

BYZANTINE BURIALS PRACTICES FOR CHILDREN; CASE STUDIES BASED ON A BIOARCHAEOLOGICAL APPROACH TO CEMETERIES FROM GREECE

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Introduction

The place and role of children in historic past societies is generally documented by written sources. Children are often unknowable through the archaeological record because they leave few material indications, with the exception of child burials (Baxter 2005: 1; for an overview on childhood see also Dasen *et alii* 2001). Studying mortuary practices is one aspect of identifying children in the archaeological record and approaching them as actors who make contributions to their community. The contextual approach of children in the Byzantine society by using mortuary practices will be assessed here by exploring cemetery populations from the Greek province of the Byzantine Empire.

"In their practical definitions the Byzantines distinguished several ages of man: infancy, childhood, puberty or marriageable age and old age" (Herrin and Kazhdan 1991). Studies of the written reports indicate that the distinction and definition of the ages of an individual remains identical all along the Byzantine period. It is thus possible to distinguish biological developmental stages of childhood and socially defined age grades (Perry 2005: 89), and try to make comparisons between the written sources and the bioarchaeological data collected from juvenile human skeletal remains.

After an overview on children and childhood in Byzantium from historical sources, this paper will focus on the bioarchaeological evidence of subadult remains by the thorough presentation of three particular provincial Byzantine sites from the inland of Attica and Boeotia in central Greece. The sites are dated to the Middle and Late Byzantine period (10th-14th centuries) and they present differences regarding subadult burial practices. The departments of Attica and Boeotia belonged for several centuries to the same administrative unit -the theme of Hellas- and they had the same distance from Constantinople, the capital of the Byzantine State. During this period, after the Dark Ages (7th-9th centuries), Byzantium knew an important socioeconomic and demographic increase (Lefort 1991: 73-75; Laiou 2002a: 49). How children are represented in archaeological cemetery samples, did they receive treatment similar to adults, at what age, and how they can be perceived by the combined examination of both historical and biological data sources are the questions that enclose the general idea of this study.

Childhood in Byzantium

The ages of children

According to the Byzantine law, the subadult life can be divided in three ages: the infants (ἰμφάντες or νήπιοι) from 0 to 7 years, the children or juveniles (ἀνήβοι) up to 12 years for the girls and to 14 years for the boys (age at which the marriage was authorized by the law) (Kiousopoulou 1997: 117) and the adolescents or older subadults up to 25 years old (ἀφίλικες) (Tourtoglou 1985: 365). Given the importance that Byzantine people gave to education, this division seems to follow schooling; formal primary education for infants after 4 years and secondary education for children (Antoniadis-Bibicou 1973: 78; Kalogeras 2000: 133-134). The age of education could be variable according to the social origin of the child (Antoniadis-Bibicou 1973: 78) that is earlier, about 4 years, for the members of a high social rank. Byzantine Christian writers described children to behave like adults (Kalogeras 2001: 8). But when children were involved in the 'adult' activity? *"Legally, adulthood began at 25, but in fact the borderline between childhood and maturity was not sharply defined: marriage, taking monastic vows, entering military or civil service, the opening of one's own workshop meant the end of the childhood. In reality it occurred about the age of 16 or 18"* (Herrin et alii 1991: 421). Thus, different activations and changes of social status for the children and adolescents such as emancipation, marriage, monachism, and education, the possibility to be tortured or enslaved can be associated to a range of chronological age (Antoniadis-Bibicou 1973: 77-79).

Birth, baptism, death and funerals

Since the 3rd century, Christian writers have been concerned by the question of the foetal stage and they created a specifically Christian look on the embryo (Congourdeau 2004). Four major events can be distinguished here that are strictly related to the biological entity of the child and its social completion: birth and baptism, death and funerals. Childbirth was usually taking place at home with the assistance of a midwife and/or relatives or friends. The newborn baby was washed and swaddled in woollen wrappings (*fasciae*) during seven days in order to straighten its body and make it beautiful (Koukoules 1951: 29). After childbirth, the mother and those who assisted her were considered impure and a priest was summoned to exorcise the evil spirits, yet the mother could not partake of communion until 40 days have passed (Koukoules 1951: 33-34; Karpozilos et alii 1991).

The notion of welcoming the babies can be found in the institutions (orphanage-*orphanotropheion*, *brephotrofeion* and maternities for poor mothers) and in the mentality of the people through the saints' lives. The term *orphanotropheion* refers to an institution which sheltered and fed orphans; although the word first appears in the legislation of Justinian, the institution can be as old as the 4th century (Miller 1997: 24). Respectively, the term of *brephotrofeion* designs an institution charged to care for infants and very young children (a foundling house); the legal and canonical sources

mention such philanthropic agencies only at the 6th century (Miller 1997: 24) in the Justinian legislation (Koukoules 1948: 156). The foundation of maternities is mentioned for the city of Alexandria during the period of plague for poor pregnant women in order to avoid the danger (Koukoules 1948: 154; Koukoules 1951: 23).

