

Beyond Death: The Tale of a Neolithic Society and
the Study of an Outdoor Communal Cemetery
at Tell el-Kerkh, Northwest Syria

A Dissertation

Submitted to the University of Tsukuba
In Partial Fulfillment of the Requirements for
the Degree of
Doctor of Philosophy in Literature

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Abstract

People in Near Eastern Neolithic societies buried their dead in various locations. Most often the deceased were buried within the settlement boundaries and associated with certain building structures and in courtyards. Through the long process of transition into agricultural societies and settled-farmer villages, major changes related to social structure, funeral practices and the role of the deceased in the life of the living were notable. Various complicated funeral practices including the disposal of the dead and the manipulation of the remains suggests that the inhabitants were involved in spirituality. Further, the relationship between the deceased and living influenced the spiritual dimension of human societies. Thus, the deceased were always buried close to the living or interred in structures that were used in daily life suggesting a spatial tie between the living and space.

Throughout the long period of development in the ancient societies from the hunting-gathering nomadic way of life in the Natufian period to the settled farming way of life in the Neolithic period, the location of graves and the interment pattern varied. In this research, a number of sites were selected from each period in order to ascertain the spatial context of the grave location in the settlement and the role of the dead in the lives of the living. Analyses have shown that the burials in the Natufian period took place in the fill of structures or were associated with dwellings and occasionally in abandoned houses. Further, some sites were used exclusively for burials before the construction of the settlement such as Hilazon Tachtit and Raqefet Cave, which indicate that the grave played a role in the settlement foundation. In contrast, the burials in the pre-pottery Neolithic period were tied to the settlement's residential areas and took place in some instances in actively used structures. However, non-residential structures bearing religious meaning were also used as the final place for burials. Hence, a spatial relationship between the venue where the communal activities took place and the burials is obvious. Further, the deceased were buried in close vicinity to the residential structures where ritual practices were undertaken. The human remains were ultimately placed in their final deposit and were in general associated with building structures. Thus, the building structure played a role by linking the living to their ancestral lineages indicating a place-based identity.

Excavations in the PN period have revealed a completely altered image of life ways in PPN societies. The northern Levantine sites revealed the existence of cemeteries for the first time during this period, which indicates a major transition in this period. In this context, the excavations at Tell el-Kerkh in northwestern Syria revealed a unique outdoor communal Pottery Neolithic cemetery. This cemetery was utilized for inhumation of the deceased regardless of age and sex. A limited number of individuals were buried in the structure after it was abandoned.

The transition in the burial location during the PN period and the major changes related to the funeral practices and the concept of expressing of identity demonstrates a high degree of social complexity. The common custom of interring the deceased in association with buildings, widely prevalent in the PPN, became less obvious. It is strongly argued that the houses in the PN became increasingly related with economic activities rather than ancestor-based rituals. The spatial relationship between the dead and the location of the grave in the PN period is linked to particular places that formed a bridge connecting the generations to each other. These locations were in close vicinity, in active-use or abandoned houses or on the designated land that allowed communal sharing activities and construction of a collective identity.

CHAPTER 1: Introduction

Death was not the end. It was the beginning of a new journey for the dead in ancient societies. Death was not the end as well for the living still alive and preparing the grave, interring the deceased and performing and participating in funeral practices post-mortem.

The deceased in Near Eastern societies were buried in various contexts. They were found within well-prepared or simple grave pits, individually or within a group. Generally, graves were constructed in different locations: inside/outside caves, on terraces and in open sites in the Natufian period; beneath house floors, between buildings, in building structures of symbolic or ritual significance, courtyards, in the Pre-Pottery Neolithic period (PPN); in some instances within cemeteries located inside the settlement boundaries in the Pottery Neolithic period (PN) or cemeteries located outside of the settlement in the Ubaid period.

Deceased were interred individually, or in groups on their side, back and in a prone position. In many instances, they were provided with various kinds of grave goods and objects. From the Pottery Neolithic period, with the invention of pottery, infants and small children were interred within different shaped pottery vessels for the first time and were accompanied by a variation of grave goods.

The transition from the Natufian hunter-gatherer nomadic way of life to the Neolithic settled-farmer and agricultural village societies was one of the most significant cultural processes in human history. The Neolithic period is characterized by the introduction of farming, domestication of plants and animals, sedentary way of life, invention and usage of pottery, and a variety of mortuary practices. The location of the grave and burial ground was varied and sometimes differed from one settlement to another. The burials were associated with residential areas and took place in the residential buildings. Burials in some instances were discovered inside, outside, or near structural buildings, beneath house floors and walls, between buildings, in courtyards and open-air cemeteries (Figure 1-1). The general distribution of the burials demonstrates a strong spatial relationship between the dead and living. Most likely, the deceased's household played a fundamental role in preparing the grave and determining its location. In other words, people often preferred to bury their deceased close

to living spaces to feel their existence or maybe to create a linkage between the living and dead. Hence, the grave was in many instances associated with living spaces.

1. Research Background: Burial Customs/Location in the Near East

Mortuary rituals have a long history and development and have been practiced since the Lower Paleolithic period. More elaborate inhumation could be recognized from the Middle Paleolithic period (e.g. Pettitt 2011). However, in most cases, the deceased were buried in a flexed or semi-flexed position. In the Upper Paleolithic, clear evidence of graves with funeral practices were documented, however, the number of deceased still limited (Nadel 1995). Crouched burials were discovered from the various sites in the Upper Paleolithic and especially in the following Epi-Paleolithic periods. Notable sites are Nahal Ein Gev I (Arensburg 1977) of the Levantine Aurignacian, Ohalo II (Nadel 1995) of Kebaran.

Toward the end of the Epi-Paleolithic, the number of burials drastically increased i.e. in the Natufian period (Nadel 1995: Table 1.1). The burials in this period were in most cases discovered in caves and their terraces such as in el-Wad Cave (Garrod and Bate 1937) and Hayonim Cave (Belfer-Cohen 1988), and the building sub-floor of the open-air sites such as in Ain Mallaha (Perrot 1960; Valla et al. 2017). Remains of about 500 individuals were uncovered from this period (Grosman and Munro 2017). The graves were simple and mostly contain individual primary burials and secondary burials were also uncovered and this type increased in the Late Natufian. The deceased were buried in various positions; flexed and extended, with supine, prone or side down positions. In general, no particular orientation was documented. The group and secondary burials were also recognized among the Natufian burials and the number of secondary burial increased in the Later Natufian. It is argued that the increase in secondary burials was related to settlement mobility (Byrd and Monahan 1995; Kuijt 1996; Bar-Yosef and Belfer-Cohen 2002). Moreover, the group burials are attributed to kin-group distinctions (Belfer-Cohen 1991; Kuijt 1996; Byrd and Monahan 1995).

In the Pre-Pottery Neolithic (PPN) periods, the number of individuals increased, as did the diversity and complexity in funeral practices. Most of the burials were primary burials and the deceased were buried intact. Decapitated skeletons, skull caches, secondary funeral rituals and group burials characterized this period. Secondary funeral practices became increasingly common. Most of the burials were discovered in the residential areas and associated with the

residential buildings. Notably, interment of deceased inside non-residential buildings used for ritual or meetings were clearly documented especially in the PPNA period. These buildings drastically decreased in the LPPNB period and disappeared in the PN period.

Most of the burials were primary burials and the graves were shallow pits. Deceased tended to be buried in a flexed position on one side, and they frequently lacked their skull especially in the southern Levant (Bocquentin, Kudas and Ortiz 2016). Removed skulls were sometimes decorated with plastering and painting, then probably after celebration, they were buried in a cache. Kuijt hypothesized that these practices were executed as a funeral cycle for keeping the peace in Neolithic societies (Kuijt 2000). From the PPNA to the Early PPNB periods, the people used to build charnel houses, where the human skeletons were gathered together, especially in the northern Levant and southeast Anatolia. The “Skull Building” at Çayönü (Özdoğan 1999), “Charnel House” at Tell Abu Hureyra (Moore Hillman and Legge, eds. 2000), and “maison des morts” at Dja’de Mughara (Coqueugniot 1999) are such examples. The skeletons discovered from the “Tower” at Jericho (Kenyon and Holland, eds. 1982, 1983) in the southern Levant probably indicated that this structure had changed its character to such a funeral place at least once during the PPNA. Essentially, various and complex funeral practices were undertaken in the residential houses and communal buildings during the PPN periods in the Near East. Up to this point, private and communal houses had been the main places for undertaking such funeral practices.

Toward the end of the PPNB, funeral practices seemed to become simpler and changed their characteristics. Funeral practices related to skull removal and skull decoration sharply declined and the charnel houses disappeared. The number of excavated burials in the Pottery Neolithic period is much smaller than those of the Pre-Pottery Neolithic periods (Akkermans and Schwartz 2003:145, Gopher and Orrelle 1995: 24). However, the discovery of the Pottery Neolithic cemeteries at Tell Sabi Abyad and Tell el-Kerkh shed new light on the study of Pottery Neolithic funeral practices (Akkermans 2008; Tsuneki 2011, 2012).

2. Objective of this Research

Utilizing the perspective mentioned above, this thesis discusses the spatial placement of the grave in the Near Eastern societies in general and particularly focuses on the PN period through analysis of excavated sites in the Northern Syria and Southeastern Turkey. The

research will generally focus on the location of the graves and burial ground in the settlement and try to elaborate their spatial relationship and determine the social factors affecting the choice of place where the deceased were interred. Through the long development of ancient societies from the mobile hunter-gatherer way of life in the Natufian period to the settled farmer way of life in the Neolithic period, major changes in subsistence, settlement patterns, the role of the deceased in the life of the living closely influenced the spiritual realms of human societies. In general, the relationship between the dead and the living in all societies was undoubtedly strong. People never discarded their dead, but rather they were tied to each other. People were always trying to feel the existence of the deceased through interring them close by in living spaces inside residential structures. The spatial relationship between the living and dead varied and changed through time and was dependent on the role that the deceased played in society and the symbolic relationship between living and dead, which peaked during the PPNB.

The prevailing PPNB funeral practices such as skull removal and skull decoration and the nonresidential religious or communal use activity buildings sharply decreased or disappeared during the PN period. There was a major change between the PPNB and PN way of life, rituals, and settlement pattern. The characteristics of the PN societies demonstrate a distinct local-based culture or regional culture distinguishing each site and region. Thus, this thesis will consider the general characteristics of the society, settlement pattern, funeral practices, burial types and the location of the burial ground and graves in the PN period in general and at Tell el-Kerkh in northwestern Syria in particular. Tell el-Kerkh revealed a unique Neolithic outdoors communal cemetery in the Near East. The cemetery exposed large number of individuals and variety of funeral practices. This research will introduce the cemetery of Tell el-Kerkh in detail and illustrate the sequence of emergence of the cemetery. Further, the distribution of the burial in each layer comprising the cemetery, the society social structure and household-based relationships. Even though excavations in the PN sites are still limited, excavations in the last decade in the Northern Levantine and South Eastern Anatolia, in particular, have uncovered interesting evidence, which could facilitate to some degree our understanding of the complexity of these societies. Consequently, a comparison between the sites included in the study area will shed light on the characteristics of the PN societies and illustrate the differences and similarities in the social structure in order to provide better understanding about the complexity of these societies. Finally, the research will provide a sequential

narrative on the transition of the spatial relationship between the dead and living spaces and the role of deceased and ritual practices in determining the location of the grave in each period by incorporating as much evidence as possible.

3. Thesis Outline

This thesis is structured as follows.

Chapter 1 includes a brief introduction to the research subject and its history and the description of purpose of this study.

Chapter 2 offers a concise overview of the development of ancient Near Eastern societies from the Natufian period to the end of the PPNB period. Burials are one of the main resources for studying the social structure, funeral practices and way of life in any society. Therefore, a handful of sites were selected from each period that revealed human remains in order to testify the spatial contexts of grave locations in the settlement. Through other relevant sites could not be treated fully in this study, the listed sites are sufficient to fulfill the research objectives.

Chapter 3 is devoted to analysis of the Tell el-Kerkh Neolithic site and its cemetery as a case study. The chapter includes full detail about the Kerkh Neolithic cemetery and the distribution of deceased in each layer. It includes analysis of all burial types uncovered in the cemetery and provides explanations of each individual uncovered. Further, this study introduces the funeral practices in the cemetery and the social structure of Kerkh society.

Chapter 4 investigates the PN sites in Northern Syria and Southern Anatolia as the core study area. Further, some relevant sites from other regions were included. This chapter illustrates the transition to the PN period and the accompanying major changes in the settlement pattern, cultural materials and funeral practices. The PN societies seem to have possessed a distinct local-based culture or regional culture distinguishing sites and regions.

Chapter 5 includes a discussion about the social-economic development documented at Tell el-Kerkh. Further, it discusses the reason for the emergence of Tell el-Kerkh cemetery based on environmental, social and economic perspectives.

Chapter 6 highlights the changes in the location of the graves and burial grounds throughout the long period of transition and development of ancient societies in Near East from the hunting-gathering nomadic way of life in the Natufian period to the settled farming way of life in the PPN period to the regional-based complexity of the PN period.

CHAPTER 2: Burials in Archaeological Contexts in the Natufian and the Pre-Pottery Neolithic Period

Burials are one of the most important resources that assist in studying the cultural and social behavior of ancient societies. All society members including men, women, and small children were in some instances treated in a particular way after death, which reflects a special social status. This status could be determined through the interment process, burial customs, and accompanying assemblages of grave goods and other factors. Thus, these details provide information about the deceased's social position in society and the type of social class and hierarchy present in ancient societies.

Throughout the development of societies in the Ancient Near East, burials were identified in various contexts, and were found in different locations. Burials were uncovered in the close proximity of living areas, in the fill of the structures, inside/outside dwelling structures, on/beneath floors, between structures, in courtyards, in communal and cultic buildings and in real "cemeteries".

Preparation of the grave undoubtedly varied. Grave pits have been uncovered in various conditions, and - in general - show no particular arrangement. Exceptionally, well prepared graves have been documented such as in Raqefet Cave (Nadel et al. 2013). Generally, the status of the graves could be divided into four categories:

- 1) In many instances, the grave was just a simple subsurface or shallow pit containing a single or number of individuals and were subsequently refilled and covered by layer of soil after deposition of the body.
- 2) Graves were prepared through digging the pit and by lying stone slabs, stones, and mud plaster partially or completely on the grave pit floor or its walls.
- 3) Graves were marked through surrounding the pit with a row of stones.
- 4) Other complex evidence shows extensive preparation of the graves, which may refer to a social status of the deceased.

Deceased were interred in various positions, on one body side (right, left), prone, supine and in a seated position. They were interred individually or in groups. Moreover, intentional grave

preparation in some instances hinted at the identity of the deceased who may have had high social rank like the Natufian Shaman burial from the Southern Levant at Hilazon Tachtit cave where a female was discovered in a well-prepared grave pit (Grosman, Munro and Belfer-Cohen 2008).

Burials provide plenty of information about the society social structure, funeral practices and the way of life in any society. Therefore, a handful of sites from each period which uncovered a good example of human remains and show the location of the graves have been selected for this study. There are many other important sites that could be mentioned, but the listed sites will be enough to meet the goals of the study.

1. Natufian Period

1.1. Characteristics of Natufian Sites

The transition from a nomadic way of life to the establishment of permanent settlements is one of the most influential cultural and economic changes in prehistory (Weinstein-Evron et al. 2012). The Natufian culture flourished approximately between 12,500 and 9,500 BC. The Natufian culture was widespread in different regions from the Middle Euphrates in the northern Levant to the north Negev in the south, and from the Mediterranean coast in the west to Jordan in the east.

The Natufian period has been divided into three phases: Early Natufian, Late Natufian and Final Natufian (Bar-Yosef and Valla, eds. 1991, Bocquentin 2003). The Natufian culture is considered the first sedentary hunter-gather society in the Levant (Bar-Yosef and Belfer-Cohen 1989). Natufians established sedentary settlements based on a hunter-gather economy and non-kinship organization over a long period of time (Grosman, Munro and Belfer-Cohen 2008).

The Natufian domestic architectures were clustered in groups, which was the first evidence for sedentary villages. The Natufian structures were characterized by stone foundations semi-circular to circular in plan and semi-subterranean, and the walls were preserved up to a meter (e.g. Moore, Hillman and Legge, eds. 2000; Samuelian, Khalaily and Valla 2006). Some of the building structures were associated with postholes that could be evidence of roof support. The roof would have been covered with the available materials in the region like poplar poles, brush reeds and grasses as in Abu Hureyra 1 (Moore Hillman and Legge, eds. 2000).

The Natufian people inhabited three major places: Caves and rock-shelters, open sites and seasonal camps. In the Early Natufian period, Natufian open-air sites were uncovered in the Jordan Valley in places such as Beidha and Wadi Hammeh 27 (Edwards, ed. 2013) and Ain Mallaha (Eynan) (Perrot 1960). Moreover, seasonal camps were uncovered in different Levantine regions at Azraq 18 (Maher 2017) in Azraq Basin in Jordan. Additionally, caves and rock shelters inhabited since in the Early Natufian include Hayonim cave and its Terrace (Belfer-Cohen 1988) in western Galilee, Erq el-Ahmar (James and Iman 2002) in the Judean desert and el-Wad and Kebara caves in the Carmel region (Garrod 1957; Weinstein-Evron et al. 2012).

Late Natufian sites were widespread in the Levant and have been uncovered in different regions (Figure 2-1). In Syria, Late Natufian layers have been uncovered in Abu Hureyra (Moore, Hillman and Legge, eds. 2000), Murybet (Stordeur and Evin 2008) in the Euphrates region and Dyderiyeh (Akazawa and Nishiaki 2017) near Aleppo, Baaz Rock Shelter and Kaus Kozah Cave near Damascus (Conard 2017a, b; Conard et al. 2013). Some Early Natufian sites attested continued occupation into the Late Natufian in the Southern Levant such as el-Wad Cave (Weinstein-Evron, Kaufman and Yeshurun 2013), Hayonim Cave and its Terrace (Belfer-Cohen 1988) and Ain Mallaha (Valla et al. 2017). Whereas, Nahal Oren is a Late Natufian site and the occupation continued into the Early Neolithic period. The Natufian remains were discovered on the cave's terrace and represented by a stone walled camp and a graveyard (Nadel and Rosenberg 2011).

Burials in the Natufian period have been documented through a series of circa 500 burials, which have been uncovered from several sites (Grosman and Munro 2017). Many of the skeletal remains were incomplete (Valla 1998). Primary burials with single individuals were common during the Natufian period, deceased were interred on their side in a flexed position. However, secondary and collective or grouped burials were also uncovered (see Table 1).

1.2. Burials in Context

1.2.1. Shukbah Cave

Shukbah Cave was the first Natufian site to be discovered in the Levant (Weinstein-Evron 2003). It is located on the northern bank of Wadi en-Natuf, on the western flanks of the

Judaean Hills, some 30 km from the Mediterranean Sea. The cave consists of a central chamber (Chamber I) and two side chambers (II and III) (Figure 2-2). There were two chimneys in the ceiling of the main chamber (ibid 2003). Excavations in the cave revealed a small number of individuals. At least seven individuals were uncovered (H1-3, H5-8) belonging to the Upper Natufian period, though they were very fragmented (Bocquentin 2003; Weinstein-Evron 2003).

The burials were uncovered inside the cave individually and close to each other. Three children (H1-3) were buried separately near the north wall between room I and II. Another child (H5) was buried in the center of room I whereas an adult (H4) was buried alone at the eastern corner (Bocquentin 2003).

A group burial consisting of three individuals (H6-8) was uncovered for the first time in room I. H8 was buried in a couching position beneath a large block. In addition, the child burials of H6-8 were fragmented and found beneath the same block probably on the knee of H8 (Garrod 1942).

1.2.2. El-Wad Cave

El-Wad site or Mugharet el-Wad is a Natufian base camp located on the western side of Mount Carmel in Wadi el-Mughara. In the vicinity of El Wad, there are three other caves: Jamal, Tabun, and Skhul. El-Wad is the largest of them and yielded Natufian discoveries. It consists of the cave and its terrace. The cave has a large room measuring 15 x 10m, which opens outwards to the northwest and other smaller rooms in addition to a 71m long corridor (Garrod and Bate 1937).

Excavation of the terrace was extensive and important, yielded the most notable Natufian finds and was less disturbed than those inside the cave (Garrod and Bate 1937). A large number of individuals were discovered at the site. The early Natufian remains were discovered in the cave chambers (I and II) including collective burials of extended bodies (Figure 2-3, upper). The terrace revealed Late Natufian finds (Weinstein-Evron, Kaufman and Yeshurun 2013; Weinstein-Evron et al. 2007). The minimum number of individuals discovered in El-Wad is different according to the counting of various authors. Thus, (Garrod and Bate 1937) counted 47 individuals, (Keith 1932) 87 individuals, (HersHKovitz and Gopher 1990) 97

individuals, (Belfer-Cohen, Schepartz and Arensburg 1991) 96 individuals, and (Bocquentin 2003) 70 individuals. The deceased were buried individually and in groups. The majority of burials belong to the Early Natufian period, However, 11 graves, containing 18 individuals have been recovered from the northeastern part of the terrace. Ten graves containing 15 individuals belong to the Late Natufian period (Bachrach et al. 2013) (Figure 2-3, down). Grave 3 for instance contains the remains of 4 individuals, and the grave was covered by a pile of stones (Weinstein-Evron et al. 2007).

Most of the burials were individual and primary burials in a shallow pit, and no architecture or intentional grave markings were uncovered (Bachrach et al. 2013). Further, there was evidence for a spatial division based on functionality at the El-Wad site in the Early Natufian. The houses were uncovered on the terrace and inside the cave, and the burials on the terrace and at the cave entrance. Moreover, spatial differentiation for the Late Natufian has been recovered (ibid. 2007).

1.2.3. Kebara Cave

Mugharet el-Kebara is located on the western escarpment of Mt. Carmel. The cave has an arched entrance, faces north-northwest and opens to the Mediterranean, and it has a small terrace (Bar-Yosef et al. 1992; Meignen et al. 2017). Two assemblages of human remains were uncovered. The first was found at the entrance, and the second, which is attributed to the Early Natufian is inside the cave. The estimated number of individuals is varied based on different excavation reports. However, the estimated number of human remains is 48 (Bocquentin 2003). Of the 48 Natufian individuals, 16 were children and 2 were adolescents. The majority of burials at the entrance of the cave were children, whereas the adults were all males (ibid.).

At the front part of the cave, a group of burials was uncovered. The grave was not prepared and the burials were dispersed without attention. Remains of adults and infants were found, but were very fragmented (Turville-Petre 1932). Additionally, the burnt human remains from 31 individuals were uncovered among the secondary burials at the bottom of the cave, which seems to suggest that the Natufian people extracted and burned their deceased after interment (Bocquentin 2003). However, it is difficult to determine whether this cremation was intentional or not (Le Mort et al., 2001).

1.2.4. Nahal Oren

The Late Natufian site named Nahal Oren is located on the northern bank of the Nahal Oren canyon. This site consists of a cave and a terrace, and the Late Natufian graveyard was uncovered on the terrace. The cave opened to the southeast, and consists of one chamber (33m). A large terrace measuring 21 × 18m, is present in front of the cave but the lower part was destroyed during the construction of the road (Stekelis 1942; Stekelis and Yisraeli 1963; Noy 1989; Nadel and Rosenberg 2011; Bocquentin 2003).

Circular and oval shaped domestic structures identified on the terrace belong to the final Natufian. These discoveries indicated that the terrace was occupied permanently (Stekelis and Yisraeli 1963). The space on the terrace was organized, and it was leveled prior to the deceased being interred there suggesting a deliberate act of preparing the funerary section (Noy 1988).

Remains of 45 humans were uncovered in the graveyard, and most of them are adults (Figure 2-4). Bocquentin (2003) has studied 44 skeletons: 31 adults, 8 infants/children and 5 children/adolescents. Various stone installations, hearths and human remains are characterized in the graveyard. Most of the burials are adults, buried individually with two cases of double inhumation (Crognier and Dupouy-Madre 1974; Noy 1989; Belfer-Cohen, Schepartz and Arensburg 1991; Bocquentin 2003; Nadel et al. 2012). A hearth surrounded by stone was uncovered in the graveyard (Stekelis and Yizraely 1963) and several skeletons were placed near and around this hearth (Stekelis and Yizraely 1963; Crognier and Dupouy-Madre 1974; Noy 1989; Bocquentin 2003; Nadel et al. 2012). The burials were associated with stones, and in some instances, were surrounded by rows of stones. Moreover, stones covered some burials (Bocquentin 2003). Some of the burials were lacking their skulls (Noy 1988). In general, the deceased were buried in a flexed position and the head was oriented to the north (Stekelis and Yisraeli 1963; Noy 1989). The Natufian human remains in the graveyard were uncovered on the terrace and at the associated stone slabs (Nadel et al. 2012). In general, the burials were not associated with structures, however, at least two burials were associated with architecture (Nadel et al. 2012; Bocquentin 2003).

1.2.5. Hayonim Cave

Hayonim cave site is located in Western Galilee and the focus for a continuous series of excavations (Bar-Yosef 1991). The cave consists of five large chambers, three of which collapsed in post-Mousterian times and were partially or completely eroded. Agricultural terraces in front of the cave were constructed in the (Byzantine period?) (Bar-Yosef and Belfer-Cohen 1981). Limited excavations on Hayonim Terrace were undertaken uncovering Natufian (early and late in the Layer B), and Geometric Kebaran occupations (*ibid*).

There was separation between the architectural remains including dwelling structures and built graves. Occupation and dwelling structures in the Early Natufian were located at the front of the cave, while the graves were located at the back. Whereas, the Late Natufian levels were represented mainly by burials. The burials were located in the front of the cave and the residential structures located in the inner part (Belfer-Cohen 1988) (Figure 2-5). The minimum number of individuals uncovered in the cave based on Bocquentin's (2003, Fig. 88) study comprised 58 individuals (33 from the old Natufian and 22 from the Late Natufian). They were 28 adults, 10 adolescents and 20 children. The sex of twenty adults and five adolescents has been identified. Men outnumber women (3 women and 22 men) (*ibid*). A number of burials were disturbed and partly disturbed due to successive Natufian excavations. In some instances, the new graves intruded into the older ones (Belfer-Cohen 1988).

The graves were rarely paved with stones. Graves (V and IX) were made of limestone slabs, whereas others were paved with stone slabs or marked with stone circles (I, III, IV). Two types of graves were uncovered, single and group burials, and most of the grave contains more than one individual. In addition, primary, secondary and disarticulated burials were uncovered. Out of 16 graves, graves V and XIV contained only secondary burials. Twelve graves contained primary burials, and graves I and II were heavily disarticulated. Burials were interred in various positions; they were extended, flexed, semi-flexed in the primary burials. Also, burials buried on supine position and on their side were also uncovered (Belfer-Cohen 1988).

1.2.6. Raqefet Cave

The cave is located in the southeastern Mount Carmel in Wadi Raqefet. It is about 50m above the Wadi bed and to the west, at the bottom of a cliff. The cave opens onto a small narrow terrace located below the entrance. The cave consists of five chambers (Figure 2-6, upper) covering about 500 square meters (Lengyel, Nadel and Bocquentin 2013).

Excavations in the cave concentrated on the Natufian remains at the entrance. The first burials were uncovered in the first chamber near the northern wall. Excavations in Locus 1 and 3 have revealed 17 burials, which indicate that this part was dedicated to funeral activities (Figure 2-6, lower) (Lengyel and Bocquentin 2005; Nadel et al. 2008, 2009; Lengyel, Nadel and Bocquentin 2013).

Four burials and a cluster of leg bones were uncovered in previous excavations in 1970-1972. Eight burials (4 children, 3 adults and 1 infant) were discovered in the 2006 season (Homo 6-13). Most of the burials (at least 11 burial) were grouped together and buried in Locus 1. This indicates that this part of the cave was repeatedly used for burials. Burying the dead on their back in an east-west or west-east orientation was notable (Nadel et al. 2008).

Five burials were uncovered during the 2008 season from two different locations (1 and 3). Homo 13 (discovered in 2006), 15 (adult) and 17 (adult) uncovered in Locus 1, and Homo 14 (adult) and 16 (child) from Locus 3 (Nadel et al. 2009). The presence of the graves in Locus 3 in the eastern part of the cave indicates the use of these areas (Locus 1 and 3) as a “sepulchral unit”. The graves showed evidence of disturbance due repeated interring of the deceased in a small area (Lengyel, Nadel and Bocquentin 2013). Also, grouping the deceased was notable feature in Locus 1, where at least 9 individuals were buried in four successive events (Nadel et al. 2009; Lengyel, Nadel and Bocquentin 2013). The burial location at Raqefet cave demonstrates that they were used for mid - or long term successive interment. Grouping individuals may indicate a kin relationship (Lengyel, Nadel and Bocquentin 2013).

1.2.7. Wadi Hammeh 27

Wadi Hammeh 27 is an early Natufian open-air base-camp with a large stone huts. The site is located in the southern Levant in the foothills overlooking the Jordan Valley. Excavations at the site revealed four phases of occupation (Phases 1-4). The three occupation levels (Phases 1-3) were underlain by primary and secondary human burials uncovered in Phase 4 (Webb and Edwards 2002; Edwards et al. 2013).

Excavations in the site uncovered at least seven individuals associated with residential structures. The burials were single-primary, a collective-secondary burial and in addition burnt

human cranial fragments were uncovered (Webb and Edwards 2002). The burials were uncovered in four contexts: The first comprised of primary burial interred beneath Structure 1. The second is collective burial comprised of multi burials. The third consisted of fragmented human remains including burnt cranial fragments, in particular (Figure 2-7). The fourth burial consists of indeterminate human remains deposited in a pit in the uppermost Phase 1 (Edwards et al. 2013). A detailed description of the burials and skeletons has been published by Webb and Edwards (2002, 2013).

1.3. Discussion

Excavations at several Natufian sites have shed the light on Natufian settlement patterns and utilization of the sites. When considering the pattern of the sites, a variety of utilization patterns can be noticed. Some sites were used exclusively for burials such as at Hilazon Tachtit (Grosman 2003; Grosman, Munro and Belfer-Cohen 2008) and Raqefet Cave (Nadel et al. 2013). Other sites were used for both burial and dwelling and functional separation between the cave and its terrace may have occurred such as at Hayonim (Belfer-Cohen 1988), and El-Wad Cave (Weinstein-Evron et al 2007; Bachrach et al. 2013).

It was common to bury the Natufians in a flexed position, but extended burials have also been uncovered. About half of the Natufian burials are primary and single graves, further, group burials containing several individuals were also recovered such as at Azraq 18 (Bocquentin and Garrad 2016). "Sepulchral units" (Bocquentin 2003), where a cluster of inhumations buried together was uncovered at Raqefet (Locus 1). Similar clusters in the Early Natufian period were uncovered at Ain Mallaha beneath structure 131 (group A and B), in el-Wad (H1-10) and at the entrance to Kebara cave. These kinds of unit graves may refer to kin-groups buried close to each other (Nadel et al. 2008).

Burials were sometimes uncovered in the fill or in some structures, but it seems not beneath active use buildings so as to represent separation between the living and dead places (Belfer-Cohen 1991). Burials were constructed nearby and associated with the dwellings, but sometimes uncovered in abandoned houses. Bocquentin, Cabellos and Samuelian (2013: 185) suggested that, "with a reduction of mobility, a veritable lack of division between the living and the dead took place". Some sites may have been a location for burials even before the settlement was established (Bar-Yosef and Belfer-Cohen 2002). Remarkably in some sites, the

burials were initiated within the dwellings. The interment of the Natufian burials in residential spaces was common in some of the Early Natufian sites such as Wadi Hammeh 27, and the early phases of the Natufian at Ain Mallaha (Webb and Edwards 2013).

It is difficult to some degree to identify the exact location of the burial in the Natufian Period. Bocquentin, Cabellos and Samuelian (2013) suggest the inter stratification of burials and houses, whereby many of the burials were excavated before recognizing the presence of the house structure, exacerbates the difficulty of identifying the edge of the burial pits and the house floors.

2. Pre-Pottery Neolithic A Period (PPNA)

2.1. Introduction

The Pre-Pottery Neolithic A (PPNA c. 9,500 - 8,500 BC) period refers to the first stage of the early Neolithic culture in the Levant. Archaeological remains were discovered in the Levantine and upper Mesopotamian region of the Fertile Crescent. A more sedentary lifestyle, larger society, increasing population, and the development of new technology (Kuijt 2004) accompanied the transition from the end of the Natufian to the beginning of the Pre-Pottery Neolithic A (PPNA) period. PPNA is the key period in the shift to food production and management of natural resources and attesting increasingly to the sedentary way of life. People started to produce food during their occupation of a site and they developed economic resources through the intensive exploitation of wild plants and cultivation of wild cereals. For example, sixty edible wild plants, including quantities of einkorn (wild wheat) and fruits were observed in the third phase of the Mureybet site. Jerf el Ahmar on the Euphrates and Neriv Hagdud in Jordan produced a lot of wild barley. Remains from Neolithic sites such as Mureybet, Jerf el Ahmar, Nachcharini, 'Iraq ed-Dubb, Netiv Hagdud and so on, showed that people also hunted various kind of animals such as gazelle wild boar, aurochs, fallow deer, badger, wild cat, polecat, beaver, hare, fox and kinds of bird species (Akkermans 2004).

The transition from the hunter-gatherer life of the Natufian to the sedentary farmer life of the Neolithic affected human spiritual life. People started to consider material resources, land and the relationships between them. This new life style certainly affected funeral practices. Funeral practices provide plenty of information for investigating prehistoric symbolism, religion and life after death. People started to live in larger communities, based on storing food, cultivation

and domestication of plants and animals although they did not change to use of fully domesticated species (Kuijt and Finlayson 2009).

The PPNA settlement sizes are much larger than those of the Natufian hunter-gatherers. The settlements are characterized by oval or round, subterranean or semi-subterranean houses with stone foundations, which later witnessed a change into standing walls. These structures were grouped and formed a village (Cauvin 2000). These types of structures were uncovered in various regions in Anatolia and the Levant. The building materials and the techniques for walls, paved floors and covering roofs varied and the available materials in the site vicinity were used such as in Hasankeyf Höyük (Miyake et al. 2012), Qermez Dere (Kozłowski and Kempisty 1990), Mureybet (Ibáñez 2008), Tell Qaramel (Mazuroweski and Kanjou, eds. 2012), Jerf el-Ahmar (Stordeur 2015), Jericho (Kenyon 1981) Wadi Faynan 16 (Finlayson et al. 2009, 2011). Some special communal buildings, circular and sunken, the focus of communal functions (ritual or meeting) were discovered at Jerf el Ahmar and Marybeth (Stordeur et al. 2001), in addition to the monumental stone-pillared structures at Göbekli Tepe (Schmidt 2011).

During the Late Natufian, the graves were simple in structure, and individuals were buried lying on their back or side. These characteristics were also known from the PPNA burials. In general, the PPNA dead were buried in a single primary burial in various positions. Burials in this period were discovered in two main contexts:

- 1) Burials were associated with various structures and they were buried beneath the floors, near the walls and between houses (the most common).
- 2) In combination with specific non-residential structures.

PPNA excavations have uncovered spectacular evidence related to burial context: primary and secondary burials, and the continued treatment of the skulls. Numerous burials discovered from several PPNA sites in Upper Mesopotamia include Çayönü and Göbekli Tepe (Schmidt 2011), Northern Levant such as at Tell Qaramel, Jerf e-Ahmar, Dja'de, and Tell 'Abr 3 (Mazuroweski and Kanjou, eds. 2012; Stordeur 2015; Coqueugniot 1999; Yartah 2004) and Southern Levant such as at Jericho, Netiv Hagdud, Hatula, Nahal Oren, and Wadi Faynan 16 (Kenyon 1981; Finlayson et al. 2009, 2011; Bar-Yosef and Gopher 1997). The burials illustrated standardization and differences in mortuary practices and the location of burials. PPNA sites do not have a documented cemetery allocated to burying the deceased separately from

dwelling, but rather, most of the deceased were associated with dwellings, and few were buried in free spaces. To some degree, there are links between mortuary practices and architectures in the PPNA (Kuijt and Goring-Morris 2002). The town of Jericho with its high walls and famous tower are the most notable PPNA settlements. Specific mortuary practices were documented at the tower (see Bar-Yosef 1986, Kuijt 1996). Small children and infants were in some instances cached and buried beneath the walls. Most of the burials in this period were uncovered inside the building, which may indicate a deliberate action to keep the dead close when the structures were used (see Table 1).

2.2. Burials in Context

2.2.1. Middle Euphrates Region

In the Northern Levant, the PPNA period was uncovered in some sites and represented mainly in the Middle Euphrates region such as Jerf el-Ahmar, Sheikh Hassan, Mureybet and Dja'de el-Mughara. One of the most remarkable developments in this period is the shift in the houses from a round to square shape in the Mureybetian PPNA phase (IIIA, IIIB) at Tell Marybeth and later to a rectangular shape in the beginning of the Middle PPNB (Ibáñez 2008).

The discovery of the communal circular and sunken buildings in the Late Mureybetian period was one of the characteristics of the Middle Euphrates valley. Two buildings of two different types were discovered at Mureybet and Jerf el Ahmar (Stordeur et al. 2001; Stordeur 2015). The earliest ones found at Mureybet and Jerf el Ahmar both have the same plan. The internal wall plans reflect radial subdivisions forming small cells. These buildings were probably used for storage or meetings or ritual purposes. These buildings belong to the transition phase between PPNA and PPNB at Jerf el-Ahmar. The bench backs onto the wall and continues around the entire interior, forming a hexagon shape. The communal buildings in the Middle Euphrates region are the forerunners of the Early PPNB sanctuaries of Anatolia (ibid).

The number of human remains in the Middle Euphrates region was small and limited to a number of sites. Excavations at Tell Mureybet revealed remains of 12 individuals. Six individuals belong to Phase IIIB and are dated from the end of PPNA and the transition period from PPNA to PPNB, and the other 6 individuals to the phase IVB, dated from the Middle PPNB. Also, a few individuals were reported from Sheikh Hassan dated to the Marybeth IIIB 10, the final PPNA period.

