EARLY EVIDENCE OF SINGLE, MULTIPLE, AND COLLECTIVE (?) BURIALS IN THE LEVANT

LEVANT BÖLGESİNDE TEKLİ, ÇOKLU VE TOPLU (?) MEZARLARIN VARLIĞI İLE İLGİLİ EN ESKİ BULGULAR

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ABSTRACT

The Levant provides the earliest evidence in Eurasia for funerary practises illustrated by intentional burials dated to the Middle Palaeolithic Period. Such burial behaviour was shared by distinct human groups that have alternated use of the Mediterranean Levant between 130.000 and 50.000 years BP and were associated with distinct Mousterian assemblages. Within a sample of 6 sites (Skhul, Tabun, Kebara, Amud, Qafzeh and Dederiyeh), two of them in northern Israel (Qafzeh and Skhul) have to be distinguished by a higher number of burials and evidence of other symbolic activities. The Mousterian toolmakers in both sites are viewed as essentially early modern human in skeletal anatomy.

ÖZET

Avrasya'da Orta Paleolitik Çağ'a tarihlenen bilinçli ölü gömme uygulamalarının saptandığı en eski örnekler Levant'ta bulunmaktadır. Bu tür ölü gömme, Doğu Akdeniz Levant Bölgesinde 130.000 ila 50.000 yılları arasında yaşamış olan ve farklı Musteryen buluntu topluluklarıyla tanımlanan insan topluluklarının ortaklaştığı bir uygulamadır. Ele alınan 6 yerleşimden (Skhul, Tabun, Kebara, Amud, Qafzeh ve Dederiyeh), İsrail'in kuzeyinde bulunan iki yerleşim (Qafzeh ve Skhul), gerek mezarların sayısal çokluğu, gerekse inanç sistemini yansıtan göstergeleriyle diğer buluntu yerlerinden ayrılmaktadır. Bu iki yerleşimdeki iskeletler, anatomik özellikleri bakımından modern insan türünü yansıtmaktadır.

INTRODUCTION

The Levant has attracted the attention of the scientific community since the early excavations conducted at the beginning of 20th century in three sites located in Palestine (Tabun, Skhul and Qafzeh), which revealed, below historical deposits, Palaeolithic entities. Later, long-term projects have allowed additional discoveries of skeletal remains and burials associated to Middle Palaeolithic (=Mousterian) industries in Northern Israel and Northern Syria (e.g. Wadi Amud, Kebara, Dederiyeh and Hayonim). In the course of the last few decades, research in biological anthropology has brought new insights in the study of the history of these human populations inhabiting the Levant. The anthropological documentation associated with Mousterian assemblages is circumscribed geographically and provides the early evidence of deliberate burials. Moreover, such funerary practises were shared by anatomically distinct human groups which have alternated use of the Mediterranean Levant for perhaps more than 130.000 years.

DELIBERATE BURIALS IN ARCHAEOLOGY AND THE DEVELOPMENTS IN ARCHAEOTHANATOLOGY

In the study of burials scholars became aware in the last three decades that human bones were as important as any other kind of remains. Arguments used to support the presence of intentional burial are based on a series of taphonomic (from the Greek *τάφοσ*, burial, and *νόμος*, law) and environmental criteria. The identification of anatomical connections is of course a frequently used criterion, but various factors (e.g. natural, accidental or anthropic) may modify the original situation of the skeletal elements. An innovative approach devoted to a better understanding of human deposits has been developed, based upon field anthropological observations. The major aim of this methodological approach, now defined as archaeothanatology (Boulestin and Duday 2004) is to enable valid interpretation by archaeologists and skeletal biologists of the process of decay of the body by close attention to its skeletal remains (Duday et al. 1990; Duday 2005, 2009).

Information is thus provided on the transformations undergone by the corpse of the deceased since its deposition either in a natural niche, a pit or an elaborated grave. Field anthropological observations permit to identify changes in the body position due to taphonomic processes, and special attention is paid to the space of body decomposition that could be either an empty space or a filled-in grave. The taphonomy of the body, rather than that of the skeleton, is one of the fundamental elements of funerary archaeology today and understanding the field conditions is a major objective.

Different mechanisms are involved in the post-mortem evolution of the body which depends upon environmental conditions. In the case of earth graves, the presence of mobile and dry sediments surrounding the corpse permit the filling of the interior volume of the corpse freed by decay of soft tissue, and the bones keep their original position. If the body was decomposed in an empty space, bones can move after the collapse due to the soft tissue decomposition and gravity force, and natural articulations are displaced from their original position. In reconstructing the sequence of body decomposition, a distinction is made between ligamentous connections disarticulating early or labile (e.g. those of hand or foot bones) and those disarticulating later or persistent (e.g. atlanto-occipital joint). Besides an evaluation of the chronology of the collapse of different joints, osteological observations contribute to the determination of the environmental conditions of the body decay and to the identification of restraining effects.

