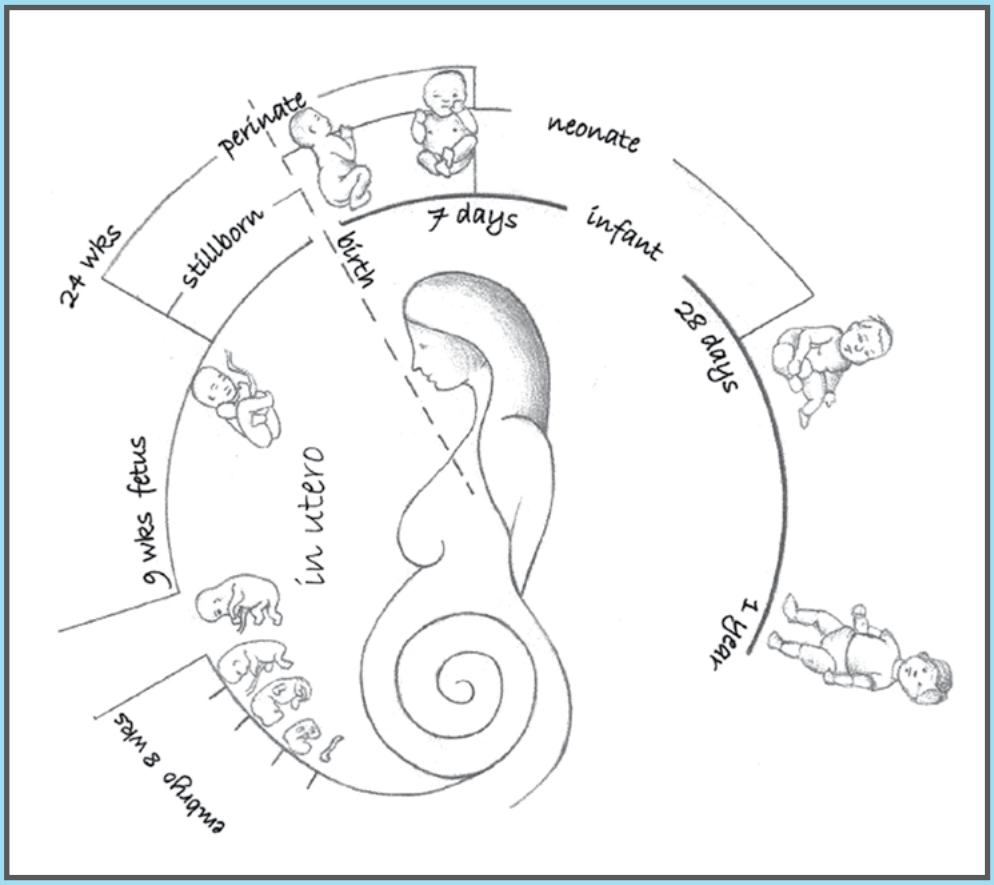
AGES AND ABILITIES

The Stages of Childhood and their Social Recognition in Prehistoric Europe and Beyond



Edited by
Katharina Rebay-Salisbury and Doris Pany-Kucera

Ages and Abilities: The Stages of Childhood and their Social Recognition in Prehistoric Europe and Beyond

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Chapter 1

Introduction. Children's developmental stages from biological, anthropological and archaeological perspectives

Katharina Rebay-Salisbury and Doris Pany-Kucera

'Ages and abilities: the stages of childhood and their social recognition in prehistoric Europe and beyond' is a collection of essays that aims to identify and describe the most important age thresholds during childhood and adolescence in the past. By combining bio-anthropological and archaeological data, often from graves, the chapters interpret how and when life was considered to begin in past societies, how developmental stages were recognised, and how childhood transitions were marked and celebrated. This volume grew from the 11th Annual International Conference of the Society for the Study of Childhood in the Past held at the Natural History Museum in Vienna from September 20–22, 2018. The conference theme 'Pregnancy, birth, early infancy and childhood: life's greatest transitions in the past' attracted scholars from the US, UK, Mediterranean and Central Europe.

The chapters present an extraordinary chronological and geographical coverage. For the first time, age and gender structures in late Neolithic to Classical societies in Central Europe are discussed in a way that allows comparison. The presentation of childhood stages includes both bio-archaeological recognition of age and the challenges of placing individuals in meaningful age classes, and cultural elaboration of developmental stages. Papers from outside the scope of later European prehistory expand the theoretical and methodological framework in a complementary manner. The chapters address their own themes and prioritise individual aspects of childhood, e.g. access to weaponry, toys, one particular transition, children's agency, rank and social status.

At the conference, discussions centred on the difficulties of cross-cultural comparison of developmental stages and important life transitions when using different conventions and terminologies with regard to naming age groups. In this volume, authors use the terminologies in the cultural context they study, but define them clearly.

The process of maturing throughout childhood to adulthood necessitates definitions of individuals' ages. The concept of age, however, encompasses various dimensions and may refer to chronological age, i.e. days, months and years counted from birth, physiological age, which focuses on biological signs of maturation, and social age, which responds to the growing abilities and capabilities of the individual (Ginn and Arber 1995; Sofaer 2006, 119).

Contemporary societies most often anchor a person's beginning of life at the date of birth, but ethnographic examples clearly demonstrate that we should not impose our modern, Western conceptions of social life stages on past cultures. A classic example is Margaret Mead's argument that coming of age differs dramatically in different cultural contexts (Benedict 1934; Mead 1928); all children go through similar physical developments, but various cultures treat these changes differently (Prout and James 1990). In archaeological contexts, the physiological and social ages are commonly explored, compared and interpreted, as reliable information on chronological age is rare.

Reflections on childhood and social age from an anthropological (e.g. Lancy 2008; LeVine and New 2008; Montgomery 2008), bio-archaeological (e.g. Halcrow and Tayles 2008; Lewis 2007; Mays *et al.* 2017; Thompson *et al.* 2014) and archaeological (e.g. Crawford *et al.* 2018; Derricourt 2018; Finlay 2013; Romero and López 2018; Sofaer-Derevenski 2000) point of view have contributed a nuanced cross-cultural picture; this book, however, presents case studies from regions that often do not find their way into standard textbooks.

Bio-archaeological age assessment

Osteologists differentiate between physiologically immature skeletons (sub-adults) and fully mature skeletons (adults) using a range of different markers of biological development. These include primarily changes in dentition (AlQahtani *et al.* 2010) and body height inferred through the length of bones, as well as morphological changes such as the fusion of ossification centres and epiphyseal union (Cunningham *et al.* 2016). Dental age is generally less variable than skeletal age, as the latter is more susceptible to the body's response to environmental challenges, and is usually prioritised (Cardoso 2007). Tooth cementum annulation (Blondiaux *et al.* 2016; Roksandic *et al.* 2009; Wittwer-Backofen 2012) relies on combining the average age of dental eruption with counting light and dark bands of dental cementum, the formation of which is thought to correspond to chronological years. Nevertheless, it remains unclear in how far the use of modern reference populations is problematic for age estimations of individuals from prehistoric and ancient populations.

From a biological point of view, the development of primary dentition is an important developmental step that enables a dietary change from nursing to solid food intake. The deciduous dentition consists of 20 teeth and, in contrast to adult dentition, does not include premolars and the third molar. The milk teeth are already present in the jaws at birth, and the incisors may erupt first from the fourth month of life onwards. At that time, dental buds of the permanent dentition are already present in the jawbones, with the first permanent molars usually erupting at around the age of 6 years (AlQahtani *et al.* 2010; Ubelaker 1987). This event coincides with the beginning of the loss of primary dentition, entailing a period of mixed dentition with deciduous and permanent teeth. The occurrence of the second dentition is largely resistant against environmental influences and therefore a reliable feature in estimating age at death (Grupe *et al.* 2015). The second permanent molar erupts at the age of c. 11 years, usually

reaching the masticatory plane around the age of 14 years. Following paediatric definitions, this important event falls into the age of puberty, which girls usually reach between 10-13 years, and boys between 12-16 years (Cunningham, Scheuer, and Black 2016). The hormonally determined growth spurt in adolescence leads to skeletal maturity, which is reached earlier in girls compared to boys of the same age. Recently, techniques used in clinical contexts to assess the pubertal stage at the skeleton relating to hamate hook development, cervical vertebrae maturation (CVM), canine mineralization, iliac crest ossification, and radial fusion in radiographs have been adapted by osteologists for archaeological skeletal remains (Shapland and Lewis 2014). This adjusted method has implications for expanding our knowledge of adolescent maturation across different time-periods and regions. Reaching puberty is of wider significance, as from that age, individuals can biologically reproduce.

Individuals are biologically fully mature with adulthood. In a skeletally adult individual, long bone growth is finished and all epiphyses are fused. Growth cessation is determined hormonally and genetically, and is usually reached for females at the age of 18, and for males at the age of 19 or 20 years. The last epiphyses close at the age of 24-25 years, e.g. in the pelvis, generally later in male individuals (Cunningham *et al.* 2016; Martin, Harrod, and Pérez 2013).

How individuals are grouped into age classes varies according to academic traditions. Most papers in this collection that concern Central Europe follow the German anthropological convention that uses the age categories Fetus/Neonatus (neonate: up to three months old), Infans 1 (early childhood, 0-6 years), Infans 2 (late childhood, 8-14 years), Juvenis (adolescence, 15-20), Adultus (adult, 21-40 years), Maturus (41-60 years) and Senilis (over 60 years, Grupe *et al.* 2015: 267; Knussmann *et al.* 1993; Teschler-Nicola 1985, 205; for a discussion on age group terminology in English, see Cunningham *et al.* 2016, 473-474). Scholars with a focus on the Mediterranean follow alternative age categorisations. Whichever classification scheme is used, it is important to specify the age ranges to facilitate knowledge exchange between different cultures and research traditions.

The study of childhood is an interdisciplinary matter (Baxter *et al.* 2017). From an archaeological point of view, age classes provided by the osteological evaluation are both a useful tool and a hindrance of analysis (Rebay-Salisbury, in this volume). On one hand, using a set of pre-defined age classes can give first insights into associations of age with material objects, funerary and other practices; on the other hand, they make it more difficult to explore the social relevance of age classes that do not align with the modern definitions and identify important age thresholds of the past. This book contributes to improving our interpretations of the meaning of ages, as our authors find social categories that cross-cut these age classes and search to understand social emphasis and significance.

Social responses to ages and maturing

How exactly people in the past determined the right time to mark age transitions socially is an unresolved question, as we often do not understand how time was conceptualized and counted (Lucas 2005). If a calendric understanding of time was established, birthdays may have been counted. Alternatively, biological signs of maturation, such as dental eruption, may have been used as references, or alternatively, signs of mental maturity and the growth of abilities and capabilities.

Maturing occurs in stages, and whilst biological growth is comparable cross-culturally, social responses and categorisations of childhood stages vary across time and space. Definitions of adulthood range particularly widely, and may be very different for girls and boys (Baxter 2005; Crawford *et al.* 2018; Lillehammer 1989). The volume accounts for the variability of how a range of chronologically and geographically diverse communities understood childhood, and at the same time, discloses universal trends in child development in the (pre-)historic past.

Van Gennep's (1909) rites of passage, famous for their in-depth analysis of the phases of separation, liminality and incorporation that constitute the transition from one stage of life to the next, focussed primarily on the beginning of life, maturity, and the end of life. In this book, we are concerned with a more fine-grained appreciation of life course transitions during childhood.

Chapters address how age classes can be recognised archaeologically, which age classes were socially recognized for sub-adults, and identify approximated ages as cut-off-points. They investigate at what point individuals are understood as adults, and if this differs for women and men. Primary sources of information include burial practices and material culture associated with each group; inclusion or exclusion of young children in cemeteries, objects associated with child rearing such as feeding vessels and toys, and gradual or staged access to adult material culture are topics that cross-cut many chapters.

One problem in interpreting the association of grave goods in context with the age of the deceased is that the objects may refer to either the social position the child had achieved shortly before death, or alternatively, to the social position the girl and boy would have achieved if s/he had lived longer. In the latter case, funerary objects reference an age class older than the deceased individual in the grave.

The organisation of the book

Kathryn Kamp and John Whittaker's chapter 'Weaponry and children: technological and social trajectories' opens with an investigation into how children participate in weapon-based activities and learn how to hunt and participate in warfare. Playing with weapons occurs at an early age in many societies, but that does not necessarily mean that children are integrated in the communities of hunters and warriors – an important caveat for the archaeological interpretation of children's weapon graves. The authors scrutinize both ethnographic information and modern learning curves for target spear throwers and conclude that contrary to popular belief, early introduction to weapons does not contribute to an adult's hunting and warfare skills.

The following chapters drawing their data from prehistoric funerary contexts in Europe are organized broadly chronologically. Ekaterina Alexandrova Stamboliyska-Petrova's chapter 'How and when life is considered to have begun in past societies: child burials at the cemetery of Durankulak in northeast Bulgaria' investigates sub-adult burials in Balkan Chalcolithic communities (c. 4900-4200 BC). The cemeteries Varna and Durankulak are extraordinarily rich in metal. The author investigates the inclusion and exclusion of children in the cemeteries per chronological phase and discusses children's access to metal. The latter is seen as an indication of an individual's social status, which raises the question if status was hereditary. The identified variability suggests that status transmission was not automatic, but depended on community decision-making.

Daniela Kern also tackles the question of inherited rank in her chapter 'Own abilities and inherited rank: status and prestige of children in third millennium BC Austria'. However, she sees children as active members of societies, contributing their abilities and skills. This changes the way in which richly equipped child graves with tools and weapons are interpreted. In particular, Kern shows that different types of axes were used in different ways and challenges the prevailing view that they generically symbolize power and status. The author further draws attention to tools less often appreciated as such, for example flint flakes and bone awls; children older than eight seem to share the same tools as adults, suggesting that they participated in adult work. Noteworthy is Kern's presentation of a doll and whistle – rare evidence for childhood specific material culture at the dawn of the European Bronze Age.

The wealth of data brought together by Lucie Vélová, Katarína Hladíková and Klaudia Daňová for their chapter 'The little ones in the Early Bronze age: foetuses, newborns and infants in the Únětice culture in Bohemia, Moravia and Slovakia' is extraordinary. For the first time, the find contexts of Early Bronze Age (c. 2200-1600 BC) remains of foetuses, newborns and infants under one year are presented and discussed in detail. Although the 66 contexts are primarily from modern rescue excavations, their frequency demonstrates that evidence for children of such young age are more common in Early Bronze Age societies than previously thought. The paper highlights children's presence in settlement, single and multiple burial contexts, and describes funerary objects found with the remains.