After birth, babies were nursed either by their mother or a wet-nurse (Beaucamp 1982). By the age of six months (see in Rey 2004: 373) several aliments were used in parallel and later substituted the breast milk. These aliments could include wheat reduced to a pulp and hulled barley cooked in water and mixed with sufficient quantity of honey, goat milk, *hydromel* (mixture of honey and water), sweet wine or honey mixed with wine (Jackson 1989). The infant was weaned gradually at about two or three years of age (Herrin *et alii* 1991: 420; Rey 2004) as recommended by Soranus and Galen. If a child got sick soon after the accomplishment of weaning, it was recommended to restart breastfeeding till its recovery. Furthermore, it seems that the practice of breastfeeding was related to the socioeconomic status of the family; women of aristocracy used to employ one or more nurses for this purpose (Poulakou-Rebelakou 2000).

Christians considered the immersion and cleaning of the body in the water washed away sins (Koukoules 1951: 43). During the first centuries of Christianity, baptism was made after the accomplishment of the catechism (*catechuminate*) for the persons who desired to be converted to Christianity and enter in the church (Jeremias 1967: 134-138; Emmanouilidis 1989). With the spreading of Christianity, infant baptism was accomplished also for children when they were still very young.

The destiny of the newborn was strictly related to the mother. At the 40th day after childbirth, the mother was purified and the newborn received the purification of the baptism. According to the 17th Novel of Leo Sophos, the newborns should be baptised at the 40th day after birth except for some dangerous cases when the baptism took place earlier. Because of the risk at death for the newborns the baptism could be made at the 8th day of its life or just after birth (Koukoules 1951: 47; Congourdeau 1993).

Even if the baby and the mother survived at birth, infant mortality was a serious problem in Byzantium. Gregory of Nyssa (see in Congourdeau 1993) numerates three reasons of infant mortality: exposure, shocking or drawing and natural death by disease. The Byzantine authors interpret the death of newborns with a 'naturalist' perspective (Congourdeau 1993). The premature death of nursing babies could be due to the bad health of the mother, the neglect of the nurse, the anomalies of the air or to any other natural cause (see in Congourdeau 1993).

The State and the Church protected the subadults in many aspects; they prohibited and punished the abortion (Koukoules 1951: 12-13) and many efforts were made to limit the exposure of the newborns. In the Justinian Code and later, infanticide by abandonment (or exposure), voluntary neglect and refusal of nursing, were condemned as mortal sins; during the 4th century, Christian writers disapproved of contraception, abortion and infanticide but also the enslavement of found children (see in Congourdeau 1993). The State and the Church tried also to stop the practice of the Byzantine people to marry their children very young, although all social classes practiced this against the law.

The diseases that affected subadults are not all known; the sources make reference for infectious diseases (meningitis, mumps, tetanus, rage, cholera, smallpox and poliomyelitis), respiratory diseases (laryngitis, pharyngitis, tonsillitis, otitis and asthma), diseases of the peptic system such as parasitosis, urogenital diseases and diseases of the neural system. Medical care for children is not the purpose of this study; however, based on sources referring at the 7th and the 14th century it seems that the population was generally young, life expectancy at birth was low and subadult mortality before the age of fifteen is considered high (Laiou 2002a: 51-52).

During the Byzantine period funerary rites and mortuary practices for children were not always similar to these for the adults. The inhumation but not the cremation was practiced unless in some particular cases such as epidemic diseases or plague (Emmanouilidis 1989; Nalpantis 2002). The funerary rites were influenced by the roman world (Koukoules 1951; Nalpantis 2002). The deceased, either child or adult, was washed, perfumed, then wrapped (Koukoules 1951: 156-157) in burial-swaddling clothes from white linen and finally dressed and adorned. Then the body laid-out for viewing (*prothesis*) either in a casket (*pheretron*) or on a bed (*kline*) which was elevated on a pedestal (*vathron*) (Kyriakakis 1974: 56) with the head at the West. The funeral took place two or three days after death. Firstly the deceased was transferred from its residence to the church and the psalm of the *epicede* began. Different psalms were sung for the civil, the priests, the monks and the infants (Koukoules 1951: 184; Velkovska 2001: 36). After the ceremony in the church, the dead was transferred to be buried in the cemetery. Infant burials were very often accompanied by offerings like jewellery or toys indicating the affection but also the protection of the parents towards the dead child.