In the discussion of the decay modalities of the corpse, detailed skeletal field observations play a major role in the distinction of primary deposits (the deceased was deposited soon after death exactly where the "skeletonized" body has been recovered) and secondary deposits ("skeletonized" body or dry bones have been removed from their original place of decomposition).

At the same time, in the case of two or more individuals buried, it is possible to differentiate those who were buried simultaneously (multiple burials) from those who were buried successively (collective burials). In the case of ccollective burials, dif-

ferent body deposits are made over a certain period of time, and the human remains consist of complete or sub-complete articulated skeletons, sometimes portions of articulated skeletons and commingled bones.

This methodological approach of human deposits was firstly applied to sites with important series of burials in Western Europe. Scholars working on Palaeolithic sites have taken benefit of this essential approach in understanding the circumstances of which the human remains have reached the situation in which they were discovered, and in the revision of published interpretations of old discoveries as well. There is no doubt that a clear distinction can be made between depositional accidents and intentional burials, and few sites in Northern Israel and Northern Syria provided evidence of the antiquity of these funerary practises in these regions.

LOCATION OF THE LEVANTINE SITES AND HISTORICAL BACKGROUND

MOUNT CARMEL

First excavations were conducted, between 1929 and 1934, by D. A. Garrod, D. Bate and T. D. McCown, at the Wadi el Mughara caves of Tabun and Skhul; they have produced the first sample of fossil hominids within a Mousterian context in Southern Levant. The Tabun cave is located on the Western escarpment of the Mount Carmel, about 25 km south of Haifa (Fig. 1). The depositional sequence of the cave yielded typical Mousterian assemblages that were identified as Tabun D, C and B, according to typological and technological studies (e.g. Ronen 1979; Jelinek 1982, 1992). The Mousterian long sequence of the Tabun Cave was later used as a reference for a classification of the Levantine lithic entities. The human remains consist of one nearly complete skeleton (Tabun C1) buried near the entrance of the cave, one adult mandible (Tabun 2) and a few isolated fragmentary specimens. The stratigraphic attribution of Tabun 2 to layer C seems to be least problematic than that of the skeleton (Bar-Yosef and Callender 1999). Effectively D. A. Garrod has firstly suggested in her book notes that the skeleton might be assigned to layer C; later she expressed a suspicion that the skeleton deposit might be either associated with layer C or intrusive from layer B into the top of layer C.

The Skhul Cave is several meters to the North of Tabun. In a short time, ten individuals were uncovered from layer B, in front of the entrance of the cave (Garrod and Bate 1937). Layer B contained a lithic assemblage qualified as "Tabun C-type" Mousterian industry (e.g. Bar-Yosef 1995; Hovers 1997). For McCown and his colleagues, the ten individuals recovered documented "*…one of the most remarkable of prehistoric sites by virtue of the cemetery it contained*" (McCown 1937: 106). All the human remains were thought to be representatives of deliberate burials; however, an examination of the documentation challenges this assertion (Tillier et al. 1988; Tillier 1995, 2009).

The Kebara site is located in southern Mount Carmel, at about 13 km south of Wadi el Mughara, and 60/65 m above sea level (Fig. 1). Excavations were firstly conducted by M. Stekelis (1951-1965) and later by a current multidisciplinary Israeli-French project that lasted from 1982 to 1990 (Bar-Yosef and Vandermeersch 1991; Bar-Yosef et al. 1992). The Mousterian sequence included several units (VI to XII) and a majority of the human remains were found in Units IX to XII, containing a "Tabun B-type" Mousterian industry (Bar-Yosef et al. 1992), between ca. 6,2 and 8 m below datum. The hominid sample (e.g. Smith and Tillier 1989; Bar-Yosef and Vandermeersch 1991; Tillier et al. 2003) includes a large amount of fragmentary isolated bone or tooth remains (MNI=21); in addition to this fragmentary sample, are two individuals which were better preserved and originated respectively from Units X and XII, providing evidence on funerary practices.

UPPER GALILEE

The Qafzeh Cave, located about 3 km east of Nazareth (Fig. 1), was first excavated by R. Neuville between 1933 and 1935. New excavations were carried from 1965 to 1979 by B. Vandermeersch and colleagues. Numerous and quite complete specimens (MNI=15) were found with an archaeological assemblage that was described as "Tabun C-type" Mousterian industry, in which centripetal and/or bi-directional preparations prevailed and

the typical products were side scrapers, large oval and quadrangular Levallois flakes (Hovers 1997, 2009). The spatial distribution of the human remains is restricted to a few square meters in front of the entrance to the cave and a majority of the discoveries originated from layer XVII.

In 1961 and 1964, a Japanese team had worked in the Wadi Amud, located along the western bank of the Jordan Valley, and have found a few human remains. The most complete specimen was an adult skeleton, Amud 1, buried close to the wall (Suzuki and Takai 1970). Recent excavations led to additional specimens and among them was an infant partial skeleton, Amud 7 (Rak et al. 1994). The lithic assemblage was described as "Tabun B-type" Mousterian industry (Hovers et al. 1995).