Katharina Rebay-Salisbury's chapter on 'Children's ages and life stages at the Middle Bronze Age cemetery of Pitten, Lower Austria' takes one of the key sites in which the transition from inhumation to cremation can be directly observed as a case study to question using pre-set age categories for the analysis of childhood stages. New-borns and under one-year-olds were included in the cemetery in very low numbers, and burials of under three-year-olds are rarely placed in prominent positions or well equipped. From that age, however, children appear to gain a firm position within society – as children, evidenced by child-specific material culture and miniaturized objects – and as persons with growing access to status indicators.

'Children in the territory of western Hungary during the Early and Middle Bronze Age' are under study in the chapter by Eszter Melis, Kitti Köhler and Viktória Kiss. The cultural contexts compared include the Kisapostag, Gáta-Wieselburg, Encrusted Pottery and Nagyrév/Vatya culture groups and paint a rich portrait of the variability of treating children after death in the area. The authors use the age categories babies (under one year), toddlers (1-4 years) and young children (4-8 years), children during middle childhood (8-12 years) and adolescents (12-20 years) for a detailed evaluation. From young childhood onwards, funerary treatment suggests the social inclusion of children in all of the discussed social contexts, whereas gendered objects become more common from middle childhood. The heritability of rank and status is again a point of discussion in this chapter.

Dealing exclusively with cremation burials, Daria Ložnjak Dizdar and Petra Rajić Šikanjić use the age categories 0-5, 6-11 and 12-18 years at death in their chapter on 'Childhood in the Late Bronze and Early Iron Ages in the southern Carpathian Basin'. Between 1400 and 600 BC in today's Croatia and Bosnia, children were buried as full members of the community. Early graves were sometimes richly equipped, whilst later burials appear to have adjusted the size of the urns used to contain the cremated remains to the body size of the deceased.

The next set of chapters is in the fortunate position to draw on written records as well as archaeological evidence. Beata Kaczmarek combines information from Linear B tablets and iconography with archaeological data in her chapter on 'Mycenaean childhood'. Her research demonstrates children's routine participation in craftwork at palaces, and the importance of skill acquisition and training. Food rations described in Linear B differentiate several age classes, separately for girls and boys. The author concludes, however, that the position of children in Mycenaean society (c.1400-1200 BC) was defined based on hierarchy and origin more than on sex and age.

Nadia Pezzulla takes a similar methodological approach in her chapter 'Developmental Stages in Ancient Mesopotamia: Dumu.gaba, ṣiḫru e Guruš/sal.Tur.tur'. It is significant that a range of terms for foetuses, newborns and small children illustrate how children enter the social world in the second and first millennium BC. Ration texts and the iconography of sub-adults in reliefs and figurines help to identify the stages of childhood, and in some cases, the rites and rituals accompanying the transition from one stage to the next. The author describes five phases of childhood: the newborn to c. 2-year-old, early childhood, a phase of entering the work and school environments at c. 4-6 years, a fourth phase from c. 7 to 12 years, and adolescence leading to independence in adulthood.

The age transition at around three years is central to Francesca Fulminante's chapter 'Identifying social and cultural thresholds in Sub-Adult Burials of Central Italy during the 1st Millennium BC'. She considers ethnographic accounts and psychological studies in addition to archaeological data and literary sources to draw attention to this particular threshold, which was likely of great social significance. By investigating the archaeological burial record in detail, she finds that children below this age threshold generally lack gender and status role indicators in burials between the end of the Final Bronze Age and the end of the Orientalizing Age (c. 1050-509 BC), whilst older children's identity is indicated by inclusion of certain types of material culture.

Elisa Perego, Rafael Scopacasa and Veronica Tamorri, discuss in how far foetuses, newborns and children were understood as individuals with full membership in society in their chapter 'Child personhood in late prehistoric Italy: implications from bioarchaeology, archaeothanatology and archaeological theory'. Using the cemetery Padua Emo as a starting point, they investigate the representation of age and gender groups as well as abnormal mortuary treatment – in this case inhumation rather than the prevailing cremation rite – in the context of Iron Age Veneto (c. 900-450 BC).

Anna Serra's chapter 'The recognition of children and child-specific burial practices at the necropolis of Spina, Italy' follows with an analysis of grave goods and burial rites to identify age groups and markers of childhood transitions in an Etruscan city near the Po Delta (c. 600-200 BC). The necropolis of Valle Trebba of Spina, organized in family plots, gives ample evidence of the inclusion of children in funerary rituals, although the low numbers suggest a selection for burial in the family graveyard. The author discusses the significance of childhood-specific material culture such as bullae, choes and toys in the conceptualisation of developmental stages in the Etruscan world.

Choes, miniature wine jugs used during children's first religious festival in Classic Greece (c. 500-300 BC), play an important role in Hanna Ammar's chapter 'Greek children and their wheel carts on classical Greek vases'. The wine jugs are frequently decorated with depictions of

playing children. In some of the pictures, a small cart with wheels, manipulated by a stick, can be seen – a toy that symbolizes growth and learning during childhood. The author considers the significance of this object as a marker of age and gender, and its role in religious festivals marking and celebrating childhood age transitions.

Alexandra Syrogianni aims to explain the high rates of infant mortality in Ancient Greece by comparing ancient to modern medical practices in her chapter 'Teeny-tiny little coffins: from the embrace of the mother to the embrace of Hades in Ancient Greek Society'. Noteworthy is that the extremely slim body ideal for women fashionable at the time might have led to fatal complications during pregnancy and birth. The author further discusses the exposure of infants, care practices including breastfeeding, and childhood deaths in their social context.

Irene Mañas Romero and José Nicolás Saiz López detail the rites and rituals surrounding birth in the last chapter 'Pueri nascentes: rituals, birth and social recognition in Ancient Rome'. Their rich description of what exactly happened between birth and the name giving ritual is exemplary for ancient societies for which this information is usually lost. Regulated social practices include an examination of the newborn, the cutting of the umbilical cord, the first bath, stimulating massages, clothing and the first meal, all of which transform the baby into a social being in the first days of life.

Final comments

In this book, we collected papers on the rituals surrounding births and the question of whether the process of social recognition of newborns as members of the community is immediate (upon birth) or gradual. We see a period of dependence during the breast-feeding relationship with the mother, which ends with entering a new stage of childhood at around three years of age. Subsequently, children constantly learn and build their skills, and appear to be integrated into the routine work life from a young age in all of the societies studied in this book. This is reflected in burials, where children's graves include a range of tools that were used during their lifetimes. Grave goods, in the form of gender, status and other identity markers are gradually added with age. This raises the question if and how status was heritable, and how families built on biological relationships interacted with other institutions such as communities and states.

There is little to suggest in the studies presented in the book that adulthood coincided with full physical maturation; rather, it appears that participation rights and obligations to society were conferred during adolescence. This may be in sharp contrast to or own society, where child labour is outlawed, formal schooling required, and adulthood with full financial and organisational independence begins later and later, sometimes not before one's thirties.

The lesson to be learned for future archaeological studies is perhaps not to rely solely on the osteological distinction between sub-adults and adults; there is much more social nuance to be explored in the interdisciplinary study of the childhood-adulthood transition when biological, anthropological and archaeological perspectives are taken into consideration.

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Chapter 2

Weaponry and children: technological and social trajectories

Kathryn A. Kamp and John C. Whittaker

Introduction

The earliest projectile weapons were probably sticks or unmodified stones, but as early as the Lower Paleolithic our ancestors invented thrust or thrown spears, followed millennia later by spear throwers and darts, and finally bows and arrows. While the sequence of technological development is relatively consistent, not all types of weapons were developed in every location and new technologies were often added to existing ones rather than replacing them. The evolutionary trajectory of weapon systems used for hunting and warfare has tended to produce technologies that are increasingly accurate, have a longer range, and require less strength to use. The trends toward greater lethality with distance from foes or dangerous prey, and the reduced need for body size and muscular strength, arguably open up the possibility for individuals of younger age and/or smaller stature to participate in hunting or warfare, with the potential for dramatic changes in the roles and status of children and perhaps women. Our research shows, however, that while with advances in weaponry design younger children can potentially participate in adult activities that utilize projectile weapons, the actual ages at which children begin to join the adult world of hunting and warfare do not decrease dramatically.

Both ethnographic reports and our learning data described below show that even very young children can achieve proficiency with a spear-thrower and dart and there is evidence that this finding generalizes to bow and arrow as well. Cross-cultural data show that weaponry play, generally associated only with males, often starts at a very young age. Children play with miniature versions of the easier-to-use bows and arrows even as toddlers. Spear use appears to start somewhat later, although the age appears to depend somewhat on the form of the spear, with the three-pronged spears used in Oceania for fishing being used earlier. There is less ethnographic data on spear throwers than for bows or spears.

While children start using projectiles, especially bows and arrows, early in life, the transition to adult hunting and warfare does not occur until much later in middle childhood or, more commonly, adolescence. The time lag between learning how to use weapons and actually participating in adult hunting and warfare suggests that factors other than the ability to throw or shoot are the limiting factors for deciding who participates. War, a dangerous enterprise that requires both strength and judgement, often is not seen as appropriate for children until at least adolescence, although war games may introduce children to some of the basic skills of war.

For effective adult hunting, an understanding of animal behavior is prerequisite, as are endurance, sufficient speed to keep up with the group, enough strength to carry necessary equipment, and aspects of self-control manifested in such things as the ability to be quiet or follow instructions. The inclusion of children below a certain age in hunting parties would actually decrease productivity, so they tend to be excluded. This does not mean that children do not hunt, however. While out of camp, the children in many groups provision themselves by hunting and foraging. In addition to providing opportunities to model gender-appropriate activities, learn social skills, practice some of the motions they will use later as adults, learn about the behavior of small animals, and have a good time, these activities provide sustenance during time away from the camp. Children's activities may or may not mimic adult procurement strategies or weapon use. For example, while men may hunt large animals with spears, boys may dig smaller animals from their burrows and club them to death.

Evolutionary trends in weaponry

Throwing is ancient and instinctive. Chimpanzees and other apes throw things. By Homo erectus times, hominin anatomy allowed effective aimed overhand throws (Cannell 2018; Roach *et al.* 2013). Children throw instinctively as soon as they can walk, and can be easily encouraged to improve. Thrown rocks make effective weapons, but are difficult to identify archaeologically. Wooden spears interpreted as javelins appear by Homo erectus times, notably around 400,000 years ago at Schöningen (Thieme 1997) and Clacton (Oakley *et al.* 1977). Stone spear points are added in some areas around the same time (Wilkins *et al.* 2012), and are common in early modern human sites. It is hard to tell whether an archaeological example of a spear was thrust or thrown and, in fact, many spears were probably used in both ways depending upon circumstances. Spears have advantages over simple thrown rocks, but require considerable bodily size and strength to throw hard enough to kill a larger animal. Poisons can help, but still require a throw hard enough to penetrate the skin. Thrown spears must be used at a short range, making the skills necessary to get near target mandatory and increasing the risk of harm to the thrower.

The major technological development after the thrust or thrown spear is the invention of the spear thrower. The spear thrower acts as a lever, facilitating a longer and harder throw with a lighter projectile, usually called a 'dart' by American archaeologists. Morphologically darts and spears may be indistinguishable, but some spears would not function well as darts, because darts need to be flexible enough to oscillate during launch and flight. This requires an appropriate length/diameter ratio that depends on the properties of the dart material. Upper Paleolithic spear throwers are found as early as the Solutrean (*c.* 17,500 BP) in Europe and were once in use in much of the globe, although they are not known in Africa (Cattelain 1994). Today they survive mainly in Australia, where they are used from a standing position to hunt land animals, and the Arctic, where they are used from a seated stance in a kayak (Cattelain 1997).

The use of a spear thrower increases the distance that can be thrown and decreases the strength required to make a successful throw. Spear throwers and darts are fairly accurate for experienced adult throwers at a middle distance (Whittaker 2010; Whittaker and Kamp 2006). Tindale (1928, 80) reports that wallaby could be reliably shot at a distance of 10 yards (c. 9 m). He tried a test, asking men to throw at a target that was an approximately four-foot (just over 1 m) drawing of a wallaby from various distances. At 30 yards (c. 27 m) most were able to make a body hit, but at 35 yards (32 m) only one man hit the target and that only a few inches above the ground. Even at 30 yards (c. 27 m) a smaller or moving target would be difficult. He describes a trial to avenge a death which involved six relatives of the deceased each throwing six spears from a distance of about 30 yards (c. 27 m). None of the thirty-six shots hit the accused.

Bows and arrows are the next development. The oldest bow and arrow fragments are from Stellmoor, Germany, Ahrensburgian terminal Paleolithic (c. 11,000 BP) (Cattelain 1994), although Lombard (2011) and others now claim stone point evidence for the bow and arrow much earlier in Africa, and they may well have been invented more than once. Bows are inherently more accurate than spear throwers because they rely on a consistent, aimable spring action rather than a highly variable throwing motion. Powerful bows also have greater effective range than atlatls. Cattelain (1994) found that on the same target, spear throwers' scores were 65% as accurate as those of archers, and that beginners learn the bow faster. Our own experiments have also shown both facts (Whittaker and Kamp 2006; Whittaker 2013).

Learning curves for spear throwers and darts

A data set of modern spear thrower and dart target scores from children ages four to eighteen years shows that children can learn how to use a spear thrower and dart at young ages and with sufficient practice be able to hit targets reliably by six or seven years of age, but that starting this early does not confer a long-term advantage. The World Atlatl Association (WAA) keeps records on the name and score for all competitors in International Standard Accuracy Contests (ISAC) at official WAA events. In 2018, 135 events were listed on the WAA webpage.[1] An age is recorded for all participants who compete in the youth category, which is defined as less than sixteen years, and high scores are reported on the website. Participants throw at a standard bullseye target five times from 15 m, followed by five from 20 m. The maximum possible score is 100, but no one has yet achieved that. Between 1997 and 2017 twenty-three individuals had scored over 95 at least once and ninety (eleven of them youths between eleven and fifteen) had scored over 90 at least once. Many of these individuals had multiple high scores, however. Participants are only allowed to compete once per day, and dedicated individuals may participate at numerous events in a year. The complete dataset of scores for 2003– 2013 is available on the WAA website[2] and as official scorekeeper Whittaker has the rest, but they require much cleaning for analysis.