The end PPNA phases at Dja'de el-Mughara (DJI, *ca.* 9,310 - 8,830 cal. BC), uncovered an 11,000 yrs. old *ca.* large semi-subterranean circular non-domestic “community building” with three massive radial piers (Coqueugniot 2017). This phase produced a limited number of individuals. Five individuals have been uncovered. They were four adult skulls found beneath the floor of the houses and one fragmented skeleton belonging to an adolescent (Coqueugniot 1998; Baker et al. 2015).

Also, about seven individuals were recovered from Jerf el-Ahmar. One individual had faced violence and was found on the top of the building (Chamel 2014; Koutsadlis 2007; Stordeur and Abbès 2002; Stordeur 2015; Cauvin 1972). The grave pit was simple and both primary and secondary burials were uncovered. One of the burials at Marybeth was buried beneath the house hearth, and the second one outside the house.

2.2.2. Tell Qaramel

Excavations at the PPNA site of Tell Qaramel, located in the basin of the River Qoueiq north of Aleppo, Syria uncovered 34 adult individuals were recovered from 23 graves (Kanjou et al. 2015). They came from the PPNA horizon H3, dating to 11,770 - 10,660 cal BP. The settlement was abandoned in the first half of the 9th millennium BP, however, the reason is unknown (Mazurowski 2012).

The housing density was high at the site. These structures have hearths, terraces and round or oval platforms in the courtyards. Human and animal burials were also documented. Four architecture occupations including fourteen levels were documented. The houses were imposed over each other, which indicates continues reconstruction and re-inhabitation over generations (Mazurowski 2012). More than 60 houses different in form and function were discovered. Generally, the concentrated structures were in a particular part of the village, and they were composed of platforms, storage pits, hearths, and other installations. People used the available materials near the site such as basalt, limestone, mud and river pebbles. Basalt was used for wall construction, also mud mixed with *tauf* used for the roof covering whereas, the floor was made of tamped mud. A differentiation in the form of the structure based on function was observed (House, household structures, monumental buildings, house of the bucrania). The houses were round and oval shape and later other structures developed into

rectangular shapes. Some were sunk or semi-sunk in the ground, but others were built on the ground surface (Mazuroweski, Bialowarczuk and Januszek 2012).

Most of the graves were concentrated and uncovered in the southernmost part of the excavations. Primary, secondary burials and a group of burials and deposit of four crania were uncovered. Individual burials (most common) comprise simple grave pits. Most of the graves were associated with the dwelling structures. They were buried beneath the floors and walls however the outside burials were in very close vicinity often adjoining the walls (Gawrońska, Grabarek and Kanjou 2012).

The shrine/common house (Loc. 10) is an east-west oriented structure measured 10 by 5 meters made of various size of stones in the square K4, L4. It consisted of an apse and rectangular annex to the east. It has installations to indicate ritual practices such as stela, incomplete bull skeletons in the north and south walls, hearth and benches (Figure 2-8). A set of three human graves and one animal grave (G. 9, 14 and 15)¹ were discovered in the apse. Additionally, one grave (G. 13) was discovered adjacent to the wall. Whereas, a grave (G. 7) discovered in east annex (G. 12) was uncovered in the round section, (G. 8,9) near the hearth and (G. 11) north of the oval section.

It seems that the people began burying their dead in and around the Shrine/communal building after it had gone out of use. The building was maintained in good condition until the end of this period at Qaramel and indicates that people may have maintained protection of the building for memorialization purposes due to its role when it was active (Mazuroweski, Bialowarczuk and Januszek 2012).

2.2.3. Göbekli Tepe

To the east of the Euphrates River in southeastern Anatolia, one of the most spectacular Neolithic ritual structures has been discovered at Göbekli Tepe. The site is known as one of the oldest sedentary aceramic Neolithic sites constructed by humans. The site with its high elevation is a landmark overlooking the Herran plain. Excavations have uncovered several circular-oval sanctuaries with immense T-shape limestone pillars that supported the roof (Schmidt 1995, 2001, 2010, 2011, 2012). Remarkably, the site was not inhabited, and no

¹ G. is abbreviation for a grave.

residential buildings were uncovered which indicates that the site was “a regional center where communities met to engage in complex rites” (Schmidt 2010). The sanctuary enclosure of layer III dated to the 10th millennium BC. The large circular structures in the PPNA (Layer III) disappeared and were replaced by small rectangular rooms in the Early and Middle PPNB (Layer II) (Schmidt, 2011, 2011a). Many of the pillars at the site were carved in animal reliefs such as foxes, lions, boar, duck cattle and others. Usually, two large pillars were standing in the center of the building floor, and smaller pillars stood in a circle up to the wall (Figure 2-9). After a period of use, the sanctuary was deliberately buried and filled in by debris. It is suggested that people were trying to protect the building and avoid providing access to strangers (Flannery and Marcus 2012).

T-shape pillars were first discovered in close vicinity to Göbekli Tepe at Nevalı Çori and were visible from three other unexcavated sites in the same region. The abundance of these sites indicates that they belong to the cultic community of Göbekli Tepe. The religious ideology of Göbekli Tepe was uncovered in the material cultures of Upper Mesopotamia, which may indicate the presence of settled communities. However, the uniqueness of the site structures and various religious symbolic representations suggested that the site is a center for a cultic community (Schmidt 2011, 2011a, 2012).

2.2.4. Wadi Faynan 16

Wadi Faynan 16 (WF16) in southern Jordan is an important PPNA site located in Wadi Faynan. The site is dated between 11,600 and 10,200 BP and is located in southern Jordan (Finlayson and Mithen, eds. 2007). Excavations at the central area of the settlement were undertaken in 2008 and produced significant results (Finlayson et al. 2009, 2011). Excavations have uncovered a cluster of semi-subterranean, sub-circular building structures. The walls were lined with pisé and the floors were made of mud-plaster (Finlayson et al. 2011).

Excavations at WF16 contribute greatly to understanding PPNA burials and the transformation in mortuary practices across the hunter-gatherer–farming lifestyle transition in the Southern Levant. Over 40 burials for adults, juvenile and infants from various PPNA contexts were uncovered. Most of the burials were primary, and some were tightly flexed. No remarkable treatment among age group was uncovered (Mithen et al. 2016). The burials were concentrated spatially in two places in the center and the northern sections of the excavation

area from 2008 - 2010 (Figure 2-10). The burials were mainly uncovered beneath structure floors, beneath walls, and also in a midden deposit. About 50 percent of the newest burials cut through old walls, which may indicate knowledge of past structures. Additionally, a number of primary adult burials from different parts of the site were buried beneath the floors of the newly constructed structures as foundation burials, “which could indicate that deaths of certain members of the community might have acted as a catalyst for the reorganization of a particular structural space within the settlement” (ibid.: 95). The various kinds of burials and interment, funeral practices and burial contexts facilitate understanding of the spatial relationship between the burials and building structures.

2.2.5. Jericho

Jericho site is located to the north west of the Dead Sea in the lower part of the Jordan Valley. It has a long history of excavation conducted by Germans: E. Sellin and C. Watzinger, who dug a series of trenches between 1907 and 1909, then followed by J. Garstang, 1930 - 1936, and later K. Kenyon, 1952 - 1958. Kenyon’s excavations uncovered a thick deposit of early pre-Pottery Neolithic occupations. One of her most notable discoveries was the massive stone wall associated with a large tower (Kenyon 1981; Kenyon and Holland, eds. 1982, 1983). The site was settled by the early farming communities and represents a large settlement and a large number of burials cut directly into the limestone. Kenyon estimated the population at 3-4 thousand. The wall and tower are the most notable structures at Jericho. The PPNA stone-built tower, with a wall in front of it was constructed inside the perimeter of the settlement. The tower measures 8.2m high by about 9m in diameter at the base and 7m at the top. A 22-step staircase leads to the top. These monumental buildings distinguish Jericho from other PPNA sites. Dorrell (1978) and Bar-Yosef (1986) estimated that it took many long working days to construct the wall. There is some argument about the exact purpose of constructing the tower and walls. Kenyon (1957) suggested that it was built to fortify the settlement, however, Bar-Yosef (1986) argued it was a defense against floods and mudflows, whereas Naveh (2003) believed that it could be used to control ritual knowledge.

Burials at Jericho were uncovered mainly from inside residential structures and non-residential or special structures. The grave was cut through the floor, and the deceased were buried beneath the floor. (Kenyon 1981). Of 272 PPNA individuals identified, at least five burials were interred in special contexts (Naveh 2003). Adult burials were not buried in these special

contexts (Kenyon 1981: 23, 24, 38, 40, 50; Cornwall 1981: 403, 404). Additionally, twelve individuals were buried in the entrance of the tower in stage (VIA), and later the entrance was closed off (Figure 2-11). Moreover, an infant burial and five other infant skulls were buried beneath a structure from stage (VIIC). Kenyon (1981: 50) suggested the accumulation of infant remains held ceremonial significance. Also, seven burials were uncovered beneath enclosure floors (Kenyon 1981: 23, 24, 38, 40).

2.2.6. Netiv Hagdud

To the north of Jericho, Netiv Hagdud is a low mound located at the outlet of Wadi Bakar, which descends from the Judean hills east into the Jordan Valley. The site was occupied during the Early Neolithic only and abandoned around 9,500 - 9,400 BP (Bar-Yosef et al. 1991). Three seasons of excavations were carried out (1983 - 1984 and 1986) covering an area of 500 square meters. Excavations at the site uncovered circular or oval structures and storage facilities. The floors of the structures, in some instances, were coated by plaster. The structures were not partitioned except in one building Loc. 8. Available materials in the site vicinity were used for the walls, which were supported by wood posts and the roof was made of mud mixture (ibid).

Twenty-two graves have been excavated. Most graves contained one skeleton buried in a flexed position within a shallow pit, but only one grave had more than two individuals. Burials were found even beneath the building structure floor (such as Loc. 10, 40, or 1006), or in contrast to other PPNA sites in open spaces or yards (such as Loc. 18) or in the infill of abandoned houses or storage facilities (such as Loc. 26) (Figure 2-12). "This indicates that the inhabitants buried their dead in either unoccupied spaces or in dumping areas" (Bar-Yosef et al. 1991; Belfer-Cohen et al. 1990). Bar-Yosef et al. 1991; Belfer-Cohen et al. 1990).

2.3. Discussion

Excavations at PPNA sites suggest both residential and communal architecture varied in size and shape, although the latter is limited so far. The diversity of building structures and the appearance of the non-residential structures, which were used for particular purposes, may indicate that the nuclear family household was less important in this early stage of community organization (Makarewicz and Finlayson 2018). Several types of buildings were designated for community use, for shared storage and gathering like at Jerf el-Ahmar and where the

authorities managed the life of the group. Most of the burials in this period as indicated above were associated with the dwelling structures. Mainly, they were buried beneath the structure floors, beneath walls, and adjacent to the walls. Moreover, burials were also discovered inside structures allocated for specific purposes such as in Jericho tower, which might reflect a ritual area within the settlement (Kuijt 1996). Furthermore, one of the most notable characteristics of the PPNA period is the discovery of symbolic structures for ritual/religious purposes such as at Tell Qaramel, Göbekli Tepe and Wadi Faynan¹⁶. This is the oldest evidence uncovered in the Levant and Anatolia that characterizes the Levantine PPNA sites in this period.

Burials at Qaramel were undertaken at the shrine/communal building - but most likely after abandonment of its function - and in the adjacent structures. Mazurowski (2012) suggested that the shrine/communal building was used for meeting of no more than 20 persons of a "council of elders". Likely, those elders were not buried in the shrine after its abandonment. In general, no remarkable way of interment or burial preparation has been uncovered including the absence of those whose skulls were removed. Thus, there were no remarkable differences for those who had been buried inside the shrine/communal building and those buried in the residential structures or in adjacent graves.

The non-residential/communal structures suggested the use of these buildings for overall benefit of the community. They were used as a communal storage, for gathering and meetings and played a role in organizing society and social interactions and even in rituals (Makarewicz and Finlayson 2018).

Notably, in most cases burials in this period were associated with the settlement's residential and symbolic structures. Likely, people preferred constructing their residential area around the symbolic structures and later used it for interring the deceased over time. Mithen et al. (2016) suggested that the burials were used to negotiate regeneration of the settlement through using the old burials in the old structure as a foundation deposit for the new structure above and so on repeatedly. In contrast, some sites have not revealed deceased that might have been buried elsewhere beyond the excavated areas, within the settlements, or somewhere in a specific mortuary location some distance away.

3. Pre-Pottery Neolithic B Period (PPNB)

3.1. Introduction

The most dramatic changes in the prehistory of the Near East occurred in the PPNB period (c. 8,500 - 7,000 BC), which represented a slow and continuous development from the PPNA period. By this time, people had become fully sedentary (Akkermans and Schwartz 2003). People had inhabited larger settlements and built larger rectangular houses with complex architectural features made of stone and mud. Lime plaster was frequently used for the floor of houses and for decorative purposes in funeral practices (Garfinkel 1987a).

In this period, several developments occurred including the domestication of various kinds of plants and animal species. The society turned into a fully agricultural society relying on a combination of agriculture and herding of domesticated animals. The PPNB culture expanded widely from southeastern Anatolia down to southern part of Jordan. Even though the region was widespread, exchange and trading items were documented. People in this period were skilled craftsmen and new types of lithic production strategies were introduced.

The PPNB period was divided into the Early, Middle, Late and Final phases. The earliest phase EPPNB was represented mainly in four northern Levantine sites, three in the Middle Euphrates: Mureybet, Dja'de and Sheikh Hassan, and in northwestern Syria at Tell el-Kerkh. The EPPNB appeared in the northern Levant somewhere around 9,500 to 9,000 uncal. BP (Tsuneki et al. 2006), in addition to four other sites in southeast Anatolia comprising Nevalı Çori, Göbekli Tepe, Cafer Höyük and Çayönü.

Buildings were relatively small in the Early phases and made of mud bricks or *pisé* on stone foundations. Houses were separated by open space and storage facilities were installed. Parallel walls in the external part of Dja'de resemble the gridded plan of Çayönü (Coqueugniot 1998). In the Middle phase buildings included rectangular multi-cells and the floors were paved by plaster (Moore and Molleson 2000).

The food production during the early Neolithic of the Near East was accompanied by fundamental changes in the ways in which societies were ruled and organized. Various complicated funeral practices in this period indicate that disposal of the dead and the manipulation of the remains suggests that the inhabitants were involved in spirituality. The mortuary practices of this period have been more extensively documented and larger number

of burials from sites such as Jericho, 'Ain Ghazal, Aswad, Beidha, Jerf el Ahmar, Nahal Hemar, Yiftahel, Tell Halula, and Kfar HaHoresh have been uncovered. The multi-stage mortuary practices including skull removal, caching, modeling and displaying have played an important role in gathering society members and families together.

Most human remains during the PPNB were uncovered beneath the floors of buildings, between walls, and in courtyards. In other words, burials were not just associated with dwelling structures. They were primary and secondary burials in the form of pits, and were usually found under plastered floors of the buildings. The best treatment of adult skulls is known from this period. One of the most distinctive treatments during this period was modeling and plastering of skulls after removal. The skull was remodeled and covered with a layer of lime or mud. This practice was interpreted as the cult of ancestors (Levy 1995).

In this period, there are many sites, which enriched knowledge about the mortuary practices and the way of dealing with the dead. In general, the graves continued to be simple, placed beneath plaster floors of houses or walls in places such as Jericho, Kfar HaHoresh, Wadi Shu'eib, Nahal Oren, Yiftahal, or courtyards such as in 'Ain Ghazal. Most of the sites in the Levant shared common rituals and features with neighboring sites. For example, affinities attributed not only with the ritual customs but also correlation with material culture such as grave goods.

3.2. Burial Locations in the PPNB

A large number of burials have been uncovered so far in the PPNB period. The graves in this period were found in two main locations:

- 1) Beneath floor and wall structures, between buildings and in open spaces.
- 2) Inside symbolic or ritually significant buildings

3.2.1. Burials Beneath Structures Floors, Walls, and Between Buildings

A number of sites in the Northern part of Syria had documented evidence of skull practices during the PPNB period. The Middle Euphrates region presented examples of dealing with human remains in the early PPNB phase of Mureybet, Sheikh Hassan, Dja'de el-Mughara, and from the Middle and Late phase of PPNB of Abu Hureyra and Hallula. Most of the individuals were buried in living and working places, and were distributed within simple graves located

beneath structure floors. Separate sanctuaries for burials have not been discovered (see Table 1).

3.2.1.1. *Dja'de el-Mughara*

At Dja'de el-Mughara, a large number of burials in the PPNB phase have been documented. In the EPPNB phase (DJII, *ca.* 8,800 - 8,500 cal. BC), there is evidence for feasting (community meal) (Coqueugniot 2017). Most of the graves contain more than one individual. Thirteen burials revealed 26 individuals (8 immature and 18 adults), and two immature individuals suffered from tuberculosis (Baker et al. 2015; Coqueugniot et al. 2015). The first one is 1 year old at death buried in a rectangular structure against a wall, in a primary flexed position. The second is also a primary burial belonging to an 8-10 yrs. old child, buried half-laying, half-seated in a narrow pit. This burial had no direct link with architecture, but according to the stratigraphic level, the skeleton can be dated to the DJII phase (Baker et al. 2015).

The last and best-represented phase (DJIII, *ca.* 8,540 - 8,290 cal. BC) is dated to the Early PPNB. The village had small rectangular houses separated by open spaces for daily activities. The funeral practices in this phase varied and the largest number of deceased were discovered (about 85) (Chamel 2014). This large number is attributed to the assemblage of burials collectively interred beneath the floor of "House of the Dead".

3.2.1.2. *Tell Abu Hureyra*

The archaeological site of Abu Hureyra in the middle Euphrates region in Northern Syria represented the transitional way of life from foraging to farming. The site was inhabited between c. 11,500 - 7,000 BP. The villagers of Abu Hureyra were the first farmers; their village was founded by a group of hunter and gatherers who practiced agriculture widely in c. 11,000 BP. Their settlement drastically expanded and formed the largest settlement in the Near East (Moore, Hillman and Legge, eds. 2000).

Few human remains including a mature skull were identified at Abu Hureyra 1. In contrast, 102 individuals have been uncovered from Abu Hureyra 2. They represent 50 adults including 26 females and 52 juveniles. Burials were identified in trenches B, D, E and G. All of the individuals were buried in the settlement but in various contexts. The majority of burials were uncovered in houses, whereas the rest are outside houses in the yard within shallow pits. The indoor

burials were found in two contexts: beneath the floor of the rooms, or in the mud brick walls. Single and collective burials were documented. The size of the grave pit was large to fit the deceased. The collective burial pit was shallow and the grave was re-opened frequently for newer inhumations (Moore and Molleson 2000).

3.2.1.3. *Tell Aswad*

Tell Aswad is located thirty kilometers southeast of Damascus. Excavations were undertaken there between 2001 - 2006, and uncovered fourteen archaeological levels representing three phases of the PPNB (Early PPNB horizon, Middle and Late PPNB). Burials were associated with the dwelling structures. They were buried inside and sometimes outside of the buildings. The most frequent act uncovered in this period at Tell Aswad is the inhumation within the funerary area, the so-called "dormitory of the dead". Burials were uncovered in two funerary areas dedicated to group burials and located on the edge of the settlement. They dated back to the end of the Middle PPNB or the beginning of the Late PPNB. The funerary rites were carried out in two stages (Figure 2-13). More than 50 individuals were uncovered. They were buried individually and collectively, in primary, secondary and a combination of these burial types. (Stordeur et al. 2006; Stordeur and Khawam 2007).

3.2.1.4. *Tell Qarassa*

To the south of Tell Aswad, the Tell Qarassa excavation uncovered Early PPNB layers including the remains of a building and funeral area for ritual purposes. A minimum number of 25 individuals were uncovered within an eighteen funeral context. They were buried in primary, secondary and collective contexts. Skull removal practice was present in addition to skull caches (Ibáñez et al. 2010; Santana et al. 2015).

The burials were interred in the houses after they were abandoned. They were found within and outside of the wall structure (Ibáñez et al. 2010). The wall of the building formed the space for the burials. The size of the grave was restricted in some instances by the stone walls (Figure 2-14). In one case only some stones were placed on the bottom of the grave (Santana et al. 2015). Secondary burials in various contexts were uncovered inside the structure. Human remains uncovered within an oval pit contained 11 skulls placed in two groups arranged in a circle on their base. Six of the crania belong to young adults between 18-25 years old, with two belonging to over thirty year olds, and the other three comprise 5-12

years old. Most skulls were lacking their mandibles and some were placed beneath the skull, some skulls showed obvious fracture. Skull (No.11) was fractured before being placed in the pit. This skull was associated with a mandible with traces of cut marks. These traces suggested the intentional act to separate the mandible from the skull by using a sharp tool (Santana et al. 2012).

At first glance, the general character of this cache suggests a ritualistic form of ancestor veneration. Because of the obvious violence towards some skulls in the cluster, Santana et al. (2012) suggest that these crania were kept for special rituals for a few years rather than for ancestor veneration before being interred.

3.2.1.5. Beisamoun

The Beisamoun site is located in the central Levant, in the northern part of Jordan Valley within the Hula Basin. The major occupation phase at this site dates to the PPNB, with few traces of Pottery Neolithic and Bronze Age phases (Bocquentin et al. 2007).

Two graves were uncovered from Level 1, which is the first stage in the development of the dwelling structure (Str. 150) (Figure 2-15). One produced newborn baby remains, and the second comprised two individuals in primary and secondary positions. In addition, inside the rectangular structure, two plastered skulls and two multiple burials were discovered within a partly plastered antechamber, which was rich with complete flint artifacts and grinding tools (Bocquentin et al. 2011).

In total, 14 burials have revealed 15 individuals (seven neonates and children and 8 adults). They were discovered in Sector F and E. One grave (Locus 347) contains burnt human remains and ashy sediment. Burial pits were not associated with contemporaneous floors except in limited cases. For instances, Locus 214, was found at the same level as, the plaster floor (Locus 209). The graves are most frequently dug into fills. However, they are sometimes closely associated with abandoned features such as ancient walls (Bocquentin et al. 2014). In Sector F, the burial took place in this area before abandonment of the village. The graves were uncovered outside of the structures in the courtyard or away from the living structures. In Sector E, the burials were dug in the remnant of structure 354 and its courtyard (ibid).

3.2.1.6. Yiftahal

The standardization of material culture and burial inhumation was uncovered in the southern Levant. The architecture, rectangular structures, plastered floors, inhumation beneath the plaster floors, and skull removal was similar to others (Garfinkel 1987b). Excavations conducted at the Yiftahal site (within Area C) has revealed seven individuals buried in primary and secondary positions located in separated structures. There were three adults, two new born and an infant. All of them were buried beneath the plaster floor, and two in an abandoned structure. Five skeletons were uncovered in the Str. 700, which consisted of roofed enclosure and two courtyards in the north and south sides (Figure 2-16). Two skeletons (Homo 1 and 6) were inside the building; two (Homo 2 and 3) were in the southern side courtyard, and one (homo 5) in the northern side courtyard. Some burials took place in the abandoned building beneath the plastered/unplastered floor (Homo 3, 4, 5, 6, 7). In addition, two (Homo 1 and 2) were buried in the debris of abandoned structures (Arensburg, Garfinkel and HersHKovitz 1986).

3.2.1.7. Kfar HaHoresh

In the southern Levant, the Kfar HaHoresh site was excavated under the direction of Goring-Morris and it produced more than 60 individuals buried in primary and secondary positions (Goring-Morris and Horwitz 2007; Goring-Morris 2000). This site didn't produce clear evidence of rectangular plan residential structures, but L shape walls were associated with human burials that had been interred under lime plaster surface. During the 1991 season, beneath the lime-plaster surface, a pit (L1004) produced an adult male-modeled skull with lime plaster, and a Byblos point placed next to the skull as a grave good. In another pit called the "*Bos pit*" (L1005) remains of eight aurochs were found, and the pit was covered with soil (Figure 2-17). On top of it, a young adult male was buried in a flexed position, with lime-plaster and chalk over his body and then sealed with lime-plaster capping. Within the lime plaster, a small hole was cut through the lime capping and the underlying layer, presumably to mark the location of the skull in order to remove it later (Goring-Morris and Horwitz 2007).

During the 1997 excavation season, the site revealed a deposit (Locus 1155) that possibly provides evidence for cult practices. Beneath the lime-plaster surface, a large shallow ashy pit was revealed. This pit contained what seems to be intentionally arranged disarticulated human and animal bones. The human remains including long bones of at least four individuals,

gazelle remains and possibly the painted fragments of a plaster skull were discovered in this pit. According to the distribution of bones within the pit, it is obvious that it was an intentional arrangement. Locus 1003 is another ashy shallow deposit contained disarticulated human and animal bones deliberately arranged. The human bones included postcranial bones, twelve human mandible and packages of long bones (Goring Morris et al. 1998). Depending on excavation evidence, the excavators interpreted and concluded that the Kfar HaHoresh site had been used as PPNB mortuary-cult center of villages in the region (Goring-Morris 2000; Goring-Morris and Horowitz 2007).

3.2.1.8. 'Ain Ghazal

'Ain Ghazal, one of the largest farming settlements in the Levant is located in Central Jordan. Extensive excavations were conducted at this site since its discovery in 1982. The excavations uncovered an occupation period that continued for 2500 years consisting of four basic phases (MPPNB, LPPMB, PPNC and PN) from 8,500 to 5,500 BC (Rollefson 1986, 2000; Rollefson and Kafafi 2013).

In the early stages, the village was compactly organized, with houses built in very close proximity with no space to walk between them. The distribution of the houses close to each other suggested placement according to kinship relations. During the MPPNB, the houses were isolated and the size structures were generally small. At the beginning of the MPPNB period the houses were single-room buildings. Over time, the interior walls came to create separate rooms (Rollefson and Kafafi 2013).

Mortuary practices at 'Ain Ghazal among children and infants were extensive and occurred on about 30% of the remains with inhumation in a flexed position the most common interment beneath plastered floors. The skull was later removed, but few skull caches were recovered (Simmons et al. 1988). Eighty-one individuals were recovered from the MPPNB period. Deceased were buried in various positions; primary interment within pit fill with debris in flexed positions and they were found as groups. Three burial "styles" were uncovered in the MPPNB; Subfloor and courtyard decapitated burials, courtyard intact skulls and infant burials (Rollefson 2000).

Infant mortality was high but all retained their skulls, while children older than 15-year-old were decapitated ritually as adults. Discarded burials represented by the non-infant burial population, where the corpses were discarded within a small shallow pit with no mortuary pattern (Rollefson 2000; Rollefson, Simmons and Kafaf 1992). Twelve PPNB human skulls were removed from room subfloor burials (Rollefson 2000). A cache comprised of two adult skulls and an 11-year-old child were recovered beneath the floor of a house designated SQ 3083. Adjacent to this house, a separated skull with thick black coating pigment - possibly bitumen - on its back was recovered (Rollefson 1998; 2000). Four skulls were cached within a pit in the courtyard; this assemblage comprised four adult's skulls carefully aligned horizontally to the southwest. Above this cache, two skulls belonging to an infant were placed in a position representative of a foundation sacrifice. Two of the adult skulls in the cache retained plaster, and traces of black pigment (bitumen) formed eyeliner decoration. The other two were not plastered and no trace of plaster was found in the pit, prompting researchers to conclude that these skulls were transferred from a ceremonial place and redeposited again in their final location (Rollefson 1983; 2000).

Burial patterns during the MPPNB are more complex. The burials were often treated with skull removal and inhumations were conducted beneath subfloors in flexed or semi-flexed position. Burials were interred within garbage deposits in various postures and the dead skulls were intact. These acts reflect the same pattern as beneath the floor interments, but here the final deposit is different. This act was applied to discarded infants who also had intact skulls. This may suggest garbage deposit interment reflected class differentiation in society during life, which in turn was reinforced after death (Rollefson, Simmons and Kafafi 1992).

The location of the burials at 'Ain Ghazal played the role of identifying the sort of person in society. Rollefson and Kafafi (2013) however classified three "sorts" of people (Figure 2-18):

- 1) "Special" people are those who have been buried beneath the house floor.
- 2) Family members, who were buried in a "cemetery", located outside of the settlement and not beneath the house floors.
- 3) "Trash burial" people who were discarded in dumps.

3.2.2. Burial Within Buildings of Symbolic or Ritual Significance

Remarkably, burials in some sites were buried inside buildings with symbolic or ritual significant such as at Dja'de el-Mughara, Abu Hureyra, Çayönü, Jericho, 'Ain Ghazal and other sites. Corpses were buried in groups within special chambers for the dead, and some headless individuals were wrapped in matting and finally deposited in a particular part of the building as a final deposit, which gave the ritual characteristics to these buildings.

3.2.2.1. Dja'de el-Mughara: House of the Dead

At Dja'de 3 (DJIII) corresponds to the early PPNB, dated from 8,540 to 8,290 cal. BC. In a so-called "House of the Dead", more than 70 individuals were interred in primary and secondary contexts (Figure 2-19). The house had five successive floors and occupied the same location during the site occupation. This house consisted of seven successive phases and the burials were associated with layers 2-5 (Coqueugniot 2017). The burials were found beneath a series of floors. Most of the individuals were children and young adults, and evidence of missing cranium and long bones was uncovered. Separated skulls were uncovered and were buried in groups. A group of human remains included an adult buried in flexed position and a child interred beside it. A separated skull was found with them, and the adult hand was resting upon the isolated skull. Another group of three adult burials occurred in what seems to be a locker in a sealed location, the top and the bottom of the pit was covered with stones and pebbles (Coqueugniot 1998).

3.2.2.2. Tell Abu Hureyra: Burial Pit 144 and Charnel Room

A large number of deceased at the site were recovered inside houses. The collective burials contain a large number of individuals. It is difficult to determine whether these buildings were originally used for daily life, or if they were used for multi-stages of ritual and later became the final repository for the dead.

At Tell Abu Hureyra, three main collective burials have been uncovered inside houses:

1. Burial pit 144

It is located across the northwest end of room 2 in the Trench B in the phase 8 building (Figure 2-20a, b). It measures 1.6 × 1 × 0.7m and is dug through solid white plaster floor. Remains of 25-30 individuals have been uncovered. Half of them are children and adolescents, and many of them lacked their skulls or are incomplete. Most of the remains were gathered and buried

at the same time in the pit. However, it is unknown if they died at the same time. No violence towards the dead was uncovered. Likely people were aware in advance the number of individuals to be interred so, the pit was large enough to fit the required number of dead. Several individuals were accompanied with grave goods. It is suggested that they might have been members of a group. This burial represents some ritual “such as a rite of passage involving circumcision or scarification, in which the young played an essential part” Moore and Molleson (2000: 279-280).

2. Charnel Room

A Charnel room is a chamber used as warehouse for the dead in the phase 8 building. The room had been used for a longer period than the building structure in phase 8 (Figure 2-20c). At least 24 individuals were discovered, 80% are adults, but there are some remains of adolescents, children and a few infants (Moore and Molleson 2000). It seems that there is relationship between some of the burials found in the charnel pit and burial pit 144. Usage of the room might reflect an intermediate stage between death and burial to decay corpses, or a final deposit for the deceased after treatment stage, or a place for exposing the corpses (Moore and Molleson 2000: 282). The deceased were buried in the center of the room rather than sides and beneath floors.

3. Pit 78 Collective Burial

This pit located in the fill of room 1 in phase 9 contains six to seven individuals, both adults and juveniles. Decay of corpses prior to interment was a common custom at Abu Hureyra, and individuals in this pit were exposed before interment. Notably burials of this phase were mainly elders.

3.2.2.3. Çayönü “Skull Building”

Çayönü in Southeastern Anatolia dates back to the 9th millennium BC. Three main phases were recovered (PPNA, PPNB and PPNC). The earlier occupation phase reflected hunter-gather society with semi-round or round huts. Deceased were buried in pits in open spaces, or beneath floors. In the second stage during the shift from the PPNA to PPNB, the burials were interred beneath the building floor, between the walls and in courtyards. The “Skull Building” (Figure 2-21) started to be used during this stage. In the third stage the major innovation in structures and settlement pattern occurred (Özdoğan 1999).

The site emphasized mortuary behavior through the discovery of cultic buildings. Four kind of buildings used for special or cultic function were uncovered at Çayönü: They were the Bench Building, the Flagstone Building, the Skull Building and the Terrazzo Building (Özdoğan and Özdoğan 1998) The Skull Building which was related to death in its earliest stage was a single room with clean sand. A massive stone floor and benches ran along three of its four walls. The last phase of the building yielded about 70 human skulls, and thus it became to be known as the “Skull Building”. The building consists of five phases and human remains were uncovered from the earliest phases. This indicates that the building had been used for long time. The building was not merely used for storing skulls. The identified human skeleton parts indicate that remains of at least 400-450 individuals were buried in this place (Özdoğan and Özdoğan 1989).

3.3. Discussion

The social organization during the shift to the Pre-Pottery Neolithic was testified in general through various aspects including: burial, funeral practices, building structures and its functions. One of the fundamental transformations between the PPNA and PPNB was the social organization that changed from the nuclear family to the extended household, which was accompanied by changes in the buildings’ partitioned shapes (Byrd 2000). In the PPNB period, the spatial relationship between the location of the graves and the building structures showed a degree of complexity in parallel to the previous period. Various features attested in this period were originally inherited and continue the review of the previous period. In many cases, burials were associated with the residential structures. The plaster was used widely for construction and it was characteristic among most PPNB settlements in the south and central Levant (Kingery, Vandiver and Pickett 1988; Goren and Goldberg 1991). The graves inside structures were often dug through the plaster floor and near the wall. The spaces between buildings and courtyards were also used for deceased inhumations. Excavations at Tell Halula revealed the interment of the deceased inside the houses while it still used by the living inhabitants. Guerrero et al. (2009) discussed that the house represented a location of social practice which linked the living and the dead physically and symbolically. Furthermore, interring the dead in the house provided a visible reminder to visitors and occupants of the history and lineage of the family and house.

The use of abandoned houses for interring deceased had been already documented since the Natufian (Bouquetin, 2003: 344). Further, it has been documented through the PPNB at 'Ain Ghazal (Rollefson 2000), Jericho (Kenyon 1981) and in the fill of an abandoned house at Yiftahel (Arensburg, Garfinkel and Hershkovitz 1986). It has been suggested that, the builders could have monitored the precise location of the burials and intentionally positioned new structures in relation to previous funerary areas. In some cases, the new buildings were constructed over burial ground indicating the place where the burials were observed (Kuijt 1996; Goring-Morris 2000).

Burials were found outside of the building structures in separated areas located in close proximity as at Tell Aswad (Stordeur et al., 2006). Moreover, the development of funerary practices over time was accompanied by the emergence of ritual centers, shrines or cultic buildings dedicated to cultic activities. These symbolic or ritually significant buildings that originated in the previous period in the northern Levant and Anatolia were dispersed widely during the PPNB period. The buildings fulfilled various functions, some were related to successive ritual practices such as at Abu Hureyra (Moore and Molleson 2000), or specifically used for burials and large number of individuals were uncovered inside it such as at Dja'de el-Mughara (Coqueugniot 1998). A number of non-residential structures uncovered in Central and Southeastern Anatolia such as the storage of human remains at PPNA-PPNB Çayönü "Skull Building" (Özdoğan and Özdoğan 1989), the Early MPPNB "temple" of Nevali Çori (Hauptmann 1993). Further, at Çatalhöyük people buried their dead under house platforms and shrines. However, a large number of decorated shrines dating to the 7th millennium with symbolic sculpture and painting were uncovered (Mellaart 1967).

In the southern Levant, a few building structures "communal buildings", "shrines" and "temples" dating back to the late PPNB have been documented at 'Ain Ghazal, where three kind of ritual structures have been uncovered: apsidal buildings, developed from apsidal buildings and temples or sanctuary (Rollefson 2000). Small and large sized ritual structures - "shrines" were documented. Two circular ritual structures or "shrines" have been uncovered and it is suggested they were devoted to cult activity. Rollefson and Kafafi (2013: 19) determined that a small building "possibly overseen by a shaman or priest who was associated with a particular kinship unit" whereas the large temples "served the entire community to weld together social groups who threatened to split the settlement apart due to competition

for scarce resources such as farmland and pasturage” (ibid: 23). Also, large buildings have been documented at Beidha, characterized by a central hearth and stone blocks possibly used as a “communal meeting place” that also served as a place for decision makers (Kirkbride 1968; Byrd 2005). However, these buildings were sometimes used to bury the deceased and burials were uncovered on or beneath the floor of the buildings.

The building structures - burials relationship in the Near East and its linkage to mortuary practices is not always static. In some instances, this relationship relies upon the nature of the building with which the deceased was associated. In other words, the fact that the building was dedicated to certain rites does not necessarily mean the presence of burials. Excavations showed that burials were absent from non-domestic buildings such as in Nevali Çori (Hauptmann 1993) and ‘Ain Ghazal (Rollefson 2000), but present in the domestic use ones, such as in Mureybet and vice versa. However, burials were not found in both contexts at Hallan Çemi (Rosenberg and Redding 2000), but burials were found in Dja’de el Mughara (Coqueugniot 1998). Further, Merrett and Meiklejohn (2007:128) have suggested that all houses in the PPNB period are sacred spaces for both the living and the dead.

CHAPTER 3: Tell el-Kerkh and its Pottery Neolithic Cemetery

Tell el-Kerkh is a large Neolithic site located in northwestern Syria, in the Rouj Basin, Idlib Governorate. This basin is considered one of the most fertile regions in Syria, and it is comprised of thirty-four archaeological tell loci. Tell el-Kerkh is a large mega site complex, and consists of three neighboring artificial mounds, named, from south to north Tell el-Kerkh 1, Tell el-Kerkh 2, and Tell Ain el-Kerkh.