Burial places

The relationship between the burial, the church and the habitation area along with the place of children in the funerary space changed after the establishment of Christianity. One of the effects of Christianity on burial ritual and practice was that infants were more likely to be found in community cemeteries and burial grounds (Scott 1999: 123). Because of the high infant mortality, the destiny of these children was an important issue. The role of the baptism was essential for the inhumation and the placement of the deceased in the cemetery; a person not baptised was excluded from the ecclesiastic celebration of the inhumation, and this could be the case of the infants died before baptism.

The church is the main element influencing the cemetery organisation. During the first centuries of Christianity burials were prohibited inside city walls and churches (*Cod.Theod.* IX 17.6). In the 6th-7th centuries cemeteries began to occupy the areas of cities (Laos *et alii* 1991). The custom of burying in the church was established especially for saints, clerics, distinguished monks, emperors and influential laymen with their families (Laos *et alii* 1991; Teteriatnikov and Karpozilos 1991). Thus, the burial location in the church may have significant social implications for the organisation of the burial ground (Teteriatnikov 1984: 145-157). Individuals frequently reserved the burial sites during their lifetime for themselves and their families, part of which were certainly the children.

SUBADULTS AFTER DEATH: THE BIOARCHAEOLOGICAL APPROACH

Skeletal samples

The skeletal samples chosen for this study come from three particular sites: Thebes in Boeotia, Xironomi in Boeotia and Spata in Attica, chosen among several Byzantine cemeteries from Greece. These sites stand at the upper and lower extremities in terms of number of children in the sample (Figure 1) (Agelarakis 1992-1993; Gerstel *et alii* 2003; Tritsaroli 2006; Bourbou and Richards 2007).

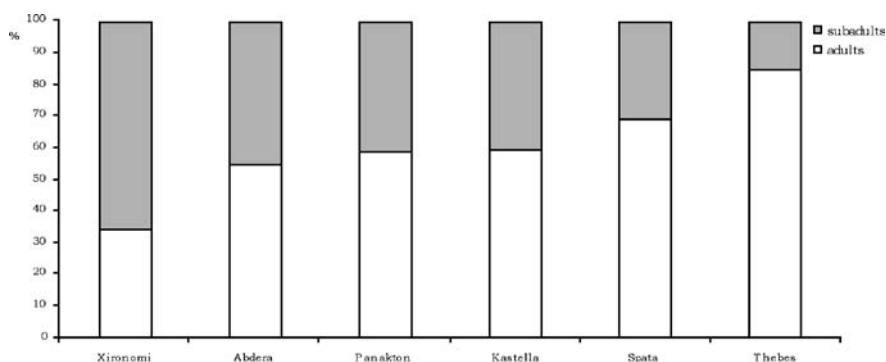


Figure 1.- Adult/subadult proportion in some Byzantine samples from Greece.

At the cemetery of Thebes in Boeotia, the subadults represent 15.2% of the skeletal sample. The burials, dated to the 12th-13th centuries, were found in the church (main church and narthex) as well as in the area surrounding the church. Archaeological evidence suggest that several burials, in and around the church, belonged to descendants of aristocratic families (Koilkou, administrative document).

The children in the cemetery of Xironomi in Boeotia form 65.6% of the skeletal sample. Their burials have been localized in the narthex, which is the west part of the church, and in the eastern, northern and southern parts of the cemetery surrounding the church. They are dated to the 10th-11th centuries (Koilkou 2006: 1108-1109; Voltyraki 2006: 1150-1151). The high proportion of children in this funerary space is unusual; previous study showed that their place is likely the result of social rather than family choices (Tritsaroli 2007).

In the cemetery of Spata in Attica, the subadults represent 30.7% of the skeletal sample. The site, excavated during the construction of the Athens International Airport (Gini-Tsofopoulou 2001; 2003), is dated between the 11th and the 14th century; it is divided into two parts. At the West, an activity zone for the treatment and the storage of agricultural products has been recovered that contains an infant burial under the foundations of the first phase of construction. It seems to be the earliest burial of

the site. The East part of the site consists in a cemetery organized in and around a church.

These samples are archaeologically comparable because they come from sites that comprise two major funerary areas: the church and the cemetery around it. Several biological and archaeological parameters are taken into consideration in order to proceed to the reconstruction of mortuary practices towards children: 1. their biological profile (comprising age at death, dental non-metric traits, dental and skeletal paleopathological conditions), 2. their numerical and biological relationships to the adults, 3. their distribution according to the grave type: elaborate (vaulted and cist) graves and modest (tile and pit) graves, and 4. their topographic distribution within the cemetery: in the church or outside the church.

The cemetery of Thebes in Boeotia

Biological profile

The analysis showed the presence of 23 subadults out of 147 individuals (Table 2). The dental age of 10 subadults ranges from 3 to 12 years old (Figure 2); only one child is younger than 4 years old. The subadult skeletal remains showed some nonspecific lesions on the skull, long bones and teeth. One case of dental caries was recorded (1 individual affected out of 10) (Table 1) (Tritsaroli 2006: 224). Among the adult sample, mature individuals (over 30 years old) are more numerous (N = 10) than young adults (under 30 years old) (N = 5) and men (N = 23) are more numerous than women (N = 16).