From the complete set of youth data we selected those who started as youths and had competed for at least five years after that. This allowed us to track their progress. Some individuals started as early as four years old. Since at these young ages children are brought to the contests by participating parents, it is hard to assess either enthusiasm or practice outside of the official events. There are a few families of atlatl enthusiasts. For instance, one child competed in fifty-one contests in a single year. Figure 2.1 compares the progress made by children who started competing between four and six years of age with those who start later. The thickness of the lines reflects the number of

[1] See https://worldatlatl.org/

[2] At https://worldatlatl.org/waa_events/competition-scores/

contests participated in during a single year. Not surprisingly, individuals who compete more often tend to have higher scores. Very young children start out with quite low scores, but are able to progress quickly. One very enthusiastic child began at four years of age and by seven was able to compete with competent adults (defined as scoring 70 and above) in terms of accuracy. The lighter darts children have to use would not penetrate as well in real hunting however, so accuracy is not the entire story. Youth who start later (at the age of 13–14 years) tend to do better initially (in the range of many first-time adults) and progress even more rapidly to full adult proficiency. In the long term, no one among those who began young is a prodigy or notably out-competes those who start as older youth or as adults (Whittaker and Kamp 2006). The take-home message is that fairly young children can successfully use small atlatls, and rapidly become proficient if they start early, but that starting early does not confer a long-term advantage. Those who start later reach adult proficiency quickly, and are capable of using more effective equipment from the beginning.

The situation for bows is analogous. While we do not have data for modern learning curves for children and bows, bow enthusiasts in the United States report starting their children as early as

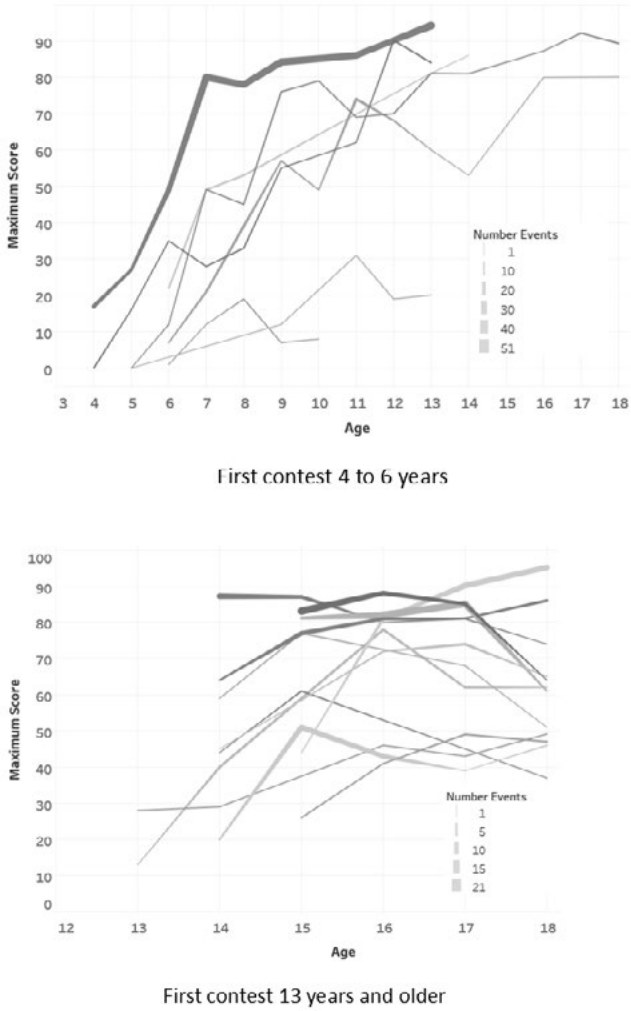

Figure 2.1. Age comparisons of atlatl scores. These two graphs compare children who began competing at atlatl throwing events very early with those who began in adolescence. Each line represents a single contestant. The thickness of the line varies with the number of competitions in a single year.

two years old[3] with equipment requiring a lighter draw, and the possibility of such early bow use is confirmed by our cross-cultural ethnographic study below.

Cross-cultural Comparisons

To compare the ways that children use spears, darts and spear throwers, and bows and arrows, we conducted two searches of the electronic Human Relations Area Files (eHRAF) using Life Cycle/Infancy and Childhood as the subject category. This full-text on-line data base which is indexed and searchable by categories and words includes both recent and historic sources from over 300 cultures. The HRAF data was supplemented with information gleaned from recent ethnography specifically concerned with children and their use of spears or bows and arrows.

The first search, for the word 'spear', yielded forty-two relevant cultures and the second, specifying 'bow' or 'arrow' yielded ninety, once irrelevant references such as those using the word 'bow' to mean genuflect were removed. Africa, Asia, and North and South America are about equally represented and account for most of the societies with information about children and bows and arrows. For spears, the situation is a bit more complicated because of the diversity of types of spears in the data set. Africa and Oceania both account for about a third of the total cases, but the types of spears used tend to be rather different in the two locales. In Africa, the spears are used for hunting or, in conjunction with shields, for waging war. Warfare is important for some of the groups of Oceania, but spear fishing is as well and was characteristic of about half of the groups in Oceania. A similar phenomenon is observed in South America where two of the three references allude to spear fishing.

Because spear throwers and darts are presently used only in a few locales, they were sparsely represented in the data set by the Aranda (Australian Aboriginal) of Oceania (Basedow 1925) and possibly the Nootkans of Vancouver Island, North America (Arima and Dewhirst 1990). In the latter case, children are mentioned playing a game with spears. There is no specific mention of spear throwers being used, but the Nootkans did have them, so they may be using them in this game. Because of the small number of societies in the sample that use spear throwers they are not separated from spears in the tables.

Table 2.1. A categorization of the Human Relations Area Files cultures used in the comparative study. The two cultures using atlatls and darts are included with those using spears. Some cultures use both spears and bows and arrows.

	Bow and Arrow		Spear	
Continent	**N**	**%**	**N**	**%**
Africa	16	17,8	13	31
Asia	20	22,2	3	7,1
Europe	1	1,1	1	2,4
Middle America and Caribbean	5	5,6	1	2,4
Middle East	25	0	1	2,4
North America	0	27,8	6	14,3
Oceania	7	7,8	14	33,3
South America	16	17,8	39	7,1
Total	90	100	42	100

[3] See https://www.archerytalk.com/vb/showthread.php?t=1366481

Because neither children nor weaponry are the main focus of the ethnographies in the HRAF sample, the percentages presented in the tables in this article should be viewed as minimum percentages. Thus a culture may be included in the sample because information about weaponry play is available. If there is no information on symbolism, we cannot assume that weaponry is not used in ceremonies and has no symbolic value, although the percentages may seem to infer this.

Miniaturized weaponry as toys

Ethnographically, modified versions of spears, spear throwers with darts, and bows and arrows are all used by children and sometimes made by them as well. Ethnographies tend to provide only vague and fragmentary information about the ages at which children start playing with toy weapons or when they obtain their first 'real' versions. Because part of our intent is to compare the types of weapons, we will discuss the available evidence for each weapon type separately, but the caveat about the information's generally poor quality unfortunately pertains to all.

Although sometimes parents or other adults make toy weapons (Hulstaert and Vizedom 1938, 474; Lebzelter and Neuse 1934, 53; Marshall 1976, 341; Turnbull 1962, 128), they are often made by the children themselves or other children (Colbacchini *et al.* 1942, 292; DuBois *et al.* 1944, 442; Goodwin and Goodwin 1942, 471; Griffiths and Guha 1946, 246; Meyer and Handzik 1916, 94; Pearsall 1950, 343; Petrullo 1939, 202; Raum 1940, 275; Seligman *et al.* 1911, 90; Weltfish 1965, 389). Who actually fashions a toy bow probably depends most on the age of the child and on who happens to be around to assist. Learning is primarily by observation, imitation, and trial and error, but adults may provide materials and an older child will sometimes assist a younger one (Imamura 2016; Lancy 2017). It is typical for children to spend considerable time with other children, joining groups by four or five years of age, but often even earlier (Gallois *et al.* 2016; Imamura 2016), and it is in this group context that much weaponry play occurs.

While most of the projectile weaponry used by children is informal, toy spears are particularly casual affairs and not really functional as weapons. Toy spears are usually made by slightly modifying a stalk, cane or stick, usually by stripping away leaves or branches, but sometimes by whittling or carving (Best 1924, 81; Buck 1952, 238; Edgerton 1988, 34; Kroeber 1908, 186; Lee 1979, 236; Raum 1940, 344; Smith and Dale 1920, 243–244; Whiting 1941, 46). Even though most of these spears are fairly light, they are potentially dangerous and when used in mock fights injuries may occur (Best 1924, 81), so their ends may be intentionally blunted to minimize the potential for injuries (Lee 1979, 236). In only one case did sources suggest that the ends of the spear were made sharp to mimic real spears. In this case, the Rapa Nui of Easter Island were said to fashion point-shaped gourds and attach them to the ends of the spears, sometimes perhaps even substituting actual obsidian points they had found (Métraux 1940, 253). The casual nature of most of these spears is made clear by Imamura (2016) who describes San children playing a hunting game where they ride stick horses and kill imaginary animals using spears, then butcher their kill and divide the meat. The whole process including making both the stick horses and spears only took about an hour.

The literature has very few references to the actual ages when children start playing spear games or get their first spears. The earliest we found was at seven or eight for Somali children (Burton 1856); for other cultures where ages were available the range was around eleven to fourteen years (Fischer 1950; Thomson 1887) or adolescence (Turnbull 1965). Part of the reason for the very late ages mentioned for having a spear may be that 'real' spears have points of

metal or stone. For this reason, they are often seen as dangerous and may be forbidden to young children (Whiting 1941).

In its simplest form, a spear thrower is simply a piece of wood with a handle at one end and a hook to engage the dart at the other, although adult spear throwers manifest considerable cultural variability in size, shape and embellishments. Toy spear throwers are simplified and miniaturized, but may not reflect directly the adult form. For example, one shown from North Queensland is a simple stick with a hook, while another is a reed with a knot to hold the dart instead of a hook (Roth 1902). The twenty-six Australian toy spear throwers Haagen (1994) found in museum collections show a full range from ad hoc ones made on a branch to miniatures of adult forms. Darts are also smaller than adult-sized darts and may, like spears, be simple sticks, sometimes with the ends bound to prevent serious injuries (Haagen 1994; Lockwood 1980). In order to throw reasonably, however, darts need to be relatively straight, which means that most light spears need to be straightened over a fire (Haagen 1994). They also need to be flexible, which limits their weight and effective use. While we do not have specific ages at which spear thrower and dart use is reported to begin, it is clear from our modern competition data that children as young as six years can throw reasonably well. There is no mention in ethnographic reports of toddlers using spear throwers and all of the available photos seem to show children who are at least six or seven years old.

Bows and arrows are apparently used earlier than spears. Some accounts mention children playing with bows and arrows as toddlers or at two or three years (Baldus and Brunel 1970, 168; Bolinder 1957, 88; Dobrizhoffer 1822, 43; Holmberg 1950, 78; Klineberg 1934, 454; Lee 1979, 236; Marshall 1976, 341; Schaden and Lewinsóhn 1962, 78; Seligman *et al.* 1911, 90; Turnbull 1965, 124; Turney-High 1941, 117) and others cite only slightly higher ages, in the four to seven years range (Basden and Willis 1966; Castetter and Opler 1936; Dennis 1940, 83; Densmore 1929,65-66; Fortes 1938, 51; Gelfand 1979, 218; Goodwin and Goodwin 1942, 271; Golovnyov *et al.* 1994, 327; Henry 1947, 117-118; Joffe 1963, 258; Karsten 1932; McCall 2000, 70; Monteil and Looney 1924, 255; Osgood 1970, 389; Westerman and Schütze 1921, 78). A third and much smaller group gives an age range of eight to twelve years for the first bows and arrows (Loeb 1926, 271; Wallace and Steen 1969, 36). It is likely that these authors refer to formal bows made by adults, rather than toys. For example, San boys get their first bows and arrows around two years of age and play at hunting and games with these, but do not start training with more effective bows until around twelve, although at seven or eight years they can shoot birds (Lee 1979, 236). A similar sequence is reported for the Kutenai (Turney-High 1941, 117) with boys given a first bow at two years, able to shoot a bird by three, by six shooting and eating birds regularly and by ten years able to use an adult-size bow and shoot a bison. Tallensi boys (Fortes 1938, 54) start out at four to six years of age playing with their bows and arrows. At six to ten years they are given real bows and arrows, but smaller in size and with unbarbed heads, with which they can hunt birds and small animals. While at eleven or twelve years old they begin participating in real hunts with adults, it is only after adolescence that they use barbed and poisoned arrows.

Toy weapons of all types tend to be informal, quickly made, and of perishable materials that would be unlikely to survive as archaeological specimens. Archaeological examples of toy weapons are rare until quite late when metal swords and guns are made for children, especially for the children of the elite. Part of the reason may be that many of the toy weapons mentioned ethnographically are made of perishable materials and not designed to last long. Moreover, identifying toys is complex (Crawford 2009). Archaeologists have used small size, especially when paired with poor construction

and contexts like child burials or trash middens, as diagnostic of probable toys, with the caveats that the miniatures may have had symbolic or religious functions instead (Daw 1997; Park 1998, 2005). Furthermore, miniature weapons may be fully functional and simply used for slightly different purposes than larger versions. Thus, Park and Mousseau (2003) studied the miniature harpoon heads found in Dorset sites and found no reason to see them as a separate toy category, suggesting instead that they were used with smaller harpoons, perhaps for hunting small species. It is also possible that less well-made and smaller weapons may be the products of novices, perhaps even child novices. Beginning flintknappers, who are often given lower quality materials to work with, tend to produce smaller flakes and tools, distinctive types of knapping errors, and final products that may not be fully useable (Dugstad 2010; Ferguson 2008; Finlay 1997; Fischer 1990; Grimm 2000; Högberg 2008).

Playing War

The frequency of war games as well as the putative identities of the combatants probably reflects the local political situation as much as the local weaponry. War games involving spears or bows and arrows are found in Africa, Asia, and Oceania (Table 2.2). None of the sources provided ages for beginning the games, but the descriptions available sounded as if the participants were boys in middle childhood to adolescence. Some war games were against imaginary enemies (Thomson 1887), but others involved actual combat with toy weaponry. Zulu boys fought first with light sticks and then with heavier pieces of hardwood as much as 2 or 3 feet (0.6-0.9 m) long (Edgerton 1988), while in Oceania children wielded herb stalks and attached rhizomes (Williams and Murray 1930) or spears of light reeds (Best 1924; Buck 1952). Although not included in the HRAF sample, we know that in Australia, young boys play war games with miniature spear throwers and darts (Tindale 1928), although most of the reported Australian war games involve hand thrown spears (Haagen 1994).

