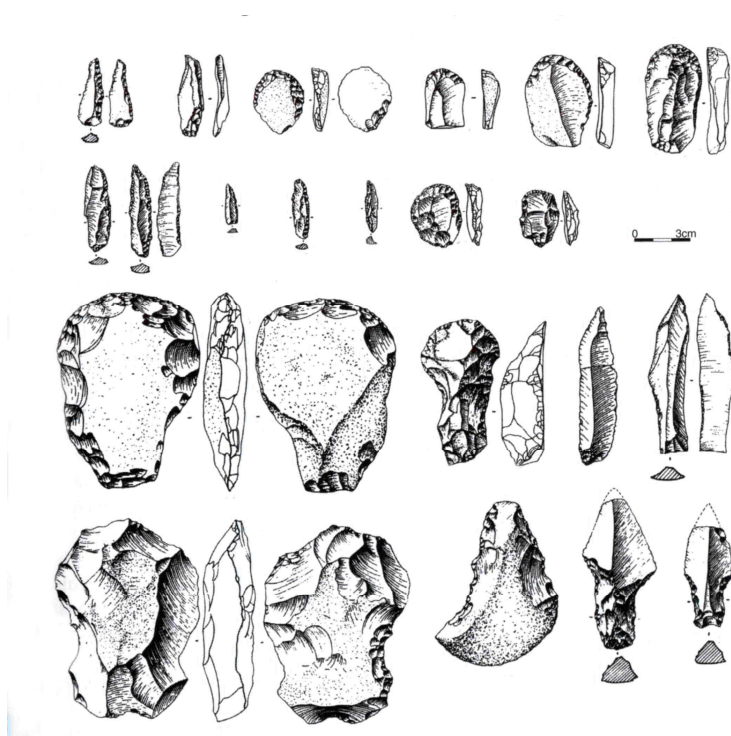
Figure 5.2 Late Natufian Tools (Akkermans, 2003: 27).
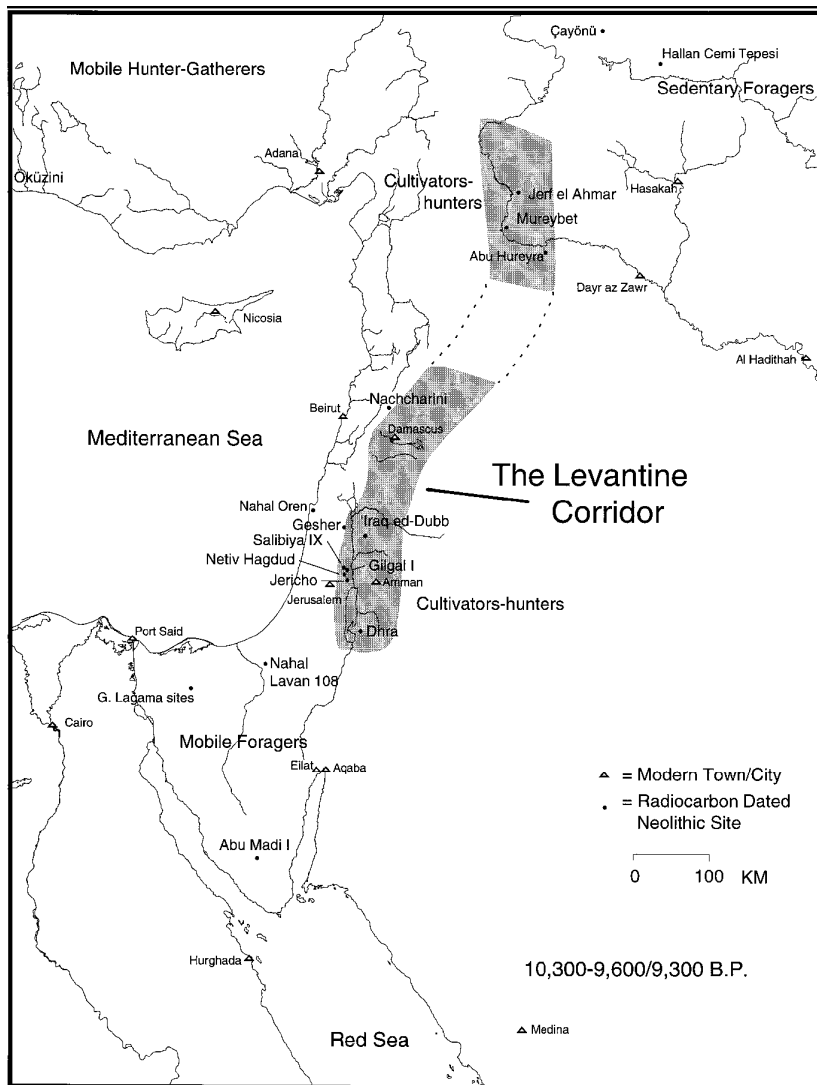
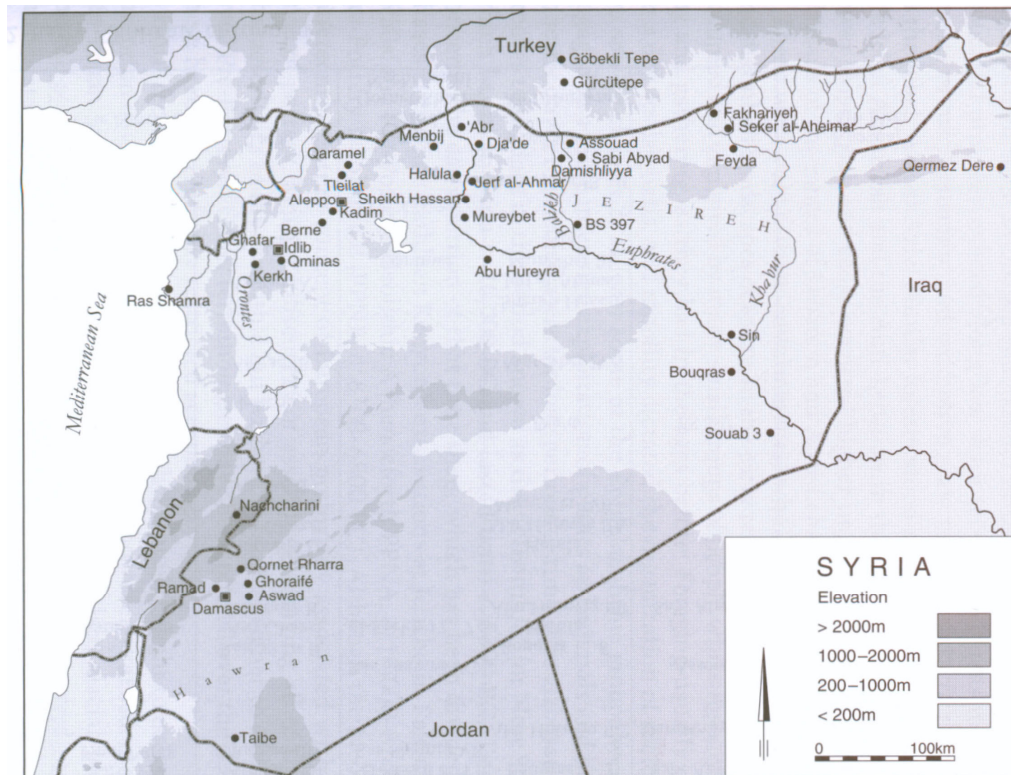Figure 6 Pre-Pottery Neolithic A sites in Syria (Bar-Yosef, 1998:160)

Figure 7 Pre-Pottery Neolithic B Sites in Syria (Akkermans, 2003: 43).

Figure 8 Burials from Dja'de al-Mughara
(Akkermans, 2003: 95).