1. Archaeology of the Rouj Basin

The Rouj Basin is a relatively small basin located in northwest Syria. It is an elongated basin extending 2-7 km from east to west, and about 37 km from north to south. The northern part of the basin is divided into two valleys and the southern part is connected with the Gab Basin. Limestone mountains surround the basin to the east, the Zawyie Mountains and the west Wastani Mountains (Akahane 2003).

The University of Tsukuba undertook fieldwork in 1990-1992 in the Rouj Basin including survey, field survey and natural environment studies. Based on these results, the El-Rouj Chronology was defined (Table 2). All of the tell-type settlements within the basin were documented during field surveys. As a result, thirty-three tells were identified in the basin (Figure 3-1). Most tells were located at the end of deposits where springs flow out suggesting that the location of tells' within the basin closely relates to water supply (Tsuneki 2003).

2. Research History and Excavation at Tell el-Kerkh

Researchers from the University of Tsukuba and the Directorate-General of Antiquity and Museums in Syria undertook the first excavation season in 1997. Neolithic material was collected from three mounds (Figure 3-2). Tell el-Kerkh 1 was covered with later period deposits while Tell el-Kerkh 2 and Tell Ain el-Kerkh contain mostly Neolithic period materials. More than ten seasons of excavations revealed that the Neolithic settlements of Tell el-Kerkh not only covered a vast area of around 16 ha, but also show signs of a complex society consisting of heterarchical human groups.

The Neolithic settlement extended over 16ha during the Rouj 1c period (LPPNB). However, in the subsequent Rouj 2 periods, the settlement shrank to half c. 7 ha in the Rouj 2a-b period, c. 6 ha in the Rouj 2c period, and to less than 1 ha in the Rouj 2d period. Therefore, if a mega site is defined as a settlement larger than 10 ha, the Rouj 1c settlement at Tell el-Kerkh is the only mega site in the Rouj Basin. The reduction in settlement size at Tell el-Kerkh did not occur as drastically in the following Rouj 2a-b period, but the transition in settlement size from the Rouj 1c to the Rouj 2d periods fundamentally corresponds to those in other regions of the Levant. (Tsuneki 2012). For the Rouj 2c and 2d periods, excavation showed evidence of communal storage, communal cemetery, craft specialization, long-distance trade, the concept of ownership, and ritual practices, all of which indicate the existence of complicated societies (Tsuneki et al. 2007, 2011).

The chronology of the settlement extends over approximately 3,000 years, and represents a complex society as shown in (Table 2) (Tsuneki 2010, 2011, 2012, 2013). Excavations were conducted in the central and northern part of Tell Ain el-Kerkh. In the central area (20 × 30m), excavation uncovered a series of one-room and multi-roomed buildings in use during the Neolithic period (El-Rouj 2c). The latter phase revealed the foundation of a two-story building paved with solid lime plaster. This building and the surrounding area, plus the discovery of a *tannor* (hearth), indicate the habitation area was used for daily activities.

The most impressive discovery at the site was the outdoor communal Pottery Neolithic cemetery in the central area at Tell Ain el-Kerkh (Tell el-Kerkh from now on). This research will describe the cemetery in detail, and provide all related information about how the Kerkh cemetery appeared, cemetery partition and burial distribution of burials in each layer of the cemetery.

3. Tell el-Kerkh Neolithic Cemetery

A Neolithic cemetery, located in a habitation zone of the Rouj 2c settlement, was discovered in 2007 in the central area of Tell Ain el-Kerkh. The area of cemetery comprises the squares E251, E270, E271 (each square is 10m x 10m) in the overall grid system of Tell el-Kerkh and covering about 200m². Up to the 2010 season, over 240 individuals have been discovered from these squares (Table 3) (Figure 3-175). Based on pottery chronology and extensive ¹⁴C dating of the

Rouj 2c layers the cemetery seems to date to the late 7th millennium BC. Thereafter, a dozen ¹⁴C dates taken directly from human bone samples in the burials date between $7,550 \pm 80$ and $7,115 \pm 70$ uncal BP, and most of them concentrate on 7,400s and 7,300s uncal BP, suggesting the cemetery must have been used for several centuries around 6,400 - 6,200 cal. BC. This is one of the oldest outdoor communal “cemeteries” in the Near East.

The Rouj 2c layers from Squares E251 - E311 can be divided into four layers (Layer 4 to 7 from top to bottom). The burials within the cemetery were confined to three layers (Layer 4 - 6 from top to bottom) of the Squares E251, E270, E271 and a few from E291.

4. Burial Types in Kerkh Cemetery

Burials were interred within the cemetery in a variety of ways. Various funeral practices were also observed within the cemetery. However, burials in the cemetery were classified into four main types (Figure 3-3):

- 1) Primary burials.
- 2) Secondary burials/pits.
- 3) Cremation burials/pits.
- 4) Urn burials.

Some burials were too disturbed to be classified into type, so they were sorted into un-known burials.

Notably, large number of the individuals (c. 97 individuals) were recovered from a collective context. These collective burials were called “Concentration (C-1, C-2...etc.)²” at the site. In total, ten concentrations were uncovered at Kerkh cemetery. A concentration is a type of burial, in which several individuals were buried within one pit or an area surrounded by stone rows. Each concentration has very different characteristics and includes several burial types. The cemetery contained burials comprising all ages, half of them are adults. A quarter are juveniles. The number of other age individuals is limited as shown in (Figure 3-4).

4.1. Primary Burials

² C. is an abbreviation for “Concentration” and refers to each collective burial and cremation pit.

Primary burials refer to skeleton in complete or nearly complete anatomical articulations discovered in its original place at the time of interment. Primary burial is the main burial type uncovered in the Kerkh cemetery (103 individuals = 41%). Most of the individuals were buried intact in a small shallow pit. However, some were disturbed, with loose or disarticulated human bones, and the bones were mostly recovered in the grave fill. The disturbance could have occurred due to the removal of body parts or successive burial activities.

Some burials were covered with lime plaster or stone. Further, some were structured burials surrounded by row of stones, enclosing the burial completely or partially. Most of the primary burials were discovered intact, however some were disturbed. In both conditions, primary burials were found even individually, or within the concentration (collective burials) (Figure 3-5).

Notably, all identified primary individuals were buried in a flexed position. However, they were mainly buried on one side: the right side (37 individuals = 41%), or the left side (34 individuals = 37%), supine (10 individuals = 11%) and in a prone position (10 individuals = 11%). Adult males, females and children were all buried in various positions. No remarkable position was noticeable in regard to age and sex. Individuals were buried in various body orientations. No common body axis or head direction were observable in the cemetery.

Some individuals lacked body parts. Also, about thirteen primary individuals were discovered in a disturbed condition. It is suggested that the disturbance occurred during the removal of body parts and the remains were re-deposit into another location in the cemetery, where several body parts were uncovered on the cemetery ground and within the collective burials.

4.2. Secondary Burials/Pits

Secondary burials refer to skeletons, partial or complete, removed from their original interment context and re-located or reinterred in another location or context. Secondary burials are the second largest burial category uncovered at Kerkh cemetery (62 individuals = 26%). They were categorized into two basic types:

- 1) Secondary single inhumation.
- 2) Collective burial comprising large number of deceased (Figure 3-6).

The number of deceased in the first type comprised twenty-two individuals. Most of these individuals were incomplete, and in a fragmented condition with separated skulls, long bones, and fragmented parts. Skulls and long bones were gathered and later placed on the ground of the cemetery or in shallow pit. In some instances, they were buried together with animal bones, stones and pottery fragments. Seemingly, some of the body parts were removed by the Neolithic people of Tell el-Kerkh from their primary context and re-located in a secondary context.

The majority of secondary burials were uncovered from the collective context (41 of 62 individuals). Individuals of all ages and both sexes were present, which may indicate that the collective burials were not associated with specific people. Furthermore, the age distribution and the sex ratio seem to indicate that the individuals were not intentionally selected by age or sex, which may indicate the use of the area for a specific family for a period of time. Some individuals in the collective burials were buried intact in primary contexts, however, some were partly articulated, and others were represented only by skull and/or long bones. The collective burial structural features range in size depending on the number of individuals buried within. The presence of a large number of individuals (between 4 - 21) suggests the use of the same pit for a long time, likely for several generations. No specific body or skull orientations were observed, and grave goods were present with a few individuals.

4.3. Cremation Burials/Pits

Cremation burials refer to the disposal of the dead by burning the remains to ashes, fragmented skeleton parts found in the crematorium pit, or skeleton parts have burnt traces re-deposited in a different location and/or context. At least (44 individuals = 18%) were discovered from ten different locations in the Kerkh cemetery. Most of the cremation burials belong to Layers 5 - 6, and notably, no cremated fetus was discovered (Figure 3-7).

Cremated human remains were discovered from two different contexts.

- 1) Crematorium pit: Skeletons or corpses were burnt in the pit and reduced to ashes; afterward the pit was covered with soil.
- 2) Removed burnt bones: Burnt bones were removed from a crematorium and re-located to another place in the cemetery (Figure 3-8).

4.3.1. Cremation Pit

Three cremation pits (crematoriums) were uncovered in Kerkh cemetery; they are C-5, C-6 and C-9 (further details and descriptions will be provided in the coming sections). The interior wall and bottom of the pits were burnt and changed into an orange color. The pits were full of burned soil, black and white ash, charcoal and cremated human bones. The number of individuals in each cremation pit ranges from five to seven individuals and contained various age grouped, but not fetus or infants. The burnt human bones exhibit a white, gray or bluish black color. Some skulls at C-5 and C-6 retained their original shape and a lot of long bones were placed around them. Some articulated bones and a few remnants of un-burnt bones were also found from C-9. All crematorium pits belong to Layer 6., and C-9 was found in the lowest level of these.

In one example, number of human remains were found inside a pit. It contained skulls, long bones and other adult and juvenile body parts. The cremation pits seem to be too small (about one meter in diameter) to accommodate complete bodies. This suggests that these remains were removed from their original grave after decomposition (but sometimes prior to decomposition) and later placed in the cremation pit.

4.3.2. Removed Burnt Bones

Besides crematorium pits, some burned human bones were discovered from various locations within the cemetery. It seems that some burned bones were removed from the crematorium pit, replaced in secondary pits, sometimes mixed with un-burnt bones. C-8 produced a cluster of small human fragmented bones from at least eight individuals. Most of these bones had turned white, which indicates that the bones were burnt at high temperature. Some burned skull fragments were covered with DFBW sherds.

Almost all cremation burials were discovered in the lower levels and in the eastern part of the cemetery. The discovery of the cremation pits indicates that cremation activities took place in Kerkh cemetery.

4.4. Urn Burials

Urn burials refer to small individuals buried inside different shaped pottery vessels. Kerkh cemetery provides the oldest evidence of urn burials in the Neolithic period. However, this practice continued into subsequent periods and is attested in several sites in later periods.

Two examples of urn burials were uncovered within the cemetery, a fetus and an individual (1-2 yrs.). The fetus was buried within a Dark Faced Burnished Ware (DFBW) dome-shaped jar, whereas the other individual was buried within a unique square shaped pottery. Interestingly, another fetus (Str. 933) was buried on its right side, but its body was covered with DFBW pottery sherds. The way this individual was buried suggests that people who interred this individual aimed to protect its body by covering it with pottery sherds (like a lid).

4.5. Unknown Burials

Unknown burials refer to skeletal material where it is difficult to determine the deposition of their bones and hence the burial type. Unknown burials comprise (29 individuals = 12%) of the total number of burials in the cemetery. In many cases, the age of the remains could be determined.

5. Burials at Tell el-Kerkh Cemetery

This section will describe the human skeletal remains uncovered in the cemetery from the beginning of excavations until 2010 excavation season. Due to preservation factors, reliably accurate estimations of sex and age were not always possible. Proper assessment of sex and age are dependent upon observations of multiple skeletal characteristics found on the *os coxae*, cranium and mandible. The reliability of the assessment declines greatly when the number of observable features is reduced, as is the case with poor preservation or cremated remains³.

5.1. Individual Burials

1. Str. 502⁴

³ Dr. Sean P. Dougherty, a physical anthropologist from Milwaukee Area Technical College, did most of the analyses of the human remains.

⁴ Str. is an abbreviation for structure and refers to each skeleton.

St. 502 is a primary burial of a juvenile 2-3 years old uncovered in Square E271c in Layer 4 (Figure 3-9). The juvenile was buried in a shallow grave pit in a flexed position on its left side. Body axis direction is south-north and the skull faces upward. Sex is indeterminate, and no grave goods were uncovered.

2. Str. 504

Str. 504 is a perinatal individual classified as an unknown burial uncovered in Square E271c in Layer 4 (Figure 3-10). It was difficult to determine the deposition of the bones, so, sex, body axis and face direction were indeterminate. No grave goods were uncovered.

3. Str. 507

Str. 507 is a primary burial of a juvenile 8-10 years old, but sex was indeterminate (Figure 3-11). It was uncovered in the northwestern part of Square E271a in Layer 4. It was buried in a flexed position in shallow pit on its right side. The body axis direction was northeast-southwest. However, the skull direction was not determined due to the lack of skull parts. A small DFBW bowl (H6.9cm D8.3cm) was gently placed on his/her right palm (Figure 3-12). It is quite possible that the community was profoundly grieved at the untimely death of the young child and placed this “tear pot” during the funeral rites. However violent and ephemeral life may have been, feelings of affection and grief existed in that family just as they do in ours today (Tsuneki et al. 2011).

Three linear hypoplastic enamel defects were visible on the available dentition. Two were present on the left maxillary canine, and the third was located on the right mandibular canine.

4. Str. 513

Str. 513 is a secondary burial of a perinatal individual (Figure 3-13). It comprised a portion of skull uncovered on the surface of the cemetery in Square E271a in Layer 4. It was isolated from other neighboring burials in the same location. Likely this skull was moved from its original place and re-located to this final deposit. Sex is indeterminate. A small animal figurine found nearby measuring L:1.8cm, H:1.1cm (Figure 3-14).

5. Str. 519

Str. 519 is a primary burial of a perinatal individual buried within a shallow pit in a flexed position on its right side in the northwestern part of Square E271a in Layer 4 (Figure 3-15). The body axis direction is west-east, but face direction was not determined. Sex is indeterminate, and no grave goods were uncovered.

6. Str. 521

Str. 521 is a primary burial of a sub-adult 12-14 years old. Sex is indeterminate (Figure 3-16). It was buried in shallow pit in a flexed position on its left side in Square E271c in Layer 4. The left arm was extended along the body axis, while the right one was folded and crossed with the left arm. The body axis direction was west-east, but the face direction was not determined due to lack of skull parts.

This individual exhibited *cribra orbitalia* in each orbit, dental caries, and linear enamel hypoplasia. The three enamel defects were located on both maxillary canines, and the right mandibular canine.

7. Str. 524

Str. 524 is a primary burial of a middle adult individual, probably female. She was buried in a shallow pit on her left side in Square E271c in Layer 4 (Figure 3-17). The hands extended along her body axis through the femur bones, and the phalanges reached and were placed between tibia bones. Her body axis direction is east-west and the skull faced south. No grave goods were uncovered.

This individual exhibited moderate-to-heavy dental attrition. Lingual surface anterior maxillary attrition was evident. Antemortem tooth loss of the right mandibular P4-M2 was observed. Ten linear enamel hypoplastic defects were distributed among seven teeth.

8. Str. 527

Str. 527 is a primary burial of an infant (B-3 mths.) (Figure 3-18). However, sex is indeterminate. It was buried in a shallow pit on its right side and body axis direction was east-west, however the face direction was not determined. No grave goods were uncovered.

9. Str. 528

Str. 528 was classified as an unknown burial of a 1-3 years old individual uncovered in a shallow pit in Square E271c in Layer 4 (Figure 3-19). Human remains like ribs, tooth, and other bones were present. However, it was difficult to determine the deposition of the bones, so, sex, body axis and face direction was not determined. No grave goods were uncovered.

10. Str. 533

Str. 533 is a primary burial of a middle adult female (40-50 yrs.) discovered in Square E271c in Layer 4 (Figure 3-20). She was buried in a shallow pit in a flexed position, lying on her abdomen. Her body axis direction is north-south and her face is looking downward. A big stone was placed over her upper body covering the skull and chest before the grave was closed. The reason for this action is not clear. No grave goods were uncovered.

This individual exhibited two hypoplastic defects on each of the mandibular canines. The left maxillary P3 had been lost prior to death. Well-defined *linea aspera* were observed. The available fragments of femora appeared platymeric, although metric assessments could not be performed due to fragmentation.

11. Str. 710

Str. 710 is a secondary burial of an old adult (probably male) uncovered in Square E271d in Layer 4 (Figure 3-21). This skeleton was fragmented and represented mainly by a large skull and legs. The skull was placed at first and the legs were heaped up south of the skull later. As other parts of the skeletons were not discovered suggests the remains were repositioned bones. The body axis direction could not be determined. The skull faces a northwestern direction, and no grave goods were uncovered.

Unfortunately, the majority of the dentition was not preserved, and only the right maxilla was present. With the exception of a heavily worn right maxillary M2, the individual was edentulous. It should be noted that age estimation relied primarily on the condition of the dentition, as other more reliable age indicators were not present.

12. Str. 712

Str. 712 is a primary burial for middle adult individual, probable female, discovered in the southwestern part of the cemetery in Square E271d in Layer 4 (Figure 3-22). It was buried in a

flexed position on its right side. The leg bones were extremely contracted, the arm was folded and the fingers were placed near the skull. Judging from the pelvis and the skull, this adult was a female in her twenties who had experienced childbirth.

The most conspicuous element of this burial is the twist treatment of the head. The skull was twisted and the face was facing downwards. As such, the head pointed to the northeast direction, but the face looked downward. It is also notable that two flint blades were discovered in the skull and near the waist. The former flint blade measures 4cm long and one end seems to have been stuck into the left eye, though it did not reach the orbital bone. The latter flint blade is 5cm long and one end almost reached the lowest rib. These extraordinary elements evoke an image of the dead being buried with special treatment. However, it is difficult to determine exactly the real meaning of that special treatment.

Lingual surface attrition of the anterior maxillary dentition was observed. Antemortem tooth loss of the left maxillary P4 and M1 was evident. Twenty-seven linear enamel hypoplasias were observed among maxillary and mandibular teeth. The broken cross-section of the cranial vault revealed unusually thick diploë. No porotic hyperostosis was evident, either healed or unhealed. This may be linked to a possible healed endocranial reaction suggested by the uneven, swollen appearance of the inner table, particularly around the area of the cruciform eminence.

13. Str. 713

Str. 713 is a primary burial of a juvenile 10-12 years old uncovered in the middle of the cemetery in Square E271b in Layer 4 (Figure 3-23). It was buried in an extremely flexed position, lying on its left side. The body axis direction is west-east, and the head points to west and the skull faces the northeast.

Cribra orbitalia was present in both orbits. Thirty-seven linear enamel hypoplastic defects were observed, twenty-six of which were distributed among all four canines.

14. Str. 715

Str. 715 is a primary burial of an adult individual probably male discovered between Str. 710 and Str. 713 in Square E271d in Layer 4 (Figure 3-24). He was buried in a flexed position on his

right side. His body axis position is north-south and his head points to north and looks toward west. His arms were also contracted and the fingers were placed in front of his face.

He was buried with a remarkable limestone vessel recovered near the back of his head. It has a spherical shape, measures 9.7cm in height and 10.8cm wide. It is rather heavy and weighs 888 g. A conch shell bead and a flint blade were discovered together near his back. These objects indicate that the dead was buried with great care (Figure 3-25).

The relatively light dental attrition suggests a young adult. However, other reliable indicators of age were not available. Four dental caries are present among the maxillary molars.

A healed fracture of the mid-proximal right radius was present. The healed fracture is located midshaft. The callus protrudes medially. Post-mortem breakage of the bone exposed the internal structure of the fracture. The marrow cavity has narrowly reopened toward the proximal end of the fracture. Though not complete woven bone, the callus is active in appearance with a fairly rugose surface, sclerotic islands and pillars. It could very well be categorized as being in the consolidation stage. The ulna also exhibits bony changes with a swollen area that articulates with the radial callus. It is likely bone formation triggered by the fracture and associated inflammation.

Degenerative changes to the right temporal-mandibular joint are also evident. The mandibular fossa is wide and shallow. The condylar surface has thick, sclerotic accretions, some porosity, and is flattened with anterior angulation.

15. Str. 716

Str. 716 is a primary burial of an adult individual, probably male, uncovered in the Square E271b in Layer 4 on the top of collective burial comprising a number of burials (C-1) (Figure 3-26). He was buried in a flexed position, lying on his left side. His body axis direction is east-west. He rests the left side of his head on his left arm and a stone pillow, and his head points to the east, looking towards the south. His right arm was also contracted, and the fingers of his right hand were placed in front of his face. Even though he was buried on the top of C-1, some of his skeletal parts were imposed with the other human remains buried beneath in C-1. No grave goods were uncovered.

As with Str. 715, dental attrition suggests a young adult, perhaps in the later age range. Sixteen linear enamel hypoplastic defects were observed, most commonly on the mandibular canines. The major muscle insertion sites of the appendicular skeleton were robust.

16. Str. 717

Str. 717 is a secondary burial of a small individual (birth-2 yrs. old) discovered in Square E271b in Layer 4 (Figure 3-27). It is an isolated skull discovered between Str.716 and Str.713 and placed on one of the flat stone courses, but the upper part of the skull had almost disappeared. The diameter of the skull measures 18cm. The skull lacks teeth and jaw and comprised the parietal part. Therefore, the head pointed to the east, though the face direction was not defined. No grave goods were uncovered.

17. Str. 725

Str. 725 is a primary individual of a young adult individual, probable female, discovered alone in the southeast of the cemetery in Square E271d in Layer 4 (Figure 3-28). Judging from the pelvis and the slight bones, this adult was a female. Her jaw has all permanent teeth without third molars, indicating that she was a young adult. She was buried in a flexed position, lying on her back. Her legs were tightly folded on the left side. Her head points to the north but the vertex points upward. Her skull faces the south. It is notable that she held her left elbow with her right hand. No grave goods were uncovered.

This is a fairly gracile individual with one hypoplastic defect on the mandibular right P4.

18. Str. 726

Str. 726 is a primary burial of an infant (9-18 mths.) discovered below Str.715 in Square E271d in Layer 4 (Figure 3-29). It was buried in a flexed position, lying on its right side. The body axis direction is west-east. The head points to the west and faces the south. Sex is indeterminate, and no grave goods were uncovered.

19. Str. 729

Str. 729 is a primary burial of a young adult individual, probably female, discovered in Square E271d in Layer 4 (Figure 3-30). She was buried in a supine position between Str. 715 in the east,

and Str. 730 in the west. She has a slight skeleton. Judging from the teeth and pelvis, it was a young female. She was lying on her back and her legs were tightly bent in front of her abdomen. She seems to have held her breath with her right hand. Her head points to the north but the vertex points upward, and her face looks south. Beside her left femur, a stamp seal made of serpentinite was recovered. It is 2cm in height and 1.9cm in diameter. It is a “bullet-shaped” seal and the design can be classified into the “a cross and parallel lines” category (Figure 3-31). This stamp seal is a popular one among the Neolithic stamp seals in Tell el-Kerkh, though the seven circles were added to the simple “cross and parallel lines” design. This evidence indicates that the stamp seals were the personal property of an inhabitant in the Neolithic society of Kerkh.

One dental caries was observed in the right mandibular first molar. Three linear enamel hypoplasias were observed on the first and second maxillary molars, and the right second maxillary molar.

20. Str. 730

Str. 730 is a primary disturbed burial of a juvenile 2-3 years old discovered in Square E271d in the Layer 4 (Figure 3-32). Sex is indeterminate. Its bones were discovered just to the west of Str. 729. A fragment of the pelvis and spine indicate that the head pointed to the south however, the skeleton is too fragmented to grasp the burial position and the head alignment.

21. Str. 738

Str 738. is a primary disturbed burial of an infant (B-3 mths.) discovered in Square E271b in Layer 4 (Figure 3-33). It was buried in a flexed position lying on left side. It was buried alone in the northeastern corner of the stony Square containing the collective burial C-2. A small stone was placed over its remains covering part of the skull and ribs. The body axis direction is west-east. The head points to the west, and the skull faces south. Sex is indeterminate.

22. Str. 739

Str. 739 is a primary burial for middle adult individual, probably male, discovered alone in the northern part of the excavated area in Square E271b in Layer 4 (Figure 3-34). The preservation of the skeleton is relatively fine, and it is quite obvious that it is a mature. The femurs are massive, but the upper parts of the body skeleton are relatively delicate. The mandible has a

massive shape and other parts of the skull have masculine characteristics. It was buried in a flexed position, lying on its right side. It pillows its head on its right arm. Its left arm extends to its left knee. The body axis position is northeast-southwest. The neck was bent at a right angle. Therefore, the head points to the northwest and faces southwest.

Seven beads were discovered at the back and follow under the neck in a line (Figure 3-35). A serpentine butterfly bead was the lowest, then two barrel-shaped terracotta beads, a barrel-shaped limestone bead, a barrel-shaped terracotta bead, a tube-shaped tusk shell bead, and a conch shell bead lined up near the head. It is very certain that the dead wore a necklace made of these beads.

This individual exhibit healed porotic hyperostosis, and the antemortem loss of the left mandibular first molar.

23. Str. 746

Str. 746 is a cremation burial (removed burned bones) and contained the commingled remains - mainly cremated - of two individuals (juveniles) discovered in Square E271b in Layer 4 (Figure 3-36). The first individual is 1-2 years old, and the second is 6-8 years old. Two skulls, arms, other long bones, and small fragments of human bones were discovered beside and under the eastern side limestone line of concentration 2 (C-2). The most remarkable characteristic of these bones is their burnt characteristics. One of the isolated skulls was heavily burnt and black in color. Another fragmented skull had turned grayish in color due to burning. However, it was so fragmented that it was not given a structure number. The black colored skull is almost complete, and it rests upright and faces north.

The burnt teeth indicate a young individual. A well-burnt upper arm and ancillary bones, discovered beside the skull, probably belong to the same juvenile. The younger of the two individuals exhibited active cribra orbitalia and porotic hyperostosis. These bones must have been detached from their original place in the crematorium pit and re-located. These remains are the first evidence of cremation uncovered in the cemetery. Moreover, Str.746 is one of the earliest specimens of the cremation in the Near East.

24. Str. 748

A small plastered floor, measuring 1.2 x 0.8m, was discovered in the center of the excavation area in Square E271b in Layer 5. This floor was partly surrounded by limestone row of blocks. The room does not seem to have belonged to the habitation accommodation as the surrounding rows are very crude and no other rooms were attached to this floor. Remains of three individuals were discovered from a crack in the center of this plastered floor (Figure 3-37). Therefore, this facility was not part of a house, but probably made for the dead. It is certain that the dead were buried first then the floor was plastered was over them.

The first individual is probably an adult male. He was buried in a prone position, with his legs folded in front of his chest. His body was tightly bent at the waist with the right knee touching his face. The body axis is northwest-southeast. His head points to northwest and faces downward. Both arms were folded, and both hands were clasped in front of his chest. Interestingly, his left arms seem to have been holding an infant, because part of an infant mandible was discovered near his left elbow. Also, juvenile remains, of a 1-2 year old were uncovered. The infant and juvenile burials were classified as unknown. Body axis and face direction were indeterminate. However, a limestone bead (L0.9cm W0.6cm) belonging to the infant and a complete flint borer (L3.2cm W1.0cm) belonging to the juvenile were uncovered (Figure 3-38).

The young adult male exhibited osteophytic lipping of the inferior margins of T11, with partial fusion to T12. This is maybe due to a pathological L2, which displays a large, concave lesion of the superior surface of the body, and anterior wedging. There is no sign of active bone formation at the site, osteophytic growth is present along the margins of the body, and sclerotic pillars of bone are present along the sides. An erosive lesion has removed most to the superior surface of the body, with only the posterior and left lateral annular ring remaining. Sharp margins define the edges of the concavity. The trabeculae of the body are exposed and appear sclerotic. The lesion is suggestive of tuberculosis, but the lack of other skeletal evidence makes this diagnosis tenuous.

25. Str. 750

Str. 750 is a primary burial of a 5-6 year old individual lacking its cranium discovered in Square E271d in Layer 5 (Figure 3-39). Its body axis oriented northwest-southeast. Structure 750 was buried within a shallow pit in the southernmost section of Square E271d in Layer 5. The

position of the mandible, and the visibility of posterior skeletal elements of the torso, suggest that it was buried in a flexed, but prone, position. There are three maxillary deciduous teeth present and they look like they are in their proper anatomical location. It also appears that the second cervical vertebra, though damaged, is *in situ*. So, the cranium could have been removed after flesh decomposition.

Three maxillary teeth found still in the ground suggest that if the cranium had been removed, the soft tissue supporting those teeth had decomposed, and the teeth fell out (Figure 3-40). Also, since the mandible is in its proper anatomical location, this also suggests that the soft tissue connections, like muscle and ligaments, had also decomposed before the cranium was removed, sparing the actor from having to cut through the tissue. If the child had been decapitated, meaning, with cuts through the soft tissue, there would be far more disruption to the head and neck region (Sean P. Dougherty, personal communication, 2014). No grave goods were discovered.

This individual represented a rare case of acts on a child's cranium. Children were usually buried intact, but other specimens were also uncovered in some Neolithic sites. However, this specimen represents clear evidence for intentional child cranium removal in this period.

26. Str. 752

Str. 752 is a primary burial of a probable 20 yrs. old adult female discovered in Square E271b in Layer 4 (Figure 3-41). She was buried in a shallow pit on her right side. Her body axis oriented northwest-southeast. It was a highly fragmented skeleton lacking cranial elements. Remarkably her skull was completely removed from the grave and the cervical vertebrae were missing. No grave goods were present.

27. Str. 756

Str. 756 is a secondary burial of a juvenile discovered in Square E271b in Layer 4. This individual was represented by skull fragments discovered under the southern part of the stone square (Figure 3-42). As only half of the skull remained, the orientation of the head and face were not detectable.

28. Str. 757

Str. 757 is a primary individual of a juvenile 7-8 yrs. old. It was discovered alone to the northwest of Str. 757 in the northwestern part of Square E271b in Layer 4 (Figure 3-43). However, sex is indeterminate. It was buried in a flexed position, lying on its right side. Its legs were tightly bent in front of the abdomen. The body axis direction is south-north. The head pointed to south direction, but placed slightly upright. The face was looking northeast. This individual had 16 enamel hypoplasias, as well as dental caries affecting the remaining deciduous molars.

Beside the skeleton, a bone awl (L5.2cm W1.1cm) was recovered, possibly a funeral gift.

29. Str. 803

A small limestone-paved area was discovered in the northern part of Square E271b in Layer 5. This area was made of coarse and weathered reddish limestone, and the area measures c.1m x 1m. Another limestone-pavement was also discovered in its eastern side, though the shape was longer and narrower.

Str. 803 is primary burial for an adult individual probably female discovered just on the former small limestone-pavement (Figure 3-44). She was buried in a tightly flexed position, lying on her right back. Her lower back and legs inclined to her right. Her body axis pointed northwest-southeast. Her face looked upward with her mouth open. She was buried with her knees drawn up, and unfortunately the ends of tibia and fibula were destroyed. Her shoulder inclined extremely. Her left arm was bent near her hipbones and placed below her legs. Her right arm was bent under her hipbones and the fingers were placed in front of her face. Her legs were bent so tightly that her tibias and fibulas extended upwards.

A spiral shell and a bone bead were discovered beside her (Figure 3-45). The sea snail was found near her right shoulder, and it is a relatively large shell of which both sides were ground. It was probably used as an adornment like a pendant. The bone bead is a tiny cylindrical one, found beside the legs.

Physical anthropological observation indicated that this individual exhibited a healed fracture of the right clavicle within the middle third of the diaphysis. Two healed fractures of the left ulna within the distal third of the shaft were also present. As no shape or rotational alterations

are evident, both fractures were likely transverse. In addition, the right central maxillary incisor tooth has been fractured, the crown lost, and the remaining root and dentin are polished.

Antemortem tooth loss of the right maxillary first molar and the right mandibular second molar was observed. Dental caries was also present on the right M2, M3, left M2. Periodontal disease was also evident among the anterior alveolar bone of the maxilla.

30. Str. 807

Str. 807 is a middle adult male (35-40 yrs.) burial discovered to the south of Str.740 at the northern end of Square E291b in the Layer 5 (Figure 3-46). He was buried in a tightly flexed position, lying on his back. Both legs were folded down on the left side. His body axis direction is north. His face looks upward, though he inclines his head to the left slightly. The right arm was bent tightly, and his right hand was placed in front of his face. His left arm was extended and his left hand was placed under his hips.

A grayish-black colored cylindrical bead (probably made of porphyrite) was discovered at the right side of the skull. A flint drill was discovered on the pelvis. When the skeleton was discovered, most of the body, except the legs, was covered with a lime plaster, and a large limestone was placed at the knees (Figure 3-47). They were the facilities for covering the body, after its burial.

Physical anthropological observation indicated that this individual exhibited perimortem fractures of the right frontal and mandible. An apparent puncture wound is present to the right of the glabella, superior to the right orbit. Radiating fractures progress through the supraorbital ridge and the frontal squama. Multiple fractures have separated the body and eminence of the right mandible. In addition, small osteophytes are present on the superior margin of L4.

31. Str. 822

Str. 822, a cluster consisting of hand bones, teeth, and some vertebrae was found in the center of the cemetery in Square E271b in Layer 5. It was classified as an unknown burial. The bones

were parts of a juvenile between eight to ten years of age. most parts of the rest of the skeleton were not recovered therefore, sex was not identified (Figure 3-48).

Twenty beads were discovered among these small fragments of the skeleton (Figure 3-49). They are comprised of fifteen agate, four porphyrite, and one conch shell bead. Three-four agate or porphyrite beads were found together in the cluster. The agate beads comprise the small flat type, measuring 6-7mm in diameter and 2mm in thickness, and the porphyrite beads are tiny short cylindrical type, measuring 4mm in diameter and 3mm in thickness. This burial seemed to be a secondary and disturbed one.

32. Str. 823

Str. 823 is a primary burial for a sub-adult (14-16 yrs.) individual discovered at the northwestern corner of Square E271b in Layer 5 (Figure 3-50). The body position could be observed completely, but the skeleton was poorly preserved, so the sex was not identified. It was buried in a flexed position lying on its left side. The body axis direction is north-south, the skull is pointed to the north and faces the east. Its left arm was bent and the hand was placed on its breast.

A fragment of shell bead was found beside the scapula. A broken bone needle, with an eye, was discovered at its right foot (Figure 3-51).

33. Str. 825

Some long bones, pelvis and fingers were discovered in the southwestern part of Square E271b in Layer 5 (Figure 3-52). They comprise parts of a juvenile (10-12 yrs.), and seem to be a remnant of a disturbed burial. It was classified as an unknown burial. Sex was not determined, and no burial goods were discovered around it.

34. Str. 826

Str. 826 is a primary burial of a sub-adult (14-15 years old) individual discovered in the northeastern part of Square E271d in Layer 5 (Figure 3-53). Sex is indeterminate. As a rough stone and potsherd spread was present on its western side, it was originally thought that the remains were buried on a stone-potsherd pavement. However, the spread was not observed below the skeleton itself, therefore suggesting that it did not have a stone pavement. It was

buried in a tightly flexed position lying on its left side. The legs were tightly flexed in front of her abdomen. The body axis direction is northwest-southeast, and the skull faces southeast. Its right hand seems to hold the left elbow under its folded legs. No funeral goods were recovered.

Physical anthropological observation indicated that thirteen linear enamel hypoplastic defects were counted.

35. Str. 828

Str. 828 is a primary burial of a fetal discovered at the southeastern corner of Square E271d in Layer 5 (Figure 3-54). It is a small fetus - only 35cm in height, however, sex is indeterminate. It was buried in a flexed position lying on its right side. The body axis direction is northeast-southwest, and the face looks to the northwest. A big size stone was found to the north of the skull and smaller stones were found in front of its face. There were no burial goods.

36. Str. 829

Three primary burials were discovered side by side at the center of Square E271b in Layer 5. They were, from left to right - Str. 836, 830 and 829. Str. 829 is the northernmost of these three burials (Figure 3-55). It is a primary burial for a juvenile (2-3 yrs.). It was buried in a flexed position, lying on its left side down. The body axis points to the east-west direction, and the head slightly bends and points to the northwest. The face looks to northeast. There were no burial goods.

37. Str. 830

Str. 830 is a primary burial of an adult individual, probably male. He was buried back to back with Str. 829 (Figure 3-55). He was buried in a tightly flexed position, lying on his right side. He seems to place his hands together in front of his face. His body axis points to the northwest-southeast direction and his face looks southwest. A dark-green stone (probably gabbro) barrel type bead was discovered beside his left femur.

This individual has ante mortem tooth loss of the right I1 and right M1. Three dental caries were present on the left M1. There was agenesis of both M3s.

38. Str. 832

Dismembered human bones were discovered at the northwestern corner of Square E271d in Layer 5. The distribution of the juvenile ribs was most conspicuous in this location. A skull, vertebrae and fingers were other main elements. Physical anthropological analysis indicated that the deposit contained at least five individuals: an infant, two juveniles, and two adults (Figure 3-56). The remains in this spot were heavily disturbed and they did not remain in their original positions. As it was very difficult to distinguish each skeletal remain in the field, the remains were grouped together and treated as one grave. However, one of the adults is a primary burial (disturbed) of an adult individual probably male. The rest of the remains were classified as unknown burials.

One complete short-necked jar, a typical El-Rouj 2c DFBW, was placed upright at the northeastern corner of this spot. It was clearly dedicated to this mass burial. Seven beads were recovered from around the adult vertebrae discovered in the lowest level of this spot. They are two agate flat beads, a serpentinite barrel bead, an obsidian barrel bead, a quartz oval bead, a limestone barrel bead, and a cowrie shell bead (Figure 3-57). As six of the seven beads were found in a row along the vertebrae it is believed that the adult wore them as a necklace.