The tendency for war games to be played with hand-thrown spears rather than spear throwers and darts or bows and arrows may reflect safety concerns, since even fairly light bows such as those being used by an eight- or nine-year-old armed with blunt arrows could cause considerable damage. Padding the arrow tip would tend to cause the arrow to become unbalanced. Spears were blunt-ended or tipped with light materials such as gourd (Métraux 1940, 376) instead of stones as safety measures; nevertheless, injuries and even deaths occasionally occurred during mock battles (Best 1924; Raum 1940). Raum (1940, 344) describes the war games Chagga children of East Africa played:

Table 2.2. Children's war games.

	Bow and Arrow			Spear		
Continent	**N**	**%**	**Total**	**N**	**%**	**Total**
Africa	1	6	16	3	23	13
Asia	2	10	20	0	0	3
Europe	0	0	1	0	0	1
Middle America and Caribbean	0	0	5	0	0	1
Middle East	0	0	0	0	0	1
North America	0	0	25	0	0	6
Oceania	0	0	7	3	21	14
South America	0	0	16	0	0	3
Total	3	3	90	6	14	42

> 'Boys still stage battles, using the midrib of the banana leaf as a spear and a piece of bark as shield. Sometimes champions fight; sometimes whole districts, each under the command of a leader. Two themes underlie the fights; raids against hostile tribes and civil wars. ...the games performed on the pasture are recognized by the Chaga as productive of courage and endurance.'

Thus war games and a variety of skill games not discussed in detail here provided practice in throwing, dodging, and sometimes catching, exactly the types of skills needed in battle.

Hunting and gathering with toy projectiles

Hunting and fishing are the activities that children are most likely to do with projectile weapons. This is particularly true for bows and arrows (Table 2.3). Young boys usually start with very small game such as insects, lizards, and rodents, or even inanimate objects, eventually graduating to the more difficult targets represented by birds (Akiga 1939, 306-307; Bolinder 1957, 88; Fortes 1938, 54; Lebzelter and Neuse 1934, 58; Lee 1979, 236; McCall 2000, 70; Opler 1941, 49-50; Turnbull 1962, 128, 1965, 124; Turney-High 1941, 117). Whether or not hunting with a projectile weapon is part of it, much of children's play may be subsistence-related. Kamei (2005) observed 269 play sessions of Baka (hunter-gatherer group in Cameroon) children. Of these, fifty involved hunting activities. The preponderance of boys in such activities is reflected by the participation of only one girl in one of the sessions. When gender was mentioned in ethnographies, it was invariably male.

While a cross-cultural HRAF-based study of 23 cultures (Garfield *et al.* 2016) proposes that children learn most of their subsistence skills from parents, especially in early childhood, other data suggest that other children may also be very important. Because children spend so much time together, rather than in the company of adults, much of their knowledge of hunting and gathering may come from other children. Reyes-García and Demps (2016) suggest that this peer group learning may be especially effective because other children, non-experts themselves, tend to break things down into smaller steps, providing better scaffolding for learning. This provides the opportunity for developing a children's sub-culture even when it pertains to basic cultural activities such as hunting or gathering. Interestingly, children's innovations do not tend to spread to adults (Bird and Bird 2000; Boyette 2016).

Table 2.3. Children's hunting play.

	Bow and Arrow			Spear		
Continent	**N**	**%**	**Total**	**N**	**%**	**Total**
Africa	14	88	16	1	8	13
Asia	8	40	20	1	33	3
Europe	1	100	1	0	0	1
Middle America and Caribbean	3	60	5	0	0	1
Middle East	0	0	0	0	0	1
North America	21	84	25	0	0	6
Oceania	4	84	7	8	57	14
South America	13	81	16	2	66	3
Total	64	71	90	12	29	42

Children's small catches may be cooked and eaten, providing food during the day while children are away from camp (Imamura 2016). For many cultures, hunting, combined with gathering, provides significant calories for children when they are away from camp (Gallois *et al.* 2016). Children may, in fact, spend more time hunting than adults; however, since the animals they catch tend to be smaller, their net return is smaller (Hagino and Yamauchi 2016) and they are generally not expected to share with adults. Opportunistic hunting is often combined with other chores (Gallois *et al.* 2016). Even herders may hunt small animals while tending their flocks and cook and eat the spoils (Raum 1940, 275). Chagga boys hunt birds with bows and arrows as they watch the herds even though adult males are forbidden to eat fowl. Chagga warriors used spears rather than bows and arrows to fight; the use of bows and arrows by the boys is probably because it is harder to hunt small animals and birds with spears.

Boys learn to hunt small animals at a young age and often without adult instruction, presumably because smaller prey is easier to catch and less dangerous; big-game hunting commences at a later age and may involve adult participation (Lew-Levy *et al.* 2017). Spears are much less used in hunting small animals than bows and arrows, because they do not make very effective weapons for hunting small game. Thus, the sample only includes one instance where small game are hunted by children with spears, among the West African pastoralist Dogon where young boys herding goats chase down a variety of small animals and birds with the help of their dogs and kill them with stones or spears (Griaule and Marcus 1938). This example then does not occur in a primarily hunting society, and is aided by dogs. In areas where spears are used by adults to hunt big game, children often do still hunt small game, just not using spears. In this case, it is more common for them to use alternative hunting methods, such as traps, chasing down animals or digging out burrows. When caught, the small animals are usually clubbed to death rather than speared.

While very young children may hunt on their own using bows and arrows or spears, and may sometimes accompany adults who are checking and setting traps, it is rare for them to accompany adults on hunting expeditions using projectiles until adolescence (Fortes 1938, 54; Gorer and Hutton 1938, 85; Murphy 1960, 119; Turnbull 1965, 120). Several sources (e.g. Wafer 1934, 34) suggest that the age at which boys start accompanying the men on hunts is determined by their ability to carry their own provisions and equipment and to keep up.

Throughout coastal Oceania and in the South American Amazon spear fishing is common and all of the instances where children play at hunting using spears in either of these two regions refer to spear fishing. The Nicobarese, who while not in South America or Oceania are an island society, also use spears for fishing (Whitehead 1924). Spears used for fishing often have a trident form, very different from those used for hunting. Fishing is conducted along rivers or sea coasts and involves a thrust or short-distance throw. This plus the relative ease of penetrating a fish, makes spear fishing easier than spear hunting. Children, especially boys, begin spear fishing at a young age. The exact age is hard to discern from the literature, but there seems to be some suggestion that they are fishing by at least five or six years old (Barnett 1949, 1963; Goodale 1971); others use vaguer terms such as 'half-grown youths' (Müller 1917, 122), or 'boys' (Salesuis 1906; Thompson 1940) to characterize fishing ages. Fischer (1950) suggests around eleven years (for Chuuk/Trukese). For the Lesu of Melanesia, Powdermaker (1933) casts doubt on the notion that young boys spear fish. She paints a picture of the period between six and eight years of age as a halcyon time for boys when they played all day and were asked to do little or no work. She specifically says 'No boy has a fishing spear or net, although a girl of his age owns a *tsip*, the shell

used to scrape the taro' (Powdermaker 1933, 86). Other researchers suggest that childhood in Oceania was often a carefree time with few work requirements, but a common regime appears to have been to spend the day with age-mates playing in the water with toy canoes and fishing (Barnett 1949; Fischer 1950; Mead 1956; Métraux 1940; Salesius 1906; Thompson 1940).

Conclusions

Most weapon-using societies start children very young, with relatively ineffective toy or miniature weapons, and introduce them to more effective technology as they get older. The age at which children start engaging with projectile weapons does seem to decrease as weaponry gets easier to use. Thus children start using miniature bows at the youngest ages and spears at the oldest. Involvement in adult hunting and warfare, however, is not dramatically affected and generally commences in adolescence or just before. Participating in adult bow hunting may start at very slightly younger age.

The age of inclusion in adult activities involving weapons may be at least partially determined by the most efficient use of both adult's and children's time. The reason that !Kung children, in contrast to Hadza children, do not forage for their own food may be a simple matter of efficiency (Blurton Jones *et al.* 1994). Younger children generally cannot forage on their own because the necessary resources are usually located far enough from camp that adults fear they will get lost. The incremental gathering advantage that women might gain if they were to take older children with them on gathering trips for mongongo nuts is offset by the processing costs, making it more economical for children to stay in camp processing the nuts.

When even fairly young children hunt for small game, hunting provides them with some of their daily food. While children appear to enjoy hunting and engaging in related activities, such activities, which often mimic adult enterprises, are probably important for establishing gender identity, and learning about the local environment. Nevertheless, for many of the children who hunt, the actual procurement and ingestion of food also appears to be important. Thus, food the child hunts and gathers may provide all or most of the calories during the part of the day when they are not in camp (Parin *et al.* 1963, 51). Since much of the day may be spent out of camp, this can be an important part of the household economy (Parin *et al.* 1963, 51).

Bird and Bird (2005) argue that size, not the complexity of the task is the limiting factor for foraging productivity and for hunting as well. Merriam children pick different types of terrain to hunt in than adults, although they hunt some of the same animals as women, especially lizards. Children's hunting effectiveness measured in kilocalories did not significantly increase by age between three and fifteen years, but did increase with height. A lot of this is due to walking speed. Although age correlates with walking speed, height is a better predictor. Children are choosing the patches that require the least time per calorie even though these are different niches, requiring different hunting techniques than those used by adults and suggesting that the experiences of childhood are not perfect learning models for the adult world.

Most cultures, including our own, seem to believe that childhood practice with toy weapons is part of learning weapon skills that are important in later participation in warfare and hunting. However, both the ethnographic information and our modern learning curves for target spear thrower use suggest that very early introduction to weapons does not really enhance later adult skill. The hunting activities of children, whatever the projectile, are useful for increasing

the children's knowledge of animal behaviour. Several studies have concluded that it is only in adulthood, and probably well into adulthood, that men maximize their hunting effectiveness (Blurton Jones 2005; Walker *et al.* 2002).

While through time weaponry technology has become more amenable to use by individuals who are smaller-bodied and less strong, this has produced only marginal differences in the ages when children begin to use it for adult activities in hunting or warfare. Efficiency in hunting and warfare are limited more by body size and cultural knowledge than by the ability to use a weapon.

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Chapter 3

How and when life is considered to have begun in past societies: child burials at the cemetery of Durankulak, north-east Bulgaria

Ekaterina Alexandrova Stamboliyska-Petrova

Multiple layers of information are brought together in this chapter to unravel the social organization of Balkan Chalcolithic communities (*c.* 4900-4200 BC). The paper focuses on the development of Chalcolithic society in north-eastern Bulgaria, where the necropoleis of Varna and Durankulak revealed a great concentration of metal. The presence of gold and copper artefacts as part of grave goods assemblages in both adults' and children's graves is discussed as a result of profound socio-economic processes, affecting the role of the individual as an essential element of social structure and social status transformations. The cemetery of Durankulak comprises 1204 graves; as one of the largest prehistoric burial grounds on the Balkan Peninsula, it provides comprehensive data regarding Chalcolithic burial practices.

Children' graves shed light on community structure and social status, as it developed from birth through the states of biological and social growth. Children are a fundamental to every society's social structure. The attitude towards its children reveals important features of social organization, the character of the social structure, and the role of the individual as an essential element of it. Burial practices reveal basic data on social behaviour, not only regarding the deceased, but in particular regarding the living community involved in the organization and performance of the funeral ceremony. Social beliefs and norms are incorporated in the ceremony, and are closely aligned with the level of development of the entire socio-economic organization. Important questions emerge from status formation, manifestation and transmission. Was status hereditary, and how did status expression relate to the appearance of social hierarchies and complexity within the Chalcolithic societies of the fifth millennium BC?

Addressing the question of status in the context of burial practices, this chapter focuses on sub-adult burials from Durankulak and the metal object distribution within them. Subjects of the

study are individuals between birth and 18 years, whose age was estimated during osteological investigations carried out from 1979 to 2000 (Todorova 2002). From a chronological point of view, special attention is paid to children's graves of the Chalcolithic period, corresponding to the Hamangia and Varna cultures. By tracing the biological development of children and comparing it to the distribution of metal items included with the burials, this research aims to get a better understanding of the mechanisms by which children become full members of societies and how they acquire status. An important question to discuss is in how far individuals had agency and some power of decision-making, and in how far the community determined the individual's personal identity and social ranking.

Gold and copper metallurgy emerged as a new and important element of Chalcolithic economy, bringing dynamics into the social structure. Important aspects to address are the value of metal and the context of metal artefact circulation. Aside from intrinsic value, metal brings dynamics into the social structure by intensifying demand and exchange (Renfrew 1986). It is thus a significant driver of the formation of new social units within the society (Chapman *et al.* 2006, 162). This provides a new perspective on the mechanisms of social interactions between individuals and changes the concept of social status to a concept strongly influenced by economic factors.

The development of metallurgy is generally considered to have autochthonic origins dating back to the end of the Late Neolithic around 5000 BC (Renfrew 1969). In the beginning, metal processing was characterized by the production of small copper items, but over time, metal processing underwent a series of developments affecting the technological aspects of metal production, as well as changes relating to the value of metal. Initially, the use of metal was considered a primary sign of prestige. The value of metal increased with the development of metallurgy and became influenced by economic factors such as trade. High metal demand led to improvements in the metal processing techniques, and metallurgy underwent a considerable development during the Chalcolithic (4900-4200 BC). The so-called 'metal boom' of the late Chalcolithic (*c.* 4200 BC, Todorova 1986) was characterised by the production of a great number and variety of metal items.

The metal boom found its most visible expression in the late Chalcolithic necropoleis, marking the general trend of metal accumulation of gold and copper items in burial contexts. Vivid examples are the cemeteries of Durankulak and Varna, situated in the Black Sea coastal area of North-East Bulgaria. Both necropoleis correspond chronologically to Hamangia and Varna cultures. All four phases of the Hamangia culture are presented in the necropolis of Durankulak, covering the transition from the Late Neolithic to the Chalcolithic. The Late Neolithic is represented by the first two phases, Hamangia I-II (5250/5200-4950/4900 cal. BC), the transition to the Chalcolithic and Early Chalcolithic by Hamangia III (4950/4900-4600 cal. BC) and the subsequent development of the Chalcolithic by Hamangia IV (4650/4600-4550/4500 cal. BC). The latter is referred to as 'Middle Chalcolithic' by some scholars (Todorova 1986) and as 'Late Chalcolithic' by others.