Figure 9 An Early Natufian decorated skull from El-Wad
(Bar-Yosef, 1998:170)
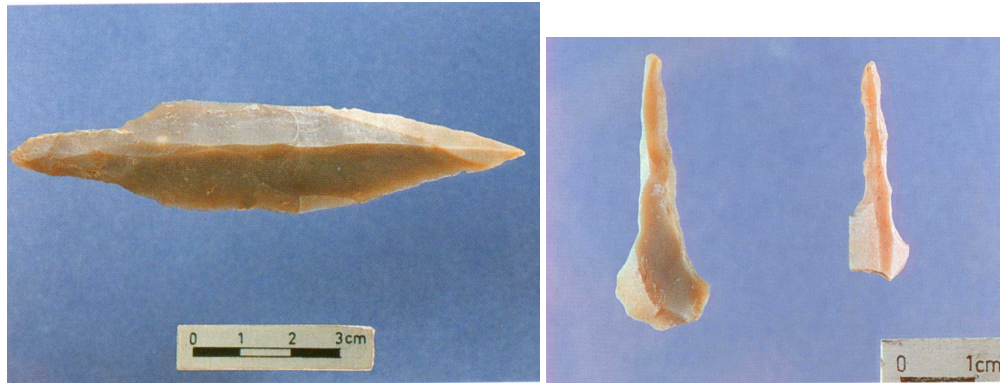
Figure 10.1 Flint Tools from Çayönü (Özdoğan, 1999 (Plates):32)

Figure 10.2 Stone beads from different stage of Çayönü
(Özdoğan, 1999 (Plates):33)
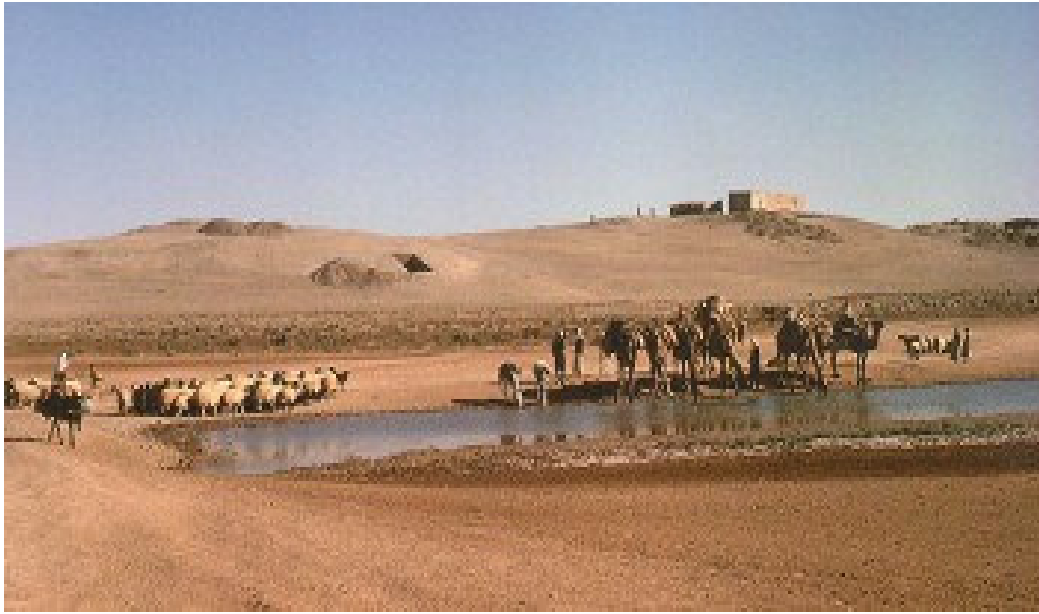
Figure 11 View of Abu Hureyra (Moore, 2000)
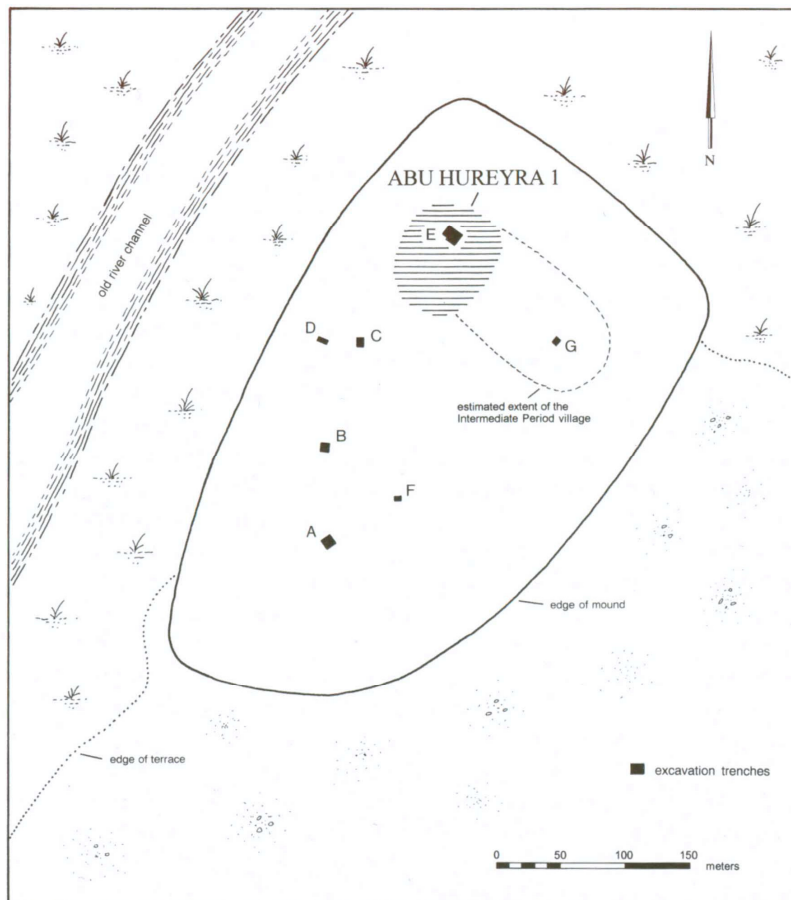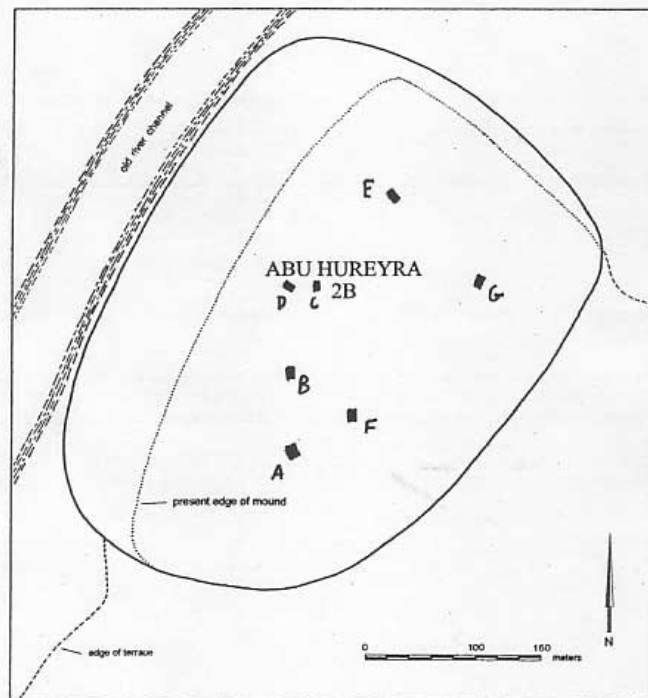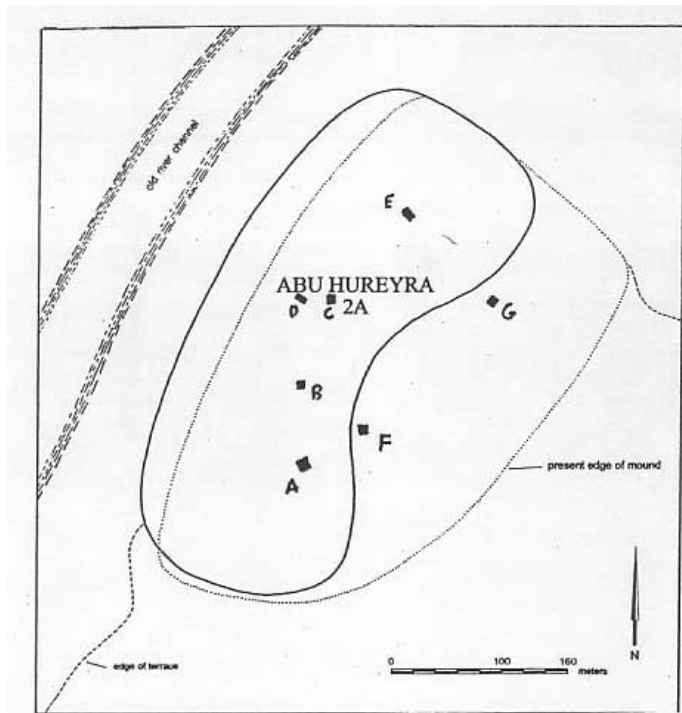
Figure 12 Plan of Abu Hureyra 1 (Moore, 2000:106)

Figure 13 Plan of Abu Hureyra 2 (Moore, 2000:270)