Children and grave typology

Subadult remains were found in all grave types. None of the subadults has been found in single primary inhumation; all of them were identified among disarticulated remains and they were systematically associated with adult remains in the same grave.

The number of subadults and adults increases from the modest to the elaborate graves (Table 2). Consequently, the average number of subadults per grave distinguishes clearly the two kinds of graves. This variation is not age-related so that no subadult particular treatment can be pointed out.

Children and topographic distribution

Subadult remains have been found in and outside the church. Contrary to the adults, they are more numerous inside than outside the religious building. Almost 70% of the subadults have been recovered in the church (16 out of 23 subadults) while only 44% of the adults were in the religious building (54 out of 124 adults) (Table 3). Their number is particularly high in the narthex (15 out of 16 subadults found in the church). The only child under 3 years has been found in the narthex (Table 5) as well.

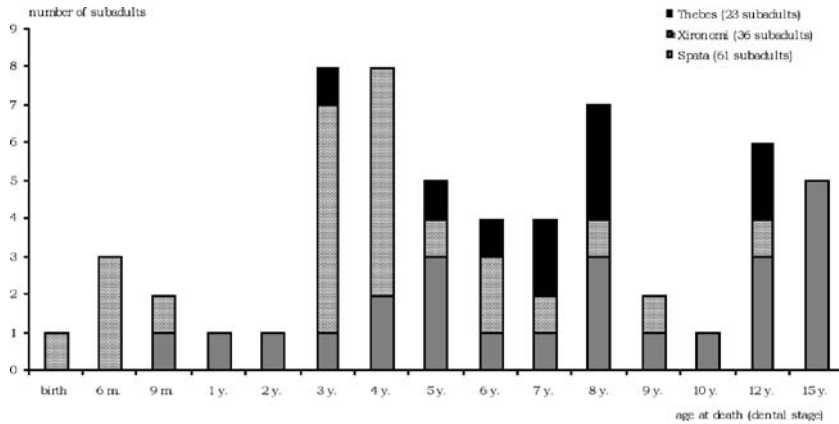


Figure 2.- Distribution of the subadults from Thebes, Xironomi and Spata preserving dental remains according to dental age at death (after the stages of Ubelaker 1989) (m. = months, y. = years).

	Thebes		Spata		Xironomi	
	N	n	N	n	N	n
nonspecific lesions						
cribra orbitalia	5	3	20	2	19	2
dental enamel hypoplasia	10	0	24	1	24	8
periostitis (tibia)	9	5	36	23	24	20
dental caries	10	1	24	2	24	0

Table 1.- Frequencies of non-specific cranial and dental lesions and dental caries (N = number of individuals observed, n = number of individuals affected).

The elaborate graves are strictly associated with the church; more we get away from the church more the grave architecture becomes simpler. The topographic distribution of the subadults is generally correlated to the distribution of the two grave types.

The cemetery of Xironomi in Boeotia

Biological profile

In the sample of Xironomi subadults are overrepresented forming almost two thirds of the sample (36 subadults and 19 adults) (Table 2). The distribution of the subadults according to the estimated dental age showed that almost half of them are younger than 4 years old (Figure 2). Among the adults, five males and two females, three young and eight mature have been identified.

Thebes	total sample	19 modest graves	7 elaborate graves
total sample	147	45	102
average by grave	5.7	2.4	14.6
subadults	23	7	16
average by grave	0.9	0.4	2.3
adults	124	38	86
average by grave	4.8	2	12.3
Xironomi	total sample	4 modest graves	16 elaborate graves
total sample	55	14	41
average by grave	2.8	4.7	2.6
subadults	36	14	22
average by grave	1.8	3.5	1.4
adults	19	0	19
average by grave	0.95	0	1.2
Spata	total sample	111 modest graves	4 elaborate graves
total sample	199	180	19
average by grave	1.7	1.6	4.8
subadults	61	58	3
average by grave	0.5	0.5	0.7
adults	138	122	16
average by grave	1.2	1.1	4

Table 2.- Distribution (number and average) of the subadults and adults according to the grave types.

The high frequency of lesions on subadult remains indicating episodes of developmental stress is remarkable. These lesions, such as abnormal porosity and new bone formation, affect a large number of bones on the cranial and post-cranial skeleton (Table 1, Table 4), sometimes over 50% of the bones. They cover a large surface of the bone (Figure 3). High frequency of dental enamel hypoplasia has been recorded [12.6% (32/254) of teeth and 30% of the individuals (8/24)] (Table 1). These cases concern mainly the children under 4 years old. On the contrary, no particular paleopathological conditions have been noticed on the adult remains. Additionally, shovel-shape upper incisors (4 out of 15 adult and 2 out of 21 subadult dentitions) and Carabelli's cusps (1 out of 13 adult and 4 out of 13 subadult dentitions) have been observed.