The further development of the Late Chalcolithic is marked by the emergence of the Varna culture, with Varna I (4550/4500-4450/4400 cal. BC) and Varna II-III (4450/4400-4350/4150 cal. BC) (Bojadžiev 2002, 67). These phases are represented both at Varna and at Durankulak.

The Durankulak and Varna necropoleis comprise some of the most peculiar examples of metal object accumulation during the Late Chalcolithic. Evidence of the results of this flourishing metal

production is visible primarily in burial contexts. By contrast, there is no evidence of such a broad metal circulation in settlement contexts. The act of metal deposition was clearly important, and the fact that metal was deposited in the burial domain lets us consider the variation of value and ownership of metal according to its depositional context.

On a broader scale, the metal deposition practice differs in terms of metal quantity even between the Chalcolithic cemeteries in the territory of Bulgaria. This discrepancy is especially evident when comparing the necropoleis of the Hamangia and Varna cultures (Varna, Durankulak and Devnya) to these of the Late Chalcolithic complex of Kodjadermen-Gumelnitsa-Karanovo VI, spread out over South Dobruja and mainland north-eastern Bulgaria (Виница: Радунчева и др. 1976, Голямо Делчево: Тодорова и др. 1975, Радинград: Иванов 1978, Търговище: Ангелова 1986, Омуртаг-Пчелина: Ангелова 1991, Лиляк: Овчаров 1963, Демир Баба Теке: Матева 1997). The discrepancy may result from local factors in the development of the Chalcolithic communities, different value concepts, diverse needs and variable access to metal. The latter is an important point to consider, as unequal access to copper and gold is the basis for the establishment of control over these resources, which gives power to certain individuals/groups (Chapman1991). The Black Sea coastal area with the cemeteries of Varna and Durankulak and their abundance of gold and copper items play a primary role in the development of the social processes that accompany the glossy metal items.

A total of 1820 gold objects weighing 5.4 kg were discovered in the necropolis of Varna since 1972 (Ivanov 1987, 24). The exceptional quantity of metal gives reasons to consider the cemetery as one of the greatest concentrations of wealth in prehistoric Europe (Chapman 1991, 152). Moreover, the gold objects found in the necropolis are accepted as the oldest manufactured gold in the world, revealing important information about the *chaîne opératoire* of the gold production process.

Situated just 100 km away from Varna, the necropolis of Durankulak is one of the largest concentrations of prehistoric graves in the Balkans (Todorova 2002). Comprised of over 1200 graves, the necropolis represents a solid study database that reveals in detail the cultural and chronological development from the Late Neolithic to the Chalcolithic. The transition is very well represented in the necropolis by the four phases of the Hamangia culture.

In addition to the important data the necropoleis provide regarding the cultural and chronological development of the area, both necropoleis include metal items in children's graves. The discovery of metal items with children's inhumations takes the debate to a different level and intensifies the discussion on social complexity, since it implies that status was hereditary; it stresses the importance of kinship ties and lineages as a mechanism of personal status acquisition. In addition to metallurgy as a socio-economic factor, metal in children's graves creates a new perspective on social identity and status formation, creating the concept of corporative prestige (Chapman 1991).

The large number and variety of burial items in the inhumation graves opens a number of questions regarding the social rank (Brown 1981) of individuals and the organisation of Chalcolithic society, for example about the relationship between status manifestation and material culture. In this view, emergence of new commodities coincides with the formation of new statuses (Renfrew 1986). Looking at metal not only as a product of technological innovations, but as a result of social transformations affecting human needs, thinking and

behaviour, raises the question of ownership and possession of metal items. In this regard, the questions to discuss are who had the right to own metal items, and what were the criteria for obtaining metal items? It is easy to assume that the persons engaged in metal production had the power to deal with metal. However, the fact that metal items were subject of demand and exchange is evidence of unequal access to metal, which goes beyond the persons engaged in the control and production of metal items. And last, we see children, who most probably had little contribution to metal production, as final consumers of gold and copper items. This raises numerous questions on the importance of kindship ties and the appearance of corporative linages (Chapman 1991).

The 1204 graves of the cemetery of Durankulak provide the data for an attempt to answer some of the questions outlined above. Statistical analyses were carried out on existing data obtained during investigations throughout the period 1979-2000 (Todorova 2002). Research focussed on chronology, individual's age, and grave goods, particularly metal grave goods of gold and copper. Of the 1204 graves, 331 graves (27.49%) are those of sub-adults. Adult graves and cenotaphs comprise 873 graves (72.51%).

The age of the individuals is anthropologically defined as follows: babies (0-1 years), *Infant I* (1-7 years), *Infant II* (7-14 years) and *Juveniles* (14-18 years). The studied graves chronologically correspond to the Late Neolithic, Chalcolithic and Proto-Yamna period. The Late Neolithic is presented by Hamangia I and II (5250/5200-4950/4900 cal. BC), the Chalcolithic by Hamangia III (4950/4900-4650/4600 cal. BC) and IV (4650/4600-4550/4500 cal. BC), as well as by all stages of Varna I, II and III (Boyadhziev 1995, 67).

Sub-adult individuals of the Late Neolithic (including the phases of, Hamangia I, Hamangia II, Hamangia I-II) were found in 24 graves (Hamangia I: 1; Hamangia II: 1; Hamangia I-II: 22 graves). The Early Chalcolithic represented by Hamangia III includes in total 48 graves (Hamangia III: 46; Hamangia IIIa: 1; Hamangia IIIb: 1). The phase of Hamangia I-III, which could not be assigned to the Neolithic nor to the Chalcolithic, comprises two graves. There are six sub-adult graves of the Hamangia culture, which could not be dated. The Late/Middle Chalcolithic of Hamangia is represented by Hamangia IV with 38 graves (Hamangia IVa: 4 graves, Hamangia IVb: 7 graves, Hamangia IVb/Varna I: 1 grave; Hamangia IV/Varna: 5 graves, Hamangia IV/Varna I: 4 graves). The Late Chalcolithic Varna culture is represented by 112 graves (Varna I phase: 16 graves; Varna II: 3 graves, Varna II-III: 44 graves; Varna III: 13 graves). Three graves date to the transitional period to the Bronze Age and the so-called Proto-Yamna Culture. There is one unidentified grave.

Due to discrepancies and incompleteness of information, 26 graves of those mentioned above were excluded from the record of 331 graves. The number of sub-adult graves taken into consideration is 305 (25.3%).

Regarding details of the chronological distribution of graves, the following graves redistribution have been discussed: 18 Late Neolithic graves have been studied. The Early Chalcolithic, represented by Hamangia phase III, comprises 47 graves. Hamangia phase I-III is comprised of 1 grave, Hamangia IV is represented by 34 graves, Hamangia IVa by 4 graves, Hamangia IVb- by 7 graves, Hamangia IVb/Varna I by 1 grave, and Hamangia IV/Varna by 1 grave. There are 5 graves of the Hamangia/Varna phase , 106 Varna phase graves, 13 Varna I graves, 3 Varna II graves, 42 Varna II-III graves, 12 Varna III graves, and 3 Proto-Yamna graves.

Table 3.1. The number of adults/cenotaphs and sub-adults in graves in the chronological subgroups of the cemetery of Durankulak.

Phase	Adults/Cenotaphs	Subadults	%
Late Neolithic (Hamangia I, Hamangia I-II, Hamangia II)	152	18	10,59
Hamangia I-III	14	1	6,67
Hamangia III	322	47	12,74
Hamangia IIIa	7	1	12,50
Hamangia IIIb	0	1	100,00
Hamangia IV	56	34	37,78
Hamangia Iva	7	4	36,36
Hamangia Ivb	28	7	20,00
Hamangia IV/Varna I	8	1	11,11
Hmanagia IVb/Varna I	3	1	25,00
Hamangia III/Varna	1	0	0,00
Hamangia	5	5	50,00
Varna	67	106	61,27
Varna I	54	13	19,40
Varna I-II	3	0	0,00
Varna II	6	3	3,33
Varna II-III	60	42	41,18
Varna III	55	12	17,91
Protoyamna (Proto-Bronze Age)	14	3	17,65

Table 3.1. presents the proportion of sub-adult graves in correspondence to each of the chronological subgroups. From the total of 1204 graves, 17 adults and 26 sub-adults could not be dated and were excluded from the database.

Forty-seven sub-adult burials belonging to the Early Chalcolithic (Hamangia III) include 23 babies, 17 individuals under seven years, 6 individuals between 7 and 14 years, and one individual between 14 and 18 years of age. Metal is only present in one of them, Grave 621 of a 7-14-year-old, in the form of a copper bead and malachite.

Hamangia IV includes 34 sub-adult graves, of which 19 are babies, 16 individuals under seven years, five between 7 and 14 years, and four adolescents between 14 and 18 years of age. Metal items are present in all age groups except for the adolescents. Metal items (beads) are present in two of 19 babies' graves, Grave 39A and 48A. Grave 39A appears extremely rich. The Infant I group (7-14-year-olds) comprises three graves with metals, Graves 464, 517 and 681, which include malachite, a copper bead and a copper ring. A copper bracelet was found in Grave 309, one of the five graves of 7-14-year-olds.

The five sub-adult graves of the Hamangia IV/Varna group (one baby, three 1-7-year-olds, one 14-18-year-old) did not include metals, and neither did the five graves of the following phase of Hamangia IV/Varna I, which all held individuals between one and seven years at death.

The 106 sub-adult graves of the Varna phase are those of 55 babies, 42 individuals between 1 and 7 years, four 7-14-year-olds, and five 14-18-year-olds. Metal items were present in the group of the babies and young children, although they were few. Only two of the 55 graves of babies contained metal: a copper ring and pottery were discovered in Grave 243 and a copper bracelet has been found in Grave 745A. Seven of the 42 graves of 1-7-year-olds included metal: a copper bracelet each was found in Grave 222, 262, 733 and 739, two copper bracelets were found in Grave 345, a copper earring and a malachite bead were found in Grave 223, and Grave 513 contained a malachite bead.

In the Varna I phase, there are 12 graves – four babies, four 1-7-year-olds, two 7-14-year-olds and two 14-18-year-olds. No metal items are presented in the group of babies, only one of the four graves in the 1-7-year-olds group contained metal, and in the group of the 7-14-year-olds there is likewise only one metal item (a copper ring and a piece of copper in grave 433). In the adolescent group (14-18 years), metal objects were found in both graves. Grave 377 contained a copper bracelet, and grave 660 contained two copper bracelets and 24 malachite beads.

Phase Varna II comprises three graves, including one baby and two individuals between 1 and 7 years. No metal items were recovered from these graves.

The Varna II-III phase comprises 42 graves, including 20 babies, 16 individuals between 1 and 7 years, four 7-14-year-olds and two adolescents between 14 and 18 years. Metal items were found only with under 14-year-olds. Metal was recovered in three of 16 graves of 1-7-year-olds. Two copper bracelets and malachite beads were found in Grave 388; Grave 400 – a double burial of mother and child – contained a copper ring and two copper bracelets. Grave 826 is also a double burial, and a copper tooth ring was found in the grave pit.

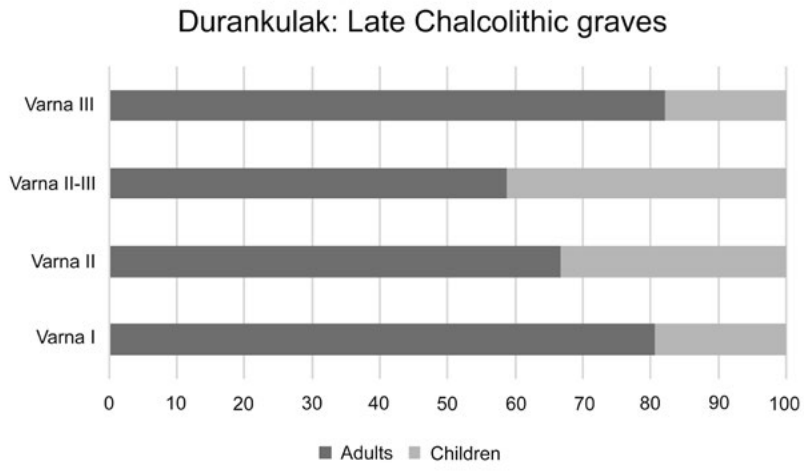

Figure 3.1. The proportion of adults/cenotaphs and sub-adults in graves in the Late Chalcolithic of the cemetery of Durankulak

Twelve graves are assigned to the group of Varna III, including five babies, five 1-7-year-olds, one 7-14-year-old and one adolescent; no metal items were found in any of the graves (Figure 3.1.).

The analysis of metal distribution indicates a general trend of increasing inclusion of metals in the graves of children from Hamangia III to Hamangia IV. In the case of Hamangia IV, metal was included in burials for all age groups except for adolescents. During the phase of Varna, in contrast, a greater standardization and limitation of metal distribution can be observed. Metal items are present in graves of children under seven, but the distribution seems to be much more limited. Furthermore, the presence of copper bracelets in six of seven graves of children aged 1-7 years suggests an early standardization of metal grave goods. In the subsequent phase of Varna I, this mode of standardization was not continued. The sporadic distribution of metal objects in burials and lack of long-term standardization implies that the observed variability is more likely a result of decision-making at the family and kinship level, and not an indication of hereditary status.

The double inhumations grave 400 and grave 826 of Varna phase II-III, potential burials of mother and child, raise a final important point. The grave goods in these graves are very extensive in terms of variation of materials and number of items, which suggests that mothers had a special status in Chalcolithic society. This is made more plausible in light of the high levels of infant mortality, confirmed by the high number of graves with babies under one year – 142 graves from all chronological periods presented here. The high infant mortality contributed to the generally low life expectancy. As discussed by Todorova (1986, 83-94), the average Chalcolithic life expectancy was 30-40 years, with few people reaching more than 50-60 years.

In addition, the presence of children within the necropolis of Durankulak is evidence not only for a high mortality rate, but also for the integration of children into Chalcolithic society at an early age. The fact the children were buried in the same necropolis as adults confirms the significance of children as a basic component of Chalcolithic society. Furthermore, the reasons for the high level of community commitment might be explained in the character of Chalcolithic (and probably broader prehistoric) society, wherein each individual was important to the prosperity of the entire community.