39. Str. 834

Str. 834 is a primary burial of a juvenile (2-3 yrs.) discovered at the eastern end of Square E271b in Layer 5 (Figure 3-58). The juvenile was buried in a flexed position, lying on its left side. The body axis direction is west-east, and it faces the north. The right femur measures 16cm long. There were no burial goods.

40. Str. 836

Str. 836 is the southernmost burial of a series of three parallel primary burials discovered in the middle of Square E271b in Layer 5. It is a primary burial of a middle adult male individual facing Str. 830, though the recovery level of this skeleton was c.10cm lower than that of the latter (Figure 3-55). He was buried in a tightly flexed position, lying on his left side. His body axis direction is west-east and he faced to the north. The left arm was bent double, and his left hand was placed in front of his face. His right hand was placed on his left arm. A small conch shell was discovered at his back (Figure 3-55).

This individual had a healed fracture of a mid-thoracic right rib. Alveolar bone changes due to periodontal disease were present, as were light calculus accumulations.

41. Str. 838

Str. 838 is a primary burial of a perinatal discovered in Square E271b in Layer 5 (Figure 3-59). Most of the skeleton was preserved, but in poor condition, so the sex was not determined. It seems to have been buried in a flexed position, lying on its left side. The body axis direction is west-east, and the head pointed to the west, but the face direction could not be identified. A stone was found adjacent to the skull. There were no burial goods.

42. Str. 841

Str. 841 is a primary burial of a perinatal individual discovered in the eastern part of Square E271b in Layer 5 (Figure 3-60). There are traces of burnt soil on the grave walls and on the floor. However, the skeletal remains exhibit no traces of burning which rules out the possibility of cremation. It was buried in supine position lying on its back. The body axis direction is southeast-northwest. Due to the skull fragmentation, the face direction has not been determined. No burial goods were recovered.

43. Str. 851

This deposit contains the disturbed remains of two human skeletons including a skull, pelvis, and other bones in the southwest of Square E271b in Layer 5 (Figure 3-61). Remains of two individuals were uncovered. The first individual is an infant (10-12 mths.), but the remains were heavily disturbed therefore it was classified as unknown burial, and sex was not determined. A fragment of the infant's cranial vault exhibited active porotic hyperostosis. The second individual is an adult burial, but its remains were also disturbed. Both these individual's axis body and face direction was not identified. One cowrie shell bead was uncovered near the adult hip bone.

44. Str. 852

This deposit contained commingled remains including a mandible and other bones and was discovered in Square E271b in Layer 5 (Figure 3-62). It represents partial evidence of a burial, and was heavily disturbed. The mandible suggests that the owner was probably an adult male, but other bones were those of a juvenile (1-2 yrs.). Str. 851 and Str. 852 were discovered in

close proximity, and both seemed to have been heavily disturbed, thus they were classified as unknown burial. Each burial contains an infant and adult remains. Therefore, they were originally two burials, those of an infant and an adult; that was later disturbed and probably mixed.

45. Str. 902

Str. 902 is a part of skull discovered in the north part of Square E271a in Layer 5. It is a juvenile (probably 1-2 yrs.) (Figure 3-63). It was classified as an unknown burial. It is difficult to determine if the original inhumation was here and the rest of the body parts were removed to another location in the cemetery or vice versa. Some animal bones were also discovered at the same spot. No burial goods were discovered.

46. Str. 904

Str. 904 is a primary burial of a young adult male discovered in the northwestern part of Square E271a in Layer 5 (Figure 3-64). He was buried in a flexed position, lying on his left side. His right hand was placed in front of his face. His left leg was stretched parallel to his right arm. His right leg was bent along the body and crossed with the right leg from behind. His body axis direction is northeast- southwest and his face looked to the south. A pottery handle fragment was discovered near his waist however this may not be burial goods. A part of skull of Str.912 was discovered beside his feet.

Healed cribra orbitalia and porotic hyperostosis are evident. Agenesis of both M^3 s and the right M_3 was present.

47. Str. 908

Str. 908 is a primary burial of a sub-adult (11-13 yrs.) individual discovered in room 5 of building structure Str.827 in Square E271c in Layer 6 (Figure 3-65). It was buried in this room after abandonment of the building. It was buried in a flexed position, lying on its right side. Its head, bust and legs inclined to its left side. Sex is indeterminate. Its right hand was twisted, and its left arm was stretched along its body. The body axis direction is northeast-southwest. Its face inclined to the lower left and looked to the southwest direction. There were no burial goods.

Linear enamel hypoplastic defects are present on several teeth. A small patch of active porotic hyperostosis is present on a fragment of posterior left parietal, near lambda.

48. Str. 909

Str. 909 is a primary burial of a young adult individual probably female discovered in the southeastern part of Square E271a in Layer 5 (Figure 3-66). The few remaining cranial indicators of sex are, unfortunately, ambiguous. However, general skeletal gracility would seem to suggest that this individual is a young adult female. She was buried in a tightly flexed position, lying on her left side. Her right hand was placed on the back of her head. Her left arm was stretched and her hand was placed near her pelvis. Her body axis pointed to the northeast-southwest direction and her face looked to the southeast. A stone stamp seal was discovered beside her waist. Its shape is like a gourd and its impression design was straight and parallel lines (Figure 3-67).

There is evidence of several antemortem injuries to the forearm, foot, and thorax. This individual has healed and remodeled fractures of the left distal ulna, the distal left second metatarsal, and six fractures affecting five mid-thoracic, probably left, ribs.

Dental attrition varies by location in the dental arcade. Anterior tooth wear was more advanced than posterior tooth wear.

49. Str. 910

This burial contains the fragmentary remains of at least three individuals. These remains include part of a skull, some long bones, fingers and feet and were discovered in the northern edge of Square E271a in Layer 6 (Figure 3-68). The burials comprise two adults; one probably elderly, and an infant (6 mths.- 1yr.). The remains were disturbed and mixed, thus this burial was classified as unknown.

50. Str. 911

Str. 911 is a primary burial for a perinatal discovered in the southeastern part of Square E271a in Layer 5 (Figure 3-69). It was buried in a flexed position, lying on its back. The skeleton was poorly preserved; thus, sex is indeterminate. Both of its arms could not be determined and its

skull was crushed. Its body axis pointed to the northwest-southeast direction. Its face probably looked to the southeast. No burial goods were uncovered.

51. Str. 912

Str. 912 is an isolated skull discovered near the foot of skeleton (Str. 904). It is a secondary burial containing an infant skull (Figure 3-70). The rest of the body was not discovered. The skull seems to have been moved from its original deposit and re-located here. Likely it had been disturbed during the digging of the grave for Str. 904. There were no burial goods.

52. Str. 913

Str. 913 is a primary burial of a juvenile (1-2 yrs.) discovered in the western part of Square E271a in Layer 6 (Figure 3-71). It was buried in a flexed and prone position. Its arms were stretched along its body. Its body axis pointed to the northeast direction. Its head was raised and inclined to the right. Its face looked to the north.

Notably, twenty beads were discovered in this grave (Figure 3-72). Eighteen beads were found near its waist and two near its left wrist. They consist of three flat agate beads, thirteen butterfly and/or barrel serpentinite beads and four oval stone beads.

53. Str. 914

Str. 914 is a primary burial of a juvenile (3-4 yrs.) discovered in the eastern part of Square E271b in Layer 6 (Figure 3-73). It was buried on the limestone course of the collective burial (C-10) beside another burial Str. 921. Even though each structure has a different body axis, the skulls were very close. It was buried in a flexed position, lying on its right side. Its right elbow was bent beside its head, and its right hand was placed near its back. Its left hand was placed on the front of its face. Its body axis pointed to the northeast-southwest direction, and its face looked to the southwest.

Eight beads were discovered around its neck, and they seemed to be a necklace (Figure 3-74). Three flat agate beads, a trapezoid serpentinite bead, and various shaped stone beads; barrel, oval, cylindrical and short cylindrical, were included.

54. Str. 918

Str. 918 is a primary disturbed burial of a small infant (4-6 mths.) discovered in the stone cluster at the eastern end of Square E270b in Layer 5 (Figure 3-75). Though its cranium was noticed easily, the body parts were poorly preserved. However, it seems to have been placed accidentally among the stones. The body position and the direction of the body axis were not clear. Sex is indeterminate. The skull points to the southeast direction and it looks east and downward. Therefore, it was buried in a flex position on its right side. It seems that there was no relation between the infant burial and the surrounding stones. There were no grave goods.

55. Str. 920

Str. 920 is a primary burial of a juvenile (3-4 yrs.) discovered in the southeastern part of Square E271a in the Layer 6 (Figure 3-76). Sex is indeterminate. It was buried in a flexed position, lying on its back. Its left leg was tightly bent and placed on its head. Its right arm was bent at its elbow and its right hand was placed near its neck. Its body axis pointed to the northeastern-southwest direction. Its face looked to the southeast. A small stone was found in front of its head. There were no burial goods.

56. Str. 921

Str. 921 is a primary burial of a young adult male discovered in the eastern edge of Square E271 in Layer 6. The skeleton was found on the limestone of (C-10) (Figure 3-77). He was buried beside Str. 914 in a tightly flexed position, lying on his left side. Both arms were stretched along his body. His body axis pointed to the south-north direction. His face looked to the west. There were no burial goods.

This skeleton exhibited healed fractures of the left radius and clavicle, and right second, third, and fifth metacarpals. The fractures are well within the stage of remodeling, with little trace of the original fracture line. Additionally, a distal first toe phalanx shows signs of traumatic injury with subsequent degenerative changes.

The maxillary dentition displays anterior lingual surface attrition. Twelve linear enamel hypoplastic defects were observed. Three teeth were lost prior to death. Periodontal disease was visible. Agenesis of the left M3 was present.

Small osteophytes were present on the margins the body of L5.

57. Str. 922

This deposit contains some finger and foot bones were discovered in the central part of Square E271b in Layer 6 beside the limestone course of (C-10) (Figure 3-78). There were some articulated bones, though most bones were disturbed. All of these bones are attributed to the same adult individual. Sex is indeterminate. It seemed to be a remnant of disturbed primary burial. However, this burial was classified as unknown.

Three beads were discovered among the bones (Figure 3-79). They are an oval serpentinite bead, a short cylindrical stone bead and a shell bead.

58. Str. 924

Str. 924 is a primary burial of a young adult female discovered in the southwestern part of Square E271b in Layer 6 (Figure 3-80). This burial was located in an alleyway between two rectangular buildings: Str. 827 and Str. 916. She was buried in a flexed position, lying on her left side. Both her hands were placed under her head. Her body axis pointed to the east-west direction. Her face looked to the south. A tusk shell bead was discovered under her lower jaw.

59. Str. 925

Str. 925 is a primary burial of a fetus discovered in the southeast part of Square E271b in Layer 6 (Figure 3-81). Though the skeleton was very small, its skull and most body parts were discernable. It was buried in a supine position. The left arm was folded in front of the skull, and leg bones were placed over the ribs. The body axis direction is northwest-southeast and the skull pointed toward the north. There were no grave goods.

60. Str. 926

Excavations in the western part of the cemetery in Square E270 uncovered six graves comprised of nine individuals in layers 4 and 5. Two of the primary burials exhibited clear skull/cranium treatment (Str. 926, 927). Structure 930, another burial was uncovered nearby, and it contains disarticulated primary burials buried within a secondary deposit. Str. 930 represented disarticulated individuals accompanied by various faunal bones and stones (Jammo 2014).

Str. 926 was a primary burial found beneath lime plaster in Square E270a in Layer 6. The long bones, pelvis, and mandible indicated the remains were of an adult female (Dougherty 2009) (Figure 3-82). The body axis is oriented north to south, and the lower limbs were tightly flexed, with knees positioned close to the chest. Her left hand was close to the chin - seeming to hold it, while the right hand was positioned parallel with the left hand and placed in front of the face.

Notably, the cranium was missing, but the mandible was present in its natural anatomical position. The intact mandible, and the absence of any cut marks on the mandible and the cervical vertebrae indicate that her skull was removed after the flesh was completely decomposed. This indicates that the cranium removal was deliberate in order to fulfill the funerary practices of removing the skull.

The mandibular teeth of this individual were unusual. The left side mandible shows heavy wear on the first and second molars, which includes non-carious pulp exposure (Figure 3-82a). Also, on the anterior dentition oblique wear on the labial surface of the right central incisor can be observed, and she favored the anterior dentition and the left side of the jaw (Figure 3-82b). These traces are usually related to non-masticatory behavior, which suggests use of the dentition as a gripping tool (Dougherty 2009; personal communication, 2014).

This female was adorned with seven beads distributed in various locations along her body within the grave (Figure 3-82c). A shell and bone bead below her left arm, tusk shell, limestone and bone beads near her lower spine, and two conch shell beads around her neck.

Physical anthropological observation told us that this individual had highly unusual mandibular teeth wear that is suggestive of the use of the dentition as a gripping tool. Tooth wear is heavy from the C₁-left I₂ suggesting a favored direction of use/movement/grip. A periapical abscess is present at the right I₂, and another may have been present for the adjacent central incisor, although post-mortem damage of the alveolar bone precludes certainty. However, it does, at least, appear that the right I₁ was held in place more by the gingiva than alveolar bone. Both central incisors are worn at an oblique angle with the downward slope on the labial aspect. The left M₁ and M₂, the only present left posterior teeth, also show heavy, asymmetrical wear. They show angular wear in which the M₁ is worn distally, and the M₂ is worn mesially, which

creates a shared concave area. The distal occlusal surface of M₁ is worn to the root. The mesio-buccal occlusal surface of M₂ exhibits non-carious pulp exposure.

Advanced periodontal disease affects the entire right dentition. Three linear enamel hypoplastic defects are present. Two dental caries are also present.

61. Str. 927

Str. 927 is a primary burial located a short distance to the southeast of the previous structure (Str. 926) in Square E270b in Layer 6 (Figure 3-83). Str. 927 contained three individuals; they were disturbed and buried together in the same grave. The main individual was an adult female, and the other individuals are a fetus and juvenile (4-5 yrs.). The female body axis oriented her west-east, while the fetus and juvenile body positions could not be identified (Dougherty 2009).

The adult female was buried in a flexed position on her right side. The lower part of her body was articulated, and the upper part was disturbed. Notably, her skull was completely removed but the first cervical vertebra was present (Sean P. Dougherty, personal communication, 2014). The skull was removed after the flesh was completely decomposed. Interestingly, a small DFBW bowl was placed near the existing skull. The skull of the juvenile was identified on the back of the adult female, while the fetus mandible discovered at the abdomen of the female, suggesting that this female was perhaps pregnant when she died. The long bones of the adult female are notably gracile. The available fragment of the left ilium has an irregular auricular surface with bone deposits that suggest fusion to the sacrum. Unfortunately, the sacrum was too fragmented to make further observations with respect to the possibility of sacro-iliac fusion.

It is not clear if the remains belong to the same family, but it seems they were buried together at the same time. The disturbance of the grave most likely suggests that it was a result of human interference in the context of rituals when the skull was removed after an interval of interment.

This assemblage was supplied with various grave goods, including a small Dark Face Burnished Ware (DFBW) bowl placed near the adult female missing a skull, and a pottery sherd close to

the bowl. Five beads made of agate, limestone, blue stone, and shell were found near the female's abdomen and under the fetus, and another incised bone bead near the female's pelvis.

It is assumed that placement of the pottery bowl near the original skull position is an intentional act aimed at marking the place of the removed skull by using a round shape (Pottery in PN) to resemble to some degree the human skull. However, this suggestion needs further consideration.

62. Str. 930

This burial contained only human crania, mandibles, animal mandibles, and postcranial bones. These human remains belong to three adult individuals, and the others are animal bones. Sean Dougherty (2009, p. 25) could identify crania, mandibles, and several postcranial elements as belonging to two adult females, and a single adult occipital bone indicates a possible female.

Tell el-Kerkh presented clear evidence for the inhumation of humans with animal bones in the same deposits. Str. 930 was located in the northern part of E270b in Layer 6 the same square where structures 926 and 927 were discovered. It is an accumulation of human and animal bones extending one to two meters (Figure 3-84). This assemblage is comprised of disarticulated human bones mixed with many animal bones, most of them belonging to cattle. Potsherds and stone rubble were the most abundant in the deposits. They were scattered and mixed with the human and animal bones. The heap of human skulls, long human bones and many animal bones gave these deposits the characteristics of a secondary burial (Tsuneki et al. 2009). It is not clear if this deposit was a burial in the truest sense or a ritual deposit.

Two human mandibles were documented in the southern end of this accumulation, while in the center, two human skulls and some skull fragments in addition to various human bones were also uncovered. Skulls were placed in the deposits facing east. Human phalanges, femora and humeri were placed around the skulls. This is the sole evidence of the mixture of human-animal bones discovered until the 2010 excavation season at Tell el-Kerkh Neolithic cemetery.

The human remains from this deposit belong to three individuals. However, the third individual is represented by one occipital bone. Crania, mandible and several postcranial elements represent the other two individuals.

- 1) The first individual is probably an adult female with two caries present on the right M².
- 2) The second individual is an adult female. This is a curious individual with a smaller than average mandibular size. Unfortunately, the mandible was fragmented at the root of the ascending rami, so measurements of mandibular length were not possible. However, the mandible and the maxilla are visibly small compared to others within the sample. It is also observable that the teeth of both dentitions are widely spaced. This seems to have contributed, or is perhaps the result of, the agenesis of the M₂ and M₃. The maxilla suffered post-depositional damage at the level of M¹, so it is unknown if the condition of molar agenesis was also present. However, this does seem likely given the size of both jaws. In addition, intra-orbital breadth appeared to be wide. Unfortunately, the condition of the skeleton was poor, so a more thorough investigation of what could be a pathological condition was prevented. It should also be noted that given that the sex was assigned based solely upon cranial characteristics, this potential pathological morphology may have diminished the accuracy of the estimation.
- 3) A single adult occipital bone with a nuchal crest within the female range. The occipital bone exhibits a pathological endocranial surface. The internal table has been eroded, and the underlying spongy bone has become swollen and sclerotic. This surface change is present within the visible cerebellar and cerebral fossae, as well as within the transverse sinus. A meningeal infection is a possible cause.

At first glance, the general pattern of square E270b suggested that there is a connection or relationship between Str. 926 and Str.927 with Str. 930. The skulls were missing from Str. 926 and 927, and two skulls were found in Str. 930, which may suggest that the skull was removed from its primary context, and reburied in the secondary. This was the primary hypothesis for skulls missing from structures and present in others. This hypothesis was rejected after analyzing human bones. The long bones, skulls, mandibles and phalanges discovered in Str. 930 indicate that these individuals were buried with their bodies and have no relation to structures 926 and 927.

The relationship between the individuals was ruled out due to the following evidence:

- 1) The mandibles of the individuals in structure 930 were not associated with skulls, but were found in the southern part of the accumulation next to cattle bone. Also, the tooth wear on Str. 926 is very advanced, while the maxillary tooth wear for both crania in Str. 930 is light to moderate.
- 2) Cervical vertebrae were present in both structure 926 and 927, and at least one vertical vertebra was present in Str. 930.
- 3) The estimated age of the individuals differs between the structures (Dougherty 2014 personal communication).

For these reasons, the connection hypothesis between these structures is ruled out here and the evidence supports this. The question remains as to why disarticulated human remains were buried with human bones and stones within this accumulation.

63. Str. 931

Str. 931 is a secondary burial represented by an isolated skull discovered in the eastern edge of Square E271d in Layer 6. It is an adult skull lacking a lower jaw (cranium) (Figure 3-85). Sex is indeterminate. No other skeletal remains from this individual were recovered. The head pointed to the east, and its face looked to the south. As it was an isolated skull, it was probably a skeleton in a secondary burial context. However, there is a possibility that it was moved from its original deposit and re-located here.

This individual was represented by an incomplete maxillary dentition and vault fragments. The maxillary teeth had heavy calculus accumulations. The right P³ was carious.

64. Str. 932

A commingled deposit containing cremated, unburnt remains and dismembered human bones was discovered in the southwestern corner of the Str. 916 building (Figure 3-86) in the north part of Square E271a, b in Layer 6. The human bone heap measures 1.5 × 1.2m. Almost all of the human skeletons were disarticulated and disturbed. At least, seven individuals were uncovered, however, six were identified. One juvenile, a sub-adult and an adult (probably male) were cremated (Figure 3-87). The skeletons of a fetus, a juvenile and an adult (probably male) were not burnt. This human bone heap was probably a remnant of the secondary burial context. This secondary burial was formed after the construction of Str.916 building was

defined. It is probable that some skeletons were burnt when the Str.916 building was burnt in a fire.

65. Str. 933

Str. 933 is a primary burial of a fetal skeleton with DFBW potsherds and was discovered in the western part of Square E271d in Layer 6. The fetal was buried in a flexed position, lying on its right side (Figure 3-88). Sex is indeterminate. Both hands were placed on the front of the face. Its body axis pointed to the northwest-southwest direction, and it probably faced to the southwest. The whole of the fetal skeleton was covered with DFBW potsherds, probably broken from an individual pottery. This burial suggests that people who interred this individual aimed to protect its body by covering it with pottery sherds (like a lid). No burial goods were found.

66. Str. 941

Str. 941 is a primary burial of a middle adult, probably female discovered at the southern edge of Square E271d in Layer 6 (Figure 3-89). As it was located at the edge of square, it was possible to identify the section and a rough plan of this gravel pit. The pit seems to be c. 1.4m in diameter, and it is at least 0.6m deep. The section tells us that the pit was refilled after the dead body was placed in the pit. She was buried in a flexed position lying on her left side. Her body axis direction is southeast-northwest, but her head was bent and oriented in a counterclockwise direction. Therefore, the skull pointed to the north and it faces south. Both her arms were folded in front of her face.

A bone spatula was found near her hipbone, a flint point was at her feet and hammer stone were uncovered in the grave (Figure 3-90). Seven dental caries were found among six teeth. Three teeth were lost prior to death. Traumatic loss of the right I2 was also evident. Additionally, this individual exhibited new bone formation on the medial aspect of the distal right fibula, just proximal to the epiphysis.

It was also noted that the deltoid tuberosities of both humeri and the attachment sites for the pronator quadratus muscles showed pronounced development, which arm-intensive habitual movements involving pronation, abduction, and flexion.

67. Str. 942

Str. 942 is an isolated adult skull discovered on the eastern edge of Square E271d in Layer 6 (Figure 3-91). It is located to the south of C-10. The fragmentary condition of this cranium prohibited successful estimation of sex or age. As the post-cranial skeleton was under the balk, it was not possible to determine the type and position of this burial. The skull seems to face to the northeast.

68. Str. 946

Str. 946 is a primary burial of a perinatal, possibly a late-term fetus discovered on the border between Square E271c and E291a (Figure 3-92). It belongs to Layer 6. Some bones were discovered in a disarticulated condition, and it was partly disturbed. Sex is indeterminate. The remaining skeleton tells was buried on its right side. The body axis direction is north-south. The head pointed to the south and its face looks eastward. A flat quartz bead was discovered near the neck.

69. Str. 977

Str. 977 is a primary burial of a perinatal discovered near the northwestern corner of Square E270b in Layer 6 (Figure 3-93). It seems to have been buried in a flexed position lying on its left side. Its left hand is folded and placed in front of the face. Its body axis direction is north-south. The head probably points to the southwest, but the face's direction was not identified. There were no burial goods.

70. Str. 981

Str. 981 is an urn burial discovered near the center of Square E270b (Figure 3-94). A DFBW used as an urn is not sophisticated pottery. It is a brown, medium size globular shape bowl, measuring 21.5cm in diameter and 14.5cm in height. The bowl was upside down, and a complete fetal was discovered underneath the pottery. This suggests the following funeral practices. The dead fetal body was placed in the bottom of bowl. Then, the bowl was filled with soil to the top of the mouth. The bowl was probably lidded with some organic material. Finally, the bowl was buried upside down. This is the oldest urn burial discovered in the Ancient Near East so far. No burial goods were recovered except the DFBW bowl which contained the skeleton.

71. Str. 984

Str. 984 is a primary disturbed burial of a young adult, probably male discovered in the southwestern corner of the Str. 916 (Figure 3-95). The skull points to the east and faces upward. The vertebrae were not attached to the skull. A complete bent but articulated right arm, from the clavicle through scapulae, humerus forearm, to the hand, was discovered north of the skull. An articulated leg also appeared above the arm. Therefore, it is supposed that it was disturbed post mortem. It is difficult to speculate on the axis direction, but if the right arm maintains its original position, he was buried in a prone position or on his left side. A small stone flat bead and two flint blades were discovered near his leg (Figure 3-96).

Three dental caries and twenty linear enamel hypoplasia are present in the dentition of this robust individual.

72. Str. 985

Str. 985 is a primary burial of a 6-7 year old juvenile that was buried along the southern wall at the southwestern corner of Str. 916 (Figure 3-97). It seems to have been buried in a flexed position lying on its right side. The body axis direction is east-west. The skull points to the west, and it faces the south. An animal (probably cattle) scapula was placed on its left shoulder.

Cribra orbitalia is present on both supraorbital plates. A fragment of sphenhoid also exhibits porosity. The combination of lesions may indicate vitamin C deficiency rather than anemia.

73. Str. 988

Str. 988 is a primary burial of a middle adult female discovered in the eastern part of Str. 916. She was buried in a flexed position lying on her right side (Figure 3-98). Her body axis direction is north-south, but her head was bent and pointed to the west. Her face looked downward. Her legs were strictly flexed in front of her abdomen, and both hands were crossed between her legs. At her feet, a bone spatula, a flat stone bead and shell bead were placed together. They seemed to be the funeral gifts (Figure 3-99). Another cylindrical stone bead was found near her legs. A goat horn was also discovered above her legs. Obsidian blade and flint point were found near by.

Both femora exhibit a plaque of new bone formation suggestive of an ongoing inflammatory process. The right femur has 67mm length of periosteal reaction at the proximolateral shaft, just opposite the gluteal tuberosity. There are several patches of new bone formation on the anteromedial diaphysis, with a mixture of woven and sclerotic bone. The left femur is similar, but new bone deposits are more sclerotic with vessel impressions, covering a 121mm area.

Eleven linear enamel hypoplasias are also present.

74. Str. 1040

This deposit contains the disturbed remains of two human skeletons, discovered in Square E251c in Layer 4 (Figure 3-100). The first individual is an adult of unknown age represented by the bones of the left upper extremity. The second is an individual represented by a juvenile (5-6 yrs.) mandible, however sex is indeterminate. This burial was classified as unknown. There were no grave goods.

75. Str. 1044

Str. 1044 is a primary burial of a middle adult probable male discovered in the southern part of Square E251c in Layer 4 (Figure 3-101). He was buried in a flexed position lying on his left side. The body axis direction is east-west and the head pointed to the east, and faces the south. Notably, both hands were placed under his folded legs, but the wrist of the right hand was bent downward. A small interesting blue bead (imitation turquoise) accompanied him.

Taniguchi et.al (2002) have studied three samples and concluded that, "The results from the analyses and laboratory experiments indicated that the blue beads were an alternative to and imitation of natural turquoise beads. They are formed of an apatite core with a turquoise colour obtained probably by the heating of manganese or iron compounds. The microstructure and chemical composition of the beads indicate the use of mammal tooth or tusk, possibly 'odontolite' (fossil ivory). The technique used to produce these blue beads is a precursor to the development of glazing".

The advanced degenerative changes in the cervical vertebrae with notable macroporosity on the joints of C5 do suggest an older age, although they may be active induced rather than age-related.

The carpals exhibit advanced degenerative changes that are unique to this sample. The right pisiform has marginal lipping and 50% of the articular surface shows eburnation. The bone is oddly squat. The left pisiform has slight thickening of the margins, and eburnation. The right triquetral has sharp lipping around the pisiform articulation, and eburnation of the facet. This is an unexpected area for degenerative changes, particularly in light of the fact that the other carpals appear unaffected. It is possible that the condition is traumatic in origin, or it may be linked to habitual activity. Eburnation (2 mm area) is present on distal left first metacarpal, which also has a healed fracture in the proximal third of the diaphysis. Sharp flexor crests are present on the finger phalanges, so hand-intensive labour is suggested. Also, there are robust muscle attachments for the gluteal muscles on what appear to be platymere femora.

There is a healed depressed fracture of the posterior right parietal (17.1 x 9.85), and a distal toe phalanx was also fractured.

Dental attrition is heavy. Twenty-four linear enamel hypoplastic defects were counted. Only the right M² was lost antemortem, although advanced alveolar resorption of the surrounding area has left little support for the M³, which was mostly likely held in place by soft tissue.

76. Str. 1045

Str. 1045 is a primary burial of an adult, probably male, discovered in the southern part of Square E251c in Layer 4, however, it was disturbed (Figure 3-101). This burial was discovered behind burial Str. 1044. This burial was represented by one arm and one leg with pelvis, ribs, jaw and some fragmentary bones were discovered northeast of Str. 1044, seemingly belonging to the same individual. The leg was articulated with the pelvis. The leg and the remaining parts of this individual indicated that he was buried in a flexed position on his right side. The axis of the body pointed to the northeast. No grave goods were discovered.

This individual had two caries affecting the right P⁴ and the left M₂, respectively.

77. Str. 1047

Str. 1047 is a primary burial of a young adult male discovered in square E251c in Layer 4. This individual was buried in the center of a cluster of five burials with the others surrounding him (Figure 3-102 (1)). Likely they belong to one family buried in the same place. This skeleton was well preserved. He was buried in a flexed position lying on his right side. His body axis direction is north-south and the head pointed to the north and his face looks to the west. Both arms were bent, but the right-hand elbow touched the left knee, and both hands were placed under his chin. There were no grave goods.

This individual had well-developed muscle attachments, and sharp flexor crests. The acromio-clavicular ligament was ossified. There is a small myositis ossificans extending from the left linea aspera. The patellae exhibited ossification of the patellar ligaments. Both ulnae had enthesopathies of the triceps insertion.

Several small, healed fractures were present: a healed fracture of the right metacarpal 1 and trapezium, which has flattened; two healed rib fractures, and a fractured distal toe phalanx.

The parietals exhibited healed porotic hyperostosis. There were six linear enamel hypoplastic defects.

78. Str. 1048

Str. 1048 is a fragment of isolated skull of a perinatal discovered in Square E251c in Layer 4 (Figure 3-102 (2)). It was discovered just in front of Str. 1047 facing to the west. Since post-cranial bones were not uncovered, it was difficult to identify the characteristics of this isolated skull (age, sex and direction).

79. Str. 1050

Str. 1050 is a primary burial of a young adult individual probably male. He was discovered in a cluster of four individuals buried close to each other (Strs. 1050, 1051, 1053, 1058) (Figure 3-103). He was found between Strs. 1051, 1053 and Str. 1058. in the northern part of Square E251c in Layer 4. This young adult male seemed to have been buried in a strange position (Figure 3-104). Based on his bone positions - with the exception of his left leg - he was buried in a flexed position lying on his left side. The body axis direction is west east and his head pointed to the west, and he faces a north-east direction. While his right leg was folded in a

normal position, his left leg was placed in an opposite position and the tiptoe was placed in an abnormal position near his right shoulder. After removing the right leg during excavation, the reason for this unusual positioning was understood. His left femur was articulated with his pelvis at one end and with the tibia and fibula on the other, however it was broken in half and bent conversely. The excavation's physical anthropologist, Sean Dougherty, decided that this femur fracture had been the cause of his death. The people tried to bury his dead body in a normal flexed position, but likely they could not fold his left leg. There were no grave goods.

This individual had a healed comminuted (butterfly) fracture of the left femur, and possibly the left distal fibula. The fracture is located within the middle third of the diaphysis. Osteoclastic and osteoblastic changes are present. The individual survived the fracture event for at least one week before succumbing to the injury, which was likely a compound fracture. If the burial position is evidence, it does not appear that the femur could be reset properly, as the thigh was in a rotated position.

One enamel defect was observed on the left C¹.

80. Str. 1051

Str. 1051 is a primary burial of a middle adult female discovered just to the northeast of Str. 1050 in the northern part of Square E251c in Layer 4 (Figure 3-103). She was buried in a point symmetrical arrangement with Str.1050 in a tightly flexed position lying on her left side (Figure 3-105). Her body axis direction is east-west and the head pointed to the east, and she faces the south. Her legs were folded, but her right knee reaches the chin. Both arms were placed under her folded legs. There were no grave goods.

Healed porotic hyperostosis is present, and the associated diploic space is thick. Agenesis of the right M₃ is probable.

81. Str. 1052

Str. 1052 is a secondary burial of a sub-adult (12-13 yrs.) discovered in square E251c in Layer 4 (Figure 3-106). This individual is part of the cluster burial where Str. 1047 was uncovered (Figure 3-102 (3)). Sex is indeterminate. Interestingly, its bones were disarticulated, but showed intentional arrangement as follows: First the femurs and the humerus were placed in

the same direction, then the ribs and other bones were placed above, and the skull were placed on its left side facing the northwest at the top. A small coarse pottery bowl with three vertical handles were discovered with it (Tsuneki et al. 2010, 2011).

This individual manifested a special arrangement of bones. The long bones were lined up carefully in one direction with the other shorter bones next to them, with later careful placement of the skull on the top. This act indicates deliberate arrangement of bones in this form.

The current state of Str. 1052 at Tell el-Kerkh suggests the impossibility of burying the body in this way immediately after death when the flesh was still fresh. The absence of several body bones such as phalanges indicate that this individual was buried immediately after death somewhere in the cemetery, then after skeletonization, the grave was re-opened and the bones moved for a special ceremony. After the ceremony, they moved it to a new deposit where the adult male (Str. 1047) was buried. Before closing the grave, the bones were intentionally arranged in this final form. The small coarse pottery annexed with the burial may be a personal belonging, or had been used during the funeral ceremony, and then later placed there before grave closure. Probably this location had been preferred as the final location within the cemetery and likely there is a kin-relationship between the members who have been buried in this cluster.

Four hypoplastic enamel defects were present on the right P³ and P⁴.

82. Str. 1053

Str. 1053 is a primary burial of an adult probable male discovered in the northern part of Square E251 in the Layer 4 (Figure 3-107). Part of the skull was buried below Str. 1051. It was partly disturbed, seemingly when the burial pit of Str. 1051 was dug (Figure 3-103). Most parts of the skull were found just beside the skull of Str. 1051. However, the mandible and the remainder of the skull was found 40cm away to the west. He was buried in a flexed position lying on his right side. The body axis direction is north-south, and the head pointed to the north and faces northwest.

A goat horn was found near his hip bone. He was accompanied by a number of grave goods; one stamp seal and four beads were discovered together near his breast (Figure 3-108). This stone seal is bullet-shaped, having a cross and parallel line design. Four cylindrical type beads, made of stone and clay were present and they seem to have been hung together from the neck.

One linear enamel hypoplastic defect was present on the right C₁.

83. Str. 1056

Str. 1056 is a primary burial of a young adult, probably male was discovered at the border between Square E251c and d in Layer 5 (Figure 3-109). He was buried in a flexed position lying on his left side. His body axis direction is southeast-northeast, his head pointed to the southeast and he faces to the west. His right hand was placed on his mouth, and his left arm bent at the knee and hung limply. Two agate stone beads and a flint blade were discovered near his left arm (Figure 3-110).

In general, the available long bones were robust. Two linear enamel hypoplastic defects were present on the left and right P⁴. The right C₁ has eight lines of abrasion across labial aspect of the crown. The occlusal surface is only lightly worn. Third molar agenesis of the right M₃ was evident.

84. Str. 1057

Str. 1057 is a primary burial of an adult, probably female, discovered in square E251d in Layer 5 (Figure 3-111). She was buried in a flexed position lying on her right side. Her body axis is west-east and her (missing head) pointed to the east. The long bones were thin and gracile. The right arm was stretched down in front of her chest, and her left arm formed an N shape with her hand. The lower limbs were tightly folded. The skull was completely removed from the grave, but some cervical vertebrae were present *in situ*. Her right humerus was higher than the scapula near the top of the cervical vertebrae. No grave goods were recovered.

85. Str. 1058

Str. 1058 is the last burial of the four-burial cluster that comprised (Strs. 1050, 1051, 1053, 1058). It is a primary burial for middle adult male discovered in the northern part of Square

E251c in Layer 4 (Figure 3-112). The lower body was covered with the upper part of Str.1050. He was buried in a flexed position lying on his right side. His body axis direction is west-east and his head pointed to the west and he faces south.

It is noticeable that he was buried with many objects (Figure 3-113). A small DFBW bowl was placed at the back of his head. Near his lower back, a flat clay stamp seal, three flint axes, three bone awls, five deer (probably fallow deer) horns, an Amuq-type flint point, five long flint blades, four pumice stones, a small whetstone, and many chipped flint flakes unearthed in a cluster as if they had been placed in a bag were discovered. The number and variety of these offering objects are conspicuous, and they indicated the importance of tomb owner. These objects were the tools and products of chipped stone knapping, indicating that the tomb owner was relied upon as a master of knapping (Tsuneki et al. 2011, Tsuneki 2017).

The right M¹ and P⁴ were lost antemortem.

86. Str. 1059

Str. 1059 is a typical secondary burial discovered behind Str. 1047 in square E251c in Layer 4 (Figure 3-102 (4)). This burial comprises the remains of two individuals identified through long bones and pelvises which were placed first (Figure 3-114). Then, the other long bones and vertebrae placed on the pelvis. Both individual's sex is indeterminate. The first individual is sub-adult, possibly in the mid-teenage years old whereas the second one is juvenile. A large animal talus was also uncovered.

87. Str. 1062

This deposit contains heavily disturbed human remains, discovered in Square E251d in Layer 5 (Figure 3-115). Only one arm with a few ribs were discovered. Based on the position of the arm, the tomb owner might be buried on their right side. However, this burial was classified as unknown. There were no grave goods.

88. Str. 1064

Str. 1064 is a primary burial for a young adult male discovered in the southwestern corner of Square E251c in Layer 4 (Figure 3-116). He was buried in a flexed position lying on his right side.

His body axis is northeast-southwest and his head pointed to the northeast direction and he faces to the northwest. Three conch shell beads were discovered at his feet (Figure 3-117).