AFRIN VALLEY

From the Afrin Valley in Northern Syria (Fig.1), is known the Dederiyeh Cave which unearthed a small sample of fossil hominids in the Mousterian layers, i.e. mainly two incomplete skeletons children (Akazawa et al. 1995, Akazawa and Muhesen 2003). Dederiyeh 1 originated from layer 11, while Dederiyeh 2 was found in the lowest part of layer 3. Following T. Akazawa and his colleagues, the Mousterian lithic assemblage shares similarities with the "Tabun-B type" identified in Kebara and Amud Caves.

CHRONOLOGY AND POPULATION DYNAMICS

CHRONOLOGICAL BACKGROUND

Radiometric dates (Thermoluminescence and Electron Spin resonance chronology), together with biostratigraphic evidence, reveal that there are Early and Late Mousterian assemblages in the Levant.

The antiquity of the Tabun and Skhul hominids, first suggested by T. D. McCown, was later confirmed by radiometric dating methods. Results from TL on burnt flints provided an average date of 119±18 ka BP (Mercier et al. 1993) for layer B at Skhul (Tabun C-type), in agreement with those of ESR analysis (ESR/LU: 101±12 ka; Stringer et al. 1989). Yet, recent direct dating (ESR) on the human remains or the animal relics associated to the burials (Grün et al. 2005) indicate that the Mousterian sequence lasted from ca. 131 ka to 93±12 ka BP, and thus some hominids (e.g. Skhul IX) predated others (e.g. Skhul I, V, II).

TL dating obtained from lithic assemblages of recent excavations at Tabun placed layer C at 171±17 ka BP (Mercier and Valladas 2003), while ESR dates (recently re-assessed by Grün and Stringer 2000) obtained on animal teeth from Garrod's excavations put layer B at 102±17 ka EU (122±16 LU), and layer C at 120±16 ka EU (140±21 ka LU). Whatever stratigraphic assignment is given to the Tabun "C1" skeleton, the specimen appeared closer in time to the Skhul hominids than what was suggested in the past (e.g. Vandermeersch 1981; Ronen 1982; Bar-Yosef 1995, 2000).

At Qafzeh, E. Tchernov had assumed that the site was occupied during a warm phase of OIS 5, documenting a "northward expansion of the African and Saharo-Arabian biotic zone" (Tchernov 1981). Radiometric techniques (TL, ESR, Schwarcz et al. 1988; Valladas et al. 1988), suggested that the Mousterian sequence covers a short time span, around 92±5 ka BP (Valladas et al. 1988).

The dates for the Mousterian sequence of Kebara (from unit VI to XII) demonstrate a longer period of human occupation, ca. 64 to 48 ka BP (Valladas et al. 1987; Schwarcz et al. 1988). The two human deposits originated from two different units (Tabun B-type), Kebara 1 from unit X (between 61.6±3.6 ka and 64±6 ka) and Kebara 2 from XII (59.9±3.5 ka). Radiometric dates for the Unit B2-8 which had contained the Amud 7 deposit gave a mean age of 57.6±3.7 ka BP (Valladas et al. 1999; Rink et al. 2001); following Hovers and colleagues, the adult Amud 1 deposit could be earlier (Hovers et al. 1995).

At Dederiyeh, layer 3 (which had contained the second child deposit) has been dated by radiocarbon measurements between 48.1±1.2 ka and 53.6±1.8 ka BP (Akazawa et al. 2003), but such measurements were close to the quantification limit. It was suggested that the Mousterian layers could be closer in age to those of Kebara and Amud (that means around 60 ka BP), on the basis of similarities between the lithic assemblages. This chronological

assignment needs to be confirmed by radiometric techniques.

THE UNIQUENESS OF THE LEVANTINE MOUSTERIAN FOSSIL RECORD

In Europe, the fossil record has established a close relationship between the Mousterian culture and Neanderthals. Yet, the anthropological data derived from Southwestern Asia has challenged this link. Indeed, most anthropologists accept the view that the association of different human groups to the Mousterian material culture is a uniquely Levantine trait, although there is no consensus at the present time on the classification of all these human subsamples.

Based on their overall anatomy, the human remains from Skhul and Qafzeh are regarded as providing the clearest evidence for early modern humans in the Levant (e.g. Howell 1958; Vandermeersch 1981; Mann 1995; Tillier 1999). The body proportions of these hominids (with long limbs) recalled those of equatorial populations and were employed to support an African origin (Trinkaus 1981).