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Chapter 4

Inherited rank and own abilities: children in Corded Ware and Bell Beaker communities of the Traisen Valley, Lower Austria

Daniela Kern

Introduction

Richly equipped children's graves of the Neolithic and Early Bronze Age are primarily interpreted as indicating social stratification and hereditary power. This interpretation is based on a number of implicitly and explicitly expressed assumptions, for example that shaft-hole axes and flat axes, bows and arrows, and daggers are weapons; that weapons and metal objects are prestige items; that children could not themselves have used the tools and weapons they were buried with; that children could not have obtained items of status and prestige and that therefore such items indicate the status of prestige of the family; and that rich children's graves co-occur with the rise of metallurgy. In summary, children are rarely seen as active agents. From this follows the conclusion – which in itself is actually a premise – that status and prestige of sub-adult individuals was low in the third millennium BC. This article is dedicated to the deconstruction of and critical engagement with these assumptions based on graves of primarily male sub-adult individuals of the age groups Infans I (0-6 years) and Infans II (7-14 years) from Corded Ware and Bell Beaker cemeteries of the Traisen Valley in Lower Austria.

Chronological and cultural framework

The third millennium is a time of upheaval and innovations in Europe, brought about by the increased use of copper and the development of bronze technology, as well as agricultural changes such as the introduction of the plough, the yoke and the increasing use of sheep wool. These changes had an impact on subsistence and the organization of labour, and thus on the social fabric in general. At the beginning of the third millennium, small cultural groups were predominant, but in the period from c. 2800-2000 BC, two large, partially overlapping cultural

phenomena emerged. The Corded Ware Complex (2800-2200 BC), spread from Poland in the East to the Netherlands in the West and to the Bavarian and Austrian Danube-Region in the South (Heyd 2007, Fig. 3), and the Bell Beakers (2600-2000 BC) were distributed from Northern Africa, the Iberian peninsula and the British Isles in the West to Southern Scandinavia, Poland and Hungary in the East (Makarowicz 2015, Fig. 3.1). The Corded Ware and Bell Beaker Cultures are similar in that both practice gender-specific burial rites. Men and women were placed differently in the grave, on the one hand in terms of their orientation regarding cardinal directions, and on the other hand in terms of their body side. In eastern Austria, Corded Ware men were placed with the head in the west on the right body side, whereas women were placed with the head in the east on the left side of the body; both thus face southwards. In the eastern Bell Beaker group, which includes the area of what is now Austria, men were buried with the head in the north lying on the left side, women with the head south lying on the right side, both thus facing east (Turek 2000, Fig. 5., Makarowicz 2015, Fig. 3.2). These differentiated burial practices are also evident for sub-adult individuals, and thus form the starting point for more or less extensive investigations into children's burial rites and social status (Häusler 1966; Turek 2000; Turek 2001; Turek 2013; Makarowicz 2015). Exceptions to the rules are made for some children in double or multiple burials, in which an adult individual is buried with one or more children. The placement of the child or children is in such cases mostly based on that of the adults, either behind the back (e.g. Franzhausen II, Grave 3348) or in front of the upper body (e.g. Franzhausen II, Grave 56, Neugebauer and Gattringer 1988, Fig. 13/4), often face to face with the adult (e.g. Gemeinlebarn, Grave 766, Figure 4.1). If two or more children were buried in a grave, they usually reference each other. In these cases, the gender specific burial position

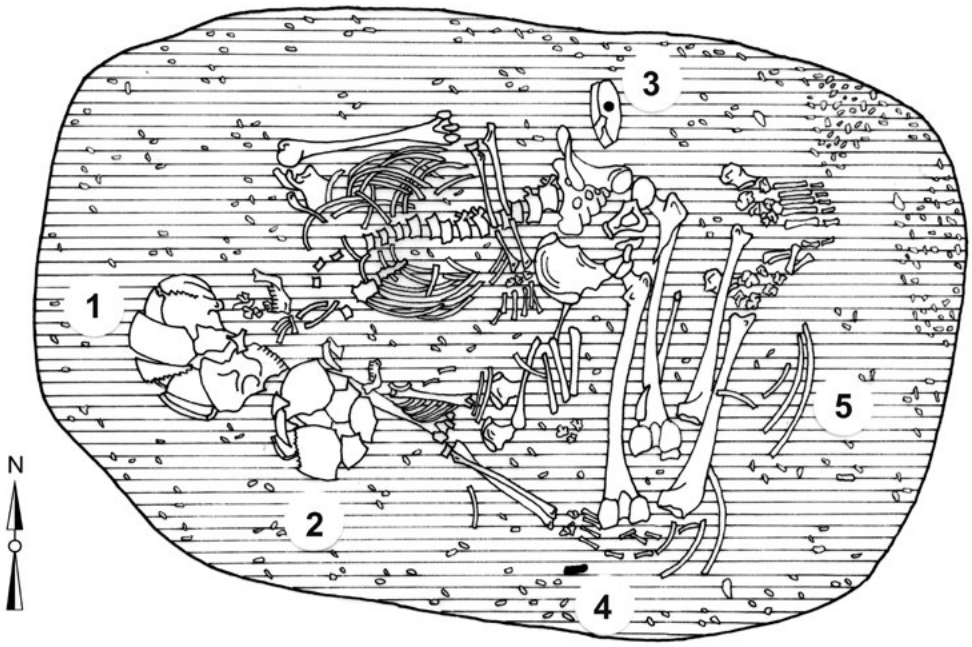

Figure 4.1. Gemeinlebarn, Grave 766 of a 25-35-year-old man (1) with a 18-24-months old child (2), stone axe (3), silex blade (4), animal bones (5) (drawing: A. Gattringer and M. Imam © Archiv des Bundesdenkmalamts Mauerbach).

is not always maintained, but where possible, it seems to have been taken into account (e.g. Ossarn, Grave 11, Neugebauer and Gattringer 1985, Figs 20, 21/1).

The division into a male and female sphere is reflected not only in the burial placement, but also in the grave goods and dress elements, which vary in the different regions, or remain uniform across large areas. For example, chains of animal teeth can be found in Corded Ware women's graves in Bohemia and Moravia, but they have not been found in the graves of the Traisen Valley (see Neugebauer-Maresch 1994, 73-74 for Lower Austria and Turek 2000, 431 for Bohemia and Moravia). Egg-shaped pottery vessels, in contrast, have been added almost invariably in women's graves in Bohemia, Moravia and Lower Austria (Dvořák 1989, 201; Turek 2000, 431); they rarely accompany men, and if so, predominantly older individuals (Kern 2001, 313). In general, the number of vessels, particularly in Corded Ware contexts, is higher in women's than in men's graves (Neugebauer and Neugebauer 1992, 144). Objects interpreted as weapons, such as shaft-hole axes and flat axes, 'daggers' and bows and arrows are found almost exclusively in the graves of male individuals. The average number of grave goods in Corded Ware contexts of Bohemia and Moravia – or rather the total number of preserved grave goods – is 3.7 for men, 3.4 for women and 2.7 for children (Turek 2013, 77).

It has also been postulated that Bell Beaker cups were gendered, in the sense that women's cups were decorated with knobs, and men's had added ornaments in the form of moustaches and inverted Ys (Turek 2006, 63 and Fig. 1). However, this appears to be a phenomenon restricted to Bohemia and Moravia and does not apply to Bell Beakers in the Traisen Valley.

Bio-anthropological and genetic studies on human remains largely confirm the archaeological sex assignments, but the universal validity of this assumption has been repeatedly questioned. Some interpretations emphasize the possibility of a third gender or gender changes under certain conditions (Turek 2013, 82-85). In this context, the DNA analysis of 53 sub-adult individuals from Hoštice-I is interesting, which generated 21 usable results (Vaňharová 2011). It was found that 14 graves with male features contained the remains of 12 male and two female individuals, according to the DNA analysis, whereas only one female but six male individuals were buried in graves with female features (Turek 2014, 288; Turek 2013, 80-82). More DNA analyses, particularly of sub-adult individuals, would therefore be desirable. The gender division visible in the burial practices is often interpreted as gendered labour organization (Turek 2000, 432; Turek 2013, 77) and different social status of men, women and children (Turek 2000, 432). Grave goods are not considered to be personal, but considered symbolic of a social group (Turek 2000, 432; Turek 2004, 147, 150). It is explicitly pointed out that the personal abilities and the personal status of the buried person are not important in the selection of grave goods (Turek 2013, 3). In general, the interpretation of Corded Ware and Bell Beaker graves usually focusses on the 'rich' male burials of the 'warrior', the metal craftsman or arrowhead manufacturers, and the identification of grave good 'packages' (e.g. Turek 2004, 147-151). This is detrimental to the interpretation of children's burials, which are generally based on the adult world, and to the interpretation of 'rich' women's graves with some 'male' inventory. The interpretations emerging from the premise of a symbolic meaning of grave goods do not take into account that the so-called 'packages' may represent more than one social position or function, and may also reflect social positions, special skills or activities. 'Rich' or specially equipped children's graves are, in this interpretative framework, evidence of the social status of the child's family and the heritability of status and are not associated with the children's everyday lives[1] (Turek 2000, 432, 435).

[1] Significantly, this argument is also employed to explain male features in women's graves, but never to explain female features in men's graves.

Even if studies of childhood exist, they do not always explicitly mention which age groups the term 'children' references. Frequently, all sub-adult individuals are considered to belong to one group. This group, however, encompasses individuals that may have been regarded as adults by the society and themselves, even if bio-anthropologically speaking, they have not fully grown up. It is well known that different societies vary as to at what age a person is considered an adult, and the meaning of adult itself varies (e.g. marriageability, earning capacity; cf. Lillehammer 1989, 91-93).

Children's graves in the Traisen Valley

The 183 graves examined in the framework of the project 'The End Neolithic in the Lower Traisen Valley' came from 16 grave groups and underwent a detailed archaeological and anthropological evaluation. In addition to the osteological age and sex determination, gender was assessed based on the gender-specific placement of the dead during the late Neolithic. Anthropological and archaeological information were merged to arrive at a single data point on gender and to interpret the social structure of the prehistoric populations.

The remains of 43 subadult individuals were found in 40 graves and were assigned to the osteological age groups Infans I (0-6 years) and Infans II (7-14 years; Cunningham *et al.* 2016). Two skeletons referred to as 'child' in previous publications were not found at the time of processing and therefore could not be examined. They were nevertheless included in the analysis, which means that the total number of children's graves is 42 and the total number of individuals is 45. Sexing was not attempted because the anthropological sexing of juvenile skeletons is generally difficult, the skeletons were only moderately preserved and the methods for sexing are often developed for specific groups (Schutkowski 1993; Aris *et al.* 2018). The gender of sub-adult individuals was determined exclusively by archaeological data.

According to their placement in the grave, 19 individuals could be identified as females (Table 4.1) and 16 as males (Table 4.2). There were no indications of gendered burial placement from six individuals; two were cremated and four were disturbed after burial and decomposition, so that the original position of the skeleton could no longer be determined (Table 4.3). For two of the disturbed burials, gender-typical grave goods (axe, boar tusks) suggest the buried children may have been male.

Corded Ware children's grave goods in the Traisen valley are usually ceramic vessels. These encompass small amphorae, bowls, cups, beakers, one jug and a handled pot. Bone and stone tools occur occasionally in graves of juveniles, just like in adolescent and adult's graves. Awls were found two times in the graves of 7-13-year-old male individuals and one bone tip was found in the grave of a female 7-13-year-old. A further awl was found in the grave of a 0-7-year-old girl (Neugebauer and Neugebauer 1992, Fig. 6), but the skeleton was not available at the time of this analysis.

The most unusual additions to a child grave in the Traisen Valley were found in Franzhausen IV, Grave 4335 with the burial of a 3-5-year-old girl (Kern and Lobisser 2010, Fig. 1, Fig. 2; Figure 4.2). The metacarpus of a sheep and the bone tube from the shaft of a right femur of sheep or goat were held in her arms, and have been interpreted as a doll (Kern and Lobisser 2010, 29-31; Lobisser and Kern 2017, 60) and a whistle or small container (Kern and Lobisser 2010, 28-29; Lobisser and Kern 2017, 59-60). A collection of different bones of beef, pork, horse and dog were

Figure 4.2. Franzhausen IV, Grave 4335, disturbed grave of a 3-5-year-old girl with a doll and whistle in her arms (© Archiv des Bundesdenkmalamts Mauerbach).

placed in front of the child, which may also have represented 'toys' in the broadest sense (Kern and Lobisser 2010, 26). Another small container was found in Franzhausen III, Grave 2000 (Kern and Lobisser 2010, Fig. 3, Fig. 4), where it was placed in the chest area of a 7-8-year-old girl. Because of its proximity to the meat offerings, the object has previously been interpreted as a salt container (Neugebauer and Neugebauer 1992, 152).

The most conspicuous grave goods from Corded Ware children's graves are shaft-hole axes and flat axes,[2] in the graves of 0-7-year old male individuals, e.g. Franzhausen II, Grave 389 (Figure 4.3). The most 'valuable' artefacts in children's graves are copper ornaments. A neck ring, two spiral rings and two arm spirals were found in a girl's grave at Inzersdorf (Neugebauer and Neugebauer 1992, fig. 6), which was assigned to the age group Infans I; one spiral ring was found

[2] Presumably, it is safer to speak of the blades of axes, as it has not been verified that they had been deposited in the graves as shafted tools.