Thebes	total sample	adults	subadults
total sample	147	124	23
in the church	70	54	16
outside the church	77	70	7
Xironomi	total sample	adults	subadults
total sample	55	19	36
in the church	29	10	19
outside the church	26	9	17
Spata	total sample	adults	subadults
total sample	199	138	61
in the church	26	19	7
outside the church	173	119	54

Table 3.- Distribution of the subadults and adults in and outside the church.

Xironomi	Bones	N	n	%
Skull	frontal bone (right + left)	33	16	48.5
	parietal bone (right + left)	43	26	60.5
	occipital bone	20	12	60
	temporal bone (right + left)	34	19	55.9
	sphenoid	8	6	75
	zygomatic bone (right + left)	12	4	33.3
	mandible	29	15	51.7
Post-cranial	hip bone (right + left)	25	9	36
	clavicle (right + left)	26	12	46.2
	scapula (right + left)	21	13	61.9

Table 4.- Frequencies of abnormal porosity and new bone formation on some cranial and post-cranial subadult remains from Xironomi (N = number of bones observed, n = number of bones affected).

Children and grave typology

All grave types included subadult remains (Table 2). Children primary burials have been found in modest and elaborate graves as well. The number and average of children per burial is higher in the modest than in the elaborate graves.

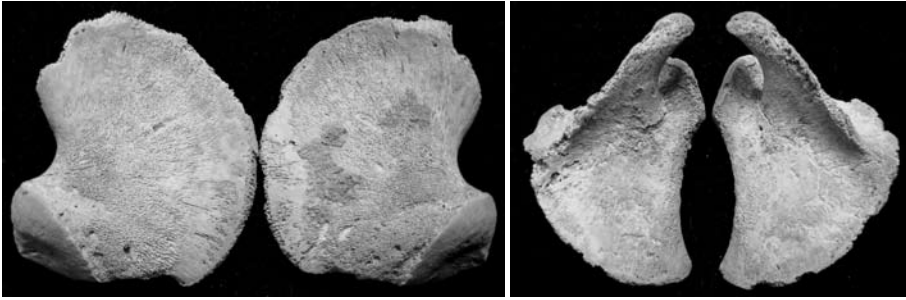


Figure 3.- Bilateral abnormal porosity on the scapula (right) and hip bone (left) of a three-month old child (dental stage) (primary burial from the tile grave n° 19).

Thebes	total	in the church	outside the church
total subadults (dental age)	10	6	4
over four years old (dental age)	9	5	4
under four years old (dental age)	1	1	0
Xironomi			
total subadults (dental age)	24	14	10
over four years old (dental age)	7	3	4
under four years old (dental age)	17	11	6

Table 5.- Distribution of the subadults over and under four years (dental age) in and outside the churches of Thebes (main church and narthex) and Xironomi (narthex only).

The distribution of the subadults according to the grave types is age-related: younger children (birth-5 years) seem to have been buried in modest graves while older children (6 months-12 years) and adults appear to have been disposed in elaborate graves. It is worth noting that shovel-shape incisors and Carabelli's cusps were present on adults and subadults uncovered from the elaborate graves.

Children and topographic distribution

The children under four years old were more numerous in the church (narthex) (N = 11) than outside (N = 6) (Table 5). The children over four years and the adults were in the church (N=3, narthex) and the space outside (N=4).

The cemetery of Spata in Attica

Biological profile

The sample of Spata includes 61 subadults amongst 199 individuals (30.7%) (Table 2). The estimated age at death ranges from nine months to fifteen years, however children over four years are more numerous (Figure 2). Subadult skeletal remains present some cases of nonspecific lesions such as cribra orbitalia, periostitis and dental enamel hypoplasia as well as dental caries (Table 1). Among the adults, four young and eleven mature/old adults, eleven males and eight females have been identified. The age of the child buried in the area of activity has been estimated at one year old. This child is among the youngest of the site. No paleopathological dental and bone lesions have been observed on its skeleton.

Children and grave typology

Subadult skeletal remains have been found in modest (N=58) and elaborate graves (N=3); their average per grave type is 0.5 and 0.7 respectively while adults are very numerous in few elaborate graves (Table 2).

Half of the subadults (31 out of the 61) were in single primary burials in modest graves; 6 of them were lying on the back with their head on a tile headrest. The other half corresponds to disarticulated remains found mostly in modest (N = 27) but also in elaborate graves (N = 3).