Periodontal disease affected the alveolar bone of the mandibular incisors.

89. Str. 1066

Str. 1066 is a primary burial of a juvenile 2-3 yrs. old discovered in the southern part of Square E251c in Layer 4 (Figure 3-118). Sex is indeterminate. The upper part of this individual was located partly beneath Str.1044. It was buried in a flexed position lying on its right side. The body axis direction is north-south and the head pointed to the north and looks downward. A bead coated blue was discovered near the wrist of his left hand (Read Taniguchi et al. 2002).

90. Str. 1067

This deposit contains the human remains of two individuals including toes and legs. It was classified as unknown burial. It was discovered in Square E251c in Layer 5 (Figure 3-119). Both individual's sex is indeterminate. The first individual is a juvenile is represented by a left foot. The second individual was represented by an adult left foot. There were no grave goods.

91. Str. 1070

Str. 1070 was classified as unknown burials discovered in the Square E251d. It was represented by a few fragmented and disturbed bones placed over the remain of Str. 1086. No grave goods.

92. Str. 1072

Str. 1072 is a primary disturbed burial discovered in Square E251c in Layer 5 (Figure 3-120). The lower part of its body was found beneath Str. 1047. It is a juvenile 11-13 yrs. old, however, sex is indeterminate. It was buried in a supine position on its back. The body axis direction is southwest-northeast, but notably it lacks the entire skull and lower limbs. There were no grave goods.

93. Str. 1073

Str. 1073 is an urn burial discovered at the eastern limit of Square E251d in Layer 5 (Figure 3-121). Some bone fragments of a juvenile 1-2 yrs. old were discovered in a unique coarse rectangular shaped pottery used as urn burial. The short side of the rectangle measures at

least 30cm. The long sides extend out of the excavation square. Inside the pottery all of the human bones were disarticulated, and they seem to be secondarily deposited bones. A small blue bead was discovered with human bones inside the pottery ware.

94. Str. 1074

Str. 1074 is a primary disturbed burial of a fetus discovered in the southern part of Square E251c in Layer 5 (Figure 3-122). Sex is indeterminate. Due to disturbance, it was difficult to determine the burial position, but likely it was buried in a flexed position on its left side. It was buried beneath Str. 1072 and a large part of its remains were covered by the former burial. It has the same body axis direction of Str. 1072 southwest-northeast, but also notably it lacks the entire skull. There were no grave goods.

95. Str. 1075

Str. 1075 is a primary burial of a young adult individual discovered at the northeastern corner of Square E251b in Layer 5 (Figure 3-123). It was buried in a prone position. A few pieces of orange *pisé* were lined around the skeleton. Its skull was in contact with a large limestone on the left side. The body axis direction is west-east and the head pointed to the west and looks downward. Its right hand hung limp and extended along the body axis, and its left hand was half folded and placed under the hipbones. Curiously enough, the bones lower than pelvis were completely missing. It is not clear if the lower bones were extracted from the burial, or the person lacked a lower body while alive. The latter explanation seems to be more probable, because the bones of its upper body remained undisturbed and intact completely. There were no grave goods.

96. Str. 1076

A broken isolated skull fragments for adult was discovered at the northern end of Squares E251c and d in Layer 5 (Figure 3-124). Sex is indeterminate. However, open sutures may indicate a younger age. It was classified as an unknown burial. There were no grave goods.

97. Str. 1077

Str. 1077 is a primary burial of a young adult, probably female, discovered in Square E251c in Layer 5 (Figure 3-125). She was buried in a tightly flexed position on her back. Her head was bent under the body. It is impossible to bury remains in such a compact position without tying

it up with rope. The body axis direction is east-west, but the skull was bent. Both her legs were bent over her abdomen. A barrel-shaped stone bead and a tusk shell bead were discovered under her left leg. A conch shell bead was also discovered near her toes (Figure 3-126).

98. Str. 1078

Str. 1078 is a primary burial of a perinatal discovered in the southern part of Square E251c in the Layer 5 (Figure 3-127). The skeletal remains were not-well preserved. It was buried in a flexed position lying on its left side. The body axis direction is west-east and the head pointed to the west and faces north. There were no grave goods.

99. Str. 1079

Str. 1079 is a primary burial of a young adult, probably male, discovered in the southeastern corner of Square E251d in Layer 5 (Figure 3-128). He has a large skeleton and his length was greater than 170 centimeters. He was buried in a flexed position lying on his left side. His upper body reflected a near prone position. Both of his arms were bent and his right hands were placed near his face. His head body axis direction is northwest-southeast and his head pointed to the northwest and he faces downward toward the east. A small conch shell bead was discovered near his skull.

The visible teeth of this individual appear to have minimal wear, which does suggest a young adult age. The linea aspera of the femora are well-developed.

100. Str. 1080

A cluster of individuals was discovered in the eastern part of Square E251d. Str. 1080 is a secondary burial where an isolated adult skull discovered at the southern end of Square E251d in Layer 5 (Figure 3-129). Most of the skull and the face skeletal remains were present. The head pointed to the west, and faces the south. There were no grave goods.

The image suggests, the left M₂ and M₃ were lost antemortem. Moderate-heavy calculus is visible on the extant dentition. Periodontal disease does seem evident, as well. Heavy attrition is visible on the both the mandibular and maxillary first molar, which does suggest an older individual. The wide gonial angle and rounded mental eminence suggest that this skull is female.

101. Str. 1081

Str. 1081 is a primary burial of an adult, probably female, discovered in the north-eastern border of Square E251d in Layer 5 (Figure 3-130). This individual was partly excavated because, the upper part and the head extended beyond the excavated square, and as such have not yet been excavated. She was buried in a flexed position lying on her right side. The body axis direction is northwest-southeast. The most remarkable finding is its numerous burial goods (Figure 3-131). Four bone awls were discovered under the legs with one stone bead, and three bone awls were discovered under the arms with three stone beads. In addition, a cattle metatarsal was discovered near the hipbone. The combination of bone awls and cattle metatarsal indicate that the tomb owner might have been engaged in weaving.

The cattle metacarpal was also discovered at another adult female burial site (Str. 732). In ethnographical documents, animal metacarpi are often used to tighten cords for a loom. The metacarpi were found with bone awls, which might have been used for weaving and boring. Therefore, it was supposed that these females were engaged in weaving. These burials and characteristic grave goods indicate a gender-based division of labour in the Kerkh Pottery Neolithic society (Tsuneki et al. 2011).

The condition of the remains limited sex estimation. However, the general appearance and gracility of the visible skeletal elements suggest that this individual was female. Sacral fusion suggests an age about 25 years. From what is visible in the photograph, the right lateral supracondylar crest is sharp, and well-defined.

102. Str. 1082

Str. 1082 is a primary disturbed burial of a middle-old adult individual discovered in the north-eastern border of Square E251d in Layer 5 (Figure 3-132). Sex is indeterminate. It was buried to the south of burial Str. 1081. It was buried in a tightly flexed position lying on its right side. The body axis direction is northwest-southeast and the head pointed to the southeast. The skull was very fragmented; thus, the direction of the face could not be determined. There were no grave goods.

Osteophytes are visible on the inferior margin of the third lumbar vertebra. This is the only visible potential indicator of age.

103. Str. 1083

Str. 1083 is the southernmost burial among those found at the eastern border of Square E251d in Layer 5 (Figure 3-133). This burial was represented by some long bones, such as the femur and humerus, which remained in a disarticulated position. It is very difficult to reconstruct the original figure; thus, it was classified as an unknown burial. There were no grave goods.

104. Str. 1084

Str. 1084 is a secondary burial containing an isolated cranium for an adult, probable female discovered in Square E251d in Layer 5 (Figure 3-134). It was placed over the knees of Str.1086 and lacks a mandible. The cranium was facing upward. Most likely, this cranium belonged to one of the skull removal specimens uncovered in the cemetery. After removal, the cranium must have been removed from its original grave and placed in this location. Other evidence for headless burials and isolated skull/craniums were uncovered at Kerkh cemetery.

105. Str. 1085

Str. 1085 is a primary burial for a young adult, probably female discovered in the southwestern part of Square E251d in Layer 5 (Figure 3-135). She was buried in a flexed position lying on her right side. The body axis direction is south-north and the head pointed to the south, and faces the east. Its left arm was bent and the hand was placed under the left knee, though its right arm was stretched under the right leg. There were no grave goods.

Vertical bone loss is present at the alveolar bone of M¹ and M₁. Both the left maxillary and mandibular first molars are heavily worn, although the anterior dentition is not. The left M₁ has been worn to the root level, and the distal root pairs may have been lost antemortem. This individual may also have had third molar agenesis.

106. Str. 1086

Str. 1086 is a primary burial of an adult, probably male discovered in Square E251d in Layer 5 (Figure 3-136). He was buried in a tightly flexed position lying on his right side. However, the upper body tended to lie supine. The body axis direction is south-north, the head pointed to

the south and the skull faces the northeast. Both legs were tightly bent, and the arms were placed under the legs. The isolated cranium of (Str.1084) was placed on the knees. A stone stamp seal and a flint blade were discovered on the right pelvis. Another flint blade was discovered near his back (Figure 3-137).

107. Str. 1087

Str. 1087 is a primary burial of a young adult, probably female discovered in the eastern part of Square E251d in Layer 5 (Figure 3-138). It was discovered imposed on the other skeleton (Str. 1088). She was buried in a flexed position lying on her right side. However, her upper body tended towards being supine. Her right arm was bent on her chest. The left arm stretched beyond the left knee. The body axis is south-north and the head pointed to the south and faces the southwest. The most striking discovery is 294 pieces of flat stone beads around her neck. The beads were discovered in double lines. It is clear that the beads were tied in a line with string and wound around her neck.

Incomplete fusion of the posterior iliac crest, as well as minimal attrition visible on the complete adult dental arcade, suggests an age between 18-22 years. Light calculus accumulation is visible, and the teeth are only lightly worn.

108. Str. 1088

This deposit contains remains of three individuals, two adults and one juvenile. It was discovered beneath Str. 1087 in Square E271b in Layer 5 (Figure 3-139). One of the three individuals was cremated.

- 1) The first upper cremation was the primary disturbed inhumation of an adult represented by a complete skull and right upper limb.
- 2) The second individual was an un-burnt adult represented by the lower limbs, the right upper limb, and the left hand and forearm, which was associated with a stamp seal. The remainder of the skeleton was buried in a flexed position lying on its right side.
- 3) The third individual was a juvenile represented by an ulna and toe phalanges.

109. Str. 1089

Str. 1089 is a primary burial of a juvenile 6-8 yrs. old discovered in the eastern end of Square E251c in Layer 5 (Figure 3-140). It was imposed on the other skeleton Str. 1090. It was buried

in a flexed position lying on its right side. The body axis is northwest-southeast and the head pointed to the northwest and faces the southwest. The right hand was folded and placed under the skull, and the left hand was placed in front of the face. There were no grave goods.

110. Str. 1090

Str. 1090 is a primary burial of a middle adult, probably male, discovered at the eastern end of Square E251c in Layer 5 (Figure 3-141). It was buried beneath the former individuals Str. 1089. Likely the grave was disturbed when the Str. 1098 grave was constructed. Only the skull and an arm and leg remained in a relatively good condition. The backbones, ribs, and hipbone had disappeared completely. It was buried in a flexed position on its left side. The body axis direction is southeast-northwest and the head was pointed to the southeast and faced west. There were no grave goods.

The mandibular third molars have lost their cusps, and there is dentin exposure. Horizontal alveolar bone loss is present from periodontal disease.

111. Str. 1091

This deposit contained a mass of human bones discovered in the northwestern end of Square E271a in Layer 5 (Figure 3-142). An articulated leg, the collarbones, fingers and toes, and a fragment of skull were present. The articulated leg tells us that it was originally a primary burial. However, it was extensively disturbed and it was not possible to recognize the original position of the deceased. A stone axe (porphyritic) and a quartz bead were discovered near one of the collarbones (Figure 3-143).

Incomplete epiphyseal fusion of the sternal end of the clavicle and the lack of annular rings on the vertebrae are the indicators of age.

112. Str. 1092

Str. 1092 is a primary burial of a juvenile <12yrs. discovered in the southern part of Square E251c (Figure 3-144). It was buried in a flexed position lying on its left side. The body axis direction is southeast-northeast and the head pointed to the southeast and faces west. The left leg was tightly bent and the right arm was half folded in front of the head. There were no grave goods.

113. Str. 1093

Str. 1093 is a primary burial of a juvenile 2-3 yrs. old discovered in the eastern part of Square E251c in Layer 5 (Figure 3-145). It was buried in a flexed position lying on its right side. Both legs were tightly bent, and they must have been tied up to the body with rope. The arms were free and stuck out. The body axis direction is west-east, and the head pointed to the west and faces south. Among the fingers of its left hand, a small gabbro stamp seal was discovered. This is the second specimen of a stamp seal buried with a child. Therefore, this suggests that even a small child carried a stamp seal in the Neolithic society at Tell el-Kerkh.

114. Str. 1094

Str. 1094 is a primary burial of an infant younger than two years old discovered in Square E251c in Layer 5 (Figure 3-146). Sex is indeterminate. It was buried in a flexed position lying on its right side. The body axis direction is east-west and the skull was completely missing. This is the sixth potential skull/cranium removal specimen uncovered at Kerkh cemetery. Unfortunately, it is difficult to determine if the skull removal occurred before or after flesh decomposed (Dougherty, personal communication, 2014, 2018). A small flint flake was uncovered near its feet.

In general, small children and infants were usually buried intact during the Neolithic periods nevertheless some specimens were exceptionally treated. Str. 1094 from Tell el-Kerkh represents rare evidence of skull removal practices in infants, whilst similar specimens in the PN period have not yet been discovered.

115. Str. 1095

This deposit contained the disturbed remains of human bones discovered just east of Str. 1089 and Str.1090 in the eastern end of Square E251c in Layer 5 (Figure 3-147). The human remains belonged to an adult individual whose sex is indeterminate. The long bones, including femur and tibia, and ribs were located in the south, and a hipbone and a collarbone in north of the square. A large cattle horn was discovered on the northeast side. However, this burial was classified as unknown. There were no grave goods.

116. Str. 1096

Str. 1096 is primary burial for adult individual containing a set of articulated human legs discovered just east of Str.1086 in Square E251d in Layer 5 (Figure 3-148). Sex is indeterminate. The rest of skeletal remains of this individual were completely missing, probably due to the construction of Str. 1086. From its legs, it was concluded that it was an adult burial, buried in a flexed position lying on its left side. There were no grave goods.

117. Str. 1097

Str. 1097 is a primary burial for an adult probable female discovered with a series of graves from the eastern border of Square E251d in Layer 5 (Figure 3-149). This grave was constructed below Str. 1083. She was buried in a flexed position lying on her left side. The body axis direction is west-east and the head pointed to the west and faces the north. The legs were folded very tightly as if they had been tied with rope. Its right arm was bent, and the hand was placed below the head. There were no grave goods.

118. Str. 1098

Str. 1098 is a primary burial of a perinatal discovered between Str.1082 and Str.1083 at the eastern end of Square E251d in Layer 5 (Figure 3-150). This burial was discovered partly beneath the urn burial of Str. 1073. It seems to have been buried in a flexed position lying on its left side. The body axis direction is west-east and the head pointed to the west. There were no grave goods.

5.2. Collective and Cremation Burials/Pits

1. Concentration 1 (C-1)

C-1: (Strs. 718, 719, 720, 721, 722, 740, 741, 742, 743) (Figures 3-151, 3-152)

C-1 is a collective burial containing the remains of at least thirteen individuals discovered in Square E271b in Layer 4. It measures about 1.5m from north to south and 0.8m from east to west. The human remains were fragmented and superimposed on each other. The deceased were identified mainly by their skulls, mandibles long bones and other fragmented bones. The deceased in this concentration were distributed in two levels: upper and lower. In the upper level, two accumulations contain the remains of at least seven individuals (Strs. 718, 719, 720). In contrast, at least six individuals were discovered in the lower level (Strs. 721, 722, 740, 741, 742, 743). All of the burials were secondary. No grave goods were uncovered neither with deceased nor in the concentration.

C-1 contains the following burials:

C-1. 1. Str. 718

C-1. 1. Str. 718 is a secondary burial containing the remains of two individuals identified by a set of leg bones including two femurs and two shinbones (Figures 3-151, 3-152). They were discovered on the top of the bone heap. The pelvis and other bone parts near these legs probably belong to the same skeleton. The size of femurs indicates that the owner was probable a young adult male with a periapical lesion of the right maxillary first molar. One of the four skulls recovered under these leg bones may also belong to this skeleton. This skull was located on the top of these four skulls. The skull was lying on its right side. The head points to the west and faces the south. The second individual is an infant represented only by a right petrous and a developing mandibular first molar. It is obvious that these bones were removed from their original burial context and re-placed on the heap of human bones.

C-1. 2. Str. 719

C-1. 2. Str. 719 is a secondary burial containing the commingled remains of an adult and a juvenile (1-2 yrs.) discovered in the southern part of the C-1 (Figures 3-151, 3-152). A skull, long bones and other parts of a human skeleton were recovered. The head points to east and the face looks northeast. The skull and teeth indicate that it was an adult human. In regard to the other parts of the skeleton a twisted vertebra was the most conspicuous. If these bones are associated with the skull, the twist probably happened during the replacement of this human skeleton.

C-1. 3. Str. 720

C-1. 3. Str. 720 is a secondary burial containing the commingled remains of at least three individuals as evident from repetitive skeletal elements (Figures 3-151, 3-152). It was discovered in the northern part of the C-1. A pair of pelvis was recovered in the prone position, and the vertebrae and some long bones were uncovered near by. These bones were not connected directly to the pelvis. These individuals are:

- 1) An adult, probable male with a healed fracture of the left fourth metacarpal.
- 2) An adult, possibly of middle adult age based upon dental attrition.
- 3) An adult with light dental attrition, suggesting a young adult age.

C-1. 4. Str. 721

C-1. 4. Str. 721 is a secondary burial for a sub-adult individual between 12-14 yrs. old (Figures 3-151, 3-152). This burial comprised a skull only however, sex is indeterminate. As no bones relating to this skull were recovered it may have been relocated here after removal from the original context. The head points to west and the skull faces upward.

C-1. 5. Str. 722

C-1. 5. Str. 722 is a secondary burial containing an isolated skull, probably a middle adult discovered in the eastern part of C-1 (Figures 3-151, 3-152). The head is pointed to northwest and the skull faces upward. Likely, it was removed from the original burial and relocated in C-1.

A small auditory exostosis is associated with the right external acoustic meatus. There is antemortem loss of the left mandibular canine.

C-1. 6. Str. 740

C-1. 6. Str. 740 is a burial containing an isolated skull located in the eastern part of C-1 just beside Str. 722 and beneath Str. 718 (Figures 3-151, 3-152). Sex is indeterminate. The skull stands upright and faces west. The remaining teeth indicate that it is a juvenile 10-12 yrs. old.

C-1. 7. Str. 741

C-1. 7. Str. 741 is a secondary burial containing another skull discovered in the southwestern part of C-1, in the skull cluster (Figures 3-151, 3-152). Sex is indeterminate. However, it lies on its right side. The head points to the west, and faces south. This skull belongs to a juvenile between 5-7 yrs. old.

C-1. 8. Str. 742

C-1. 8. Str. 742 is also a secondary burial containing an isolated skull in the cluster of the skulls in C-1 (Figures 3-151, 3-152). The skull stands upright and faces west. Skull condition and the teeth indicate that it is a juvenile between 6-8 yrs. old.

C-1. 9. Str. 743

C-1. 9. Str. 743 is a secondary burial containing a skull and arms discovered in the northern part of C-1 (Figures 3-151, 3-152). The skull stands upright but leans slightly to the right side. It

faces the northeast. The arms were placed on both sides of the skull in a V-shape. At the point of the V-shape, the mandible was discovered. Some other bones near the skull and arms probably belong to the same person. Sex is indeterminate, however, judging from the skull and mandible, it is a middle adult burial.

2. Concentration 2 (C-2)

C-2: (Strs. 711, 714, 731, 732, 737, 751) (Figures 3-153, 3-154).

C-2 is a collective burial containing the remains of six individuals discovered in Square E271b in Layer 4. C-2 was surrounded by limestone rows (courses) from the eastern and western sides. A smaller stone row also was placed in the northern side and one big stone in the southern part. Thus, C-2 is surrounded by a stone structure in three directions forming a square-shaped burial opened partly from the south. The concentration measures about 2m from north to south and 1.5m from east to west. The human remains in C-2 were discovered in two levels, upper and lower. Two individuals were buried in the top concentration (Strs. 711, 714). Their level was slightly higher than the stone row beneath them, which suggests that they were buried on the top after C-2 was full of deceased or closed. However, their remains are imposed with the other individual remains buried beneath them.

In the lower level, four individuals were buried inside the stone structure. Additionally, disarticulated cremated black and white bones were uncovered in the bottom of C-2. All of the identified burials were primary or primary disturbed except one secondary burial. Grave goods accompanied to the dead, and some others were dedicated to the whole concentration.

C-2, upper level burials are:

C-2. 1. Str. 711

C-2. 1. Str. 711 is a primary disturbed burial for a sub-adult 15-18 yrs. old discovered in the southern part of C-2 (Figures 3-153, 3-154). It was buried on the top of the stone structure access in the southern side. Its remains were placed over and superimposed with the lower limbs of Str. 732. Sex is indeterminate. However, it was buried in a flexed position, lying on its right side. Most of the skeletal remains were recovered, but the cranium was missing and only part of the mandible can be seen. The body axis direction is northeast-southwest, and the head seems to be pointed to the northeast.

Five hypoplastic defects were observed on the both pairs of mandibular premolars.

C-2. 2. Str. 714

C-2. 2. Str. 714 is a primary disturbed burial of an adult, probably male discovered just to northeast of burial Str. 711 (Figures 3-153, 3-154). This individual was poorly preserved, and highly fragmented; however, it was buried in a flexed position lying on its left side. The body axis direction is southwest-northeast. Notable also, it lacks cranium, but the mandible is almost completely preserved. However, the head pointed to the southwest. Two sea conch beads were discovered between the upper ribs and the lower jaw, and they seem to have been a necklace worn by the dead.

Fragments of the femora were visible robust, and the linea asperae were thick and well-defined. A carious lesion was present on the right maxillary P4. Two enamel hypoplastic defects were present on the right mandibular canine.

C-2. 3. Str. 731

C-2. 3. Str. 731 is a primary burial of a middle adult male discovered in the northern part of C-2 (Figures 3-153, 3-154). The skeleton has massive femurs and shinbones, and all of other characteristics of the skeleton indicate that it was young adult male. He was buried in a flexed position lying on his back. His legs were folded on the left side. The skull seems to have slid down below his left shoulder. Though his left arm was folded, his right arm hung free. The body axis direction is east-west and his head pointed to the east and faces down to the south. An agate bead was discovered near his left hand, but the recovery level was 10cm below the skeleton. Therefore, it is difficult to decide if the bead belonged to Str. 731 or another skeleton.

The tooth wear of this individual suggests an early middle adult age. In addition to 14 linear enamel hypoplasias, this individual also experienced the antemortem loss of the left mandibular first incisor. Available parietal fragments exhibit healed porotic hyperostosis.

This robust individual also appears to have suffered a traumatic injury to the right hand. A healed fracture of the right first metacarpal is visible. The right capitate and trapezoid exhibit bony, degenerative changes likely due to an associated traumatic event.

C-2. 4. Str. 732

C-2. 4. Str. 732 is a primary burial of a sub-adult 12-15 yrs. old individual discovered in the southern part of C-2 to the south of Str. 731 (Figures 3-153, 3-154). It was discovered at the entrance of the burial stone square. The upper part from the head to the pelvis was inside the grave borders, however, from the pelvis to the feet were outside. Sex is indeterminate. However, it was buried in a prone position, with folded legs on the right side. The right arm was bent and the right hand was placed under the chest. The left arm was similarly bent, but the left wrist was bent downward. The body axis direction is north-south and the head pointed to the north direction and faces downward. Curiously enough, her toe was placed on the skull of Str. 737. It is also notable that it was holding a (cattle) metacarpal bone by her right hand and near the chin.

Seventeen hypoplastic defects are distributed among the nearly complete dentition.

C-2. 5. Str. 737

C-2. 5. Str. 737 is a secondary burial of an adult, probably male, represented mainly by a skull and legs (Figures 3-153, 3-154). It was discovered outside of the C-2 stone square at the foot of Str.732. Sex is indeterminate. The body axis direction was not identified, but the skull was placed on the right side and faces to the west. The legs were found just south of the skull. It is obvious that these skull and legs were removed from the original context and replaced here.

Minor dental disease is evident in this individual who displays the antemortem loss of the right first mandibular molar, and four carious lesions.

Viewed in cross-section, the cranial diploë is thick, but there is no indication of any underlying pathological cause.

C-2. 6. Str. 751

C-2. 6. Str. 751 is a primary disturbed burial of a juvenile 5-6 yrs. old represented by a skull, pelvis, jaw and a few other bones discovered under the eastern side of the stone square (Figures 3-153, 3-154). These bones were found in the same place but separated. The most remarkable findings relating to this individual are a stamp seal and two beads. A stamp seal, which was found near the hip bone, is a tiny "boot-shaped" limestone stamp, having "a

straight and parallel lines” design. This tiny “boot-shaped” type is exceptional among the stamp seals of the Kerkh Neolithic material, but a few specimens have been discovered. This finding indicates that these tiny seals might have been the property of small children. A small turquoise bead and a serpentinite bead were found near the jaw and probably belong to this juvenile.

Two hypoplastic defects were observed on the left maxillary second incisor.

3. Concentration 3 (C-3)

C-3: (Strs. 831, 847, 848, 849, 854, ...) (Figures 3-155, 3-156).

At least twenty-one individuals were found in C-3, which is a pit measuring 0.8 - 1.0m in diameter and 0.9m in depth. C-3 was a pit discovered at the northern edge of Square E271b in Layer 5. Many human bones were piled up within the pit. This concentration was excavated in two separate campaigns. As the northern half of the pit was out of the excavated square, the southern half of C-3 was first excavated in the 2008 season. However, the northern half was excavated two years later in 2010. In 2008 in the southern half, at least twelve individuals were uncovered (8 adults, 3 juveniles and one infant) and six of them were cremated.

Among this bone deposits, at least eleven human skulls were discovered. Most of the human remains were disarticulated and fragmented. Skulls, mandibles, long bones and other fragmented human remains can be clearly seen. Though the pit size is small, it seems that these deceased were removed from their original grave and part of their remains were re-located and buried in this heap.

The identified burials in C-3 are:

C-3. 1. Str. 831

C-3. 1. Str. 831 was the uppermost skull found in the southern part of the pit (Figures 3-155, 3-156). Likely it belongs to an adult individual and has cremation remains. In the spot where Str. 831 was discovered, some remains of at least six individuals were uncovered, and notably all of them were cremated. Thus, we named them all Str. 831. It contains one juvenile and five

adults (two females, one male, and two their sex is indeterminate). Notably, all of these individuals were heavily cremated⁵.

C-3. 2. Str. 847

C-3. 2. Str. 847 is a secondary burial represented mainly by a skull and was the second uppermost skull at the excavation wall.

C-3. 3. Str. 848

C-3. 3. Str. 848 is a secondary burial for an adult male represented mainly by his skull. He was discovered in the middle level to the south of Str. 847 (Figures 3-155, 3-156).

C-3. 4. Str. 850

C-3. 4. Str. 850 is a secondary burial of a juvenile 5-7 yrs. old discovered just under Str. 848 on the bottom of the C-3 pit. Sex is indeterminate.

C-3. 5. Str. 854

C-3. 5. Str. 854 is a secondary burial of a juvenile 5-7 yrs. old discovered below Str. 850 (Figures 3-155, 3-156). A small serpentinite cylindrical bead was discovered near the skull.

In contrast, at least nine individuals were discovered in the northern half of C-3 in 2010. All of the burials were secondary and fragmented also and were represented by skulls, mandibles and long bones. Unfortunately, the skeletal remains were not studied by our physical anthropologist due to shortage of time.

The remaining human bones were also piled in a complex way between the above-mentioned burials; thus, the number of identified individuals is larger than what have just mentioned.

Finally, a stack of six human layers could be identified from C-3 (Figures 3-155, 3-156). Some of the human bones in the piled deposits were thoroughly cremated, and sometimes the human bones had turned into a bluish color because of the high cremation temperature. It seems that the people piled the cremated and un-cremated bones alternately. Such alternation could be observed not only in C-3 but also in C-4.

⁵ The precise number of individuals is still under analysis.

4. Concentration 4 (C-4)

C-4: (Strs. 833, 839, 845, 846, 853, 859) (Figures 3-157, 3-158).

Concentration 4 (C-4) is a collective burial containing the remains of six individuals. It was discovered adjacent to C-3 at the northeastern corner of Square E271b in Layer 5. C-4 measures 0.9m from east to west, and 0.7m from north to south. The skeletal conditions and contents of the concentration are very similar to those of C-3. Therefore, this concentration must have been a burial pit, however, the pit itself was not defined. A pile of human bones extending 0.8m in diameter and 0.3m in thickness was the feature discovered here. Though the skulls and long bones were the most remarkable skeletons of this pile, other skeletal material were also piled in the bone heap. Cremated and un-cremated individuals were recovered. A structure number was given for each skull.

C-4. 1. Str. 833

C-4. 1. Str. 833 is a secondary burial of an elderly adult, probably female, discovered on the top of heaped bone in C-4 (Figures 3-157, 3-158). It was a skull and folded long bones placed in eastern part of the concentration.

C-4. 2. Str. 839

C-4. 2. Str. 839 is a secondary burial of a young adult probably female (Figures 3-157, 3-158). It was a cremated skull with other cremated human bones piled next to it, discovered in the western part of C-4. The alternate pilings of cremated and un-cremated bones were repeated in lower parts of the concentration.

C-4. 3. Str. 845

C-4. 3. Str. 845 is a secondary burial of a middle adult, probably male. It was a skull accompanied by some long bones. Three stone beads and two shell beads accompanied this individual (Figure 3-158).

C-4. 4. Str. 846

C-4. 4. Str. 846 is secondary burial for a young adult, probably male and was represented by a jaw and some long bones.

C-4. 5. Str. 853

C-4. 5. Str. 853 is a secondary burial of an adult, probably female. A jaw and some long bones were recovered also.

C-4. 6. Str. 859

C-4. 6. Str. 859 is a secondary burial of a young adult, probably male and was represented by a jaw and some long bones (Figure 3-157).

The directions of these skulls and jaws uncovered in C-4 were various and there was no regulation. Each skull or jaw was usually accompanied with long bones.

5. Concentration 5 (C-5)

C-5: (Str. 842, 855, 856, 857, 858) (Figures 3-159, 3-160).

Concentration 5 (C-5) is a cremation pit burial containing the remains of at least five individuals (Table 4). It was discovered in the northeastern corner of Square E271b in Layer 6.

The characteristic of this concentration is very different from other concentrations. The pit shape is circular and measures 1.5m in diameter by 0.4m in depth. The pit characteristics and the cremated human remains uncovered inside suggest C-5 was used as a cremation pit for burning human bodies. The walls and bottom of the pit was thoroughly burnt and had turned an orange color. The inside of the pit was full of highly baked soil. In addition to this extensive evidence of cremation, and thoroughly burnt human skeletons, at least 5 skulls were discovered in the pit. Some of these skeletons had turned white, and the others were turned into black by cremation. The cremated burials uncovered inside C-5 were mainly identified by their skulls. Also, many burned fragments of long and small bones remains were discovered in the pit.

No grave goods were discovered with the burials. However, two complete pottery were discovered above the pit, at the level of the mouth of the pit. One was a short necked and squat typed DFBW jar, measuring 17cm in diameter and 10.5cm in height. It has a thin wall and highly burnished surface. The other pottery was a short straight-necked DFBW jar, measuring 11cm in both diameter and height. Surprisingly, a stamp seal was discovered from this short-necked jar. It is a bullet type seal, having a cross-hatching design. The seal was made of bone,

but the surface color had turned gray due to burning (Figure 3-160). Anyhow, retrieval of such complete and sophisticated pottery is unusual from the excavation of dwellings, and it is very probable that these two pottery jars (and one stamp seal which was contained in one of the pottery jars) were dedicated to the dead who were cremated in this pit.

C-5. 1. Str. 842

C-5. 1. Str. 842 is a cremation burial of a middle adult individual, probably male. It was an astonishingly well-preserved cremated skull discovered in the southeastern corner of the pit (Figures 3-159, 3-160). The skull is probably an adult male, placed on his left side and face down and looking south. Though he was highly cremated, the skull did not fall into pieces but remained whole. This condition indicates that the skull was cremated and left untouched in the pit. Some remnants of cremated body parts like fingers, ribs and long bones were discovered around the skull and ashes as well. It is difficult to infer if these bones belong to the same individual or not.

C-5. 2. Str. 855

C-5. 2. Str. 855 is also a cremation burial of a young adult, probably male. It was discovered in the southwestern part of the cremation pit (Figures 3-159, 3-160). It was a cremated skull but not preserved well like Str. 842. It seems that the high temperature caused its fragmentation, however, it kept a rough shape and the mandible can be seen.

C-5. 3. Str. 856

C-5. 3. Str. 856 is also a cremation burial for an adult, probably female, discovered in the western part of the cremation pit to the north of Str. 855 (Figures 3-159, 3-160). It was a cremated skull. The upper half of the skull still remains, but it was fragmented and heavily burned.

C-5. 4. Str. 857

C-5. 4. Str. 857 is also a cremation burial for a young adult, probably male discovered in the northeastern part of the cremation pit (Figures 3-159, 3-160). It was heavily fragmented and comprised a burned skull. Moreover, due to the high cremation temperature both surfaces of the skull fragments turned into a whitish color.

C-5. 5. Str. 858

C-5. 5. Str. 858 is also cremation burial for an adult, probably female discovered in the northwestern part of the cremation pit (Figure 3-159). It was also heavily fragmented and has a burned skull.

The preservation of the other four skulls (Strs. 855, 856, 857 and 858) was not as good as Str.842, but they kept a rough shape. Many other parts of the skeletons were dispersed within the pit, but it was not easy to identify the relationship with each skull within the pit. A series of severely cremated long bones, which had completely blackened, were observed in a row at the southern end of the pit.

6. Concentration 6 (C-6)

C-6: (Strs. 865, 866, 867, 868) (Figures 3-161, 3-162).

Concentration 6 (C-6) is another cremation pit discovered 5m south of C-5. It was located beside the eastern side of Square E271d in Layer 6. Remains of at least seven individuals were identified in the pit, and they were all cremated (Table 4). Interestingly, the characteristics of the C-6 pit suggest the pit was used for cremation twice. Two different floor levels were observed within the pit. The lower level, which is the earliest, was dug in the western part of the pit. It has a circular shape, measuring 0.6m in diameter and 0.3m in depth. At least two skeletons were identified by their skulls (Strs. 867, 868), however several cremated bones dispersed around the skull were uncovered in this older pit.

The newer upper pit was expanded to the east and wider. It covered and superimposed the old pit. The upper newer level of the pit has an oval shape, measured 1.0 × 0.8m in diameter and 0.2m in depth. At least two skeletons identified by their skulls (Strs. 865, 866), were cremated in this new pit. Moreover, many long bones were observed along the southwestern wall of the pit. All of the human bones from these pits, including skulls, were thoroughly burnt and had turned white and black in color (Figures 3-161, 3-162).

The wall and bottom of the old and new pits were mud-plastered and scarcely burnt. At the level just above the new pit, a short row of small stones was discovered and a spot, which produced a large volume of carbonized wheat. It was possible that the stone row was a facility accompanying this cremation pit and the wheat was dedicated to the dead.

One small-necked DFBW jar was discovered at the southeastern edge of the pit. It measures 9.5cm in diameter and 8.5cm in height. It was almost complete, and it must have been a grave good.

7. Concentration 7 (C-7)

C-7 (Strs. 860, 861, 862, 863) (Figures 3-163, 3-164).

Concentration 7 (C-7) is a collective burial containing the remains of at least four individuals. It was discovered in the western part of Square E271b in Layer 6. All of the burials were primary, however some were severely disturbed. The concentration was limited by 2.4m long course of limestone at the southern end, and 1m long at the eastern side.

Three of four individuals (Strs. 861, 862, 863) were piled up and superimposed on each other in the southern part, whereas Str. 860 was buried separately a bit to the north.

C-7. 1. Str. 860

C-7. 1. Str. 860 is a primary disturbed burial of an adult represented by the bones of the left upper limb and six teeth (linear enamel hypoplasia is present on three teeth.), however sex is indeterminate. The arm was articulated comprising the humerus, radius, ulna, and hand, and all parts were severely bent. This arm seemed to have been a remnant of a primary burial, and all other skeletons had been removed (Figures 3-163, 3-164).

The most astonishing findings about this arm were the three stamp seals overlapped in the palm of the hand. All of them were sophisticated bone seals, but their shapes and designs were different. In addition to these three seals, another stone stamp seal was also discovered beside the ulna. It was a boot-shaped seal, and its impression design was straight and parallel lines. This stone seal was a good specimen, probably made of porphyrite. Besides the four stamp seals, thirteen beads and one miniature stone vessel were discovered around this arm. The shape and material for the beads varied. They were two serpentinite butterfly beads (one of them was severely burnt), two serpentinite trapezoid beads, two limestone trapezoid beads, one quartz oval bead, one burnt bone bead, one dentalium bead, and four large cowrie beads.

A miniature stone vessel had a lamp-like handle, measuring 6.3cm long and 4.2cm wide. Reddish alabaster like stone was used as material. Some of these objects were located near the pelvis of Str. 863, and there is a possibility that they were the burial goods for Str.863. However, the level and condition of these objects suggested that they were a series of grave goods for the same person. In this case, there is a strong possibility that all of them belonged to Str. 860.