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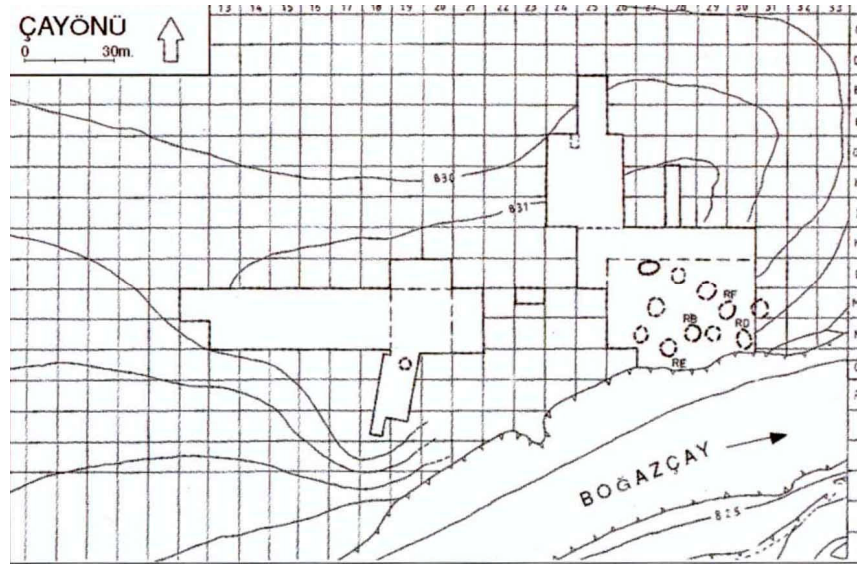Figure 14 General view of Çayönü Tepesi (Özdoğan, 1999 (Plates):22)

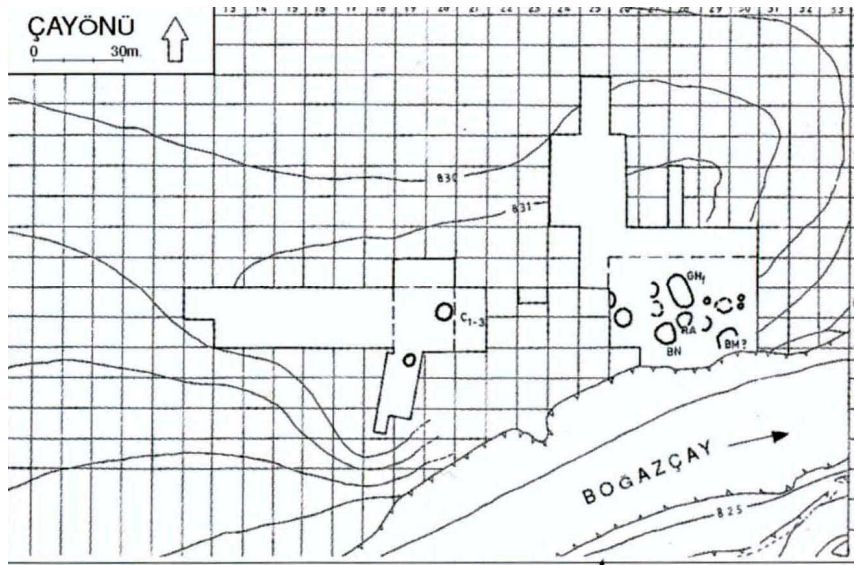Figure 15.1 Round Building Phase (r3) (Özdoğan, 1999 (Plates):23)

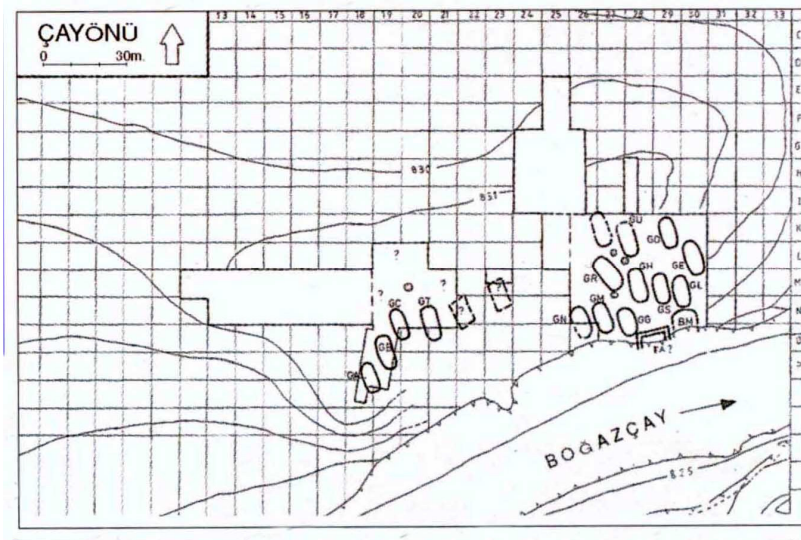Figure 15.2 Round Building Phase (r4) (Özdoğan, 1999 (Plates):23)

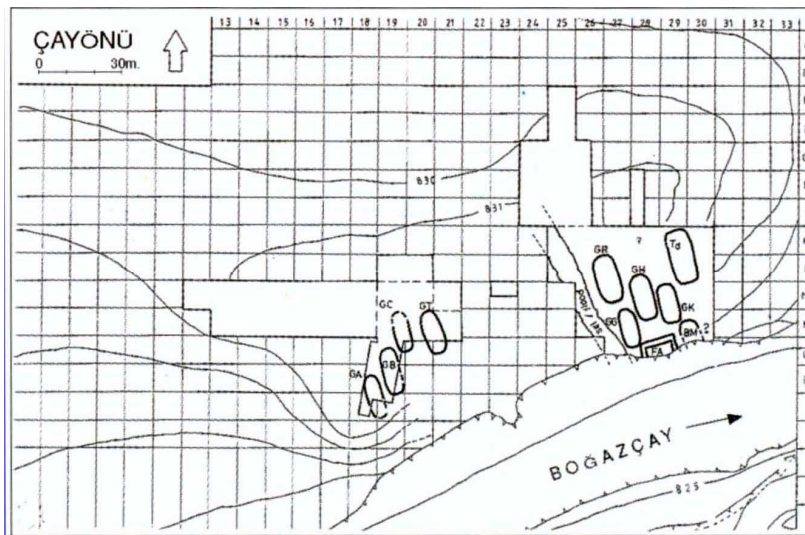Figure 16.1 Early Grill Building Phase (Özdoğan, 1999 (Plates):23)

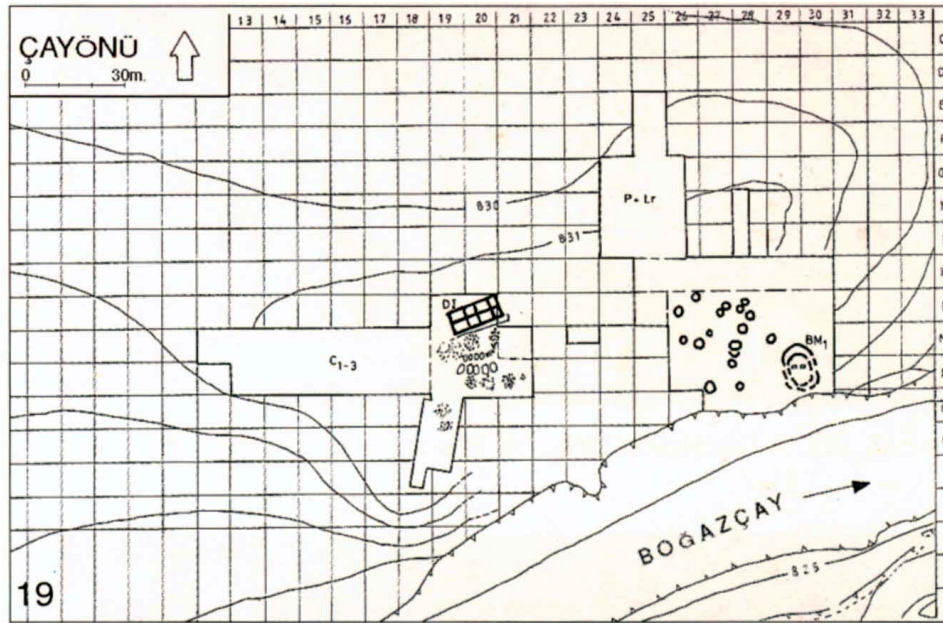Figure 16.2 Late Grill Building Phase (Özdoğan, 1999 (Plates):24)

Figure 17 Channelled Building Phase (Özdoğan, 1999 (Plates):25)