On the other hand, the phylogenetic affiliation of all other Mousterian toolmakers (i.e. Tabun, Kebara, Amud or Dederiyeh specimens) remains a matter of debate, as this anthropological documentation clearly reflects a high degree of anatomical variability. Although acknowledging presence of markedly anatomical differences between these Levantine hominids and the classic Neanderthal people of Europe, a number of scholars conventionally includes the former within the Neanderthal grouping, supporting a paradigm idea of a Neanderthal migration to the Near East (e.g. Rak 1993; Trinkaus 1995; Vandermeersch 1995; Hublin 2000); others underlined the fact that genetic connections with populations from Africa and Asia have also to be considered and that some admixture between different human groups remained a possibility in the Levantine corridor (e.g. Mann 1995; Arensburg and Belfer-Cohen 1998; Tillier et al. 2003; Tillier 2005; Tillier et al. 2008).

At present, there is a general agreement that in the Levant different human groups have shared the same funerary behavior during the Middle Paleolithic, although the number of identified burials for this time period associated to a Mousterian archaeological context is not numerous.

SINGLE PRIMARY BURIALS

In the Levant, it has now been attested that the Mousterian human deposits were not simply depositional accidents. A majority of the deliberate burials identified are single primary deposits and all age-classes are represented: infancy, childhood and adulthood. At present, a minimum number of single burials between 10 and 12 (if the two possible infant burials unearthed in Qafzeh and Kebara are considered) can be recognized. The purpose of this paper is not to go through all the cases documented, but to illustrate with few examples, different types of funerary deposits and patterns of body decomposition.

POSSIBLE INFANT BURIALS

Among the Levantine Mousterian hominid samples, the ratio of infants (deceased less that one year old) is very low and mainly represented by isolated teeth (e.g. at Kebara and Qafzeh: Tillier 1999; Tillier et al. 2003). However, two sufficiently preserved individuals were discovered during old excavations. The Kebara 1 infant skeleton was uncovered during the last year of M. Stekelis excavations in 1965 in the northern sector of the cave, close to the wall. T. Schick and M. Stekelis noted: "*at a depth of 6.83-6.90 m the skeleton of a seven-month-old child was discovered. (..) Nearby were three stones and the tooth of a rhinoceros. The skeleton was removed intact within a mass of earth*" (Schick and Stekelis 1977: 103). Additional details concerning the circumstances of deposition or the evidence needed for understanding the original anatomical articulation of the corpse were not recorded. However, considering the state of preservation of the skeleton unearthed in an area used as a dumping zone, it has been suggested that the infant had been intentionally buried (Smith and Arensburg 1977; Tillier 2008).

The perinatal (or neonatal) specimen Qafzeh 13, found under a stone in 1969, was removed as a block with the sediments; no field observations (body position, preservation of anatomical connections) were collected that could be employed to reconstruct ele-

ments in the chronological sequence of body deposit. Interestingly, cranial and infra-cranial bones (including complete small hand phalanges) and few deciduous tooth germs were preserved. Regarding the state of skeletal preservation, the location of the deposit in front of the cave entrance, it is likely that the Qafzeh 13 deposit reflects an intentional protection process (Tillier 1995).

Field observations on the arrangement of the bones is, of course essential, but in these two cases they are lacking due to old excavations methods. However, the uniqueness of the two infant deposits within the general scope of documented sites, lead us to suggest the presence of deliberate burials as an interpretative working hypothesis.

THE DECAY OF THE CORPSE IN A NATURAL NICHE

The articulated skeleton of the infant Amud 7 (Rak et al. 1994) was lying on its right side in a small niche. It has been noted as (Hovers et al. 1995: 52): "*A natural niche in the rock face of the cave wall served as burial structure, the body laid down directly on the bedrock (…)*". We could notice from the picture published (Fig. 2) that the skull had collapsed, and several bones in disequilibrium did not maintain their original position (as illustrated by the mandible for instance), the rib cage was flattened; it seems that the filling with sediment of the empty space inside the original volume of the corpse did not immediately follow the disappearance of the soft parts. On the pelvis of the infant a part of a cervid maxilla was found: its location within the space occupied by the body, in contact with the bones, supported the recognition of an offering, according to E. Hovers and colleagues.

The use of a natural niche for human deposits is not restricted to infants or to those deceased at a very young age as exemplified by the Qafzeh 8 adult burial. The corpse was resting on its right side, oriented East-West and facing East, in a natural niche (around 1 x 0,8 m) from layer XVII (Vandermeersch 1966). The upper limbs were lying along the body, while the lower ones were flexed.

PRIMARY DEPOSITS IN AN EMPTY SPACE

A child burial was uncovered in 1990 in a Mousterian layer at Dederiyeh Cave. According to Akazawa and colleagues, the Dederiyeh 1 skeleton (a child ca. 2 yrs old at death) was found, 1,5 m below the surface in layer 11 (Akazawa et al. 2003). The child, oriented north-south (Fig. 3) was lying on its back, upper limbs extended along the body and lower limbs partly flexed. A large part of the skeleton had still preserved its anatomical connection. The presence of a plaque behind the head was interpreted as a possible pillow. The head resting on that plaque was probably in a higher position than the rest of the body and did not maintain its initial position in the deposit. Bones of the skull have clearly moved after the collapse due to the soft tissue decomposition, and have fallen beyond the space originally occupied by the head (Tillier 2008).