C-7. 2. Str. 861

C-7. 2. Str. 861 is a primary disturbed burial of a sub-adult discovered on the top of three piled up burials in the southern part of C-7 (Figures 3-163, 3-164). Sex is indeterminate. Based on the remnant long bones, it was buried in a flexed position lying on its left side. The body axis direction is east-west and the head pointed to the east. The skull was buried on its left side and faces the east, but it seems to have been bent at this angle.

A coarse pottery bowl was placed on its shoulder. The body skeleton was disturbed and did not keep its original position. Based on the remnant long bones, it might have been buried in a flexed position, lying on its left side. Eleven linear enamel hypoplastic defects were observed among several teeth.

C-7. 2. Str. 862

C-7. 2. Str. 862 is a primary disturbed burial of an adult. It was the westernmost of these three burials. It was buried in a flexed position, lying on its right side (Figures 3-163, 3-164). The body axis direction is east-west and the head pointed to the east, and faces north. Interestingly enough, a large cattle (?) left mandible was placed on the flexed legs. Below the legs, a complete small-necked (DFBW) jar was discovered. It is 8.5cm in diameter and 11cm in height. It has a narrow, long neck and ball like body. This kind of shape is very rare among the jars of El-Rouj 2c period. About 20cm west of Str. 862, a complete Amuq-type flint point was discovered. There is a possibility that it was also a burial good.

One dental caries was present, as was light calculus accumulation.

C-7. 3. Str. 863

C-7. 3. Str. 863 is a primary burial of an adult, probably female. She was discovered just below Str. 861 (Figures 3-163, 3-164). She was buried in a prone position, and her legs were tightly folded under the pelvis. Her body axis direction is northwest-southeast and her head was pointed to the east, and faces the north. Her arms seemed to be folded across her chest. One black stone flat bead, probably made of gabbro, was discovered near her chin.

Antemortem tooth loss of three posterior mandibular teeth, in addition to three hypoplastic defects, was observed. The occlusal surfaces showed moderate attrition. Heavy calculus was present on the labio-buccal surfaces of the dentition.

Both patellae were notched. Visible muscle attachment sites are robust.

8. Concentration 8 (C-8)

C-8: (Strs. 869, 870, 871, 872, 873, 874, 875) (Figures 3-165, 3-166).

Concentration 8 (C-8) is a cluster of heavily cremated human bones found north of the cremation pit C-6 in the northeastern part of Square E271d in Layer 6. Two parallel ditches, full of burnt soil and ash, measuring 0.6m wide and 0.4m deep, were discovered. The bone cluster was discovered at the western end of these two ditches. The area of bone spread was c. 1.5m x 0.5m, which traversed the western end of both ditches. These ditches must have been used for cremation, and the cremated bones seemed to have been swept and accumulated at the western ends. This deposit contains the commingled cremated remains of eight individuals: an infant (b-3 mths.), two juveniles, one sub-adult, and four adults, one of which is probably male. One of the adults was likely elderly. Another is a young adult. One juvenile and the sub-adult exhibited cribra orbitalia of the right orbit.

At the southern end of the concentration, some large fragments of DFBW bowls covered the skull of Str. 874. Two flint drills were discovered in the concentration.

9. Concentration 9 (C-9)

C-9: (Str.919) (Figures 3-167, 3-168).

Concentration 9 (C-9) is a cremation pit was discovered in the northwestern part of Square E271b in Layer 6. It was a small rectangular-shape pit, measuring 1.0 × 0.9m (Table 4). The depth was shallow, measuring 0.15m. The pit was filled with burnt soil and black and white

colored ash. Very thin black organic matters were noticed on the bottom of the pit. There were a lot of human bones, which had turned white due to the high-temperature fire. However, some bones remained in black and red/brownish dark colors, due to exposure to lower-temperature fire. Though most bones were fragmented, some skeletal parts were still articulated. This indicated that the dead had been cremated in this pit, soon after the corpses decayed in other places. There were no burial goods.

At least, five individuals were discovered in this pit, made up as:

C-9. Str. 919 (1)

C-9. Str. 919 (1) is a cremated burial of an adult represented by adult foot bones (Figures 3-167, 3-168). It is unclear if these bones were exposed to low-temperature fire or were discolored by the soil and ash within the pit.

C-9. Str. 919 (2)

C-9. Str. 919 (2) is a cremated burial for a sub-adult represented by metacarpals, carpals, and phalanges showing a partial fusion of the epiphyses.

C-9. Str. 919 (3)

C-9. Str. 919 (3) is a cremated burial of an adult represented by an unpaired first metacarpal.

C-9. Str. 919 (4)

C-9. Str. 919 (4) is a cremated burial of a juvenile represented by a fragment of developing sternum, and a vertebral body.

C-9. Str. 919 (5)

C-9. Str. 919 (5) is a cremated burial of an adult represented by the grayish-white cremated cranial and post-cranial remains. The fragments display color changes and drastic morphological modification that is indicative of high-temperature exposure while the bone was still fresh, or soft tissue was still present.

10. Concentration 10 (C-10)

C-10 (north Strs. 943, 927, 962, 971, 972, 978, 979, 980, 983, 991, 993, 995, 996, 998, 999, south Str. 953 and five others) (Figures 3-169 - 3-174).

Concentration 10 (C-10) is a collective burial discovered in the southeastern corner of Square E271b in Layer 6. C-10 has unique characteristics among the collective burials. It was enclosed by rows of limestone rocks, measuring 2.5 × 1.5m. Inside this small area, there were two accumulations of human remains, including at least twenty-one individuals (Figures 3-169, 3-172).

The northern accumulation (C-10 north) is a small pit measuring 0.8 - 1.0m in diameter and 0.8m in depth. At least fifteen individuals were found here, of which four individuals were in a complete primary context. Some individuals remained partly articulated, and others comprised part of the skull and long bones. The age distribution of these individuals is seven adults, one sub-adult, four juveniles, one infant (possibly young juvenile), and two individuals of unknown age. The deceased comprise three males and two females. A flint blade, clay discs, bone stamp seal, stone stamp seal, animal task, and stone beads were found as grave goods. Mostly they accompanied intact or disturbed primary burials.

The three complete primary individuals interred in the uppermost layer of C-10 north, overlapped each other in a small pit. This suggests that these individuals were not buried in a single event. A mass of long bones and isolated skulls were discovered on the side of the pit. Therefore, the burial process can be hypothesized as follows: First, the deceased was buried in a primary condition. Second, during the burial of the next deceased, only the long bones and skull (or other parts of the body) of the former individual were left in the pit and put aside. Third, these two steps were consequently repeated and in the last stage of C-10 north, three complete primary individuals were interred and overlapped each other.

This northern accumulation is a very special mass burial, and it is the first example in the Tell el-Kerkh excavations. In addition, the pit was too small to bury the fifteen individuals together at the same time. Therefore, the conclusion is that the people buried the deceased in this small pit one after another over a considerable interval. In fact, the excavation revealed intermediate soil layers of a few centimeters thickness between individuals. After burying a deceased person, the pit seemed to be covered with a clay layer. The clay remnant remained here and there in the pit. For burying a newly dead, the clay cover was removed and the dead person was buried on top of the previous skeletons. Then, the pit was covered again with clay.

If the burial space was limited, the former accumulated skeletons were put away within the pit. In such way, at least fifteen individuals were accumulated within this small pit. The buried persons must have been related to one another, and they seemed to belong to the same family or kin.

C-10 (north), 1. Str. 943

C-10 (north), 1. Str. 943 is a primary burial of an adult, probably male discovered on the top of the north accumulation in C-10 north (Figures 3-169, 3-173). It was buried in a flexed position lying on his left side. The body axis direction is east-west and the head pointed to the west and faced the north. His legs were tightly bent in front of the chest. He was accompanied by one flint blade.

Age could not be precisely assigned. Seven lines or bands of enamel hypoplasia were present on the mandibular canines.

C-10 (north), 2. Str. 947

C-10 (north), 2. Str. 947 is a primary burial of a middle adult, probably male discovered on the top of the north accumulation beneath Str. 943 (Figures 3-169, 3-173). He was also buried in a flexed position, but his upper body tended toward a prone position. His body axis direction is southwest-northeast and the skull pointed the southwest and faced downwards. Two disk type clay objects were uncovered over his pelvis (Figure 3-174).

Both mandibular first molars have completely exposed mesial-buccal roots, which suggests pronounced periodontal disease. Antemortem loss of the right M² was also observed. The left M³ was carious. Mandibular third molar agenesis of the left tooth was evident.

C-10 (north), 3. Str. 962

C-10 (north), 3. Str. 962 is a primary burial of a middle adult male discovered on the top of the north accumulation beneath Strs. 943, 947. He was buried in a flexed position lying on his abdomen (Figures 3-169, 3-173). His body axis direction is west east and the skull pointed the west and faced north. There were no grave goods.

This individual has severe degenerative changes of the left superior and inferior articular facets of the lower cervical vertebrae. Unfortunately, the highly fragmentary condition of the vertebrae prevents an exact assignment of number. It is most likely that these pathological fragments are C5-7, perhaps C4-6. In varying degrees, the facets each exhibit macroporosity, eburnation, and osteophytic lipping along the margins.

The right M2 and P4 each have interproximal caries that would have been adjacent with the first molar. The presence of these lesions is likely related to the antemortem loss of the first molar and the healing periapical abscess that remains. Five additional teeth were also lost prior to death. Two hypoplastic bands were also visible.

An unsided intermediate finger phalanx exhibited a healed compression fracture. Vault fragments showed evidence of healed porotic hyperostosis.

C-10 (north), 4. Str. 971

C-10 (north), 4. Str. 971 is a secondary burial of a juvenile 3-4 yrs. old discovered in the lower levels. Sex is indeterminate. It was represented by a skull (Figures 3-169, 3-173).

C-10 (north), 5. Str. 972

C-10 (north), 5. Str. 972 is also a secondary burial for juvenile 11-12 yrs. old discovered beside Str. 971 in the lower levels. Sex is indeterminate. It was represented by a skull (Figures 3-171, 3-174).

C-10 (north), 6. Str. 978

C-10 (north), 6. Str. 978 is also a secondary burial of a young adult, probably female, discovered in the eastern part of C-10. This burial was represented by a skull (Figure 3-174). This individual had three carious posterior maxillary teeth, and antemortem tooth loss of the left M₂ and M₃. Healed porotic hyperostosis was also present.

C-10 (north), 7. Str. 979

C-10 (north), 7. Str. 979 is a primary burial for a sub-adult discovered in layer C-10 north. His legs were flexed and tightly bent, and he was buried in a prone position. The body axis

direction is south-north and the head pointed to the south and he faces downward (Figures 3-169, 3-174).

C-10 (north), 8. Str. 980

C-10 (north), 8. Str. 980 is a secondary burial however no details are available (Figures 3-169, 3-174).

C-10 (north), 9. Str. 983

C-10 (north), 9. Str. 983 is a secondary burial of an adult, probably female discovered below the Str. 979 skull. This individual is represented by an isolated mandible with interproximal dental caries of the left first and second molars (Figures 3-169, 3-174).

C-10 (north), 10. Str. 991

C-10 (north), 10. Str. 991 is a secondary burial of a juvenile 4-5 yrs. old discovered beneath the Str. 983. It is represented by a skull and ribs and phalanges (Figures 3-170, 3-174).

C-10 (north), 11. Str. 993

C-10 (north), 11. Str. 993 is a secondary burial of an infant, possibly a young juvenile. Sex is indeterminate (Figures 3-170, 3-174).

C-10 (north), 12. Str. 995

C-10 (north), 12. Str. 995 is a primary burial of an adult, but sex is indeterminate. It was buried in a flexed position lying on its right side (Figures 3-170, 3-174). The body axis direction is east-west and the head which is missing pointed to the east. Two stamp seal dedicated to this burial as grave goods.

C-10 (north), 13. Str. 996

C-10 (north), 13. Str. 996 is a secondary burial of a juvenile 4-5 yrs. old discovered in front of the legs of Str. 995. Sex is indeterminate (Figure 3-170).

C-10 (north), 14 Str. 998

C-10 (north), 14 Str. 998 is a secondary burial of an adult discovered in the bottom of C-10. It was represented by an isolated poorly preserved pelvis. Sex is indeterminate (Figure 3-171).

C-10 (north), 15. Str. 999

C-10 (north), 15. Str. 999 is a disturbed primary burial discovered beside Str. 995 (Figure 3-170). It was represented by spine vertebrae and other long bones. Sex is indeterminate. Three stone beads were discovered.

The southern accumulation is a small spot, measuring 0.8m in diameter, partly encircled by limestone rocks. This spot produced a complete DFBW bowl, many fragments of burnt human bones, and a set of adult leg bones (Figures 3-169, 3-173). All of the burnt human bones were disarticulated and fragmented. These burnt bones include at least five individuals, though no skulls or mandibles were found. A set of adult leg bones (Str. 953) was found on the northern fringe of the location.

Str. 953 was an adult of indeterminate sex represented by left and right tibia, fibulae and feet. These lower legs were not burnt and found on the distribution of burnt bones. These articulated legs indicate that the adult was buried in a flexed position on its right side over the burnt human bones. However, the skeleton was disturbed except its lower legs. A DFBW bowl must have been dedicated to that person or the burnt human bones (Figure 3-174).

Therefore, the Southern Accumulation consists of strange combination of human bones, i.e. the fragments of burnt bones and a set of un-burnt legs. We do not know the symbolic meanings of such bone accumulation. However, at least six individuals' bones were placed in the southern accumulation.

6. Stratigraphy of the Kerkh Cemetery and the Distribution of Burials

As mentioned earlier, over 240 individuals have been discovered from the cemetery (Figure 3-175). The cemetery of Tell el-Kerkh was divided into three Layers. They are Layer 4, Layer 5, and Layer 6 from top to bottom. In addition, there is a habitation layer (Layer 7). Almost every layer has its particular layout including the existence or absence of structures, collective burials, cremation burials/pits, and grouping individuals.

The Kerkh people invested a specific part of their settlement as a cemetery located to the north and eastward of excavation area, and used it continuously for hundreds of years. Each

layer produced a large number of deceased; Layer 6 (86 individuals), Layer 5 (94 individuals), and Layer 4 (61 individuals).

6.1. Layer 7

Layer 7 of this area mainly consisted of habitation structures (Str. 916 and Str. 827), and they were used for daily life activities (Figure 3-176). No burials were uncovered in this layer. People at Tell el-Kerkh did not use occupied residential houses to bury their deceased. However, they did so after the structure was abandoned. After abandonment of the structure, people started to use them to bury their deceased, and these building and the spaces around become a part of the cemetery.

Str. 827

Str. 827 was one of the most notable houses discovered in the central area of Tell el-Kerkh. It was a large building extended over Square E271 and the neighboring Square E270. It has a rectangular plan consisting of two stories measuring 4.2m x 7.7m, and extended in an east-west direction (Figure 3-177). A narrow corridor runs east-west in the center of the building, and the corridor was flanked on both sides by six small rooms. In a small room at the southeastern corner (Room 1), a furnished well-preserved *tannor* of which the ceiling remained was uncovered. As this building seemed to have been burnt in a fire, many objects were discovered. In the eastern end of the corridor, a large saddle quern made of porous basalt, the upper stone of a saddle quern, two grinding stones, a beautiful limestone vessel, a large clay basin, two pot stands and a hammer stone were recovered. All of these objects were complete, and some were broken by fire. In addition to these objects, three fragments of the upper stone of saddle quern were also discovered.

From the middle-south room (Room 2), another large saddle quern made of porous basalt was found with an upper stone of a saddle quern. A large broken mortar, a large amorphous stone with a ground surface, a grinding stone, a stone axe and some grinding stone fragments were also discovered. The southwestern room (Room 3) and the northeastern room (Room 4) each produced the complete upper stone of saddle quern. The narrow north-middle room (Room 5) produced a stone axe. Also, a skeleton of a sub-adult 11-13 yrs. old was discovered in this room. Another stone axe was found in the room in the northwestern corner (Room 6). The artifacts, especially the ground stones, from each room and space are summarized in (Table 5).

It is quite certain that the most remarkable objects were a series of food processing tools, such as saddle querns and grinding stones.

These finds indicate that this building was used as a communal kitchen. The number of querns (6 complete and 5 fragments) including the recovery of two large ones is not uncommon from ordinary dwellings. A *tannor* present in Room 1 was unusual. A clay basin furnished in the eastern part of the central corridor has also an unusual figure. A large flint scraper was discovered in this basin. Two complete pot-stands were also extraordinary findings. All of these finds and contexts indicated that this building was not a dwelling house but a communal kitchen. It is difficult to speculate further, but it is possible to suppose that this community kitchen was used during funeral ceremonies at the cemetery.

The black residue and burnt accumulation remains in Str. 827, indicates that a fire burnt caused the building down to the floor level and collapse of the wood which supported the roof. The remains of many carbonized timbers, burnt accumulation and soil can be seen on the building's floors and along its east-west corridor. After burning down, Str. 827 was abandoned. After a period of time, Str. 827 became a part of the cemetery and people started use it for burying their deceased. A young individual (Str. 908) was buried inside room 5 of Str. 827, but no traces of burning were noticed on its bones. Therefore, the wall remains of room 5 were used for inhumation of the deceased body of Str. 908.

Str. 916

This is a building structure discovered north of Str. 827, beyond a narrow 0.7m wide street, in the same layer (Figure 3-86). It was excavated in two successive seasons in 2009 and 2010. The direction and long axis of this building were quite similar to those of Str. 827. As the northern half of this structure extended out of the excavated area only the southern half of the building was uncovered. Possibly it has a rectangular plan, measuring 5.2m from east to west. The building was divided into at least two rooms. Its eastern room was severely damaged by two cremation pits (C5 and C-9). The building was built on a visible stone foundation. Its western room was preserved relatively well. A *pisé* wall remained on the stone foundation, which was made of three-four courses of limestone. The width of the *pisé* wall was about 0.6m, and some *pisé* blocks were noted. Some bark or white-colored hide like organic thin material were stretched in the room, and might have been a floor. Below the organic material, a few

carbonized timbers and some human skeletons were present. In the following season (2010), further excavation of this building was undertaken. Under the floor level, many human bones were discovered. Remains of at least eight individuals were uncovered in the building (Strs. 932, 984, 985, 988)⁶. They were under-floor burials in the building Str. 916. These deceased were buried in the building after it was abandoned

6.2. Layer 6

Layer 6 is the first layer of the cemetery from the bottom. In total, 86 individuals were uncovered in this layer, and it contains the second largest number of burials. Various types of inhumation and burial types were present. People at this time began to use part of the abandoned house to bury their deceased, and they become a part of the cemetery. Most of the available spaces around and between the building structures were used to bury the deceased. Some deceased were uncovered in the western part of the cemetery, and fewer in the southern part, whereas the majorities were in the north and eastern parts (Figure 3-178).

Interestingly, all of the crematorium pits (C-5, C-6 and C-9) that were uncovered in the cemetery came from this layer. One urn burial and two specimens of skull removal were discovered in the western part. Three collective burials (C-7, C-8 and C-10) came from this layer too.

Archaeological investigation shows that the feature of grouping burials in this layer is obvious. The number of individual burials in this layer was limited (13 burials) compared to the group burials. Eight burial groups comprising seventy-three individuals were identified including the collective burials and cremation pits (Figure 3-179). In the western part of the cemetery in the Square E270, nine individuals were uncovered. Both Str. 927 and 930 comprise of three individuals, whereas the other burials were individual. All the individual burials were buried in a shallow pit except for Str. 941 which was buried within a deeper pit and Str. 908 which was buried inside the room 5 of the abandoned structure building (Str. 827). The burials in the groups 1 and 7 were constructed on the surface of the cemetery in a shallow pit, whereas all other group burials took place in a determined location. The burial took place even in the abandoned structures such as group 2, or it was enclosed partly by rows of limestone such as

⁶ The precise number of individuals is still under analysis.

groups 3 and 6, or the human remains were ultimately left in the cremation pits after the end of cremation such as groups 4, 5 and 8.

Group 2 in the Str. 916, for example, contains ten burials; they were four adults, one sub-adult, four juveniles and one fetus. Among adults whose sex was identified, only one mid-adult female (Str. 988) was identified in this accommodation and she was accompanied with several grave goods. Nine of the deceased were buried in the western part of the structure over and beside each other. Based on the number of the deceased in this group, an extended household may have used this place for interring their deceased for at least two generations. Seemingly, the number of grave goods dedicated to this female and interring her alone beside the other members may indicate that she is relevant to the group has played an important role in sustaining her household.

6.3. Layer 5

Layer 5 is the mid layer of Kerkh cemetery. In total, 94 individuals were discovered in this layer, and it contains the largest number of burials. This layer contains only one structure building Str. 109, and it was constructed in the southern limit of the cemetery. However, no deceased were buried inside it. All of the deceased from this layer were uncovered to the north and east of Str. 109. Burials were buried individually and in groups (Figure 3-180). One urn burial and three specimens of skull removal were uncovered. Two collective burials (C-3 and C-4) came from this layer.

Grouping individuals was common feature in this layer also. Remains of 56 individuals clustered in eight burial groups were identified. Whereas 38 deceased were buried individually (Figure 3-181). Unlike the burials in the Layer 6, which found within determined or specific location, most of the burial groups in this layer were clustered adjacent to each other in different places in the cemetery. However, group 5 (C-3) and group 6 (C-4) were only clustered within collective pits. Also, a short row of limestone was constructed in the southern part of the burials in the group 9. Deceased in all groups – except for groups 5 and 6 – were buried next to each other and they were partly overlapped in some instances. This way of interment suggests that people who participated in the funerary were aware of the location of the former grave, or it could be partially visible; hence the overlapping was avoided as possible.

The other individual burials were interred in various positions like most deceased in a shallow pit and dispersed in the vacant places near and between the grouped burials.

The interment pattern in the group 1 was distinctive in this layer. Remains of seven individuals were interred in this group burial. Four completed skeletons were buried in a unified body axial position. The deceased of this group were accumulated in a small area and buried beside each other. They were partly overlapped except for Str. 1090 which was buried under Str. 1089. Seemingly, this household is following a unified interment pattern as a distinctive custom to their dead members distinguishes them from other groups.

6.4. Layer 4

Layer 4 is the upper most layer in the Kerkh cemetery. Notably, all the space in this area was used just for inhumation, and structural buildings were not discovered. In total, 61 individuals were discovered in this layer (Figure 3-182). One specimens of skull removal were uncovered and two collective burials (C-1 and C-2).

The deceased in this layer were mainly buried in two separated clusters: in the north side and the south. Seven burial groups were identified, three in the north and four in the south (Figure 3-183). The burial groups comprising fifty-six individuals, whereas only five deceased buried individually. The group burials were even clustered adjacent to each other or within a determined location surrounded with a row of lime stone such as group 4 (C-2). Grouping of burials in all layers indicate that inhabitants selected a part of the cemetery to bury their dead. In some instances, they have surrounded it with rows of limestone such as (C-2) to identify the grave. Archaeological investigation suggests that households at Tell el-Kerkh were using this structured burial to bury the dead over generations.

7. Skull Removal Practice and Cycling of Human Body Parts at Tell El-Kerkh

The burials at Tell el-Kerkh presented evidence of intentional acts upon skulls in primary burials. Some skulls were completely removed, but occasionally only the cranium was detached. On the other hand, the secondary burial deposits presented evidence for skull separation probably from primary burials, and subsequent deposition within collective burials. The cremation pits displayed similar characteristics as the collective burials. Most of the

secondary deposits comprised a large number of individuals, and many of them are represented by skull and long bones or separated mandibles. This certainly indicates an intentional act of moving bones from the primary burials to the secondary deposits.

Up to the 2010 excavation season, the cemetery revealed six headless primary individuals; four are adults and notably were females only (Strs. 752, 926, 927, 1057), one child (Str. 750, 5-6 years old), and an individual younger than 2 years old (Str. 1094) (Jammo 2014; Jammo and Tsuneki in preparation).

In the Late PPN period, the practice of skull removal dramatically decreased. There was little attention paid to the skull and its treatment, suggesting that these practices were being abandoned. However, a few specimens were uncovered in some sites in the Levant, such in Abu Hureyra (2C) (Moore and Molleson 2000), Ba`ja (Gebel and Hermansen 2000; 2001) and Ain Ghazal (Rollefson, Simmons and Kafafi 1992). In this regard, it is difficult to explain the decrease of skull removal practices not only in the LPPN period, but also in the PN and the following periods. However, in spite of the general decline, some evidence for the continuation of this mortuary tradition was uncovered from the PN sites in both the Levant and Anatolia.

7.1. Skull Removal Practice in the Pottery Neolithic Period

7.1.1. Continuity of the practice

The number of excavated PN sites in the Near East is limited. Nevertheless, the PN sites have yielded important and unique evidence, and have helped to some degree in understanding the PN society social structure and how the society was ruled and organized. PN societies present high complexity in the funerary practices, and various differences were documented between the PPN and PN periods (Verhoeven 2002).

In the PN period, there was a dramatic change compared to the PPN period in terms of funerary practices linked to ritual and social interactions, structure, and the way of administering the society. Regarding the practice of skull removal in the PPN period, skull removal practice was frequently undertaken, and it flourished in the PPNB with the

introduction of skull decoration. Whereas, this practice extensively decreased during the PN period in the light of limited specimens discovered up to now.

The practice of skull removal was clearly attested in the Northern Levant, Anatolian PN sites, and in some Mesopotamian sites in the later periods, but it was not common. Six specimens were discovered at Kerkh, and two specimens were from Tell Sabi Abyad (Akkermans 2008). Çatalhöyük reported a number of isolated and plastered skulls (Boz and Hager 2013, 2014). Interestingly, twelve examples of intentional skull retrieval were represented by headless primary burials, and three examples of cranial retrieval were identified. Furthermore, numerous separated crania and skulls were uncovered in secondary deposits, and in other places (Haddow and Knüsel 2017). Nineteen skulls were uncovered from Köşk Höyük, and thirteen of them were plastered (Özbek 2009). Five separated skulls were uncovered from two burials at Tell Arpachiyah (Hijara 1978). Five came from Yarim Tepe II (Merpert Munchaev and Bader 1978), and several headless human burials were found in the tholos at Tell Azzo I in the Upper Tigris region in northern Iraq (Killick and Roaf 1983). Hence, it is possible to say that the skull/cranium removal practice was attested and continued to the PN and following periods, but also it shows sharp decline.

7.1.2. Decline and factors

Obviously, mortuary practices during the PN period underwent some changes. The subsistence economy might affect social behavior, and the way of thinking and dealing with the dead. Examination of the evidence from the PN sites unquestionably attested a decline in interest in the post-mortem treatment of the skull. However, it is difficult to speculate the clear or exact circumstances that affected such a decrease. Drawing upon the available evidence, the declining interest in skull removal practice in the PN sites could be attributed to two possibilities:

- 1) Decline in interest in the skull itself as one of the most important parts of a human.
- 2) The practice of skull removal becomes more private, subjected to considerations determined by the deceased's family members.

It is possible that the practice of skull removal in the PN was a personal decision related to specific households or clans, for some members. Kuijt (1996) has suggested two possible explanations for skull removal in the PPN: it could differentiate a group of people from others,

or it could symbolize the same beliefs expressed by the removal and caching of the skulls. It seems in the PN period that selection of individuals for skull/cranial removal, and subsequent treatment was undertaken by the inhabitants of the settlement on a smaller scale and perhaps confined to close family kin. Verhoeven (2002: 9) asserted, "Evidence for social hierarchy and clear leadership is largely absent in the PPNB and PN." Nevertheless, some social differences could have been asserted in the society through burial type (e.g. individually, collectively, cremation and urn burials), post-mortem treatment (e.g. skull/cranium removal), and grave good inclusion, which reflected status of property (especially stamps), or labour for some individuals.

It is difficult to extract the exact reason behind decreasing of the skull removal practice in the Late Neolithic. Meanwhile, it is necessary to highlight the excavated evidence in order to clarify where possible the reason for the decline in skull removal and leave the door ajar for further investigation.

Evidence from the Kerkh cemetery, and some other PN sites, showed obvious attention in burying children and small infants. Children were sometimes buried side by side with adults but sometimes they were separated and were often supplied with grave goods. In the Kerkh cemetery the oldest evidence of urn burials was uncovered (Strs. 981 and 1073) in the Neolithic period where small children were buried inside different shaped pottery vessels. However, this practice continued into subsequent periods and is attested in several sites. Also, the intentional arrangement of the human bones of the young individual (Str. 1052 mentioned up), indicates intentional interest in young individuals' interment.

In general, this suggests that the children in the PN period were treated carefully after death and there was a bias in favor of infants and small children burials. Hence, this may indicate a new ideology of interest in focusing on child funerals in parallel or even more so than adults. Children in several instances in the PN period were accompanied with various types and amounts of grave goods. At Kerkh, Hakime Use, and Köşk Höyük, children were, in general, associated side by side with adults or buried individually, whereas at Sabi Abyad in general, it seems to be that people preferred to bury the very young separate from adults.

7.1.3. Whose skull was Removed and who Removed it?

In order to understand the funeral rituals and general relationship between the living and the dead, it is necessary to investigate the path from life to death in ancient societies. Death is the most significant rite of passage from womb to grave (Pearson 2016). Van Gennep's theory of the *rites of passage* clarified that the ritual practices following death constitute a rite of passage. He also illustrated that death is like birth and marriage, which is an event of the transformation of a living person from one social state to another (Van Gennep 1960). In many instances, funerary rituals involving ceremonial performances toward the deceased followed death. Pearson (2016: 193) discussed that death forces a change in social relations, where life will not be the same again for the living. Meanwhile, death gives the opportunity to the living to holding funeral and manipulate their relation to the each other through the relation to the dead. The relationship between the living and dead is inextricably linked where the perception of the dead is an idea of the living, and also that the treatment of the dead is an activity of the living.

The removal of the skull/cranium was an intentional act in the cemetery not accidentally caused or occurred during successive inhumation. All adult skull/cranium removal specimens at Tell el-Kerkh were females. They were all buried individually in the grave. Hence, the investigation of the skull/cranium removal graves did not show intentional or severe disturbance of human bones when the skull or cranium was removed, with the exception of Str. 927. Moreover, it seems that people who retrieved the skull/cranium were aware in advance of the location of the grave or maybe they participated in the funerary rites at the time of death. Manipulation of grave elements resulting from successive inhumation was notable especially in the collective burials (e.g. C-10) and cremation pits where the remnant of previous inhumation pushed aside of the gravel pit in favor to the new inhumation (Tsuneki 2013; Tsuneki et al. 2011).

Further investigation of Kerkh Neolithic society revealed notable characteristics of the cemetery where many small children and young females (around 20 years old) were uncovered. A large number of the population died below the age of three. High infant and perinatal mortality and childbirth mortality were frequent which indicate the rough reality of life in Kerkh Neolithic society. However, very few people survived beyond fifty years old. Further, bioanthropological analysis revealed the high frequency of death between 1-3 years old. The high frequency of juvenile deaths occurred due to bad health conditions (Dougherty

2011), which ultimately affected the health of the youngest within Neolithic society. Additionally, the presence of fetal, perinatal, and first year infants within the skeletal sample suggests the existence of conditions that may have jeopardized maternal health.

The people of Tel el-Kerkh were aware of the relationships between society members and the role that the deceased played in their life, which required commitment in dealing with them after death. Pregnancy and childbirth play a primary role in the life of all human groups and communities. They were both followed by rites whose purpose is to protect the woman and child (Van Gennep 1960). Women gave birth, and played the primary role in regenerating society through the birth of new members. For this reason, or due to the women who died in childbirth or other severe circumstances, some families at Kerkh may have honored females and some small children by removing their skulls. Giving birth was (and even in the present) a difficult, painful and dangerous task. Croucher (2012: 115) suggests that the skull selection could be attributed to the circumstances causing the death, and some types of death required action beyond burial regardless of power or leadership. These actions could have been based on the qualities of the person and emotional ties. Therefore, some families at Tell el-Kerkh practiced skull/cranium removal on female members because they played the primary role in birthing and sustaining new life in society.

In this context, the question is whether this biased treatment of a number of individuals' post-mortem at Tell el-Kerkh demonstrates different social status or social distinction among society members. If social distinction is considered, this distinction is not reflected in the society as a whole, but limited to their close family members.

As mentioned above, the mortuary practice of skull removal reflected the impact of changes in society structure. Also, the family system played a fundamental role in decreasing skull/cranium removal practice, since this practice became a selective and private decision. People in the PN period proved their identity through funerary practices. The identity may link to concepts such as the role of individuals in their society, the social-collective status within the group they lived with and qualities of the person. Manipulation and displacement of corpses may aim toward maintaining a spiritual and physical connection between the living and the dead, and providing alleviation of their sorrow.

Undoubtedly, the practice of skull removal in the PN period attested a drastic decline in the Levant regardless the proportion of uncovered specimens in any region (e.g. Bocquentin et al. 2016). Limited specimens of skull removal in the PN period indicate that the people practiced it to a limited extent compared to the PPN period.

8. Circulating Human Bones

In Kerkh society, the number of deceased underwent multi-stages of treatment prior to interment in their final deposit. Also, some funeral practices like cremation, collective burials, skull removal were required multi-procedures. In Kerkh society, the living people and close social group members decided burial practices, preparing the deceased for interment, position in the grave, ornaments dedicated with the deceased and the performance of ritual practices in the following weeks after death, or years later. These are all related concepts perceived and performed by the living members to the deceased from their social group.

For example, when re-considering Str. 1052, it is notable that this individual underwent multi-stages of treatment. After death, its family or social group have buried it somewhere in the cemetery. Then later - after decomposition - the grave was re-opened and some skeletal remains were removed, re-located and ultimately arranged and buried in its final deposit. The small coarse pottery annexed with the burial may be a personal belonging, or had been used during the funeral ceremony and then later placed there before grave closure.

The cremated deceased uncovered in the cemetery underwent multi-stages of treatment also. Interment in the grave after death, then after complete/prior decomposition the grave was re-opened. Human remains were moved from their original grave, and cremated in the cremations pits (some may have been originally placed in the cremation pit). Later, after cremation process ends, some cremated skeletal parts were removed from the pit and ultimately re-located in various places in the cemetery.

Also, the presence of remains of some individuals in collective burials, indicate that these parts were removed from their original grave and re-located in this collective pit. Moreover, about nine skulls/skull fragments and several fragmented human skeletons were discovered in the cemetery. Thus, this common feature at Kerkh cemetery poses the question of where the remnants of these skeletons were, and why they were found in this state.

The variety of funerary practices and burial types uncovered in the Kerkh cemetery reflect the variety of the households living in the settlement, and the diversity of dealing with the dead post-mortem. The diversity of funerary practices and burial types over hundreds of years at Kerkh cemetery demonstrate clearly how people made deliberate choices to remember and commemorate their deceased. Householders played fundamental role in treatment of the dead and selection of the burial place in the cemetery. The different aspects of the treatment of the dead may help in the detection of group identity and differences in social behaviors in the society. Most likely, close family members in Kerkh society were tasked with the selection of individuals for skull/cranial removal, and other treatments.

Croucher (2012: 213) asserts that identity in the Neolithic period was constructed through relationships between living and dead, animals and objects. Moreover, individuals may have been recognized as a component of personal identities, there was a communal setting to these relationships, including the process during mortuary events, where identities were reconstructed around deconstruction bodies of animal, people and things. The body was transformed through the reuse of body parts presenting continued and altered relational identities (ibid: 214). In the PPNA at Wadi Faynan 16, within the burial (B32), ten large cranial fragments had been stacked and placed over an adult burial whose skull was removed. The skull was replaced with long bones and tibia, which were moved from their original position (Finlayson et al. 2009). Also, other evidence of isolating and removing body parts and re-burying with the remains of other people were clearly attested in the PPNB at Tell Aswad. Two remarkable skull caches were discovered including skulls were removed (from its original grave) and then plastered and ultimately buried with other burials in collective context. Remains of twenty individuals were uncovered in four burials. Likely they died on different occasion and were ultimately buried together in collective graves containing primary and secondary burials. Another funerary location contained the remains of twenty-two burials. A cluster of plastered skulls and primary infant was deposited between the skulls were uncovered (Stordeur et al. 2006; Stordeur and Khawam 2007).

The excavations in the PN sites uncovered various funerary practices that represented diversity of dealing with deceased postmortem. These discoveries in addition to the left materials - partially highlighted aspects of social complexity in these societies. The multiple

forms of burial uncovered in the Tell el-Kerkh cemetery demonstrate variation in dealing with the dead. This illustrated by interring of deceased in groups, which may reflect the style of life of living in kinship-groups. Furthermore, people aimed to create collective identity intra-group and with other groups over generations through interring several number of individuals. In contrast, cremation practices underwent multi interval stages. This transformation aimed to change the characteristic of the corpse into a new state (Hertz 1960). At the end of cremation, the remnant of burnt bones were also removed and buried in various locations in the cemetery with other member's remains. At Kerkh, the social structure in the society and households played a fundamental role in determining post-mortem funerary treatments, which may have affected the decrease of skull removal, and relevant practices in the PN period.

The absence of a skull cache in the cemetery makes it incumbent to ask where the removed skulls and cranial have been buried. The answer could be revealed from the cemetery itself. They must have been buried either in the collective burial where several individuals were identified by long bones or skulls, or inside one of the successive use crematorium pits for cremation treatment with other members. Detached skulls and parts of body were often manipulated, circulated and carefully placed with other members in communal burials. These features were sometimes attested in the PPN period. The relationship between the living and the dead did not end after the burial. Manipulating skulls indicate the continuity role of the dead in the lives of living. Moreover, their removal demonstrates that the dead body did not need to be retained in its complete state. Croucher (2012: 219) has suggested that the fragmented and removed body parts continued their biographies after death, and they were re-buried in other meaningful contexts accompanying burials. She further illustrated that identities were not statically assigned, but transferable to parts, which could be separated and exit without the whole. In this regard, there was a deliberate choice to handling with human remains at Kerkh society. Some graves were frequently opened and parts of the body like the skulls/cranial were extracted on different occasions and re-buried later within another grave containing human remains. In other words, the deceased's skull played fundamental role in representing the dead and family identity. People were sharing their identities with other members through interring the body as whole or represent it partly in its ultimate deposition. And these phenomena are clearly applicable to Tell el-Kerkh cemetery.