Figure 18.1 Cobble Paved Building Phase (cp1)
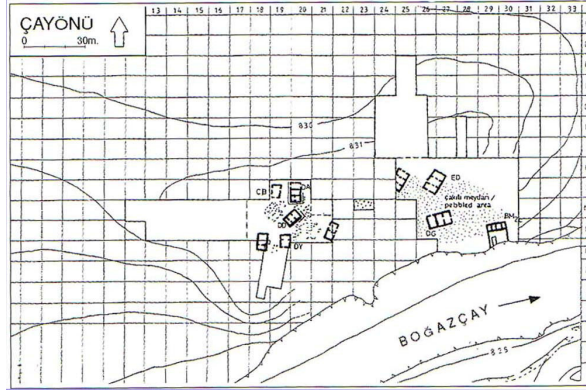
(Özdoğan, 1999 (Plates):25)
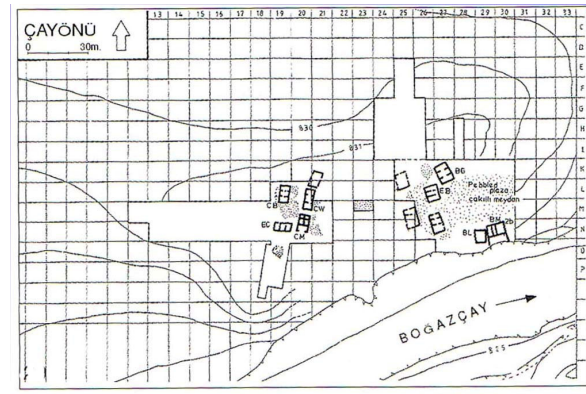
Figure 18.2 Cobble Paved Building Phase (cp2)

(Özdoğan, 1999 (Plates):25)
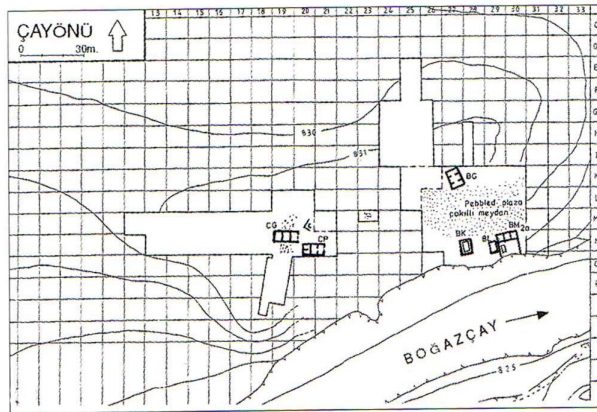
Figure 18.3 Cobble Paved Building Phase (cp3)

(Özdoğan, 1999 (Plates):25)
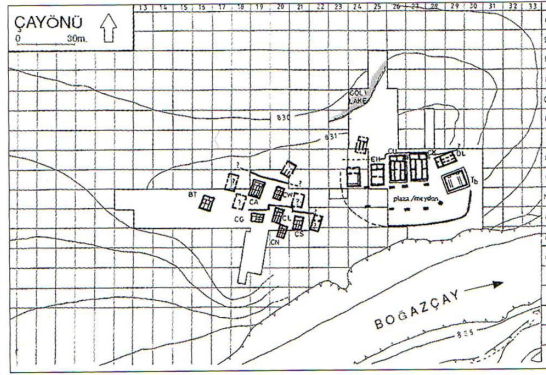
Figure 19.1 Cell Building Phase (c1)

(Özdoğan, 1999 (Plates):25)
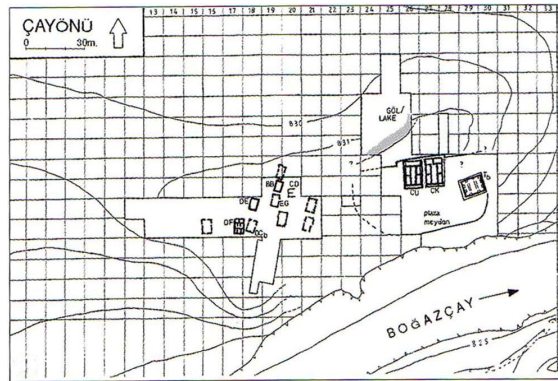
Figure 19.2 Cell Building Phase (c2)

(Özdoğan, 1999 (Plates):25)
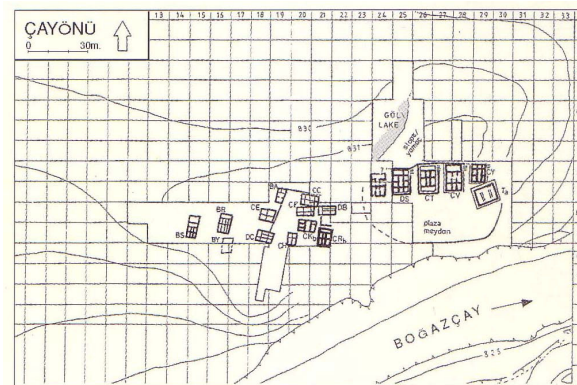
Figure 19.3 Cell Building Phase (c3)

(Özdoğan, 1999 (Plates):26)
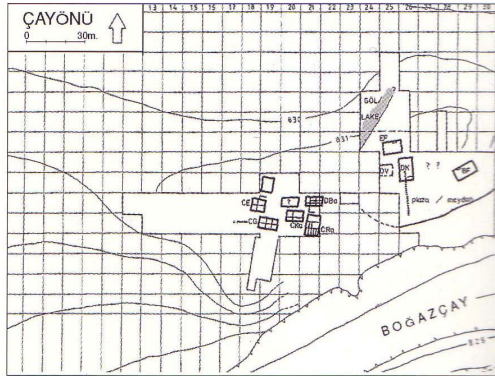
Figure 20.1 Large Room Building Phase
(lr2) (Özdoğan, 1999 (Plates):30)
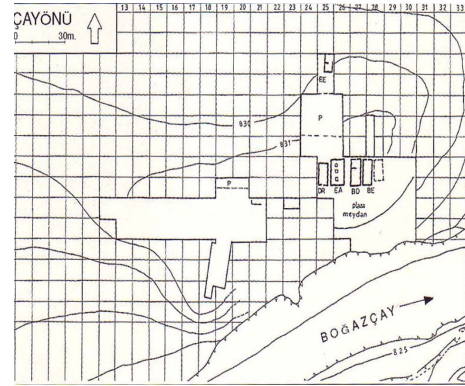
Figure 20.2 Large Room Building Phase
(lr1) (Özdoğan, 1999 (Plates):31)
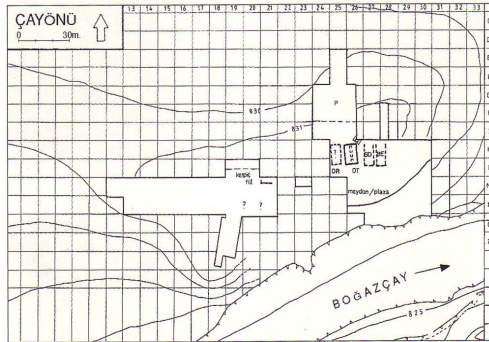
Figure 20.3 Large Room Building Phase
(lr3) (Özdoğan, 1999 (Plates):31)
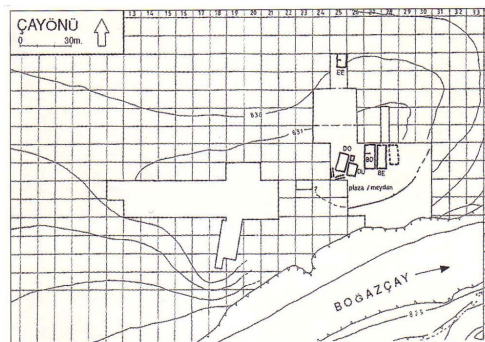
Figure 20.4 Large Room Building Phase
(lr 4-6) (Özdoğan, 1999 (Plates):31)

Figure 21 Skull from Abu Hureyra Trench B

(Moore and Molleson, 2000:281)