The mandible and as well as the hand and foot bones have been displaced from their original position, some of them were dispersed outside of the space originally occupied by the corpse. All these observations support that the Dederiyeh 1 deposit was a primary burial and that the decomposition probably occurred in a void.

PRIMARY DEPOSITS IN "FILLED-IN GRAVE"

The discussion related to conditions of body decomposition must rely on field observations considering the skeleton with its surroundings. Yet, it appears that sometimes, geochemical processes have altered the sediments surrounding the "skeletonized" body and this can easily explain the lack of information with regard to the limits of the pit (or grave) dug to contain the corpse. In such cases, particular attention must be paid to the observation of anatomical connections and bone orientations in the understanding of the primary state of deposit.

CHILD BURIALS

The Skhul 1 child deposit was found in 1931, 1,75 m deep in front of the mouth of the cave; it was unearthed in a layer that had been extremely altered after the burial. "*The skeleton which was embedded in hard lime-stone breccia, showed by the position of its parts that the child has been buried in a squatting posture with body flexed forwards*" (McCown 1934: 15). This contracted positioning implies that the

corpse probably was put in a narrow space, and the sediment replaced the perishable elements of the cadaver as they were disappearing. This child was about 3 years old at death.

The Qafzeh 11 adolescent (ca. 13 years old at death) unearthed from layer XXIII was lying down on the bedrock, in front of the entrance to the cave, with upper and lower limbs flexed, and the hands were positioned nearby the face (oriented westwards). A large stone has damaged the pelvic area and the lower limbs. Parts of fallow deer antlers were placed directly in contact with the hands near the face. Such a location, within the original body spatial arrangement, suggested that the deposition was not an accidental incorporation but a funerary gift (Fig. 4). The adolescent burial represents a unique case from the site documenting a special treatment of the deceased with a funerary offering (Vandermeersch 1970; Tillier 1995). Interestingly, osteological data led to the diagnosis of a cranial injury affecting the right side of the forehead that must have happened soon before death (Tillier et al. 2004). Under such circumstances, a link between the causes of death and the presence of the intentional offering can be postulated.

ADULT BURIALS

At least two primary adult burials can be recognized at Skhul and they were located, like the child deposit, in front of the cave, and unearthed in a hard lime-stone breccia. The Skhul IV body was lying on its right side in a pit with upper and lower limbs tightly folded. The head was lying to the East. The position of the foot bones resting again the western wall of the pit appeared as a consequence of a restraining effect, resulting from the small size of the funerary space (Fig. 5). Foot and hand bones have kept their anatomical connections.

Unlike Skhul IV, Skhul V was lying on its back, the head bent upon the chest and oriented to the West, with upper and lower limbs tightly flexed. McCown noted: *"it would seem that the deceased had been crowded into a grave of inadequate size"* (McCown 1937: 100). The Skhul V deposit represents another archaeological example of funerary offering in the Levant: it consisted of a large pig mandible lying below the left forearm and close to the tightly flexed right upper limb. There is no doubt that this deposition was intentionally done, however, as mentioned by the author, *"its presence is a subject for speculation rather than explanation"* (McCown 1937: 100-101).

The Qafzeh 25 deposit excavated in 1979 has been partly damaged by an old sounding made in 1934 by R. Neuville; thus only the upper part of the skeleton was preserved and appeared in natural articulation. The position of the body was quite similar to that of Skhul V, the corpse was lying on its back, oriented north-east/ south-west, the upper limbs flexed and the hands near by the face. The Qafzeh 25 head was in a northern position. The skull and jaw were flattened due to the peripheral pressure of the sediment.

The Kebara 2 adult (Arensburg et al. 1985) was lying on its back, oriented East-West; the head, as documented by the anatomical position of the cervical vertebrae, mandible and hyoid bone, was originally at a slightly higher level than the rest of the body. The skull was missing (Fig. 6), but the well preserved mandible rested on its basis. The upper limbs were crossed on the chest, while only the proximal half of the left lower limb was preserved (the deposit has been damaged by an old sounding made by F. Turville Petre in the 1930s). Some taphonomic aspects can be inferred from the anthropological observations made in the field that helps understandingm this adult burial. Most of the skeletal elements were still anatomically connected, especially the looser ligamentous connections disarticulating earlier in body decomposition (e.g. hyoid and hand bones). There was no evidence for the collapse of the thoracic cavity after decomposition of the soft tissues. We can assume that there has been a progressive filling of the space with sediment. The body was buried, lying against the steep northeastern side of the pit (around 50 cm wide) as shown by the persistent connections of right humerus and right hipbone in correct anatomical position. The Kebara 2 burial located in the central area of the cave, was indeed a primary deposition as the decomposition of the body took place in a filled grave.