Grouping individuals ultimately either within collective burials, cremation pits, or clustering within the cemetery was a notable feature of the Kerkh Cemetery. The deceased were clustered and grouped in different locations in the cemetery reflecting social groups of families living in the community. Interestingly, a recent isotope analyses indicates that people at Kerkh society were living in close relationship (families); they were buried in specific locations in the cemetery and consumed foods having similar isotope values (Itahashi et al. 2018). Two of the skull removal specimens (Str. 927 and 930(f.)) were included in the study and the results indicate that they were probably related or from the same family group. Thus, we can assert that the skull removal practices in Tell el-Kerkh were practiced on a limited basis confined to a few families who applied these practices on some of their deceased. Hence, families at Kerkh society played a role in decreasing the practice of skull removal in the PN period. And they shared the skull with other member's remains in order to create a social identity in the society.

Grouping individual and mingling their remains with other members was favorable to Kerkh people rather than individual inhumation. This may demonstrate the promotion of social identity and communal cohesion between community members. Most likely, family members at Tell el-Kerkh created a social system that facilitated society management and maintained social unity between its members. This social system enhanced the social cohesion between community members. This cohesion defined commitment to the community as a whole and allowed members to prove their communal identity.

9. Grave Goods at Tell el-Kerkh Cemetery

Excavations at Tell el-Kerkh have revealed more than 1300 artifacts from all layers. About 256 different grave goods were discovered from various places in the cemetery (Table 6). These include one necklace containing 294 flat stone beads in two rows placed around a young adult female neck (Str. 1087). In total, (59 individuals = 24%) were accompanied by grave goods (Figure 3-184). The grave goods in the cemetery were discovered in two contexts. They were even dedicated to the deceased or found close to them. Or, the grave goods were dedicated to the collective burials or to the burial context. However, the number of objects discovered with the diseased is larger than those in collective burials (Figure 3-185).

Grave goods were associated with primary, secondary, cremation and even with urn burials. They were found with all age groups, but the percentage is varied (Figure 3-186). Grave goods

were most commonly found with adults and small children, and even with a very young perinatal. The largest number of objects was uncovered with adults. However, there were no big difference between the number of grave goods uncovered with males and females (Figure 3-187).

Various kinds of grave goods were uncovered in the cemetery. They were pottery vessels, stone bowls, beads, stamp seals, pendants, flint and bone tools (Figure 3-188). The pottery was remarkable feature of PN period. It was not only used in daily life activities, but it was also used in funeral practices and comprised part of the funeral goods accompanying the deceased. Kerkh vessels mainly consisted of DFBW, coarse ware and limestone vessels.

In the primary burials, pottery and/or stone vessels were sometimes placed in front or behind the head of the deceased. Placing vessels with deceased in the graves is a deliberate action. In Str. 927, an adult female's skull was missing, but a DFBW bowl was placed in the place of the skull.

Beads were the most frequent objects associated with the deceased as a grave goods. About 144 beads have been discovered from thirty-nine burials. Some beads were made of local resources. However, others were made of materials such as turquoise and obsidian imported from afar. A wide variety of beads shapes, including discs, barrel-shaped bulges on both ends, and butterfly shapes were uncovered. They were found around the deceased neck, or wrist or they were hung with other objects near the hip. These beads were used in necklaces and other accessories that adorned the bodies of the dead when buried, and they provide us with important information about how people decorated their bodies. Some individuals were accompanied by a large number of grave goods ranging from five to twenty-one objects.

Some deceased were accompanied by animal bones; this feature was uncovered in the primary and secondary contexts. However, animal bones were confined to vertebra, horns, part of mandible, metatarsal and metacarpal. Remarkably, one of the deceased was buried with some bone objects. She was an adult female Str. 1081 buried in a flexed position on her right side, and number of bone implements was discovered in her grave. A caprine metacarpal, seven bone awls and three stone beads were placed near her hip. A large cattle metacarpal was discovered with a 12-15 year olds burial Str. 732. Ethnographical records in Syria indicate

that animal metacarpal was often used on weaving looms and tightening cords for treadles (Saito 2007). Drawing upon this information, metacarpal likely was preferred to use in weaving. Therefore, it was supposed upon on the various objects discovered with Str. 1081 that she tended to engaged in weaving.

Str. 1058 is another remarkable burial accompanied by a large number of objects. He was a middle adult male buried in a flexed position on his right side. A small dark faced burnished ware (DFBW) was placed behind his head and a cluster of objects includes flat clay stamp, three bone awls, five deer horns, three flint axes, two grind-stones, two hammer-shaped pumice stones, small hand-held whetstone, Amuq-type flint point, five long flint blades, two burins and eighteen flint flakes. All were discovered near his lower back. Likely, these objects were packed together in a bag and placed in the grave. Probably, these objects were tools used by him during his lifetime and devoted to him when he died. However, if this interpretation is true and these objects belonged to him, their presence denotes that the tomb owner was engaged in flint knapping (Tsuneki 2011, 2017; Tsuneki et al. 2011).

Stamp seals were one of the remarkable discoveries at Tell el-Kerkh. Over one hundred stamp seals were uncovered at the site. However, fifteen stamp seals have been discovered from ten burials. One stamp was found inside DFBW which was dedicated to C-5. Stamps seals were dedicated to a different age group of deceased. They were found with adults and small children. Further, they were uncovered from various contexts in the site. The large assemblage of stamp seals uncovered in the site indicates that the stamps were accessible to many members regardless of age or sex. The stamp seals which were dedicated to the deceased were found near the hipbone or palm, suggesting that the stamp seal was hung from the belt or placed in the owner's palm (Tsuneki et al. 2011). In most cases, the skeleton bore only one stamp seal; however, one skeleton (Str. 860) had three bone stamps on the palm and another skeleton (Str. 995) had two stamps.

The stamp seals are one of the distinctive finds in the PN period. The evidence uncovered from Tell el-Kerkh indicate the that stamp seals were available to a large number of individuals. It is highly suggested that they have played an important role as evidence for private property and in the use, management and control of access to goods. Evidence unearthed from burials at Tell el-Kerkh showing that stamp seals were not only used for economic activities but also

provided as grave goods to its owner. Further, dedicating the stamp seal to the small children may bore symbolic meaning rather than economic.

The grave goods data at Tell el-Kerkh provided us with plenty of information about adorning the dead. Also, grave goods showed an evidence on the division of labour based on sex. Eleven individuals in the cemetery were accompanied by five or more of grave goods. They were eight adults and three children. Two of these children (Str. 822 and Str. 913) were accompanied by twenty bead, and the third one (Str. 914) accompanied by eight beads. It is significant that the beads were the most favorable items for adornment at Kerkh cemetery.

The diversity in the contexts and the discovery of numbers of beads from locations other than graves indicate that the adornment was not merely limited to the dead. Notably, over half of the individuals accompanied by grave goods had more than one piece and there was a diversity in the kind of objects and materials made from. Thus, it can be suggested that the burial rituals and the dead adornment most likely reflected the customs of the living. The grave goods were made from different materials. Some of these materials are local resources, while others are not available in the close vicinity especially for the beads. Certainly, colorful beads were a preferable option which may reflect Kerkh people's sense of beauty. Further, the attempts to imitate of nature turquoise beads suggest that blue color is a beloved. Thus, it is certain that combining various and colorful grave goods to make a single personal ornament is preferable custom to Pottery Neolithic people of Tell el-Kerkh.

The custom of decorating of individuals by various kinds of grave goods became popular with the beginning of the PN period and indicate to dramatically changes compared to the PPN period. this custom accompanied with drastic changes in this period related to the funeral practices, the invention of pottery and invested it in the funeral practices, the stamp seals and its economic and symbolic function and the emergence of cemeteries. Hence, the grave goods were not only materials used during life, but also began to be used to decorate the dead, not only as decoration but also for memorial and symbolic purposes.

CHAPTER 4: Burials in the Pottery Neolithic Period

1. Introduction

The transformation from the Pre-Pottery Neolithic to the Pottery Neolithic period occurred around the 7th millennium BC. in the northern Levant and a little bit later in the southern Levant (Akkermans and Schwartz 2003: 99). During this period, the development process and shift from hunting-gathering subsistence to a farming way of life was fully completed and the society gradually became reliant on agriculture and herding. These developments were reflected in the ability to produce food, more developed tools for daily life and various kinds of adorned artifacts. Various kinds of grains were cultivated and animals were domesticated. This was a period of complex human technological development in prehistory, and much progress emerged indicating a growth in the awareness and ability to live independently.

Initially, it is necessary to understand the general characteristics, social structure, funerary practices in PN societies in the Near East and its complexity. There are significant regional variations in the structure of PN societies, but sometimes there were common characteristics overall. The settlement pattern and occupation period of the settlement is a considerable matter of debate. Evidence for successively inhabiting a settlement for a few generations or for a long time has been accumulated. The PN sites, in general, showed two basic features:

- 1) The first is inherited from the PPN period or represented PPN legacy. The general characteristics of the site, the settlement pattern, the funeral practices and burial ground attested a form of continuation from previous periods. However, some variation could be noticed from site to site throughout the regions.
- 2) The second type of PN sites represented transformation. The general layout of the settlement, the appearance of new funeral practices and interring the deceased within a cemetery attested the shift to a new stage of social development.

2. Settlement Patterns

The settlement size in the Late PPNB period was relatively large and the emergence of these large settlement sites (mega sites) in various regions in the Near East was notable. The mega-sites sometimes exceeded 10ha, making them comparable to the small cities of later periods

(Rollefson 1987; Hole 2000; Tsuneki 2012). Notable examples in Northern Syria include Tell el-Kerkh (Tsuneki et al. 1997, 1998, 1999, 2000, 2012), Tell Halula (Molist, ed. 1996) and Tell Abu Hureyra (Moore, Hillman and Legge, eds. 2000), Aşıklı Höyük (Esin and Harmankaya, 1999) and Çatalhöyük (Hodder 1996, 2007) in central Anatolia and 'Ain Ghazal (Rollefson 1987; Rollefson and Simmons 1988), Basta (Gebel, Muheisen and Nissen 1988; Nissen, Muheisen and Gebel 1991) and Beisamoun (Lechevallier 1978) in the southern Levant. However, the PN settlement was relatively not so large. The size of the settlement was around or smaller than 10 ha and it was inhabited for an extended period of time.

Various kinds of building structures were uncovered. They were used for various purposes; for habitation or daily life activities. In general, the structures in this period represent continuation of the former period. The structures were rectangular in shape, occasionally divided into series of multi small rooms with corridor extending along the axis of the building. However, circular buildings were also uncovered. Sometimes the circular buildings were associated with rectangular structures such as those at Tell Sabi Abyad (Akkermans et al. 2006). Moreover, evidence for two-floor buildings had been uncovered at Tell el-Kerkh (Rouj 2c). The building consisted of a ground floor with multi small rooms and open space in the second floor (Tsuneki et al. 2000). It is suggested that these kinds of buildings were for community use or functioned as storehouses or communal buildings. Substantial evidence for the use of circular structures and the *tholoi* type was uncovered from northern Syria at Tell Halula in the late seventh millennium. By the mid of 6th millennium, the circular structures type became common during the Halaf culture in northern Syria, southeastern Anatolia and northern Iraq (Akkermans 2010).

This period is named based on pottery, which appeared for the first time around the seventh millennium BC, and affected all aspects of society. The pottery was dispersed widely in the Near East. It has been suggested that this region has a long history of pottery production, and appears to be one of the origins where pottery was documented (Tsuneki, Nieuwenhuys and Campbell 2017). The Yarmukian pottery was restricted to specific areas in the southern Levant dated to the last two thirds of the 7th millennium (Orrelle and Gopher 2000). While Halaf pottery succeeded it at around roughly 6,000 - 5,200 BC. in the northern Levant (Akkermans and Schwartz 2003). Pottery played an important role in human life in this period, and a variety of decorations related to symbolic meaning were observed. The pottery was a

remarkable feature of this period. It took the place of ritual and funeral practices, and comprised a part of the funeral goods accompanying the deceased. At Tell el-Kerkh cemetery, pottery bowls/vessels were uncovered from various primary burials and secondary deposits. These bowls/vessels were basically made of limestone, dark face burnished or coarse pottery, and stood in front or behind the head of the deceased. Pottery was one of the most remarkable inventions in this period, necessary for use in daily life particularly for cooking and storing foods. Pottery was associated with burials as grave goods and used for ritual practices and identity (Plug and Nieuwenhuysen 2018: 350). It served part of the economic conditions for exchanging products with other societies or symbolic concepts (Verhoeven 2002; Akkermans and Schwartz 2003).

3. Burials and Funeral Practices

Excavation evidence from PN sites were, for a long time, poor, and did not reveal sufficient information to understand the social structure and mortuary treatment in PN societies. Even though excavations were undertaken at a number of sites in different locations, the number of burials was relatively few. Therefore, it was difficult to define a common conclusion for the region in relation to social structure and mortuary treatment. There were prevailing beliefs that the PN people buried their dead in off-site cemeteries as in the later Halaf and Ubaid periods (Tsuneki 2013). However, excavations in the last decades have refuted these beliefs. It seems to prove that generally people of the Pottery Neolithic continued to bury their dead within the confines of their settlements, as per prior custom, beneath the floors or between residential structures. However, at a few sites, special locations designated as burial grounds or “cemeteries” appear to have emerged for the first time during this period in sites such as Tell el-Kerkh (Tsuneki 2010, 2011, 2013) and Tell Sabi Abyad (Akkermans 2008; Akkermans et al. 2014; Plug, van der Plicht and Akkermans 2014) (see Table 1). Most of the deceased in the Neolithic period were buried in flexed positions. However, in some cases, the deceased were also buried in extended, prone, supine or a flexed position (e.g. Makarewicz and Rose 2011; Ortiz, Chambon and Molist 2013).

So far, northern Syria and southeastern Anatolia have been considered the most promising regions to investigate PN societies and gather information related to the lifestyle during this period. In the last decades, intensive excavations and studies were carried out, and number of sites revealed extensive information about the development of the PN settlement and

funerary practices, although much data has not yet been published. Therefore, this chapter will focus on the excavation results uncovered from a handful of PN sites. It will also illustrate the general characteristics of these sites and compare the results with the Tell el-Kerkh data.

4. Further Investigation of Burials in the Pottery Neolithic Period

4.1. Northern Syria, Euphrates Region: Tell Sabi Abyad

4.1.1. Excavation and Chronology

Tell Sabi Abyad is an 8,000-year-old settlement mound. The site is located in the province of Raqqa in the upper Balikh Valley, about 30 km south of the Syrian-Turkish border. The site consists of four prehistoric mounds (Tell Sabi Abyad I to IV). These mounds were spatially segregated at a short distance from each other and used from the late eighth to the early sixth millennium BC, but they were not all used contemporaneously. Over time the settlement shifted from one tell to another. However, some parts of the settlement were continually inhabited, whereas other parts were abandoned. Excavations have been carried out at Sabi Abyad I, II, and III. Tell Sabi Abyad I is the largest mound about 5ha in size and 6m high (Figure 4-1). It has been extensively excavated since 1986 and exposed occupation layers back to 7,000 and 5,800 BC. The excavations have revealed plenty of information about the economic system, material culture, and funeral practices (Akkermans 2008, 2013; Akkermans et al. 2012; Akkermans and van der Plicht 2014; Plug, van der Plicht and Akkermans 2014). Excavations at Tell Sabi Abyad I were undertaken in five different stages termed (Operation I to V) which have revealed prehistoric layers, and each has its own history of inhabitation. Operation I revealed a long occupation sequence dated from c. 6,200 to 5,850 BC. Operations II-V revealed a deposit assigned to the 7th and early 6th millennium BC (Figure 4-2) (Akkermans et al. 2006; Akkermans and van der Plicht 2014).

- Operation I revealed 11 levels dated from ca. 6,200 to 5,850 BC. It was characterized by the discovery of a settlement consisting of rectangular houses made of *pise`* surrounded by smaller circular structures. The settlement, the so-called Burnt Village was uncovered in Level 6. It was represented by five multi-roomed rectangular structures and four circular (*tholoi*) structures. The village was heavily affected by fire (Akkermans and Verhoeven 1995; Akkermans et al. 2014).

- Operation II revealed a sequence of four occupation levels dated to ca. 6,000 and 5,800/5,700. Passages in addition to various shaped ovens and hearths were the characteristic structural features that were revealed. It is suggested that the houses of mud bricks beneath these remains were used for tool production. A courtyard containing *tannors* surrounded the architecture and an infant burial was uncovered (Akkermans et al. 2006).
- Operation III revealed the most complex sequence of the settlement. Four successive levels of occupations (A, B, C and D) dated from (~7,100 - 5,500 BC) were documented (Plug, van der Plicht and Akkermans 2014). Buildings used for an extended or a short period of time characterized this part of the site. The structures in the lower levels (Layer 4) uncovered small single-room and large multi room structures. Moreover, three children were uncovered - originally wrapped in mats - buried on the floor of Building 2. They were buried on the floor of the room not in a grave pit. (Akkermans et al. 2006).
- Operation IV revealed inhabitation remains similar to Operation II, dated to ca. 6,300 - 6,200 BC. It was characterized by rectangular building built in two phases and consisted of twelve small rooms.
- Operation V revealed remains dated to ca. 6,300 - 5900 BC. Three occupation periods have been uncovered. The earliest phase revealed no evidence for structures dated to the early Pottery Neolithic (ca. 6,300 - 6,200). The second phase is characterized by building structures with its installations generally dated to the end of 7th millennium BC. Debris layers represent the third phase. Based on pottery uncovered in this phase, it belongs to the transition period dated to ca. 6,000 - 5,900 BC (Akkermans et al. 2006).

4.1.2. Burials and Cemeteries at Tell Sabi Abyad

4.1.2.1. Tell Sabi Abyad Neolithic Cemeteries

Excavation in different parts of Tell Sabi Abyad revealed a group of cemeteries. People shifted intra-site over generations and so a number of cemeteries were uncovered (Akkerman 2013). Operation III yielded the largest number deceased, a total of 138 within 192 graves until the 2009 season. The graves were uncovered in the northeastern slope of the mound (Plug and Nieuwenhuyse 2018). No specific burial ground dedicated exclusively to the deceased was

uncovered in this part of the site. The majority of graves were constructed in the open spaces and in the abandoned structures, (Plug, van der Plicht and Akkermans 2014). Stratigraphically, the deceased were distributed within seven cemeteries, each comprising a number of deceased uncovered in various contexts (Table 7).

4.1.2.2. Burials

Burials at Tell Sbai Abyad were discovered in different parts of the site. The earliest graves were uncovered in Operation III. In the early years of excavations, the number of burials was limited and only small number of burials were uncovered containing the remains of children (Akkermans and Verhoeven 1995; Akkermans 2008). However, the number of graves gradually increased starting from 2005 excavation seasons. Hundreds of burials; males, females and children have been recovered from the seven cemeteries. Operation III in the northwestern slope revealed the largest number of burials in all age categories (c 200) (Plug, van der Plicht and Akkermans 2014).

Burials at Sabi Abyad were found in different sections within the settlement. Primary and secondary burials were uncovered. Primary burials were the most common, however, secondary burials were identified too. In general, the grave was a simple shallow oval/round shape pit. Deceased were buried in a flexed position on their side and in some instances on their back. Deceased were sometimes accompanied with different kinds of grave goods such as pottery vessels, pendants, beads, stamps and others. Two specimens of skull removal have been documented so far. (Akkerman 2008).

4.1.2.3. Location of Graves

The locations of graves at Tell Sabi Abyad were uncovered in various contexts showing high complexity. They were found in various operations and places in the settlement. Operation I in the southeastern part of the tell uncovered 16 burials in total (Figure 4-3). This part of the site was dedicated particularly to small children and infant inhumation, which indicates a significant pattern in this period. Fifteen children/infants and one adult were uncovered in this section. Burials were revealed mainly from building levels 7, 6 and 5. The graves contained single individuals. The grave pit was simple and shallow dug into the floor of the buildings, next or through the walls and in the fill of the abandoned settlement (Table 8). In other words, the children's graves were uncovered in a place already abandoned (Akkermans 2008; Otte, Smits and Akkermans 2014). In the Burnt Village in level 6, the deceased were sometimes interred in

a house still in use (Akkermans et al. 2014). In addition, the deceased were buried on the top of the buildings (Akkermans and Verhoeven 1995). The burials uncovered in the northwestern section in Operation III showed no regulation compared to Operation I. Adult burials were uncovered interred in the remnant of the abandoned houses, which indicate the use of this section as a cemetery after being abandoned of the settlement in Operation III. The adult graves pit was simple around one meter deep. Deceased were buried individually, in a flexed position, generally lying on one body side (Akkermans 2008). Excavations at Operation III have uncovered the largest number of burials. The graves were located on the northeastern slope of the highest mound (Plug, van der Plicht and Akkermans 2014).

4.1.3. The Characteristics of Tell Sabi Abyad Settlement

Excavations in the PN sites in northern Syria including Tell Sabi Abyad have shed light on various aspects and characteristics of PN complex societies. The collected data from the PN sites have clarified and facilitated our understanding of the complexity of these societies. The large assemblage of burials uncovered at the site and the variation in mortuary practices have illustrated the diversity of dealing with the dead in this period. However, the distribution of the deceased within several cemeteries in different parts of the site illustrates the social organization in the society.

Tell Sabi Abyad settlement is formed of an assemblage of non-contemporaneous - small mounds, and each with its own history (Akkermans 2008). Tell Sabi Abyad I, for example is comprised of four contemporaneous small size occupations. People in these occupations lived within a framework of households and close kin-groups with other groups in the nearby vicinity. The deceased were grouped and distributed in different parts of the sites within cemeteries. The life in the settlement followed a repeated scenario over generations. It was active for a span of time, then later had abandoned and finally reused the remnant of the abandoned section as a cemetery. The next generations moved to the adjacent vicinity and built a new small-scale settlement, a move that was repeated in other parts of the site. (Akkermans et al. 2006; Akkermans 2013).

The presence of a number of cemeteries with dozens of deceased in each reflect the lifestyle patterns at Sabi Abyad - a reliance on low density populations living in short-term and shifting settlements. In another sense, the place where the parents lived and the children and later the

grandchildren were not the same. New generations built a new house in adjacent areas and the next generations repeated the life cycle. Thus, the settlement was continuously shifting over generations from one place to another. Then the remnant of the inherited and abandoned houses was invested in an alternative purpose than living, for burying their dead in (Akkermans 2013). Hence, there was obvious attention paid to separate the living spaces from the dead, and most likely people preferred burying the dead separately in a particular cemetery.

4.1.4. Funeral Practices

The large assemblage of burials uncovered at Tell Sabi Abyad enriched knowledge of important information about the lifestyle in the PN and the way of dealing with the dead. Various kinds of funeral practices refer to the diversity of dealing with deceased postmortem have been identified. These practices are summarized as follows:

- 1) Primary burials are the most common among the deceased however secondary burials are uncovered as well.
- 2) Burials were interred in various ways and in different contexts. They were found inside structure buildings on the floor and beneath walls, on open spaces and on the roof of the buildings. Moreover, burials were associated with burnt buildings.
- 3) Most of the burials were buried intact, however, two specimens of skull removal have been documented so far (Akkermans 2008).
- 4) Small children and infants were buried separately in cemetery in the Operation I, which may refer to a new ideology and favor of interest in child interment.
- 5) Exploitation of fire for ritual acts and rituals practices was identified at Tell Sabi Abyad in the Burned Village in Operation I, and in the T-shaped burnt building in Operation II (Verhoeven 2000; Akkermans et al. 2012).
- 6) The so-called “burnt heart” is “ritual involved the insertion of burning embers into the chest cavity of the deceased, usually being adults, males and females in equal numbers” was only uncovered at Tell Sai Abyad (Plug and Nieuwenhuys 2018: 350).
- 7) Invested pottery in the funeral practices was widely documented at Sabi Abyad. It was not only dedicated to the deceased, but also used for body container.
- 8) Interring small children and fetuses within pottery vessels was documented at Operation II (ibid).
- 9) Grave goods were communally dedicated to the deceased at Tell Sabi Abyad.

4.2. Southeastern Anatolia, Upper Tigris Region: Hakemi Use

Excavation in the PN period in this region is also limited and confined to a handful of sites. However, the excavations in the recent decades had uncovered a limited number of human skeletons. The poor evidence, to some degree have restricted knowledge about the lifestyle and burial customs in this region in particular and the PN period in general. Hence, some relevant sites in this region will be studied in order to clarify the characteristics of this period in adjacent regions.

4.2.1. Excavations and Stratigraphy

Hakemi Use is a small Neolithic site located in southeastern Anatolia in Diyarbakir province in the Upper Tigris region. The settlement is located on the southern bank of an old bed of the Tigris River and measured 120m in diameter by 4m high. A rescue excavation of the flooding area of the Ilisu Dam has been undertaken since 2001 by a team from Hacettepe University (Tekin 2004, 2007, 2011). Excavations in the site have revealed three main periods numbered from I-III.

Phase I: Early Iron age/ New Assyrian period

Period II: Late Bronze age (The Middle Assyrian period)

The Phase III: Late Neolithic (Hassuna / Samarra period). Trenching work revealed five levels in this phase dated to 6,100 - 5,950 BC. Moreover, Hakemi Use is northern limit for Hassuna/Samarra culture, and it is the first settlement belonging to this period uncovered in the upper Tigris region (Tekin 2008, 2011).

Excavation in the site showed evidence of a settled community that practiced agriculture and domestication activities (ibid). People in the Neolithic Levels inhabited one-floor rectangular plan houses consisted of multi rooms. Circular plan buildings were also discovered. The houses were built by using mud bricks and *pisé*, and the hearths were usually constructed outside. The excavated materials at the site showed similarities in pattern with material from the neighboring regions. This evidence indicates a trading network at Hakemi Use with links to other communities in the region (Tekin 2007, 2010).

4.2.2. Burials and the Location of Graves

Excavation in the Late Neolithic levels has unearthed remains of 95 individuals from 89 graves (Table 9) (Erdal 2013). The burials were mainly uncovered inside the settlement. The deceased were interred beneath the floor of the houses. However, it is not clear whether they were buried in the house during its use or after its abandonment. The grave in general was simple shallow pit. Single primary burials are the most common and a few secondary burials were unearthed. Collective burials were not common at Hakemi Use, but double burial containing the remains of two elderly females were identified. Burials were interred in a flexed position on one side however, a few were buried on their back and in squat position. Pointing the head to the east and west was most preferable (Tekin 2010; Erdal 2013).

Notably, small children and infant mortality was relatively high. Sixty percent of the dead are sub-adult which is relatively high also. However, a small number of people exceed 45 years. Reed remains were uncovered in several graves suggesting that the wrapping of a corpse with a mat was a common tradition.

Skull removal practice was not common, but three isolated skulls were found. Moreover, deformation of the skull was common practice at Hakemi Use (16 individuals: 14 infants and two adults), also burials with red ocher were documented (Tekin 2010, 2011; Erdal 2013). Further investigations at Hakemi Use did not show particular differences among burials which rule out social differences between society members.

4.2.3. Funeral Practices at Hakemi Use

Investigation at Hakemi Use site shed light on the life style in the upper Tigris region. The discoveries and the assemblage of burials allowed a comparison of the similarity and differences in funeral practices and the life style between the PN periods in adjacent regions. The funeral practices at Hakemi Use can be summarized as follows:

- 1) Primary burials interred on one side is common, however, specimens on their back and in a squat position were also identified.
- 2) Deceased were buried inside the settlement, beneath houses floors. However, it is not clear whether the houses were in use or abandoned when interment occurred.
- 3) Most of the burials were buried intact, and secondary burials were few.
- 4) Child mortality is high, and they were selected for skull deformation.

- 5) The wrapping of corpses in reed matting was a common tradition at Hakemi Use.
- 6) Intentional skull deformation was common custom.
- 7) Scattering ochre over deceased bodies was identified.
- 8) Grave goods were sometimes uncovered including local pottery vessels and well fired bowls, beads and other small objects made of stones or bones, whereas, stamp seals were limited (Tekin 2010).

4.3. Central Anatolia Region: Köşk Höyük

4.3.1. Excavations

Köşk Höyük is a Late Neolithic site located in Central Anatolia to the East of Çatalhöyük, the famous Neolithic site in Niğde province. Niğde museum first conducted rescue excavations from 1980 to 1982. Later, Uğur Silistreli led excavations from 1983 to 1990 and the Niğde museum under the supervision of Aliye Öztan conducted excavations from 1995. The settlement measured 100 × 90m and had been inhabited for a long period of time beginning in the Pottery Neolithic period (Özbek 2009; Öztan 2011).

Level I dated to the Early Chalcolithic and Levels II to V dated to the Neolithic period. The Neolithic houses were built by using available materials such as limestone and mud bricks. The houses were rectangular in shape - divided into small rooms; the walls were built by stones and covered by a plaster layer. Some of the houses were associated with benches situated in one corner. The layout of some buildings was later modified. The interior rooms were divided into smaller sections, and some rooms were connected to each other. The houses were built close to each other forming a passage opening into a small square (Öztan 2011).

4.3.2. Burials and the Location of the Graves

Excavations at Köşk Höyük have revealed 88 burials containing 82 complete skeletons and six burial of skulls (Bonogofsky 2005). Most of the burials were uncovered from the residential area. The deceased were buried inside houses beneath walls or benches. The open spaces between the houses sometimes formed the wall of the grave and mud-bricks closed open side. All of the burials in the Levels II and III belong to infants, fetus and small children, whereas adult burials are scarce. Exceptionally, small children were interred in exceptional body containers (in a jug and pot). Moreover, small sherds were used to cover the deceased body. In

general, the graves are simple inhumation. Burials were buried individually or in collective burials located in open spaces. Deceased were buried mainly in a flexed position, and no particular body axis orientation was noticed (Öztan 2011).

Nineteen skulls were uncovered and two headless burials were present from all levels. Among the 19 skulls, 13 were plastered and belong to adults and children. Some were covered with red ocher, and six skulls were untreated. Two headless burials belong to child 15-16 years old and an adult female 50-55 years old were uncovered. Both were buried beneath the room floor (Özbek 2009).

4.3.3. Funeral Practices at Köşk Höyük

- 1) Most of the burials were buried in simple grave inhumation in flexed position.
- 2) The deceased were interred inside the residential structures beneath the wall, benches, in open spaces and between buildings.
- 3) Two specimens of skull removal practice were uncovered.
- 4) Plastered skulls of males, females and a child were recovered.
- 5) Grave goods were usually dedicated to deceased included pottery pots, beads, pendants and figurines and other objects.

5. The Significance of PN Sites: Similarities, Differences and General Characteristics

5.1. Settlement

The investigations about the PN sites in the targeted regions demonstrated that the size of the sites was relatively small compared to the size of the sites in the previous period. Small settlement size was documented from Tell el-Kerkh (Tsuneki 2012), Sabi Abyad (Akkermans 2013), Bouqras (Akkermans, Fokkens and Waterbolk 1981), Hakemi Use (Tekin 2011), Salat Cami Yanı (Miyake 2005) and Köşk Höyük (Öztan 2011). Whereas, Domuztepe the large site in Southeast Anatolia, with its 20 hectares, is considered the largest site in the Near East with an estimated population between 1,000 - 2,000 people. The sites dated back to Later Neolithic (part of Halaf period) (c.5,800 - 5,475) (Campbell 2007-2008; Kansa et al. 2009). The pattern and duration of occupation and the in these sites were considerably varied. The occupation was even concentrated in a part of the site and people were successively rebuilding the new

settlement over/by using the debris of prior settlement, or the new occupation was built in close vicinity and so on the settlement was moving over time.

All of the settlements have documented evidence and installations for domestication activities. However, the settlement layout sometimes differed from one region to another, and to some extent, the differentiation could be observed in the same region particularly in terms of burial ground location. In most instances, the buildings were built close to each other separated by narrow passages ending in an open area, or constructing the houses around the area formed the open spaces. Thus, this area in many instances was used for interring deceased.

The buildings were used for many domestic purposes and they were the most preferred place for burying the deceased not only in the PPN period but also in the PN. In most cases, the houses were already abandoned before ultimately being invested for burials or became a part of the burial ground.

5.2. Cemeteries/Burial Grounds

Tell el-Kerkh has a unique settlement pattern different from all other sites excavated so far. In fact, the settlement was functionally split into places for living, for daily life activities and an open-air cemetery dedicated merely for burying deceased. Sometimes, the remnant of the building structures was used for burying deceased, in other words, the buildings became a part of the cemetery after being deserted. However, the number of deceased uncovered in the cemetery is much larger than those limited/uncovered in the abandoned structure. The distribution of the individuals in the cemetery of Tell el-Kerkh reflected a communal cemetery pattern for all individuals in the settlement with no obvious spatial division according to sex or age.

Compared with the settlement pattern of Tell Sabi Abyad in the Balikh region, the irony is obvious between the two settlements and cemeteries in terms of burial distribution. The settlement shifted over generations and as did the cemeteries. The cemetery of Tell Sabi Abyad was divided spatially into extensive areas confined for child burials in Operation I, and the other for adults and age categories in the other operations. The deceased were recovered from inside buildings and open spaces, however, the majority of the burials were uncovered in the abandoned building structures, which ultimately turned into a cemetery.

Excavations in the Euphrates region at Tell Bouqras, situated on the western edge of the Euphrates Valley downstream from the junction with the Khabur River, c 30 kilometers downstream from Deir ez-Zor have uncovered a long occupation sequence from the Early Neolithic (Levels 8-11) to the Late Pottery Neolithic (Levels 1-7). Careful planning is reflected in the settlement characterized by its houses, their uniform size and systemic layout (Akkermans and Schwartz 2003). A number of adjacent buildings and the open space between were influenced or demolished by fire in Level III. All Neolithic human remains were uncovered from the largest building (House 12) in the Level I which was also damaged by fire (Akkermans, Fokkens and Waterbolk 1981; Merrett and Meiklejohn 2007). In total, remains of six human beings were identified. They are two young adults, one adolescent and two children (the sixth one is a fragmented cranium). The burials were found in inside the rooms on the floor. The burials uncovered in the Boqueras House 12 building indicate a relation between the dead and the burnt building. It suggested that House 12 served as a “Charnel House” and ritual space. Further, the building was intentionally set on fire as a process for the “ritual preparation of human remains for secondary ceremonial treatment” (Merrett and Meiklejohn 2007: 136).

Investigation of the Central and Southeastern Anatolian sites showed that the settlement patterns and the characteristic of the PN sites are not static and to some degree are different than those in the northern Levant. The number of PN excavated sites is relatively larger than other regions. The pattern of settlements, in some instances resembled or represented a continuance from the previous PPN period, but variation was also notable. Most of the burials were associated with residential or other building structures or they were found in the close vicinity. No clear evidence for a cemetery allocated mainly for burials was uncovered in this region so far, but a complex pattern was uncovered.

Excavations at Salat Cami Yanı in the Upper Tigris regions revealed a limited number of deceased, but notably, they were all infants and no adults were uncovered. The *pisé* wall building (Str. 166) in the first phase basically has a rectangular plan and the interior is divided into several rooms by a partition wall (Figure 4-4). The inside is partitioned into seven small rooms and a passage with an L shape at the center. Seven human burials have been uncovered inside the house and all of them belong to infants. A similar pattern of infant burials was also

detected from two other buildings. It seems that the burial of infants indoors was widely performed (Miyake et al. 2009).

Exceptionally, excavations in Northwestern Anatolia at Ilipinar have uncovered a Neolithic cemetery located at the edge of the settlement. The cemetery comprised the remains of 48 individuals. The cemetery was utilized for all individuals, male female and children (but most were neonate). The number of male and female burials is equal, however the largest number of burials belonged to infants and babies, which demonstrate high mortality (Alpaslan Roodenberg 2008; Roodenberg and Roodenberg 2013).

5.3. Ritual Practices and Symbolism

The Pottery Neolithic period is characterized by emerging social complexity of various aspects related to funeral practices, social organization and social stratification. Investigations have revealed a prominent variation compared with the previous PPN period. Most of the sites in the PPN period in the Levant shared common rituals and features with neighboring sites. For example, affinities attributed not only with the ritual customs but also a correlation with grave goods materials culture. The paradox is evident in this period, not only in the adjacent region but also in the same one.

Levantine and Anatolian sites have uncovered astonishing ritual practices. The ritual buildings, concentricity of the human skull and its subsequent relevant practices of plastering and caching skulls, facial masks and ritual buildings were clearly observed in the PPN period. However, the picture dramatically changed between the PPN and PN periods.

The types of burials and funeral practices in the PN period showed substantial variety. The burial practices in the PN period attested dramatic changes compared to the PPN. At some sites the burial ground location, funerary practices, social structures and settlement pattern changed markedly during the PN. For example, the practice of skull removal was frequently undertaken in the PPN, and it flourished in the PPNB with the introduction of skull decoration. Whereas, this practice drastically decreased during the PN period in the light of limited specimens discovered up to now. Pottery Neolithic settlements showed wide variety in handling deceased individuals (simple primary inhumation, single, double and collective burials, cremation burials and pits and urn burials). However, human remains during this period were

relatively scarce at some sites, and few sites gave rich evidence of funeral practices. Further, the treatment of the deceased was not constant but varied over time. Hence, the characteristic of burials and common funeral practices will be outlined in the following paragraphs.

In terms of grave status, generally the grave was a simple and shallow pit, sometimes dug within a plaster floor layer. In some instances, the grave was prepared and enclosed by a row of stones to identify its boundaries such as in Tell el-Kerkh

The relation between the building structures and burials was less notable. People tended to dig the grave in the remains of the abandoned buildings, open spaces and in cemeteries.

Most of the burials were buried in a flexed position on one side. However, prone, supine and contracted positions were documented.

Deceased were communally interred individually and occasionally in groups. However, the ratio varies from site to site. Sometimes, the graves were enclosed by a row of limestone to identify the property or border of the grave such as in Tell el-Kerkh.

In general, no specific axil or head and face orientation have been identified. However, favorite orientation sometimes was documented among adult burials such as in Ilipinar (Alpaslan Roodenberg 2008) and Sabi Abyad (Akkermans 2008).