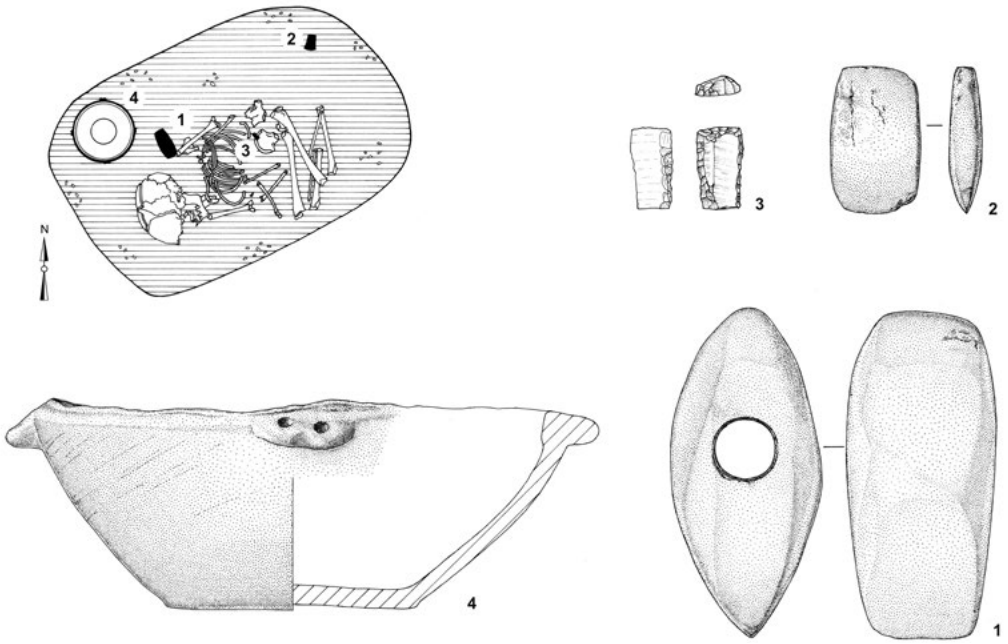

Figure 4.3. Franzhausen II, Grave 389 of an under seven-year-old boy with shaft hole axe (1), flat axe (2), silex blade (3) and bowl (4) (drawing: A. Gattringer and M. Imam © Archiv des Bundesdenkmalamts Mauerbach).

in the grave of an 8-year-old girl from Franzhausen I, Grave 34 (Neugebauer and Neugebauer 1997, 71, pl. 12). In addition, food offerings that left traces such as the bones of cattle, sheep/goat and pig have been detected in children's graves of the Corded Ware group.

Bell Beaker children's graves in the Traisen Valley include almost exclusively ceramic vessels, just like the contemporaneous adult graves. Solely in Oberndorf in der Ebene, a silver ring was found in addition to the ceramic bowl in the grave of a *c.* 9-year-old, cremated individual; a decorated boar tusk was recovered from the fill. Therefore, the buried child is usually classified as male (Neugebauer and Neugebauer 1994, Fig. 14/1-3).

Weapons and tools

According to popular belief, male burials of the Corded Ware Culture are characterized by hatchets and axes, whereas male Bell Beakers graves include beakers, bows and arrows and daggers; the latter are thought to represent weapons in all cases (Dornheim *et al.* 2005; Drenth 2014; Dresely 2004, 115-118; Fischer 1956, 136; Hein 1987, 148-149, Wiermann 2002, 119, fig. 1). Battle-axes were exclusively reserved for adult males (cf. Drenth 1992, 208). Especially in recent years, men with weapons are exclusively seen as warriors or their leaders, the latter because only a comparatively small number of men were buried with such an equipment. However, Feustel already pointed out

in 1966 that he considered the axes and hatchets predominantly to be tools for production (Feustel *et al. 1966, 86-88).* The Bell Beaker equipment with bows and arrows, wrist guards and daggers was not only interpreted as that of a warrior, but also as that of the 'great hunter' (Case 2004, 29).

Shaft-hole axes and flat axes are very rarely found in women's graves, unless a child is buried in the same grave. Since shaft-hole axes and flat axes are also found in graves of young boys, it can be concluded that the children from these graves were indeed boys, e.g. Franzhausen II, Grave 56 (Table 2, Kern and Lobisser 2010, 32) or Künzing, Grave 2 (Engelhardt 1998, 73, figs. 2 and 3). Shaft-hole and flat axe blades in the graves of boys are not limited to the Traisen Valley, but have also been found in Bohemia and Moravia (Turek 2000, 435); they are far less common in the remainder of the Corded Ware distribution area. Drenth mentions only one flint axe with a small cup that characterizes a child's grave from the Netherlands (Drenth 1992, 209-210).[3]

Flint (chert) and copper daggers are found in both Corded Ware and Bell Beaker Graves. They are almost exclusively found in the graves of men; copper daggers rarely occur as equipment of women and children (Matějíčková and Dvořák 2012, 208). Flint daggers are knapped from Nordic Flint in the northern part of the distribution area and from tabular cherts in the south, e.g. in Bavaria and Austria (Heyd 2004, 193). Their shape is thought to imitate daggers made of copper. After a careful analysis of the Corded Ware graves with daggers made from Grand Pressigny flint, which contrary to the daggers described above, are large retouched blades (Ihuel *et al.* 2015, 115 and 117), Drenth concludes for the Netherlands that the presence of these daggers in children's graves is highly unlikely (Drenth 2014, 142). Use-wear analysis of flint daggers has demonstrated a glossy finish, which results from contact with plant material; Van Gijn has argued, albeit unconvincingly, that for the Grand Pressigny-flint daggers this is the result of drawing the dagger out of a sheath made of plant material[4] (Van Gijn 2010, 147-148). Contact with plant material is equally possible when cutting vegetable raw materials (Feustel *et al.* 1966, 98-100; Plisson, Beugnier 2004, 139), be it for food production or for textile production. In addition to the daggers, Corded Ware graves of the Traisen Valley also include blades, scrapers, flakes and arrowheads. Two blades and two flakes that may have been used for cutting have been found in graves of children of both sexes aged 8 to 14 years. This suggests the tools were used as knives in the broadest sense. The copper daggers, which are included in Bell Beaker graves of men, but occasionally also women, are usually heavily worn, just like other costume components (Heyd 2004, 204); the blades have been reduced in size by frequent sharpening, which speaks against a sole function as a prestige object.

Rough blanks for flint arrowheads are occasionally encountered in large numbers in the graves of Corded Ware men; together with the rest of the grave goods, these burials are usually interpreted as those of arrowhead manufacturers, e.g. from Koniusza, Polen (Budziszewski, Tunia 2000). No such grave has been found in the Traisen Valley. So far, no flint tools have been discovered in Bell Beaker graves of the Traisen Valley.

Bone chisels are the most conspicuous bone tools included in male graves in the Traisen Valley, which is remarkable; they are not typical grave goods during the entirety of prehistory and also

[3] Since skeletons do not preserve in the sandy Pleistocene soils of the Netherlands, the sex of buried persons is primarily determined by grave goods; the size of the grave pit is used to assess if the buried person was a child or adult (Drenth 2014, 138-139).

[4] Dagger sheaths are usually made of organic material and therefore preserved only in exceptional cases. A dagger blade made of flint with wooden handle and leather scabbard was found in a bog near Wiepenkathen, Lower Saxony (Cassau 1935). The flint dagger of the Ice Man came with a braided scabbard made of linden bast (Egg 1992, pl. 7).

relatively rare from settlements, although they must have been a commonly used device. Bone tips and awls are also found in graves. Awls are also found in women's graves from the adolescent age class (over 14 years); children's graves of both sexes also include awls.

Children as actors

If weapons or equipment are found in children's graves, it is sometimes suspected that the children did not use them themselves, and in the case of objects considered to be particularly prestigious, the child's lifetime and abilities may not have been sufficient to acquire or use the objects in question (Heyd 2004, 195 and 208, Wiermann 2005, 47). It is frequently argued that axes have formed no part of the children's world and 'we can simply see replications of values and symbols represented within graves of adults' (Turek 2013, 75).

These assumptions then usually only allow the conclusion that status and prestige (see Bernbeck and Müller 1996 for a discussion of the terms), expressed by the 'rich' equipment in the child's grave, are really those of the family or lineage, and are then argued to point to heritability of status. Sometimes, the opinion is expressed that children could not acquire prestige (Wiermann 2005, 47) or that they had no special skills (cf. Bosch 2008, 137-138). Researchers typically do not acknowledge that children in traditional societies were introduced at a young age to the activities important for survival, and could show their talents and abilities in this context. The learning of critical activities takes place by encouraging children to observe persons in action and assist in complex actions, e.g. mounting a loom (Bender Jørgensen 2012, 131), and then also through starting the activity themselves.

Examples include archery among the San (Bugarin 2005, 18), where little boys are encouraged to use the bow as soon as they can run, or girls engaging in spinning from about five years of age (Bender Jørgensen 2012, 129). Amongst the activities that children carry out independently are, for example, collecting firewood, animal fodder and plant foods, fetching water, household chores such as food preparation and cooking, as well as herding animals (cf. Whiting and Whiting, after Lillehammer 1989, Tab. 1; Bugarin 2005 17-21). Children – as has already been emphasised – contribute a significant component to the subsistence base and therefore also in a position to acquire their own prestige. It has been repeatedly argued that the emergence of particularly well equipped children's graves is a phenomenon associated with the spread of metalworking. In this context, it should be noted that richly equipped children's graves are already known from the Palaeolithic, for example the children's graves of Sungir, Russia (Bahder 1978). This raises the question of whether these 'rich' and prestigious grave goods were not (only) a question of the status of the family or the clan, but whether the abilities and activities of the individual were also relevant.

Equipment of children's graves in the Traisen Valley

The equipment in children's graves in the Infans I and Infans II age group (0-14 years) corresponds largely to that of adults, whereby patterns typical for males and females are applied. Graves of girls contained more ceramic vessels than those of boys. Corded ware girls received an average of 2.14 vessels, whereas the number was only 1.41 for boys. On average, two vessels are included in Bell Beaker girls' graves and 1.75 in Bell Beaker boys' graves. The most common vessel type in children's graves is the bowl, which may be related to the diet of this age group. Bowls are also the most common ceramic vessel type in children's graves in Bohemia and Moravia (Turek 2000, 434).

Table 4.1. Female children's graves, according to the position and orientation of the skeleton (n=19). Skeletal age determination: M. Berner, K. Wiltschke-Schrotta (N&N: after C. and J.-W. Neugebauer). *Bell Beaker graves, object? = not certain whether object belongs to funerary assemblage.

Site	Grave	Age	Ceramic artefacts	Stone/metal/bone artefacts	Animal bones
Franzhausen I	34	c. 8 years	bowl	copper spiral ring	
Franzhausen I	354	5-6 years	cup, small amphora, cup		
Franzhausen II	1300	c. 7 years	undecorated beaker, cup, 2 small bowls	flint flake	
Franzhausen II	3348/ FN2	2 years ± 8 months	bowl?, cup?		
Franzhausen II	3377*	5-6 years	bowl		
Franzhausen II	3378*	9-11 years	bowl, 2 cups		
Franzhausen II	3384*	c. 1 year	bowl, cup		
Franzhausen II	3427*	4-5 years	bowl, cup		
Franzhausen III	4	12-13 years	2 bowls, beaker		sheep?: femur, metacarpus
Franzhausen III	7	6-7 years	bowl, cup, beaker	flint blade	
Franzhausen IV	2000	7-8 years	bowl	whistle	juvenile pig: radius, ulna
Franzhausen IV	2424	2-3 years	bowl		
Franzhausen IV	4335	3-5 years		whistle, doll	cattle: female pelvis; juvenile pig: metapodium; horse: tibia; dog: first phalanx; juvenile dog: talus, 3 metatarsals; 2 indet.
Franzhausen IV	4439	2.5-3 years	bowl, cup, small amphora		
Gemeinlebarn	3562	5-7 years	bowl, cup, jug		animal bones
Gemeinlebarn-Hochgerner	1	11-15 years	bowl, cup	tip of an awl	pig: radius, ulna
Inzersdorf/ Traisen	532	0-7 years (N&N)	beaker, cup	2 spiral rings, 2 spiral bracelets, 1 neck ring, bone awl, flint tool	
Oberbierbaum	5*	c. 8 years	bowl, handled pot		
Ossarn	11/FN8	2-2.5 years	bowl, cup		

Table 4.2. Male children's graves, according to the position and orientation of the skeleton (n=16). Skeletal age determination: M. Berner, K. Wiltschke-Schrotta (N&N: after C. and J.-W. Neugebauer), *Bell Beaker graves, object? = uncertain whether object belongs to funerary assemblage.

Site	Grave	Age	Ceramic artefacts	Stone/bone artefacts	Animal bones
Franzhausen II	49	6-7 years	remains of a beaker	flat axe	
Franzhausen II	389	0-7 years (N&N)	bowl	flat axe, shaft-hole axe, blade	
Franzhausen II	761	3-4 years	small amphora, corded beaker	atypical hammer-axe	
Franzhausen II	3380*	5-6 years	bowl, 2 cups		
Franzhausen II	3368	3-4 years	beaker, cup	flat axe	
Franzhausen II	3422	6-7 years		2 pebbles	
Franzhausen III	5	5 years ± 16 months	bowl, cup		
Franzhausen IV	2677	7-8 years	cup, beaker, bowl	bone awl	
Franzhausen IV	6110	12-14 years	cup	flint flake, bone awl	juvenile sheep (?): radius, ulna
Franzhausen IV	6231	9-11 years		simple hammer-axe, bone awl	goat: radius
Franzhausen V	1	12-15 years			
Gemeinlebarn	6646/ FN1	8-9 years	2? bowls, cup?		
Oberbierbaum	3*	c. 5 years	bowl		
Oberbierbaum	4*	5-6 years	2 cups		
Oberbierbaum	7*	8-9 years	bowl		
Ossarn	11/ FN5	3-4 years	bowl, 2 cups	flat axe	juvenile pig: tibia, scapula

Shaft-hole axes and flat axes are only found in graves of male individuals. The question arises if they are always to be interpreted as weapons, or if their other uses – and associated symbolic content – is emphasised in the graves, in particular because in most cases they are not battle-axes. When classifying the Traisen Valley axes according to typological features, it becomes clear that only the faceted axes occur in male graves of best warrior age, whereas less characteristic forms also occur in boy's graves. They never appear in the graves of adolescents, in contrast to flat axes and adzes. Shaft-hole axes and flat axes can be used for many different activities and are still used as trademarks by different professional groups (e.g. carpenters, miners, shepherds).

Table 4.3. Children's graves of undetermined gendered burial position (n=10). Skeletal age determination: M. Berner, K. Wiltschke-Schrotta. *Bell Beaker graves, object? = not certain whether object belongs to funerary assemblage.