The Tabun C1 deposit was outside of the entrance of the cave. According to the description noted by Garrod and Bate, the skeleton *"rested on its back,*

slightly turned over the left side with the legs loosely flexed and the left arm bent at right angles to the thorax" (Garrod and Bate 1937: 64). The head was orientated at west. The circumstances of the discovery were reported by Garrod and she wrote in her field notes: "*the skull which rested on its basis with the mandible in place was badly crushed from above*".

The Amud 1 man was lying on its left side, with his lower limbs tightly flexed, the feet under the pelvis. While the skeleton appeared in anatomically natural arrangement, most of the bones have been altered post mortem. The size of the pit itself (around 1 m long) probably influenced the contracted attitude of the body and the bone alteration was related to the peripheral pressure of the sediment.

In an overview, there are no standards in terms of body position (on the back, on left or right side), with upper and lower limbs loosely or tightly flexed. Variety in the orientation of the head has also to be noticed. The location of the human deposits differs from one individual to the other (outside or inside the cave). Field observations support a removal of the Kebara 2 cranium following the complete decay of the cranio-cervical ligaments (prone to disarticulate later in decomposition), including those between the atlas and the skull. The complete preservation of the cervical vertebrae in anatomical connection, the position of the mandible and that of the isolated right upper third molar next to the right lower one, has to be noted. There was no evidence of bone fragmentation and disturbance by external agents. Based on these observations, it can be postulated that the lack of the cranium resulted from a later human manipulation rather than an animal scavenging signature. Yet, if we can assume that the cranium was manipulated, we cannot prove that this manipulation has been planed for a secondary deposit, due to the lack of documentation.

FIRST EVIDENCE OF A MULTIPLE BURIAL

In the case of multiple burials, two (or more than two) individuals have been deposited simultaneously or within a very short period of time. In the analysis of such deposits, questions arise related to the cause of death, to the possible family link between the deceased, etc. At present, from the Levant, there is a unique burial containing the remains of two individuals associated to a Mousterian context; this double burial identified in Qafzeh (Vandermeersch 1969) is also unique for all Middle Palaeolithic sites in Eurasia. Two immature individuals were buried in a narrow pit (*circa* 50 cm wide and 1,5 m long). Due to the diagenetic evolution of the sediment (a hard lime-stone breccification), the exact limits of the grave were impossible to discern in the field, but could be deducted from the relative position of the bones.

The oldest individual, Qafzeh 9, oriented north-south, was lying on the left side, the right hand on the left forearm, and lower limbs flexed (Fig. 7). The position of the right upper limb and pelvis (still in natural articular arrangement) indicates the presence of the wall pit. The left toes of this individual are only a few centimetres apart from the right upper limb of the second deceased, the Qafzeh 10 child. This child, oriented east-west, was lying on the left side with the left upper limb tightly flexed under the head. The right upper limb was extended while the lower limbs were also flexed, the right knee joint being at the level of the pelvis.

The two individuals have been buried together in a pit and the bodies have decomposed in a filled grave. What this unique burial implies, evidently needs to be questioned; even if it would have been possible to how the body been left lying, still it would not be possible to understand the motive beyond this process. A pathological investigation was conducted on the two skeletons, and only minor bone lesions were detected on Qafzeh 9. The Qafzeh 10 child exhibited pathological lesions that indicated two episodes of trauma during childhood. A right coronal craniosynostosis has affected the skull development and without proper adequate treatment, the child died at circa 6 years of age (Tillier 1999; Tillier et al. 2004).

COMMINGLED PRIMARY DEPOSITS, COLLECTIVE BURIALS?

The Dederiyeh 2 child remains were found in a pit (70 x 50 cm), 25 cm deep in layer 3. A large part of the skeletal elements of the child, who died at circa 2 years, was preserved; however no natural articulations were maintained and the bones were dispersed in the pit together with fragments of tortoise shell. Following Akazawa and colleagues, "the iso-

lated bones found in the pit might be the remains of an intentional burial that has been disturbed" (Akazawa et al. 2003: 76).

At Skhul, a majority of the human deposits (7/10) were characterized by poor bone preservations and lack of most of the anatomical connections. These deposits were interpreted by T. D. McCown as relics of interments that were secondarily destroyed. Two immature individuals (Skhul VIII and X) consist of a few fractured pieces and it seems rather difficult to establish that they represent either parts of commingled primary burials or remains of a deliberate hominin arrangement. In the case of the adult Skhul IX the human bones were mixed with animal bones. No traces of carnivores or other animals apparently have been detected on the human remains. No traces of deliberate modification have been described on the human bones.

The assumption of a secondary human action that will explain the disturbance of several primary interments, as suggested by McCown (McCown 1937: 92-107), remains a working hypothesis; indeed, the idea, that such an action has been intentionally linked to a funerary or ritual practise can hardly be tested in the site. However, the marked occurrence of associated skeletons and human remains is impressive and represents a unique case among the Mount Carmel sites.