Figure 22 Mat Impressions from Abu Hureyra Trench B Phase 8
(Moore and Molleson, 2000:282)
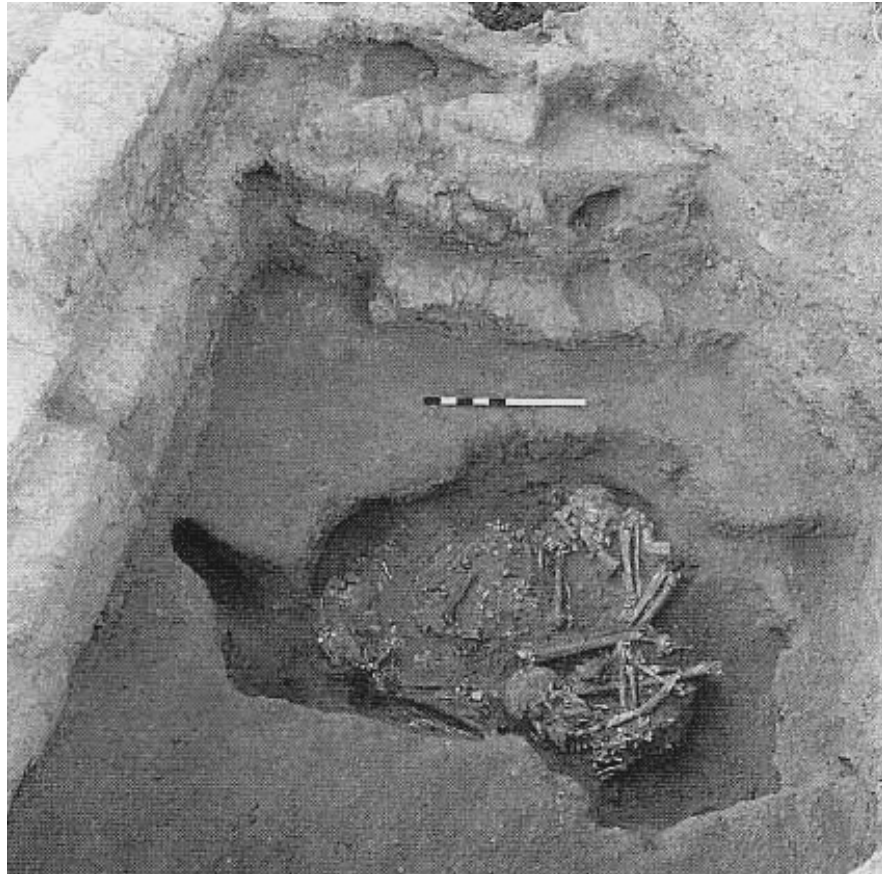
Figure 23 Plan of Pit 144 (Moore and Molleson, 2000:280)
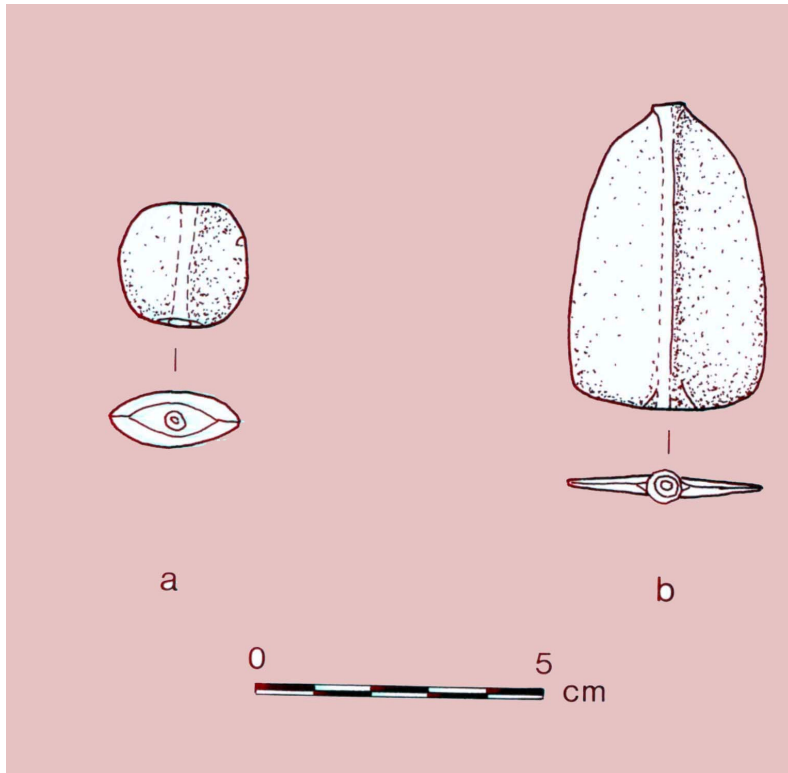
Figure 24 Beads from Graves of Abu Hureyra (Moore, 2000)

Figure 25 Close up Burials from Abu Hureyra Trench D Phase 2
(Moore and Molleson, 2000:285)

Figure 26 Seated women from Abu Hureyra Trench E Phase 4
(Moore and Molleson, 2000:286).

Figure 27 Cut-marks from Abu Hureyra Room 4 (Moore and Molleson, 2000:287).

 Figure 28 A Male from Abu Hureyra with arrowhead
(Moore and Molleson, 2000:289).