Children and topographic distribution

Subadults are equally represented in the area inside (26.9%) and outside the church (31.2%) (Table 3). No specialized funerary areas have been identified for the subadults. However, they are more numerous at the north part of the cemetery and almost absent at the south part. The grave found in the activity area had a North-South orientation. The infant skeleton was in a primary situation, extended on the back with the skull at the North. The position but not the orientation, was similar to the adult and subadult primary burials of the cemetery. This isolated child grave was covered with a fragment of a beehive which kind of covering is the only example in the site.

WHAT IS LEFT FROM CHILDREN? AT THE QUEST OF DIFFERENTIAL BURIAL PRACTICES IN BYZANTIUM

Multiple levels of selection shape the creation of a skeletal sample (Perry 2005) affecting the post mortem fate of human remains that involves intrinsic and extrinsic sources of bias: mortality bias, differential burial, taphonomic factors, excavation methods (Buikstra and Cook 1980; Saunders and Hoppa 1993; Bourbou 2001). Especially for subadult remains it has been argued that they can disappear more rapidly than

adult remains (Angel 1969; 1971). Scott (1999) states that very often children are absent from the cemeteries because their skeletons cannot survive. Some other factors related to the soil quality (Gordon and Buikstra 1981) or the mineralization of the bones (Guy *et alii* 1997) may have implications to the conservation of the remains.

However, the differential representation of the subadult remains in archaeological samples can be also due to cultural factors (Lucy 1994); specialized zones in the cemetery for the inhumation of children or unusual concentration within non cemeterial areas resulting from infanticide (Gowland 2002; Smith and Kahila 2002) are some examples.

In the following paragraphs we will discuss burial practices for children by combining the historical and bioarchaeological data. We can already conclude that no evidence was found indicating infanticide, abandonment of children or an area used exclusively for the burial of the infants and young children of the community. On the contrary, the variable representation of the subadults and their emplacement in the cemeteries of Thebes, Xironomi and Spata offer the possibility to discuss differential burial practices according to age at death. The age categories proposed for the discussion try to combine the stages of skeletal and dental development (Baker *et alii* 2005: 157-160) with the chronological ages of the subadults as they are described in the written Byzantine sources.

Infants and young children, [0-7] years

The first years of life of an individual include several important, mostly biological, transitional stages: birth or the transition from the foetal stage to the infant life, breastfeeding, walking and talking. These events can be successive or contemporary and they are associated to the gradual intervention of cultural practices in life such as baptism, weaning and changes of nutritional habits and education. However the risk at death during these years is very high. In the Byzantine world, the behavior of the living society towards dead infants and young children could follow specific rules either institutional such as religious laws, or family habits or even communal and local customs. Each of the skeletal samples examined here is a specific example of differential funerary treatment towards infants and young children regarding particular cultural practices.

The role of the baptism was determinant for the ecclesiastical celebration of the inhumation of the deceased. On the one hand, the functional, architectural and religious value of the narthex is strictly related to the baptism. Indeed, the narthex is the place that introduces to the main church where catechumens were standing in preparation for the baptism. On the other hand, the age of baptism could vary according to different historical periods or special conditions (risk at death). The children in the cemetery of Xironomi have been buried outside the church and in the narthex of the church. It is possible that their sepulchral place was fixed by rules related to the baptism. The age at death-distribution of the children doesn't provide clear evidence for a generalized hierarchy related to the baptism and the right to an ecclesiastical funeral. Nevertheless, the overrepresentation of the children less than four years in the narthex (Table 5) could be seen for sign of divine protection and consideration of those who died very young just before receiving catechism and baptism.

Subadult skeletal remains have also been found in the narthex of the church from Thebes. Their distribution is age-related as well but contrary to the previous example they are over three years. In this case, the children seem to participate to the creation of larger groups rather than standing at the doorstep of the church because of their premature death. Thus, children represent a specific biological age that could correspond to their social involvement: the beginning of education and the end of weaning seen for signs of maturation.

Weaning and general poor nutritional and living conditions were probably related to the death of a major part of infants and young children in Xironomi. On the one hand, chemical analysis for weaning patterns on skeletal samples (Garvie-Lok 2001: 451; Bourbou and Richards 2007; Bourbou and Garvie-Lok *in press*) agree for a gradual weaning possibly terminating around the age of 3 years. On the other hand, recent archaeological research on the department of Boeotia shows an important expansion and augmentation of the population and villages after the 9th century (Avraméa 2005: 219-220). Nevertheless, it is testified that at the beginning of the 10th century in Byzantium, the severe winter of 927-928 and 120 consecutive days of frost reduced villages to economic misery, provoked famine while an unending rain caused another climatic catastrophe in 1037 (Dagron 2002: 452). Furthermore, the toponym of Xironomi means a place where the soil is dry and arid (Tsevas 1928: 367-368). So, the common paleopathological profile for many of the children, the frequency, type and distribution of the paleopathological lesions (Table 1, Table 4, Figure 3) within the age interval between birth and 4 years, can be possibly associated to complications following weaning such as weaning-related infection or metabolic disruption, nutritional deficiency of vitamin C and D, scurvy or rickets (Ortner and Mays 1998; Lewis 2002: 24-28; Melikian and Waldron 2003; Maat 2004; Brickley and Ives 2006; Mays *et alii* 2006). Thus, the synergy between environmental factors and insufficient nutritional supplies, for example in fruits and vegetables, cannot be excluded describing a crisis that caused the increase of mortality.