The number of burials and human remains recovered from Qafzeh deserves in the same way close attention (Tab. 1). With the exception of Qafzeh 13, there is sufficient data on the body position. Apart from the double burial (Qafzeh 9 and 10), no indications are available about the chronological sequence of the deposits that were made at different times. It is of importance to note that the TL and ESR dates indicate that the accumulation of sedimentation at the site was rather rapid. Furthermore the Qafzeh XXIV-XVII Mousterian lithic assemblages were described as rather homogeneous (Hovers 1997, 2009). Finally, except the Qafzeh 11 burial, all the human deposits are linked to layer XVII.

Indeed the relative abundance of the anthropological finds in Skhul and Qafzeh sites lead us (Tillier 2009) to assume that they may document the early evidence of burial gathering in the Near East. It should be reminded that the radiometric dates suggest that, unlike the Qafzeh deposits, the burials at Skhul were made over a certain period of time.

CONCLUSIONS

A critical analysis of the available data permits to recognize the presence of a few intentional burials associated to Mousterian lithic assemblages in the Levantine sites. Spatial analysis of these burials indicates a varied distribution pattern, as either inside the cave (at Kebara, Amud, Tabun and Dederiyeh), or outside (at Skhul and Qafzeh). Yet, differences in the location of the burials cannot be interpreted as a reflection of specific funerary treatment; at Qafzeh, for instance, no human or animal bones were recovered inside the cave (a result of diagenetic processes), while a huge amount of lithic artefacts was preserved.

Different age-classes are represented among the buried deceased: infancy, early childhood, late childhood, adolescence and adulthood. However the child/adult ratio of buried individuals differs between the sites (see Tab. 1).

There are no standards in terms of body position or body orientation regarding the four cardinal points. All the burials are primary deposits and comprise one individual, with the exception of the unique case of a multiple burial at Qafzeh, and the interpretation of the relationship between the two individuals (using non-metric traits, Tillier 1999) can only be speculated, due to the lack of DNA analysis.

We have pointed out that the radiometric dates suggest the antiquity of intentional burials in the Levant around 130-100 ka BP, at Skhul, Qafzeh, and perhaps at Tabun (?), and that a large chronological gap separated these burials from those found in Kebara and Amud. Thus the earliest Levantine burials predated those associated to Neanderthals in Europe (e.g. Maureille and Tillier 2008; Turq et al. 2008; Tillier 2009). The relative abundance of the anthropological finds in Skhul and Qafzeh is the most extensive source of information on the early burials not only in the Near East, but for all of Eurasia. Both sites provide the clearest evidence for early modern humans in the Levant.

Finally, it should be remembered that early Upper Palaeolithic sites with preserved human bones in the Levant are rare (Ksar Akil in Lebanon, Qafzeh, Hayonim and Kebara in Israel; Arensburg 1977; Vandermeersch 1981; Bergman and Stringer 1989; Arensburg et al. 1990; Tillier and Tixier 1991) and no burials are known. Several thousand years were to pass before the occurrence of the adult Ohalo II burial in northern Jordan Valley (Hershkovitz et al. 1995), dated to 19.000 years BP by C14.

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Levantine sites	Mousterian type	MNI*	Primary burials	Individuals buried
Amud	Tabun B	14	2 singles	1 infant 1 adult
Dederiyeh	Tabun B (?)	15?	1 (+1?) single	1 or 2 (?) children
Kebara	Tabun B	23	2 singles	1 infant, 1 adult
Tabun	Tabun B, C (?)	8	1 single	1 adult
Skhul	Tabun C	10	3 singles	1 child, 2 adults *(or even more?)*
Qafzeh	Tabun C	15	1 double 4 or 5 singles	4 non-adults + 1 (?) 2 adults

Table 1 - Levantine sites mentionned in the text. Mousterian lithic assemblages, number of individuals (* some of the individuals are represented by teeth, others by partial or complete skeletons). Sources: Hovers et al. 1995; Akazawa and Muhseisen 2003; Tillier et al. 2003; McCown and Keith 1939; Vandermeersch 1981; Tillier 1999, 2009.

Fig. 1 – Map of the Levantine sites with Middle Palaeolithic assemblages (revised after O. Bar Yosef 2000, in Tillier 2008). Among sites with human remains (black star), six (Skhul, Tabun, Qafzeh, Kebara, Amud and Dederiyeh) provide evidence of individuals deliberately buried.

Fig. 2 - The Amud 7 infant burial in situ (modified from original photograph made by E. Hovers).