Figure 29 Worn Teeth from Abu Hureyra 2 (Molleson, 2000:308)
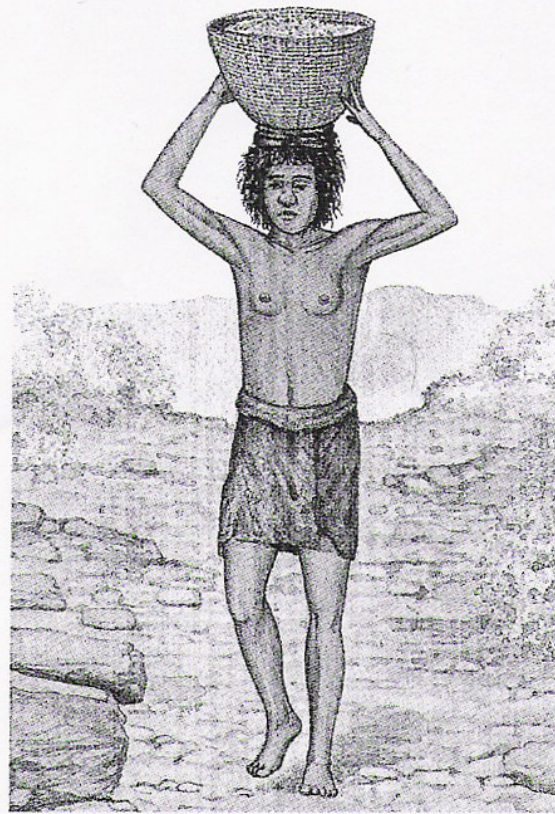
Figure 30 Curved Vertebrae from Abu Hureyra
(Molleson, 1994)
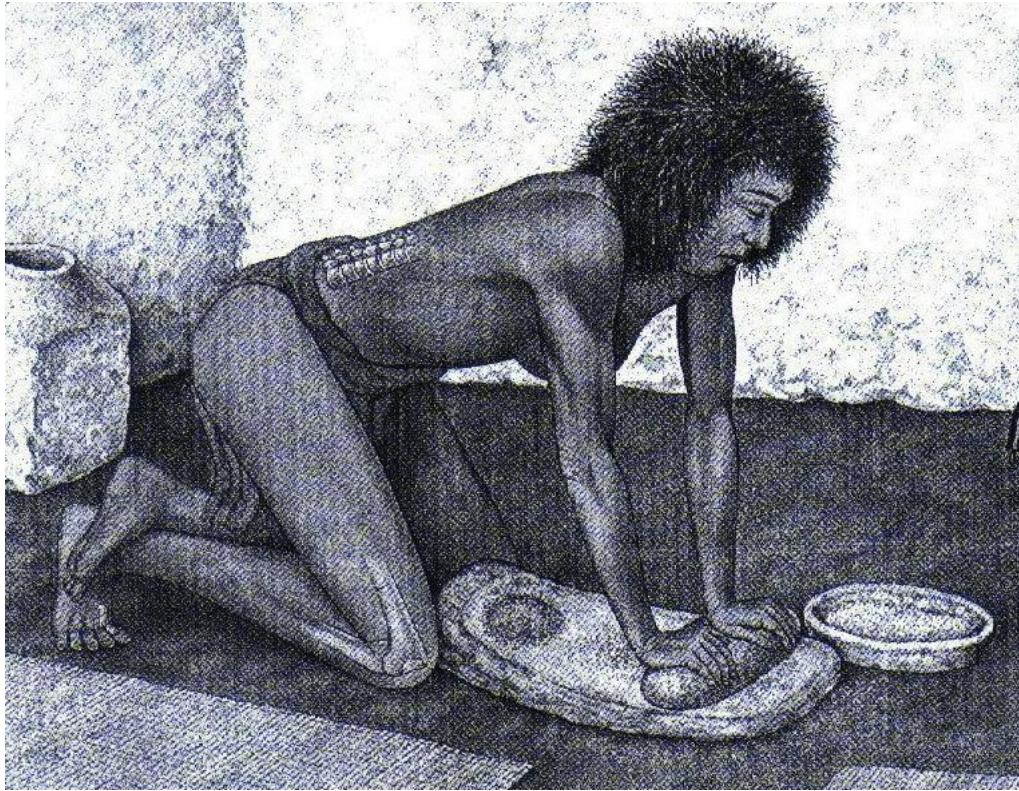
Figure 31 Reconstruction of Grinding Position (Molleson 1994)
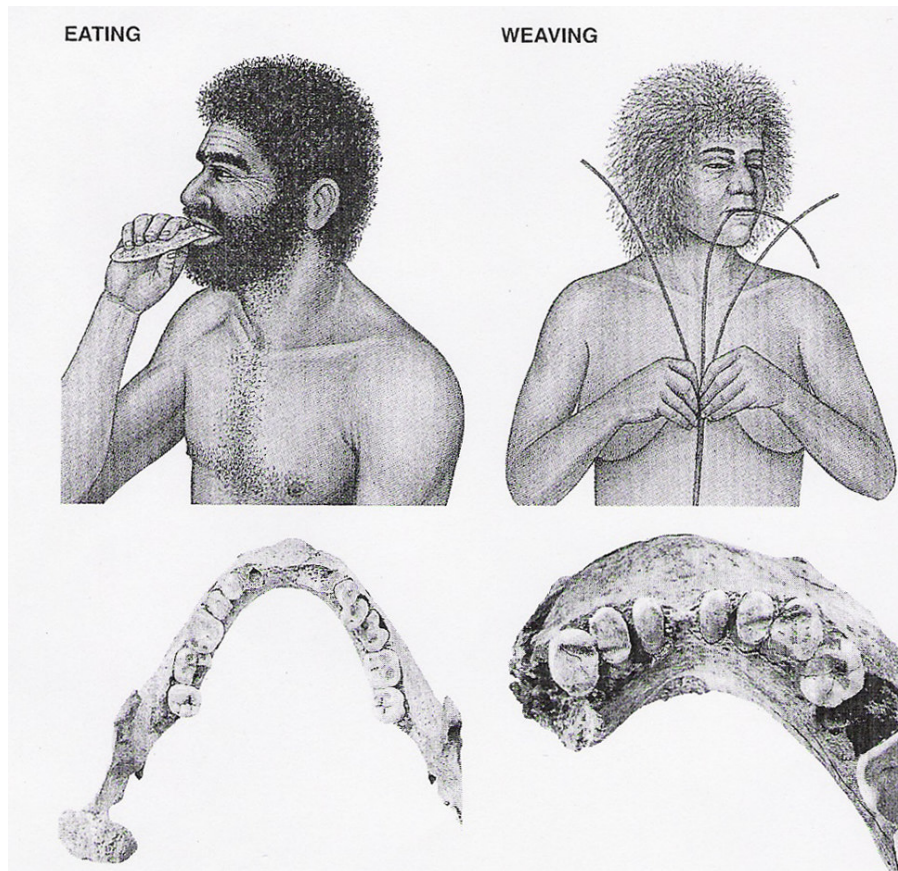
Figure 32 Reconstruction of Teeth Works (Molleson 1994)
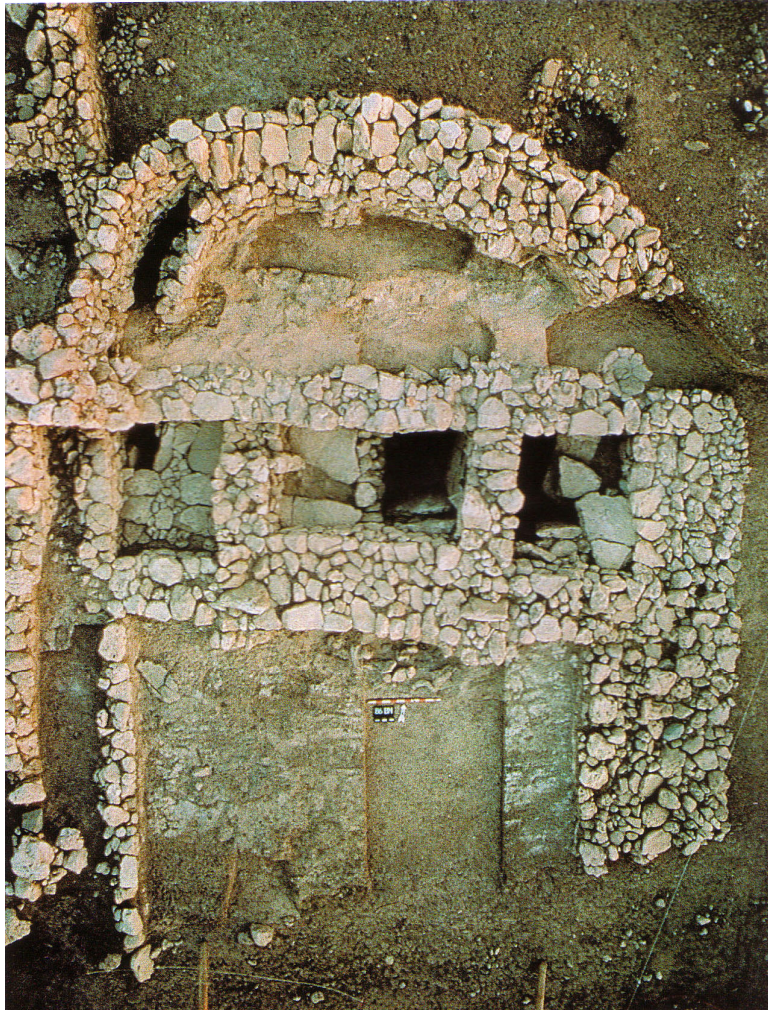
Figure 33 Skull Building: Round Plan of BM1 and Rectangular
Plan of BM2 (Özdoğan, 1999 (Plates):26)

Figure 34 Burial Pit in BM1 (Özdoğan, 1999 (Plates):26)
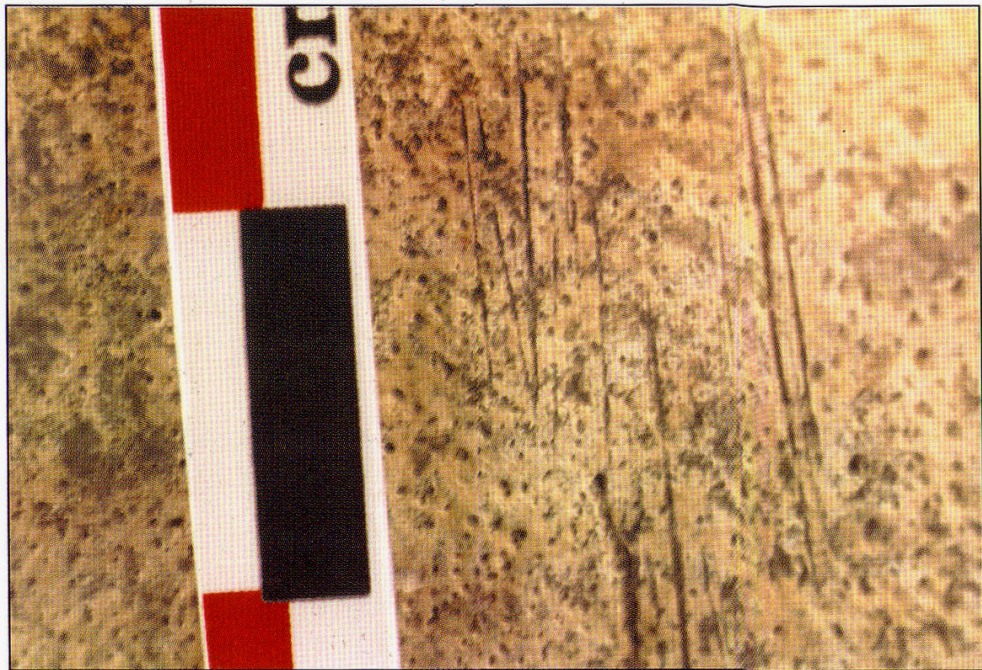
Figure 35 Skull with cut-marks from Çayönü, Skull Building (Özbek, 2004:32)
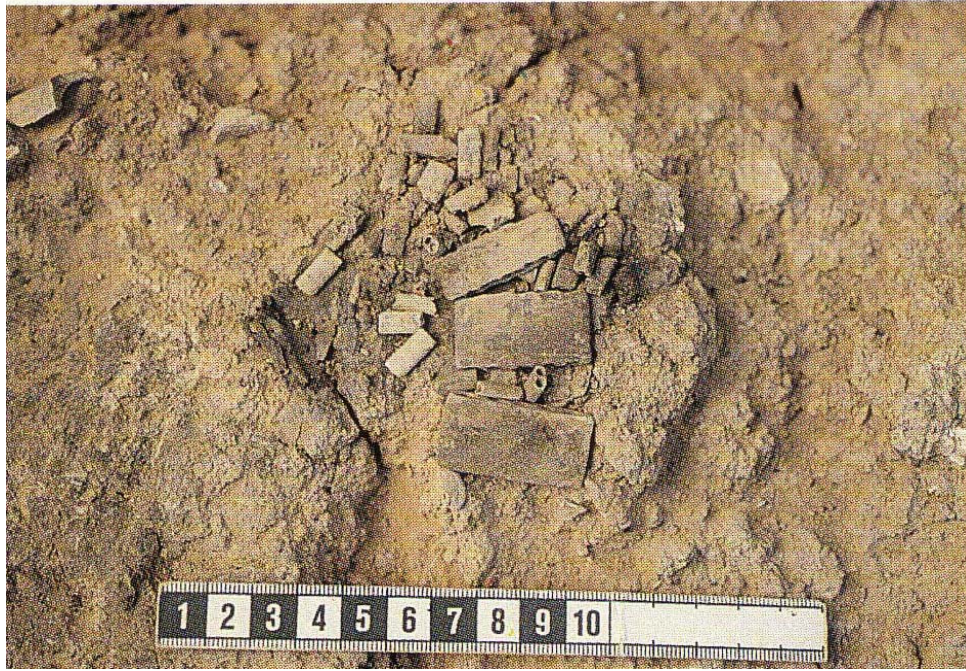
Figure 36 Beads among the Burials in BM1 (Özdoğan, 1999 (Plates):26)