Finally, the presence of a child burial in an area of agricultural activities emphasizes the important role of the children in the community. This burial in the site of Spata doesn't allow discussing the hypothesis of a distinct funerary zone for children either in the cemetery or in a non-funerary area (Alduc-le Bagousse and Pilet-Lemiere 1986; Tillier and Duday 1990; Dedet 1990; Fabre 1996; Lambot *et alii* 1996; Alduc-le Bagousse 1997; Séguy 1997; Blaizot *et alii* 2003; Laubenheimer 2004) but underlines the possibility for children to receive occasionally a particular burial treatment. Did the fragment of the beehive has been chosen to cover this grave or was it an abundant object easy to find and to use within an area where the agrarian work was an everyday task? Can this object be related to the age of the individual, in particular to weaning practices? Covering the grave with a fragment of a beehive should be result of a non premeditated act. The number of beehives found in the site testifies that the production of honey and the equipment within a specialized area was abundant with no particular value (Gini-Tsofopoulou, pers. comm.). Regarding weaning, it is possible that the child had already started the introduction of other aliments in his diet by the age of his death (1 year) including honey, and that this diet had secondary complications to his health. Previous analysis of the sample of Spata as a whole showed important

frequencies of dental caries and ante mortem tooth loss (Tritsaroli 2006: 229) for the adults. This has been associated to the important consumption of sugar contained by products such as honey, which was one of the main products in Attica by this time. However, the relation of subsistence between this child, the object (beehive) and the product (honey) itself seems quite slack. The place of the subadults is particular not regarding the cemetery itself but because of the agricultural installation associated; this infant burial could have served as the biological and cultural link between the area of activity and the cemetery in a settlement where the agricultural sector was at the basis of the economic activities (Kazanaki-Lappa 2002).

What about children after the age of 3 years? In fact, only in the site where communal activities predominate, the young children between [4-7] years are more numerous than the children under the age of 3 (Figure 2). While in one case (Thebes) the age of 3 years seems to indicate a stage of segregation, in the other cases children of this age are likely part of a larger group of subadults including younger and older than 3 years.

Older children, [7-12/14] years and adolescents, [12/14-25] years

In general, children over 7 years are less numerous than the younger ones. By this age, old children could start a more intensive education and, by becoming later adolescents, they could make choices for their professional life. They could also get married and make their own families, while not biologically adults. It is thus evident that after the age of 7, children entered to a very important and formative transitional period and by the end of adolescence they became adults, biologically and socially. In the present study not both age groups are represented in all the sites.

In one case (Thebes), subadults under and over 7 years are equally represented in a limited range of age of [3-12] years. So, we can argue that in this site, young and old children had the right to be buried in a close distance from the church probably because they were in an age of preparation to become adults. Primary and secondary education, marriage, monachism and a general emancipation could be made during this period.

At the site of Xironomi as well, older children but not adolescents were present; contrary to Thebes, this age group is underrepresented, regarding younger children, indicating probably that a large part of them were buried not so close to the church.

Finally, old children and adolescents were more numerous only in the agrarian settlement of Spata. Children are better represented mostly after the age of five and subadults of 15 years are the most numerous than at any other age stage of the sample. Different duties and changes of social status after the age of five and up to the beginning of adolescence possibly implicated subadults to the adult activities.

The role of the family in the cemetery structures

We will not stand here at the structures of the peasant society but we will take a closer look to the smaller basic unit, the family. The peasant family was a biological, social and economic unit. It happens that the unit of family and household were

intermingled, when a household owned some property in common with another household, which was related to it by blood ties (Laiou-Thomadakis 1977: 74). Thus, a positive correlation may exist between the economic factors and the structure of the household (Laiou-Thomadakis 1977: 85). The members of a household were connected to each other and to other households by links of consanguinity or through marriage (Laiou-Thomadakis 1977: 95). It is likely that a large part of the families and households in the provincial communities examined were blood-related.