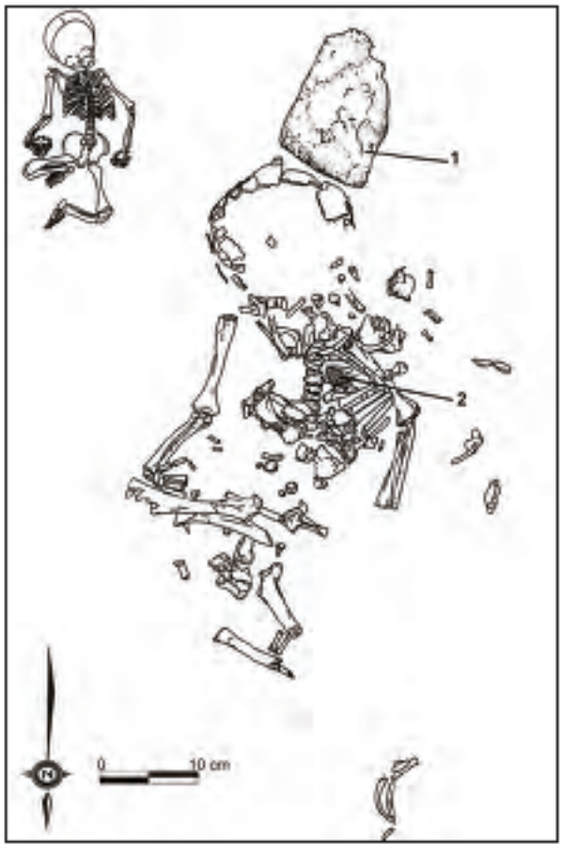

Fig. 3 - The Dederiyeh 1 child deposit (reproduced from published reports with permission of T. Akazawa and S. Muhesen)

Fig. 4 -Upper part of the Qafzeh 11 primary deliberate burial showing the fragments of fallow deer antlers placed nearby the adolescent face, in contact with the hands (reproduced from published report by Vandermeersch 1970).

Fig. 5 - The Skhul IV adult burial in situ (reproduced from Garrod and Bate 1937). The foot bones are resting against the wall of the pit.

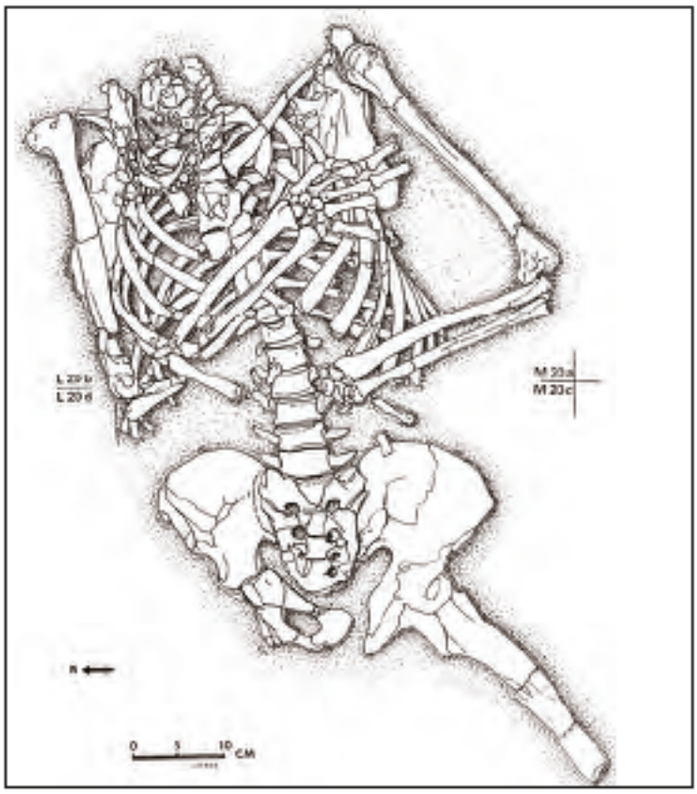

Fig. 6 - The Kebara 2 adult burial eproduced from published report by B. Arensburg et al. 1985). Drawing made by D. Ladiray, Centre Français de Recherche de Jérusalem.

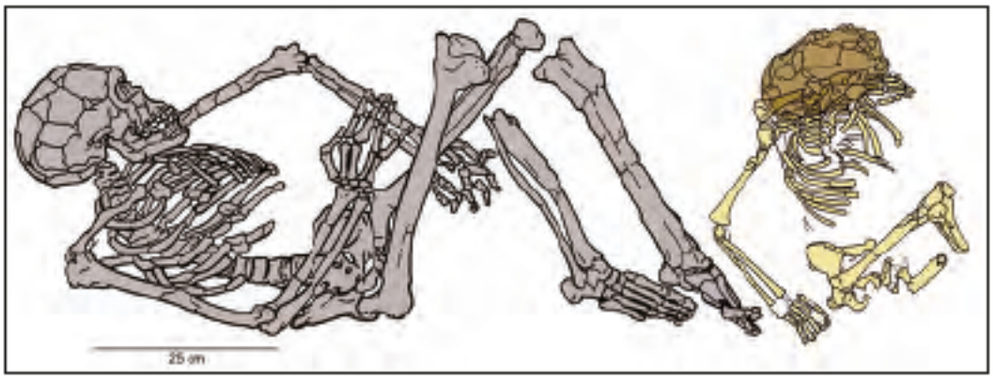

Fig. 7 - The double Qafzeh 9 and 10 burial (modified from the original drawing made by D. Visset, in A-m. Tillier 1995).