Figure 37 BM2b-c before the removal of pavements
(Özdoğan, 1999 (Plates):26)
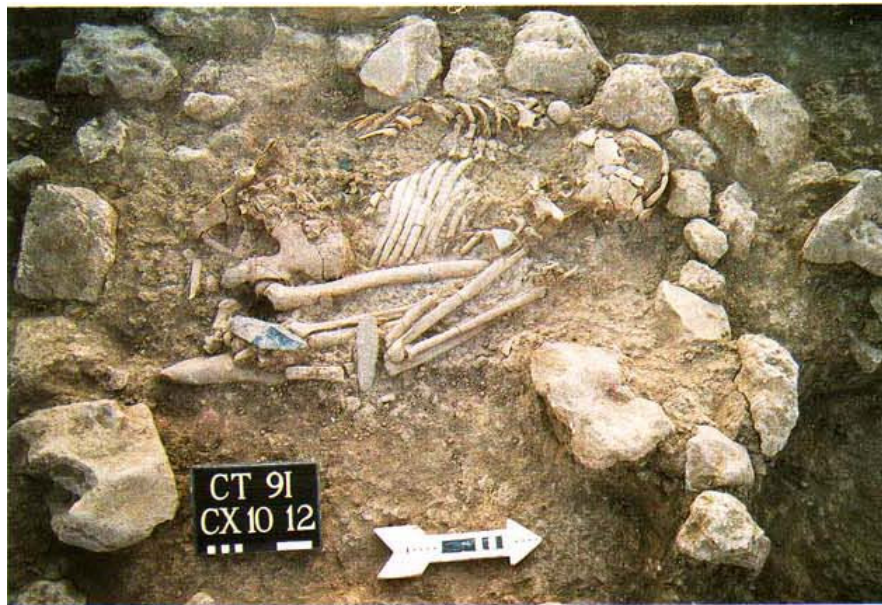
Figure 38 BM2c, W Room with organization of skull and long bones

Figure 39 An aurochs skull from Çayönü (Özdoğan, 1999 (Plates):26)
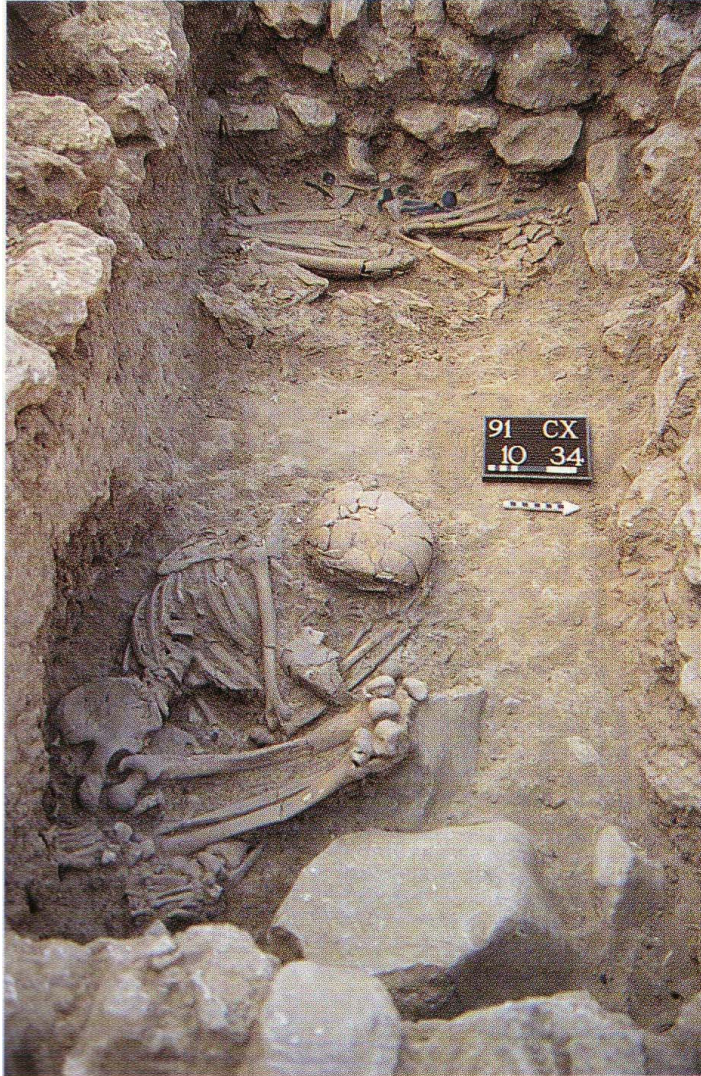
Figure 40 Burials from CX Building

(Özdoğan, 1999 (Plates):30)

Figure 41 The Examples of Teeth Cavity from Çayönü (Özbek, 2004:32)
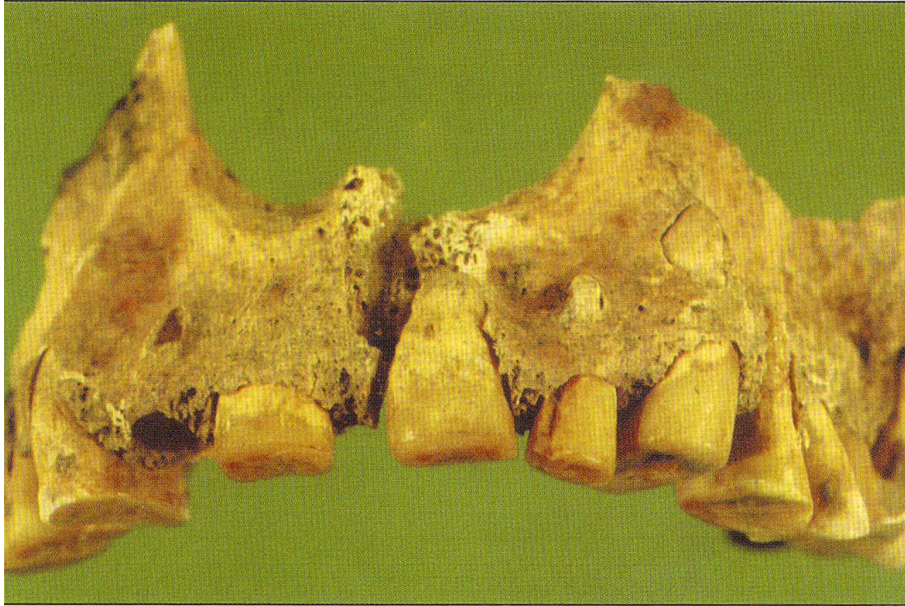
Figure 42 The Example of Abrasion on Teeth from Çayönü (Özbek, 2004:32)

	TRENCH B BURIAL		
Phase	**Burial form**	**Skeletal remains**	**Associated finds**
7	shallow grave	pelvis and vertebrae of adult male	animal bones
8	small pit in wall 139	postcranial remains of one child	2 pink 73.2593,
		aged 3-5 years	73.2594, and 3 black
			73.2595, 73.2596,
			73.2597, cylindrical
			stone beads
8	seated in pit in wall 139	skull of c. 10 year old child	
		and a few postcranial bones	
8	in fill of entrance to room 3	skeleton of infant aged	
		18-24 months	
8	in fill of room 3, tightly flexed on side	postcranial skeleton of female adult	
		aged 20-25	
8	in fill of room 3,	postcranial skeleton of young female	
	flexed, lying SW-NE,		
	associated with 73.2401		
8	in fill of room 3,	femurs, scapula	Bos sp. horn core
	associated with		bone bag 225,
	73,2399		bone with impressions
			of mat wrapping
			73,2611
8	wrapped in matting	skull of young adult male	matting impressions
	facing north against		on clay 73.2610
	wall 139 in fill of room 3		
8	in section G-H	skull of c. 8 year old child and	
		skull of adult male	
8	pit in room 3, flexed,	skeleton of adult male	
	on left side, head to south	associated with 73.2167	
8	pit in room 3	postcranial skeleton of young male	
		associated with 73.2949	