Grave goods were usually dedicated to the deceased. Some burials held various goods, more than others, which may indicate social status or occupation. However, the proportion varies from region to region. The grave goods were commonly uncovered with deceased at Tell el-Kerkh and Tell Sabi Abyad in the northern Levant, and less common at Hakemi Use and Köşk Höyük in Anatolia.

The funeral practice of skull removal and plastered skulls which were widely prevalent in the PPN period drastically decreased. Skull/cranium removal specimens were uncovered from a limited number of sites in both the Levant and Anatolia. Plastered skulls were only uncovered, and for the first time in this period at Köşk Höyük and Çatalhöyük (see previous chapter).

The practice of cranial deformation was applied on a limited scale. A small number of specimens exhibiting intentional deformation were uncovered in this period. Two isolated skulls came from House 12 in Bouqras (Merrett and Meiklejohn 2007), and 16 individuals comprising 14 infants and children and two adults in Hakemi Use (Erdal 2013) and one individual uncovered in the Southern Levant from Tel Roim West (Eshed and Nadel 2015) exhibited intentional deformation.

Wrapping of corpses by matting (reed), or discovery of the remains of wrapping materials beneath the deceased bodies was rare for this period. However, excavations at Hakemi Use uncovered a number of corpses wrapped in reed matting (Erdal 2013).

Ritual fire

Exploitation of fire and the intentional investment in ritual practices was clearly documented at a few sites. The ritual was applied in different forms. The investment of fire in the ritual and the function of the burnt building and the involved burials in this phenomenon are questionable. However, it is not clear whether those who were involved had a significant social status in their society

- At Tell el-Kerkh, the use of the fire was manifested by the discovery of cremation pits. Forty-four individuals were exposed to fire in different contexts. Seventeen were identified inside the cremation pits, and the rest were re-located and buried in different locations in the cemetery. The evidence Tell el-Kerkh displayed is the most obvious evidence of associating fire with deceased. Fire was undoubtedly used for the ritual practices in cremation. The cremation process is the middle stage between removing the dead remains from its original grave and relocating the cremated remains ultimately in its final deposit.
- At Tell Sabi Abyad, fire was used in the so-called “burnt heart” ritual which applied to adults as mentioned earlier, "this ritual involved the insertion of burning embers into the chest cavity of the deceased, usually being adults, males and females in equal numbers"(Plug and Nieuwenhuyse 2018: 350).
- The second form of using the fire in the rituals at Sabi Abyad was identified from the T-shaped building in Operation II. The buildings were purposely set on fire after placing a

young woman on the floor of the room. It has been suggested that the building was purposely burned as part of a ritual related to fire and death (Akkermans et al. 2012).

- Similar evidence related to ritual burning was uncovered in the Burt Village settlement at Sabi Abyad. Two burials were placed on the roof of the building, and they were intentionally cremated when the village was also intentionally burned in fulfillment of "death and destruction" (Verhoeven 2000: 60).
- The fire played a role in mortuary practices in the "Charnel House" which was used previously as a residential dwelling in Bouqras. The deceased uncovered within the house were intentionally exposed to fire. The house and the deceased were associated with an intentional burning implying the ritual significance of preparation of the deceased for secondary ceremonial treatment.

Gender-based division of labour

The distinguishing of body treatment, status differences in burial preparations, the diversity of grave goods and its symbolism could be interpreted via the concepts related to social differentiation, the nature of the deceased's social identity, signs of wealth between households or linked to gender. These features have been identified from most of the sites mentioned earlier.

Neither the excavation data nor the burials and skeletons in all PN sites have documented any form of social hierarchy so far (Akkermans 1989, 2008; Campbell 1995; Verhoeven 2002). However, certain cultural or ritual practices devoted to certain members in favor of other members of the society are vague and still need to be elucidated.

The characteristic of the grave goods provides clues as to the work in with the tomb owner was involved. Further evidence of gender-based division of labour between household members was identified. Tell el-Kerkh, a male (Str. 1058 mentioned in the Ch. 3) was engaged in flint knapping, and two females (Strs. 1081, 732) were supposed to be engaged in weaving. Other evidence derived from Ilipinar suggest female's front teeth (incisors in most cases) had grooves caused by using the teeth during weaving and basketry making, which also indicated to a gender-based division of labour between male and female (Alpaslan Roodenberg 2008).

Pottery

The most remarkable transformation in the PN period was the invention of pottery, which gave this period its unique character, which appeared for the first time around the seventh millennium BC (Tsuneki, Nieuwenhuys and Campbell, eds. 2017). Pottery played an important role in human life in this period and further affected all aspects of society. Pottery was not merely used in daily life but also for funeral goods. Pottery was clearly represented in the funerary practices, and associated with burials as grave goods. It was used as a body container for small children and fetuses for the first time in this period. Halaf pottery succeeded this phase at around roughly 6,000 - 5,200 BC. in the northern Levant (Akkermans and Schwartz 2003). Whereas, Yarmokian pottery was restricted to specific areas in the southern Levant dated to the last two-thirds of the 7th millennium (Orrelle and Gopher 2000).

The pottery was invested widely in the ritual practices and it was uncovered in various archaeological contexts. The pottery either accompanied the deceased in the context of personal grave goods, or it was dedicated to the interment context in the frame of using pottery in ritual ceremonies. A more complex pattern is the use of a particular-shaped type of pottery as a body container for small children and infants.

At the Tell el-Kerkh cemetery, pottery bowls/vessels were uncovered from various primary and secondary deposits. These bowls/vessels were basically made of limestone, dark face burnished or coarse pottery, and were stood in front or behind the head of the deceased (Strs. 507, 927, 1058, 1078). In contrast, two complete DFBW pottery were discovered above C-5 cremation pit dedicated to the dead in the pit.

Placing the pottery in front or behind the head has also documented from Tell Sabi Abyad (Plug and Nieuwenhuys 2018) and Köşk Höyük (Özbek 2009). In some instances, the pottery was found near the place of the head for some skull removal specimens.

Investing pottery sherds in ritual is identified in the North Levant but on a limited scale. At Tell Sabi Abyad, a deliberate enclosure of the sherds in the burials was recovered. Further, sherds were used to carry embers and that were placed inside the deceased chest cavity of the 'person' undergoing the "burnt heart" ritual (Plug and Nieuwenhuys 2018). Additionally, pottery sherds were used to cover the body of infants and fetus in place of a cover. In case of Sabi Abyad, both complete pots and fragments were used (ibid 2018), whereas, a fetus (Str.

933) was buried on its right side down, but its body was covered with DFBW pottery sherds. This phenomenon has only been uncovered in these two sites so far.

Attention to children inhumation

Excavation evidence at the PN sites revealed that small children and infants experienced high mortality. They were sometimes treated carefully and different than adults after death. As mentioned earlier, the deceased were interred in different places and in varied ways, however, burials - especially young individuals - uncovered from the residential area. Furthermore, evidence for the division of the burial location based on age was observed. Small children predominantly received treatment from their family group, likely due to their short lifetime, and their small social circle. In the PPN period, infant and juvenile remains were utilized in some instances for sacrifice as at 'Ain Ghazal (Rollefson 1983) or foundation sacrifice in Jericho (Kenyon 1981) and this practice continued to the PN period in Tell el-Kerkh (Tsuneki 2002). They were in most cases recognized with adult skulls in several sites (e.g. Benz 2012).

Returning to the role of pottery in the funeral practices, the disposal of small children especially fetuses and infants in pottery vessels (Urn Burial)⁷ remarkably appeared for the first time in the PN period at Tell el-Kerkh. However, similar samples were observed from several sites covering a wider region in the Levant. Further, this practice continued into later periods, and several specimens have been uncovered.

Most likely, the vessels utilized for this particular kind of burial are not exclusively made for this reason, but rather for its primary intended function - probably - for daily life activities (like cooking or storing cereals). Alternatively, the deceased family selected the vessels and re-used them in such a way as to hold a deceased body. The shape of vessel used in the type of burials was in most cases globular-elliptical shaped bowls or jars. However, exceptional and a unique coarse rectangular shaped pottery vessel was uncovered at Tell el-Kerkh (Str. 1073). The other specimen at Tell el-Kerkh was a DFBW brown, medium size globular shape bowl (Str. 981).

Two urn burials were uncovered from Operation II at Abi Abyad. The vessels used in this type were all plain Standard Ware, and their size was larger than those dedicated as grave goods.

⁷ The author will use the term "Urn Burial" for all study cases in the text to avoid terminological conflict with other authors or papers. Urn Burial indicates to the practice of interring the remains of dead people inside pottery vessel regardless of the shape.

One fetus was interred within a convex-sided bowl. The interior side was coated by a layer of plaster, which suggested the use of old vessels or intentionally applied to this type of interment. The second case represents an infant buried inside reused broken Standard Ware jar and placed within an oven. Two beads were found with the infant in the vessel. Further, plain Standard Ware convex-sided bowl placed upside down over the remains of two years old as a cover (Plug and Nieuwenhuys 2018).

Urn burials discovered in several sites in the Central and Southern Levant⁸. For instance, thirty jar burials were recovered from the three PN layers in Byblos, Lebanon (Orrelle 2008).

Furthermore, the application of skull removal practices for infants and children at Tell el-Kerkh represents deliberate interest in action. Moreover, children were associated with different types of grave goods and some others were accompanied with a large number of goods. At Sabi Abyad, some people likely preferred to bury children separately from adults as in Operation I, however, they were buried with adults in Operation III. This suggests changes in the cultural perspectives that related to children's social status, social roles and identity in the society (Akkermans 2008).

The differences and similarities between adults and child burials do indeed vary, and depend on whether the burial is in the context of a particular cultural tradition, or practice, for certain families. These manipulations could be attested based on mortuary treatments, specific grave goods, and the way and location of interring the deceased. The variation in the mortuary treatment of children, attaching different grave goods in this period is undoubtedly meaningful. For example, interring children sometimes separately like in Sabi Abyad and exclusively inside structures in Salat Cami Yanı suggests that the age at death is a considerable matter.

Further, children closely buried with others like in Kerkh cemetery might indicate a relationship between these individuals. Thus, the treatment of the children suggests that socially, to a certain degree, they were recognized as individuals with a role in society. Moreover, treatment of children and burying them in various contexts together with other

⁸ The data related to adult burials from Southern Levant is relatively poor in the PN period. The number of uncovered deceased was limited and didn't show any diversity in the treatment of deceased. In other words, the burial pattern and funeral practices have continued the traditions of the former PPNB period. In general, the burials were mainly uncovered in the site inside houses. Grave goods were scarce or not found in most cases (Gopher and Orrelle 1995; Eshed and Nadel 2015).

members or separately would seem to suggest that children and infants had a status that was socially different than adults which perhaps indicates changes in social status intra-household. The interest in children mortuary treatment in the PN period was not only confined to the Northern Levant, but also in the central and southern Levant. Urn burials were attested in the Pottery Neolithic period in Byblos and from Wadi Raba culture sites (Gopher and Orrelle 1995; Orrelle and Gopher 2000; Eshed and Nadel 2015).

6. Final Remarks

Increased details were gained from the examination of the mortuary practices in PN, which clarified the similarities and differences in various aspects in different regions. Investigation of the Anatolian settlements revealed a high degree of variation and differences in addition to a marked regional similarity in some funerary practices. Compared to PN sites in northern Syria, some cultural relations (prevalence of Halaf cultures) (e.g. Tekin 2007) were identified, however, a clear connection is less obvious. The diversity and the privacy of each site intra-region or in different regions are obvious. In other words, the differences and distinctive disparities are greater than similarities. Hence, it is difficult to unite the region in a common feature or type of mortuary practices. The common point between most if not all PN sites, undoubtedly, is that these sites have shown signs of less attention to the funerary practices that prevailed in the PPNB period.

The transformation in social organization from nuclear family households in the PPNA to the extended family household in PPNB (Makarewicz and Finlayson 2018) has been accompanied by a series of social, economic and spiritual changes. Further, the collapse of PPNB society and the development of the PN in the 6th millennium BC led to the emergence of more complexity at all levels and tended to show social differentiation. For instance, potteries become an important component in the PN material culture. A connection between the pottery and its decorations reflect a role in the symbolic system (Verhoeven 2002). On the other hand, devoting the pottery as burial offerings has been proposed as relevant tie to the social class or identity of the deceased (Plug and Nieuwenhuyse 2018).

In the context of social structure, social organization in the PN underwent some changes. Investigation in the PN sites didn't show convenes evidence for social hierarchy, and authority forms were absent in PN society. It appears that the PN society was subjected to form of social

structure that organized the society. The social organization may have been subjected to a local authority that controlled social and economic matters. This authority was confined to and relied on the relationships between society households.

The changes in PN period were crucial and distinctive in the process of development of the Neolithic societies, which was echoed during the following periods. There was an explicit regional diversity from the perspective of material culture such as pottery and its stylistic development scale, grave goods, and other aspects related to the social organization. The PN societies seem to have possessed a distinct local-based culture or regional culture distinguishing sites and region. Moreover, the absence of the PPN common ritual practices or the undertaking of it on a limited scale in the PN, may indicate a major change related to the degree of development of the society between these periods.

CHAPTER 5: Discussion – Reasons for the Emergence of Tell el-Kerkh Cemetery

The abundant plant resources and wild species in the Mediterranean coastal zone attracted hunter-gatherer groups (Natufian) to the region. People ceased their nomadic way of life and began the preliminary steps toward a sedentary way of life by establishing small permanent base camps. This is inferred from the remnants of the round pit-houses uncovered in some of the world's oldest known villages at Abu Hureyra and Jericho. Despite climatic fluctuations during the “Younger Dryas” - the “Natufian people were sedentary hunter-gatherers that relied on a diet consisting of wild wheat and barley, and on hunting gazelles and deer and other available species (Bar-Yosef and Valla, eds. 2003; Enzel and Bar-Yosef, eds. 2017). The domestication of plants was the first step towards the sedentary Neolithic societies that developed, directly from the Natufian period. The succeeding PPNA society became larger than the Natufian and the population density increased. The society relied on a new way of food production involving plants and animals, which were domesticated (Bar-Yosef 2000). The most important development in this period was the domestication of animals and wide-spread food-producing communities. On the other hand, the PPNB provides evidence for the development of new religious beliefs and rituals related to "ancestor cult" (Kenyon 1957) and connected to the development of agriculture.

The development of ancient societies' way of life from mobile hunter-gatherer to the sedentary farming societies, plus the long-term process of subsistence development and food production besides animal domestication, and the transformation into full farming societies led to a more complex way of life in the Late Neolithic period. Some of these relevant aspects related to the funeral practices, grave goods and the emergence of pottery and its correlation to the funeral ceremonies and identity have already been mentioned in the previous chapter.

As mentioned earlier, the PN societies demonstrate a distinct local-based culture or regional culture distinguishing sites and region. Thus, the emergence of Tell el-Kerkh cemetery has been discussed as an independent case study in Chapter 3.

More complex aspects related to the concept of personal property and land ownership demonstrating a high degree of social-economic development have been documented at Tell el-Kerkh. The stamp seals were first uncovered in the Northern Levant at the beginning of the 7th millennium. The use of stamp seals was widely practiced and played an important role as evidence for private property and in the use, management and control of access to goods. Conversely, the cemetery at Tell el-Kerkh demonstrates evidence - in parallel with the appearance of the stamps - for the partition of the cemetery ground for extended family households to bury their deceased over generations in respect to land ownership. From here on, the complex aspects and the expected circumstances beyond the emergence of the cemetery will be discussed.

1. Environmental and Natural Contexts

It is common to invoke environmental factors as the main driving force for changes in ancient societies in order to facilitate the understanding of major transformations. However, it is accurate to think of the surrounding environment as creating opportunities within which people make the decisions that lead to societal changes. Considering the case study, the abundance of the rich organic soil and water resources in the Rouj Basin made this region a fertile place for living - thousands of years ago and up to and including the present day. Locally, it is believed that the Rouj Basin derives its name from the French word (*Rouge* = Red color in English / الروج in Arabic) because of its fertile blackish dark-red color soil and its black volcanic stone however clear references are not available. The Rouj Basin is an extension of the Asi-Orontes Basin, which was one of the water resources in the ancient times. The Rouj Basin is also considered one of Syria's most fertile and richest regions for water springs, groundwater and water swamps (Figure 4-5). Thus, many archaeological sites are located there and several types of main crops such as wheat, cotton, sugar beet, sesame, potatoes and other kinds of vegetables are still cultivated in the region.

The abundant water resources, which provide a fertile place for living, may have enticed the Kerkh people to live there permanently in their settlement over generations. Excavations revealed that Tell el-Kerkh was a complete settled farming village. Several domesticated cereals were grown and various species of animal were domesticated. The appropriate living conditions in Tell el-Kerkh region facilitated sedentism in the settlement since the middle of 9th millennium to the early 6th millennium BC. The zooarchaeological analysis and isotope studies

of human bones indicate the consumption of wheat and animals such as goat, sheep, cattle and pig. Additionally, the isotope ratios did not show a significant difference in consumed plants and animal species between the sexes or between rich and poor, (displayed by the difference in the quantity of grave goods) which illustrate availability and variation of nutrition sources for all society members.

The nature and the layout of Late Neolithic settlements in the Levant most often concern the sedentism of the population in the society. Most likely, the climate conditions and availability of water and food sources played a fundamental role in the settling of the same area or continuous mobility. In another sense, people settling down relied on the place where they can make a living. In some instances, people in the PN period moved in small short-term occupations and/or they were living in near-contemporary human groups in the same region. For instance, excavations in and around Wadi Ziqlab in the Southern Levant revealed several related contemporary Late Neolithic sites. These sites are too small in size and were occupied by small agro-pastoral groups that formed a dispersed community, which interacted closely with one another (Kadowaki et al. 2008). A similar example of mobility and shifting in the same area over a single generation was identified at Tell Sabi Abyad (Akkermans 2013).

In contrast, excavations at Tell el-Kerkh revealed that people lived continuously at the site in a large agglomeration within a small area in the same place. No remarkable evidence for shifting the settlement in the same region, despite the existence of several Neolithic mounds in the region has been uncovered. Essentially, environmental factors and the abundance of living resources have enticed people to settle the same place permanently. Thus, the substantial evidence for domestication activities, communal food storage, and investment of building for particular purposes, food production tools and burial ground emphasize continuous occupation of the settlement for long time year-round.

People have inhabited the same location continuously and the newer levels were built over the older ones. Inhabitation of a farming village characterized by abundant living resources in the close vicinity could restrict mobility and promote living in the same area. The combination of all these circumstances tied the inhabitants to their land and maintained the settlement. In contrast, considering the modern nomadic pastoralist societies in the Rouj Basin region or other regions in Syria, it is notable that they periodically move due to perceived environmental

stresses. They tentatively settle in the fertile seasons, as there is an abundance of nutritious pastures. However, during the severe drought conditions in the summer, they moved their temporary house, which is merely a mobile tent and their herd to more fertile regions near the riverbanks and water bodies. Thus, environmental impacts parallel long-term sedentism.

2. Social and Organizational Contexts

There was no clear evidence for a hierarchal system in this period at Tell el-Kerkh. Remarkable social hierarchy and authority were absent in the PN society. It appears that the PN society was based on a set of social correlations between its members in order to organize the society. However, the general characteristics of the Kerkh cemetery, variation in funeral practices, burial types and dense clusters of graves, pointed to the conclusion that the interment of the dead in the household burial ground was often desired. Relatively small heterarchical human groups occupied Kerkh society. These groups were close to each other and constituted of homogeneous social units maintained by residential proximity. They shared living resources, culture, practices, and experiences common to its members.

The permanent occupation of the same site for a prolonged period of time at Tell el-Kerkh supported people working together and the planning of a long-term constructive way of life. People have their settlement organized, controlled living resources, re-used the abandoned building structures for different purposes such as for burials and established the cemetery. Excavation evidence derived from Tell el-Kerkh demonstrates that people were working collectively and thinking in a way that would benefit all groups. The large size of communal storage, large clay storage baskets, the communal kitchen (Str. 827), the collective household burials and the communal cemetery all point to benefit not only a small group, but rather all groups. The layout of Kerkh settlement took the form of organized communities. On the one hand, people invested in a part of their settlement and continuously use it for several generations as communal cemetery for all members in order to keep the settlement organized, and meeting the increase of the population density on the other hand. Thus, the emergence of the cemetery was a consequence of long-term of sedentism transformation. Ultimately, the emergence of the cemetery reflects an organizational perspective that could be interpreted as the preliminary step toward urbanization and the emergence of the cities in the subsequent periods.

This is another interpretation for the emergence of the Kerkh cemetery in the Neolithic period from an organizational perspective.

3. Economic and Private Property Perspective

The other interpretation for the emergence of the Kerkh cemetery is related to economic activities and the appearance of ownership of land as property between the end of PPNB and the beginning of PN. In this period, the shift from a hunter-gatherer subsistence economy way of life to a new stage of subsistence strategy, mainly reliant on farming, was already completed. This new way of life accompanied significant societal changes, inventing pottery and exploiting it in funeral practices, the emergence of the concept of personal property and the frequent use of stamp seals (e.g. Denham 2013), in addition to the evidence for land as property particularly at Tell el-Kerkh.

In Kerkh society stamp seals were frequently used and sealing was observed. More than one hundred stamp seals and sealings were uncovered at Tell el-Kerkh. Stamps were dedicated to a different age group of deceased and uncovered from various excavation contexts, which implies that the stamps were accessible to many members regardless of age or sex. They were often attached to the stamp holder during lifetime, or dedicated to others after death. Considering the stamp seals holders at Tell el-Kerkh society - stamps hold two meanings: the first is economic, and the second is symbolic.

Stamp seals were discovered in various places in the cemetery. They were discovered in the graves, inside pottery and on the cemetery ground. Stamps were not merely discovered with adults, but also with children. Adult stamp holders were often holding the stamp at their hip or in the palm of the hand. It is strongly suggested that stamps have been used for managing storage or controlling goods; exchanging commodities and marking personal property according to the disposition and evidence of several sealings discovered during excavations. Thus, the stamp seal holders may have fulfilled different functions during their life than other members. Further, Kerkh people in some instances were buried with their own goods which they used during their lifetime or that indicate their occupation e.g. stamp seals, knapping and weaving tools. Thus, the concept of private property and its tools appeared at Tell el-Kerkh for the first time in the second half of the seventh millennium BC.

The function of stamps found with children's stamp holders might differ from that of adults, it rather holds a symbolic meaning than economic one. Due to the children's young age, logically they would not be engaged in economic activities in the same way as their parents. Children do not have the privileges to use or to be an actual stamp holder. However, if they did hold this privilege during their life or if a stamp was found in their grave, it suggests that their kin members dedicated it to them as a grave good. Thus, from an economic concept, the meaning of holding a stamp seal possibly varies and has a different meaning between adults and children. However, the essential purpose of stamp seals is protection - which bears an economic as well as a spiritual and symbolic meaning to those whom it was dedicated; no matter whether holder was an adult or a child.

On the other hand, the cemetery of Tell el-Kerkh displays unique evidence of allocation of part of the cemetery land by household groups to bury their deceased. The general characteristic of Kerkh cemetery illustrates that the burials in the cemetery's three layers were clustered and buried in groups. Considering the distribution of the burials in each layer, the grouping of burials is rather than individual burials in each layer (Figures 3-179, 3-181 and 3-183). In this context, archaeological investigation suggested that Kerkh society consisted of several kin households living together; sharing living resources and the place of interment after death. Moreover, these families determined the location of the burial within the cemetery.

To test this hypothesis, samples from seven groups within the cemetery were selected to compare the isotope values of collagen, glutamic acid, and phenylalanine. The results of the analysis showed that the values varied with respect to burial location. The results indicate that individuals buried within a specific area consumed foods having similar isotope values, even within the limited isotope range for this inland environment. It also suggests that they lived in close relationships, and ate together regardless of sex, age and property. Thus, the results indeed support the view that individuals at Tell el-Kerkh were buried among those with whom they shared common dietary sources, and were probably related and/or household members (Itahashi et al. 2018).

At the earliest layer (Layer 6), some families selected a part of the cemetery and surrounded it by a row of stones to bury their deceased in their property (e.g. C-7 and C-10). Other families used the remnant of abandoned houses like Strs. 916 and 827 to bury their dead. Whereas, Str.

109 in the following layer (Layer 5) was used for habitation purposes and was located in the southern limit of the cemetery, but no burials were uncovered inside. The individual burials in this layer seem to be dispersed, however some others were clustered in groups. Notably, a short row of limestone was constructed in the southern part of Str. 748 in group 9, and one stone was placed over the young adult body. Further, various kinds of grave goods were dedicated to this cluster burials which distinguish this group. The last phase of the cemetery (Layer 4) produced two main remarkable clusters of burials with few individual graves. The layout of C-2 indicates that it was clearly used by one kin household. The burial was surrounded by a square-shaped limestone row, opened partly from the south side - to identify their burial outline and bury their deceased over the generations.

The burials at Kerkh cemetery were grouped in three main contexts:

- 1) An extended kin-household burial surrounded their burial outlines by rows of limestone to demarcate their property.
- 2) Kin-household burial took a place in the remnants of abandoned houses.
- 3) Kin-household burial took a place in the ground of the cemetery. This kind of burial has no outlines such as C-1, C-8, and other burial assemblages.

People at Tell el-Kerkh did not use residential houses during their occupancy to bury their deceased, however, they did so after the structure was abandoned. Thus, the legacy of burying the deceased inside the houses in the PPN period does not apply to the Kerkh case. Rather more, people began burying their dead in designated places in the cemetery, and in some instances, the outlines of the grave were marked by a row of stones. Marking the grave outlines not only demonstrates specific household grave plots in the cemetery, but also prevents overlapping with the close adjacent household graves. Further, the outline for the first grave is the same for the second grave such as (C-2 and C-1, C-10 and C-8). Identifying the grave and the interment of number of different age groups of deceased indicates the grave was dedicated to a particular extended household and they kept using it over generations. It can be suggested that the place of the grave was originally determined through compatibility between household members with other groups. Thus, the concept of property has been testified at Tell el-Kerkh. This concept took shape through the use of stamp seals for the first time in this period and within the context of land tenure. Eventually, it can be concluded that

the emergence of property and ownership concepts were synchronized with the appearance of the stamp seals in this period.

According to current evidence, people at Tell el-Kerkh neither attached their deceased to the buildings in use, nor rebuilt them after their demolition, but rather used them for a different function. Consequently, the house in the PN period did not retain its role as a place of social practice which linked the living and the dead physically and symbolically (Guerrero et al. 2009: 383), or linked to the ancestor in the houses that had prevailed in the PPN period. The prevalent indoor rituals and burying the deceased beneath the floor of the house in the PPN have been abandoned in the PN. At Kerkh, the ritual practices took place in open spaces and the communal building Str. 827 could have been used for preparation due to its location near the cemetery and the subsequent interment of the deceased in the household grave. The deceased were even grouped and buried side by side, or they were superimposed over each other in case of the grave pit. Likely, the vacant spaces, the number of deceased and the size of the grave pit determined the layout of the grave and the interment form.

The kin relations in Kerkh society may have shaped the arrangement of the deceased within the cemetery. Hence, the phenomenon of collecting burials and repeating the interment with every new death reminded the living people of their descent groups, which mean that the dead people were remembered. The collective burials contain the remains of individuals from one community and they have been used for a prolonged time. This raises the suggestion of building a collective identity for descent groups over several generations spanning hundreds of years, and the grave represents the fixed ancestral place. However, they may also have contained individuals from different household groups (as mentioned in Chapter 3 (8) p. 120) to strengthen socio-political ties and strength the social cohesion between groups. Consequently, grouping burials in the social perspective have played a cohesive role spread over a large number of individuals and sending distinct echoes in time from generation to another.

Considering modern traditions in Syria, the distribution of the graves and its location in most modern cemeteries reflect a close relationship to a larger group. People always prefer to be buried close to their relatives if there is a vacant place. Thus, some people even break the system of graves allocation to bury their deceased close to their family members, and this is

the reason why most of the cemeteries in Syria look un-systematic. Further, many families still dedicate a piece of land near the village exclusively to bury the deceased of their extended family. Moreover, many ask before their death, or the offspring request to be buried in the same grave as their parents or grandparents. Hence, the grave receives the successive depositions of multiple corpses over generations.

The variation in funeral practices, burial types and inhumation patterns uncovered in the cemetery reflect the diversity of dealing with dead postmortem. The kin household in Kerkh society was the basic social nucleus for continuity on a day-to-day and generational basis through kinship and this was clearly demonstrated in the cemetery. The distribution of the individuals in the cemetery of Tell el-Kerkh demonstrate a communal cemetery allocated to all individuals with no consideration of spatial division based on age or sex. People maintained and strengthened social cohesion by sharing their identities with other members in the whole group. Hence, the cemetery of Tell el-Kerkh has fulfilled a crucial role in preserving social order and communal identities. Significantly, the settlement and household organization are obviously seen at Tell el-Kerkh society. This way of life indicates compatibility between the settlement household members and reflects an acceptable shared view to dedicating household burial land in the settlement overall.

In conclusion, the life at Tell el-Kerkh was characterized by sets of correlations. The prolonged-term occupation of the settlement demonstrates a spatial tie between people and their settlement. Further, people are tied spatially to the cemetery ground or to their own land property, whereas group members are tied to a household burial. Hence, people at Tell el-Kerkh fully adapted to the new lifestyles suited to their local environment and subjected their deceased to a particular treatment appropriate to their beliefs and intra-group norms.

CHAPTER 6: Conclusion

The purpose of this dissertation was to highlight the changes in the location of the graves and burial grounds throughout the long period of transition and development of the ancient societies in the Near East from the hunting-gathering nomadic way of life in the Natufian period to the settled farming way of life in the PPN period to the regional-based complexity of the PN period. As discussed earlier, the location of the burial-structure was a shifting relationship. This was explicitly varied and relied upon development of the way of life, the changes in social structure and the spatial ties with the ancestors through the house-based ancestral lineage. Hence, understanding the role that the deceased played in the society and the symbolic relationship between the living and the dead postmortem could to some degree facilitate our knowledge of the changes in burial location and the associated reasons beyond determining the location of the grave.

It is argued that characteristic of the burials in the Natufian period and the increase in secondary burials were subjected to the constraints of settlement mobility (Byrd and Monahan 1995; Kuijt 1996; Bar-Yosef and Belfer-Cohen 2002). Moreover, the group burials are attributed to kin-group distinctions (Belfer-Cohen, Schepartz and Arensburg 1991; Kuijt 1996; Byrd and Monahan 1995). Further, it is suggested that the deceased who died away were brought back to their base settlement to be buried in their original home (Bar-Yosef and Belfer-Cohen 2002). Thus, this may indicate that there was a spatial connection between the settlement and the people who were periodically mobile through the deceased. In other words, the burials tied people to their first settlement where their ancestors were buried. Hence, the relation between the living and deceased could have played a role in restricting mobility or even enhanced settling down. Further, the association of the deceased with the living structure in the Natufian period became common which suggested a reduction in the itinerant way of life (Bocquentin, Cabellos and Samuelian 2013).

Some sites were essentially used as burial sites such as Hilazon Tachtit and Raqefet Cave, and they were used for successive interment (Grosman, Munro and Belfer-Cohen 2008; Nadel et al. 2008). These sites are interpreted as evidence for attachment to a specific territory in a particular location. Therefore, the larger number of deceased in collective burials in the Late

Natufian on one hand suggests the expression of group cohesion between society members “since they indicate more concentrated efforts toward reburial in specific locations serving as territorial markers” (Bar-Yosef and Belfer-Cohen 2002: 61). Ultimately, the burials in the Natufian period not only linked people with each other but also to their permanent settlement. Hence, “the graves may have played an important symbolic role in the new settlement foundation” (Bocquentin, Cabellos and Samuelian 2013: 185).

By the beginning of the Neolithic period, there was increase in population density and the large villages of the PPNA began to appear. Giving up mobility, and transitioning to new settled way of life might require the creation of intra-group social cohesion in the permanent settlement. The changes in social organization in this period were first examined through the construction of sacred structures that were used for cultic functions or for meeting and decision making, and secondly through examining funeral practices. However, such building in the subsequent PPNB period, as mentioned in chapter 2 obviously decreased and almost disappeared in the PN period. It has been suggested that in, “such large communities, the need for intragroup social cohesion motivated the establishment of public structures such as shrines, and the introduction of organized rituals” (Bar-Yosef and Belfer-Cohen 2002: 62). Moreover, the communal buildings played a role in facilitating social communication and strengthening social cohesion between groups through shared activities and “the ubiquity of such communal architecture in PPNA settlements strongly suggests that the social systems of increasingly large and settled PPNA communities were supported by the propagation and maintenance of community-oriented activities” (Makarewicz and Finlayson 2018: 4). Hence, a spatial relationship between the venue where the communal activities take place and the burials is obvious. Even though the original building function was at an end, people kept living in its close vicinity and they buried their deceased inside the structures or adjacent to it, which means that “the inhabitants retained the memory of the role the building had played a few or several dozen years earlier” (Mazuroweski, Bialowarczuk and Januszek 2012: 54).

In many instances, funerary rituals involving ceremonial performances toward the deceased followed their death. Pearson (2016: 193) believes that death forces a change in social relations, where life will not be the same again for the living. Meanwhile, death provides an opportunity to the living to hold a funeral and manipulates their relation to each other through their relationship to the dead. The relationship between the living and dead is inextricably

linked through treatment of the dead by the living. Further, the collective ritual activities ensure the participation of individuals from multiple households, which enhanced social cohesion (Kuijt 1996). Hence, the deceased were always buried in the close vicinity to the residential structures where ritual practices were undertaken. Retrieval of body parts of the deceased and secondary treatment of the human skull in the framework of the funeral practices carried symbolic significance and emphasize communal identity and shared ancestors. In this period society is characterized by communal buildings and their role in strengthening the social cohesion between society members through shared activities. This includes a focus on the secondary funeral practices and removal parts of the human body. The remains ultimately placed in their final deposit and were in general associated with building structures express and reinforce a form of place-based identity.

The dramatic changes in the PPNB, which included the complete reliance on farming and the expansion of large agricultural villages, accompanied by complex funeral practices affected various aspects of human behavior. During this period, various interpretations related to the practice of interring the deceased beneath the floor and rebuilding houses in the same location have been put forward. In some settlements, the burial location was determined in advance, and there was a unity in the design of the houses such as in Tell Halula. Whereas, in other cases, the dead were attached to the building in the framework of shared funeral practices between communities which required placing the deceased body completely or partly in its ultimate deposit which indicate the expression of place-based identity. The dead, however, were found in different contexts as seen in Chapter 2.

The relationship between the living and death did not end at the moment of death. In many instances, multi-stage funerary rituals involving ceremonial performances toward the deceased followed death to build social memory, and until the dead were ultimately buried in their final location. Thus, it is strongly argued that these behaviors were put forward to create social memory and "reflect aspects of individual and collective identities" (Kuijt 2001: 86), further linked to house-based ancestral lineages. In general, the funeral practices were often undertaken within the settlement residential area and associated with the residential buildings which represented a place linked the history of the ritual actions. It is suggested that, "people physically and symbolically linked the living with the dead, a link materialized within the house as a location of social practice" (Guerrero et al. 2009: 383). Thus, the spatial contexts where

the deceased were buried or the collective caches were installed have symbolic meaning that linked the society social memory to a spatial location (Kuijt 2001).

The nonresidential structures of the former periods continued to the PPNB, but they were drastically decreased and came to an end in the LPPNB and disappeared in the PN period. The changes attributed to the drastic transition in the societies in the LPPNB were associated with a major shift in subsistence strategies to food production and herding. Further, Makarewicz and Finlayson (2018: 6) illustrated that "The new reliance on plant and animal domesticates, use of architectural forms that increased storage capacity for agricultural output while simultaneously concealing such stores from neighbors, and the absence of nonresidential buildings in LPPNB settlements suggests the emergence of new socio-economic frameworks that accentuated individual or household property and privacy".

Excavations of the PN sites have shown a completely altered image of life ways in PPN societies. The substantial changes related to the abandonment of life ways in the large settlements, long-term settlement or short periodic mobile way of life, changes in settlement pattern, funeral practices and expressing the concept of identity, all refer to a complex way of life and distinctive regional characteristics. The custom of interring or attaching the dead to personal property or a spatial location in a residential area was abandoned in the PN period. The phenomenon of interring the dead beneath a building floor has been interpreted as related to the concept of house-based identity in the PPNB period is far from being applicable in the PN period. The concept or the expression and building of personal and communal identity in the PN period have been interpreted through various perspectives. Some are related to the funeral practices such as skull removal (Jammo and Tsuneki in preparation), material culture such as pottery (Plug and Nieuwenhuysen 2018), pottery decoration (Verhoeven 2002) and stamp seals (Denham 2013). In a "house-based society" such as at Çatalhöyük, Hodder (2006: 12) argued that the houses have become more relevant to economic function rather than ancestor-based rituals. Further, he argued that the houses shifted away from ancestry and the lineage constituted in the houses to the relations between houses.

In closing, the spatial relationship between dead and building structures in the PN period is further from the prevailing concept in the former period, and closer to remembering the

extended household dead and the construction of a collective identity over several generations within their own property. Boz and Hager (2013: 439) have also concluded "the dead were remembered, as each new death reminded the living of the occupants in the world below them". The deceased in the PN period were linked to particular places that formed an extension connecting the generations to each other. These locations were in close vicinity, in active-use or abandoned houses or in the designated land that allowed communal sharing activities, rituals, and communication.

Last but not least, various essential points related to the transition to the PN period need to be highlighted and extensively studied. Although the number of excavated sites has increased in recent decades, this period is still poorly understood and the released data is still insufficient to understand the social changes, the funeral practices and its symbolism and various aspects of the PN complex societies.

In the end, it is hoped that the tale of Tell el-Kerkh Neolithic society has delivered sufficient knowledge and opened the door widely for further discussion and further comparative studies with other relevant sites in the same period in order to facilitate understanding of the PN period and its complexity.

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