The place of children and childhood in textual sources has been accentuated (Kiousopoulou 1997: 89) and family relations were a field where church effectively regained her authority especially after the 10th century (Laiou 1992), until the end of the Byzantine period. This coincides with the phenomenon of feudalisation of the Byzantine Empire and the rise of aristocracy. After the 6th-7th century, the family relations started progressively to be reinforced and family became the most powerful element of the Byzantine society (Kazhdan 1988: 231, 234). Additionally, during the 9th-10th centuries, the filiations by the baptism and the subsequent interdictions on the marriage seemed like an integral part the cultural Byzantine system for a long time before (Patlagean 1978: 628) while the theoretical structure of voluntary kinships (*parentés volontaires*) has been created by the end of the 7th century (Patlagean 1978: 630).

Several biological features and their association to an archaeological element argue for the presence of family groupings in the funerary space of Xironomi. Some subadult and adult dentitions present common dental morphological traits (shovel-shape upper incisors and Carabelli's cusps), which are found to have a strong genetic component (Kelley and Larsen 1991; Hillson 1996; Scott and Turner II 1997; Alt and Türp 1998; Correia and Pina 2002; Lauc 2003). These traits are considered as the macroscopic evidence of possible biological affiliation between these individuals coming exclusively from the elaborate graves. Furthermore, adults and children of a wide range of age [6 months-12 years] coexist only in this grave type (see paragraph, *Children and grave typology*). It is thus possible that some persons with biological affinities occupied this funerary area and used a specific grave type for their burial. However, more than a family grouping, the high proportion of subadults in and around the church indicates likely the social choice for a preferred burial area for infants and children, suffering from health and nutritional problems, buried occasionally with some of their adult relatives and forming family groups when young and older children were involved.

Similar distribution is observed in the cemetery of Thebes. The children of [3-12] years, along with young and old adults, men and women, seem to form large family groupings. The earliest age of education and the accomplishment of weaning allow associating a biological developmental stage of childhood and a socially defined age grade around the age of 3 or 4 as the lower limit for an individual to be considered full member of a family and the right to be buried at the same place as the rest of its members. As previously indicated, the location of the burials and their distance from the church could be analogous to the social status of the deceased; families had also the possibility to reserve particular burial sites in a desirable distance from the church. In the case of Thebes, children seem to follow the distribution of large biological groupings with a distinguished place in the cemetery at a close distance from the church. The archaeological evidence for the presence of members probably of the provincial aris-

toocracy (Cheynet 1991: 213) indicates that the buried population or a part of it should have been selected on the basis of family criteria. If the marriage was the affaire of the couple but also of the family (Patlagean 1973) and, in the case of aristocracy, of the social class as well (Laiou 1992: 9), why not death and funerals? As part of this sample, the subadult biological remains seem to follow a particular distribution and thus the burial of young and older children was likely the family affaire of a high status class.

This type of association between biological and archaeological characteristics is absent from the cemetery of Spata. The representation of the subadults and their topographic distribution reflect rather structures that are proper to a communal organisation of the society. Through their burials, children are seen as members and participants of a community dealing with everyday *adult* agrarian tasks of the primary production involved in the polyactivity and polyculture, an important characteristic of the agricultural sector (Laiou 2002b: 319, 347), during a period of social and economic regeneration that was the 11th century in Byzantium.

Conclusions

The mortuary practices are one material expression of the beliefs of the Byzantine society. Perceptions of children and childhood in Byzantium as seen through the archaeological and historical record, point out several aspects that can be searched by using the skeletal remains when they are contextually considered in the cemetery. As Abrahamse puts forth *"Without denying the power of Byzantine conservatism, the question of continuity and development in funerary practices is worth examining through the study of specific deaths-monastic, aristocratic, lay- and in different periods and types of source material, even where rituals themselves have precedents"* (Abrahamse 1984: 126). Within the general frame of the advanced studies on the Byzantine civilization, the abundant human skeletal remains, particularly the subadults, merit a more systematic and contextual analysis used as the direct biological source of cultural production and identity.

The general frame that encloses children and childhood is characterized by several limitations and interdictions related to religion, family, wealth or profession. The examples presented show that burial places and modes for children are not uniform; children did not always receive treatment similar to adults and their place in the cemetery is age-related regarding particular cultural practices. These age-related variations are not strictly associated to the biological and chronological age groups, generally defined at birth, 7, 14 and 25 years. Subadults of different ages were placed in the cemetery as members of high status families, or as a fragile segment of a population, victims of insufficient food supplies and episodes of developmental stress who received divine protection for the life after death or by participating to daily life activities. The only element that unifies the variable burial practices is the constant presence of subadults in the structures of the funerary space along with the adults. *"The treatment of younger burials can only reflect upon the attitudes of those in charge of the burial, who were presumably not other young people, but older members of society"* (Lucy 1994: 24). We can thus assess that the particular places of children in the living societies were also maintained after death. After all, for the Byzantines death was not the end of life but a change of life (Dennis 2001: 7).

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