8	in room 3	hand bones	
8	in lane between houses	skull of adult	
8	flexed, lying NW-SE	headless skeleton of adult male,	many flints
	under plaster floor in	left mandibular ramus	
	mudbrick house	of 12 year old child	
8	pit in room 2	adult, 3 children	
		(c. 6, 8, 12 years old),	
		and infant, with 73.1785	
8	pit in room 2	skeleton of young adult female,	flint knife 73.1797,
		remains of young adult and child	butterfly bead 73.1933
			under burial
8	pit in room 2	skeleton of young female	
8	pit in room 2	skeleton	3 1/2 baked clay
			beads 73.1879
8	pit in room 2	tibia, fibula, other postcranial bones	
		near 73.178	
8	flexed, pit in room 2	skull, a few postcranial	
		bones of adult female with	
		12 year old child	
8	pit in room 2	bones of child, near	
		73,1604	
8	pit in room 2	crushed skull, postcranial	cylindrical clay
		bones of adult	bead 73.1642
8	pit in room 2	skeleton of adolescent	
8	pit in room 2	long bones, probably	
		from adult 73.1784	
8	pit in room 2	incomplete skeletons of	
		perinatal infant, child,	
		and an adult, between	
		73.1785, 73.1784	
8	pit in room 2	incomplete skeletons between	
		73.1785, 73.1784	
8	flexed, on left side,	skeleton of elderly	2 butterfly beads
	head to SW, pit in room 2	adult female, remains of	73.1793, 73.1794,
		child and 13 year old	
		adolescent	under skull,

			bone point 73.1641
8	flexed, on left side, head to NW	adolescent skeleton	4 cylindrical clay beads 73.1637
	pit in room 2		
8	pit in room 2	skeleton of mature female	bone point 73.1528
			butterfly bead 73.1684,
			2 cylindrical baked clay beads 73.2393,
			turquoise bead 73.2087,
			stone disc bead 73.2088
8	in wall 139	skeleton	
8	in wall 139, room 3	skull of adolescent or young adult	
8	flexed,	skeleton of c. 8 year old child, some female adult postcranial bones	
	pit in room 3		
8	flexed, skull inverted with basal aspect uppermost, in room 3	1 skull, 2 mandibles, vertebrae, arm and finger bones from young adult male and older adult	
8	in room 3	mandible, postcranial bones from adult ? female and 2 children c. 6 and 10 years old	
8	on left side, head to NE, pit in room 3	red-colored skull and skeleton of adult male, remains of second adult and an adolescent	animal bones
8	on right side, head to W, in room 3	skull, a few postcranial bones from an old man	
8	in room 3	skull, a few postcranial bones	
8	on right side, head to N, in room 3	skull	
8	lying on back, head to NE, in room 3	skull, scapulae, vertebrae, arm bones, ribs of adult female	
8	flexed, on right side, head to E, in room 3	flexed skeleton of young adult male	

			flints, arrowhead tang
8	pit in lane between	mandible, other	
	two houses	postcranial bones	73.1386, scraper 73.1387
9	pit in room 1	2 crushed skulls,	
		postcranial bones of 6-7	
		people, including 1 adult	
		? female and 1 child	
10	occupation soil in room	incomplete skeleton	
10	in occupation soil	a few bones	many animal bones
	outdoors		
10	flexed, skeleton	skeleton of c. 12 year old	gypsum plaster,
	encased in gypsum	adolescent	traces of cinnabar
	plaster, wrapped		
	in matting, part of		
	surface painted with		
	cinnabar, head to W		

	TRENCH C BURIALS
Level	**Description**
39	skull, bones
39	skull, bones
39	skull
39	skull
39	skull
39	mandible, bones
39	mandible
39	scapula
39	bones
39	burial, largely complete
39	skull
39	skull, mandible
39	skull
39	skull
39	skeleton with crushed skull
39	skull, possibly other bones
39	skull
39	bones
39	skull
9	skull, long bones, ribs, vertebrae, bones (5 bags)
9	burial, largely complete (4 bags)
9	long bones, ribs (2 bags)
9	burial, largely complete (3 bags)
9	partial skeleton
9	skull, some other bones

	TRENCH D BURIALS		
Phase	**Burial form**	**Skeletal remains**	**Associated finds**
2	flexed, head to E,	skeleton	caprine jaw, other
	pit under clay		animal bones
	floor of room		
2	flexed, head to W,	skeleton of juvenile,	2 greenstone peardrop
	rectangular pit	bones of second juvenile	beads 73.731, 73.737,
	under plaster floor		2 small stone beads
	in room		73,730
3	disarticulated	skeleton	
	tight bundle, head		
	to E, long bones		
	EW, pit in floor of room		
3	flexed, aligned	skeleton	1 disc shell bead 73.214
	WNW-ESE, pit in		
	clay floor of room		
3	disarticulated	skeleton	a few flints
	tightly flexed		
	bundle, head at SW,		
	hollow in fill of room		

	TRENCH E BURIALS		
Phase	**Burial form**	**Skeletal remains**	**Associated finds**
4	small pit in yard	skull colored red	
5	shallow pit in fill	skull and a few	
	of room 1	postcranial bones	
5	shallow pit in fill	2 skulls and some	
	of room 1	postcranial bones	
5	fill of room 1	skull	pebble with bitumen
			blob in shape of cross
			73.2685 on top
			of mandible, agate
			butterfly bead 73.2898

			directly under skull
5	pit in fill of	skeleton	
	room 4, flexed,		
	on right side		
5	pit in fill of	mandible and several	animal bones
	room 4	long bones	
5	pit under plaster	skull of child 73.3437	
	floor 341 of room	above adult skull 73.2656	
5	pit under plaster	skull; photo shows	
	floor 341 of room	vertebrae, ribs, and some	
		long bones	
5	in fill of room	incomplete skeleton of child	
5	pit in east corner	skeleton of child	
	of room 5, flexed		
5	upright, in pit in	incomplete adult skeleton	caprine horn core, animal
	fill of room 1		bones, stone ball 73.1960,
			flints, flint blade resting
			on zygomatic arch
5	pit under floor of	skeleton	clay figurine of animal
	room 5, flexed, on		72.613 in fill of pit,
	left side, head to		
	southeast,		
	primary burial		
6	pit in corner of room 1	adult skeleton above	butterfly bead 73.2628
		73.2396, seated upright	
		with legs splayed	
6	pit in corner of room 1	incomplete adult skeleton	agate butterfly bead 73.2635,
		in same pit under 73.2398	green butterfly bead 73.2636,
			bone tube 73.2637,
			flints F296, and
			animal bones B334
6	on floor in corner	adult skeleton	Bos sp. horn core, other
	of room 1, flexed,		animal bones, polished
	on right side, head		pebble 73.2336
	to southwest		

6	in fill of room 2, right hand under chin, flexed, on left side, head to west, primary burial	adult skeleton	flints F233 and pebbles
6	flexed, in pit under floor of room 3	adult skeleton	
6	in fill of room 4	skeleton	chalk ball 73.2049, pebble spoon 73.2050
6	in mud wash level	fragment of cranium	
6	in pit under floor of room 5, flexed, on left side, head to west, primary burial	adult skeleton	arrowhead 72.570 from beneath ribs in chest cavity, flint blade core 72.569
7	shallow pit in fill in corner of room	incomplete skeleton above 73.1316	arrowhead 73.1305 associated with both skeletons
7	shallow pit in fill in corner of room	incomplete skeleton in same pit below 73.1315	
7	disarticulated bundle in mudbrick collapse	long bones	
8	in occupation soil	pelvis fragment long bone fragment long bone fragment long bone fragment	all near caprine skull 73.124
8	in occupation soil	skull	
8	in occupation soil, oriented east-west	legs and foot	
8	pit in yard	fragments of skeleton below 73.842	
8	pit in yard, flexed	skull and some postcranial bones	
8	in wash	a few bones	

	TRENCH G BURIALS		
Phase	**Burial form**	**Skeletal remains**	**Associated finds**
1	small pit in yard	skull fragments	none