Site	Grave	Age	Ceramics artefacts	Metal/bone artefacts	Animal bones
Franzhausen I	19	8-10 years	bowl		
Franzhausen II	56	4 years buried with female	cup?	flat axe?	
Franzhausen II	3340*	9-11 years			
Franzhausen II	3373*	6-7 years	bowl, cup		
Franzhausen II	3348/FN14	5-7 years	?		
Gemeinlebarn	766	1.5-2 years, buried with male			
Gemeinlebarn	6646/FN4	5-6 years	bowl?		
Herzogenburg-Kalkofen	4	3-9 years	bowl, cup, bottom fragment of a vessel		
Oberbierbaum	3a	3-7 years			
Oberndorf in der Ebene	50	7-11 years	bowl	silver ring, boar tusk	

Bell beaker graves show regional differences in the inclusion of bows and arrows in the graves. Although archers' equipment is thought to be characteristic in Bell Beaker graves, far more flint arrowheads were found in Corded Ware graves in Lower Austria. Only two Bell Beaker graves of adult archers have been found, one in Gemeinlebarn (Neugebauer and Neugebauer 1994, 198-200, Figs 4-5) and another in Oberbierbaum (Neugebauer and Neugebauer 1994, 204, 206, Fig. 10), if wrist guards are taken as indicative for archery. In southern Germany, archery equipment is more frequent. Among others, the combination of two flint arrowheads, a wrist guard and three crescent pendants has been found in the grave of a five-year-old at Landau (Kreiner 2002; Heyd 2004, 208, Fig. 11; Husty 2004, 23, Fig. 6; Heyd 2007).

End Neolithic children and their fields of activity

The particular question of who is a child, who is an adolescent, and who is a young adult is answered differently in different times and spaces (Häusler 1966, Lillehammer 1989). All societies, however, have in common that they classify individuals in different age groups, using both biological development and cognitive skills as criteria. It is precisely this observation that has led to repeated arguments that interpretations of childhood in the past are strongly distorted by our own modern Western European perspective (e.g. Baxter 2008).

One consequence of this fact is that weapons and tools in children's graves are usually not seen as properly belonging to the child or young person. This viewpoint is symptomatic of the marginalization of children and adolescents in many models of prehistoric life, such as estimates and calculations of group size, work performance and work organization (Baxter 2008). Especially in the context of Corded Ware and Bell Beaker burials, the focus on rich male

graves with their warrior and craftsmen's equipment is remarkable. In recent years, the opinion has prevailed that these items of equipment are not objects of everyday life, but objects with symbolic relevance (e.g. Turek 2001, 226). Primarily weapons and crafts connected to weapon making, such as smiths and arrowhead knappers, were considered (Heyd 2004, 193; Turek 2004). Little or no attention has been paid to bone chisels and awls, presumably because they were found to be neither particularly prestigious nor symbolically interesting, unless they appear in a grave in context with one of the above-mentioned prestigious objects and thus contribute to the wealth of the funerary assemblage. Even then, they are usually only mentioned in passing. Nonetheless, they too are evidence of various activities in graves, particularly woodworking and leather processing. Attention is only given to flint tools if they are arrowheads, daggers or blades, also referred to as knives, in the interpretation of how wealth and power is represented in graves; scrapers and formally uncharacteristic, but functional tools are routinely ignored, although they were common in the Late Neolithic (Šebela and Kopacz 2000).

If one disregards a symbolic meaning of grave goods, one can question whether different age groups are represented by different equipment in the graves and then if they also reflect the different fields of activity of children, adolescents and adults in the everyday life of the community. In this context, it is interesting that in the Traisen Valley, shaft-hole axes are documented from the graves of 0-7-year-olds and once in the grave of an 8-14-year-old, but not in the graves of adolescent male individuals. Interpreting all these axes as symbols of power of the tribal head or future leader begs the question as to whether such a person never died in adolescence or was never entitled to such a distinctive item.

In contrast to axes, bone and flint tools are never found in the graves of children under seven years old, but in graves of children of both genders from age group Infans II (7-14 years). In particular, these tools are found more often in older children's graves, which correspond to the equipment of adult graves. This is interesting in light of the fact that in some cultures, for example in medieval Europe, no distinction was made between a child older than eight years and an adult (Lillehammer 1989, 91). Perhaps the tools in the graves of these young individuals indicate the incorporation into the (working) world of adults.

The doll made from the metapodium and the femoral bone tubes of a small ruminant appear to reflect children's everyday life, especially if one does not see the tubes as containers, but as whistles. At present, the tubes' use as containers cannot be confirmed, since neither objects nor colour or other residues have been found in the tubes. Whistles, on the other hand, have a wide field of use, for example in attracting birds or as signals for herding animals – both activities that may have performed by children or in which children may have been involved. Ill persons or persons unable to walk might even call attention to themselves with the help of a whistle.

Interpretation of the metapodium as being a doll ultimately cannot be proven, but is highly probable because of the object's position within the grave in the girl's arms, and in cross-cultural comparison (Gallay and Mathieu 1988; Cameron 1996; Maret and Sidéra 2015). It is very rare to detect toys in children's graves, presumably because many of these things consist of organic materials that are not preserved (Balen-Letunić 2014, 13). In addition, an unmodified animal bone not found in such a special, conspicuous context, would normally have been interpreted as part of the meat offering.

Summary

In summary, it can be assumed that objects in Late Neolithic graves had a connection to the everyday lives of the buried young persons, and did not (only) have symbolic meanings. They thus underline the social and economic status and importance of these age groups, which are underestimated in most interpretations.

Acknowledgements

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Chapter 5

The little ones in the Early Bronze Age: foetuses, newborns and infants in the Únětice culture in Bohemia, Moravia and Slovakia

Lucie Vélová, Katarína Hladíková and Klaudia Daňová

Introduction

The Early Bronze Age (*c.* 2200-1600 BC) is probably the best-researched era of prehistory in Central Europe. Attention, however, has mainly focused on graves of adult individuals. Remains of children aroused attention only if they came from exceptionally wealthy graves or if they represented unusual finds, such as burials in vessels referred to as *pithoi* (Neustupný 1933). At present, the archaeological evidence of the Únětice Culture in Bohemia, Moravia and Slovakia (Bátora 2018, 87) provides a solid basis for researching childhood. A striking under-representation of remains of the youngest children is generally present in the literature. Since 2000, conversely, we have been recording an increasing number of finds of children's remains aged up to one year.

If we want to better understand past societies, it is necessary to concentrate on all its segments, even the youngest children. In addition to information about health in past populations, their study brings new insights into the perception of the creation of life, personhood and the consequent reaction to premature death in prehistoric societies.

The aim, method and evidence

During our long-term research focusing on the archaeology of children and childhood (Daňová 2011, 2012; Hladíková 2013, 2018; Vélová 2011, 2014), we are collecting data on the remains of children up to fifteen years of age from the territory of the Únětice Culture in Bohemia, Moravia and Slovakia. Our current database includes 785 children. We investigate the distribution of children's age categories and the frequency of their presence in cemeteries, settlements and other known contexts. We subsequently evaluate grave goods in children's graves to identify

possible changes of how they were perceived at certain ages, and how their social status might have changed in connection to the material culture.

In this chapter, we focus only on the remains of children up to the age of one year, which represent eight per cent of all recognized children up to fifteen years of age. The youngest children, 66 individuals (Figure 5.1; Figure 5.2; Figure 5.6c), were identified at 13 sites in Bohemia (30 individuals), 15 sites in Moravia (20 individuals), and seven sites in Slovakia (16 individuals). The first part of the paper describes the contexts of the finds. Large numbers of cemeteries are known from the studied area (Bátora 2018, 89; Ernée 2015, 298), but the data is of various quality (i.e. the absence of anthropological data does not allow the inclusion of some of the finds). Only inhumed remains found at cemeteries and settlements are presented; the burial rite of the Únětice Culture was inhumation, mainly in flat graves. Most often, the deceased were buried in individual graves, but multiple graves were also relatively frequent. The dead were usually placed in rectangular or oval pits, the majority on their right side. In Slovakia the position of the bodies in the graves varies according to their sex. Male individuals were placed on the right side and females on the left side, which is a tradition of the preceding Nitra group. The same general norms of the burial rites were applied to adults and children (Bátora 2018; Limburský 2018).

In the second part of the paper, we discuss infant mortality, the 'phenomenon of missing children', variability in the treatment of infant bodies, how children were perceived in the past, and the reflection of possible family ties in multiple burials.

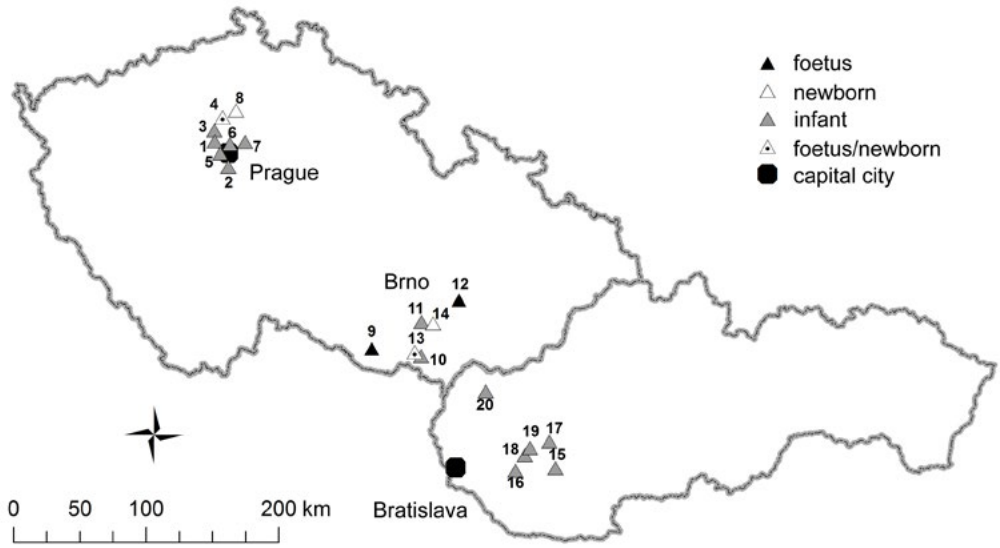

Figure 5.1. Distribution of foetuses, newborns and infants in cemeteries in Bohemia: 1 – Únětice; 2 – Kamýk (incl. two pithoi); 3 – Holubice; 4 – Vepřek (incl. two pithoi); 5 – Praha-Bubeneč; 6 – Praha-Čimice; 7 – Praha-Čakovice; 8 – Vliněves; in Moravia: 9 – Těšetice-Vinohrady; 10 – Pavlov; 11 – Rebešovice; 12 – Vyškov-Markova cihelna; 13 – Mušov; 14 – Újezd u Brna; and in Slovakia: 15 – Branč; 16 – Matúškovo; 17 – Jelšovce; 18 – Pata; 19 – Rumanová; 20 – Senica.

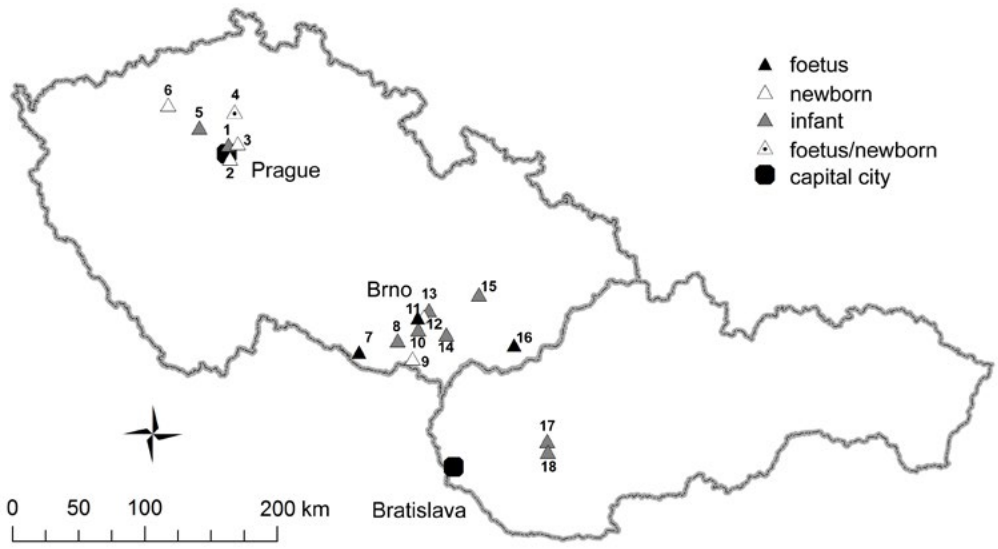

Figure 5.2. Distribution of foetuses, newborns and infants in settlements in Bohemia: 1 – Praha-Čimice; 2 – Praha-Michle (incl. pithos); 3 – Třeboradice; 4 – Vliněves; 5 – Slánská hora (incl. pithos); 6 – Březno; in Moravia: 7 – Znojmo; 8 – Branišovice; 9 – Mikulov; 10 – Blučina-Cezavy (incl. pithos); 11 – Modřice; 12 – Brno-Tuřany (incl. pithos); 13 – Podolí; 14 – Dambořice; 15 – Vrchoslavice; 16 – Uherský Brod-Kyčkov; and in Slovakia: 17 – Jelšovce; 18 – Nitra-Selenec.

Terminology

The definition of the term 'child', based on the biological age of a human individual, is far from uniform. Several authors have criticized this as a problem for the research of children, because it considerably complicates the comparison of data (e.g. Siemoneit 1997, 9). In addition, Lewis (2007, 5-6) has remarked on the inappropriateness of the use of the wide interval of 0-5 years for the term '*infant*', since it ignores important stages of physiological and social development of children in this period.

Inconsistencies in the terminology of the classification of the youngest children generally relate to problems determining their age at death. The difficulty of distinguishing foetuses and premature births from full-term babies with low birth weight or babies small for their gestational age (Halcrow *et al.* 2018, 84-91) is complicated by the fragmentary anthropological material. The medical literature defines foetuses as individuals *in utero*, aged from eight weeks to their birth (Lewis 2007, 2). The category of perinatal individuals refers to prematurely born individuals aged from 24 gestational weeks up to seven days after birth, the category of stillbirths refers to still-born children after 28 gestational weeks, and the category of newborns includes individuals from their birth to 27 days after birth. Other babies aged up to one year, including those with undetermined age, are referred to as 'infants'.

In our paper, the finds of remains of children up to one year of age are divided into three categories. The first age category of foetus (7 individuals) includes babies who were recognized as foetuses by physical anthropologists. This includes not only individuals *in utero*, i.e. unborn

babies, but also premature births. The age category newborn (14 individuals) comprises babies identified by physical anthropological analyses as *neonates* (full-term babies that died within one month from birth). The last category is infant (45 individuals), representing babies up to one year of age.

Archaeological evidence of foetuses

The first foetus in the study area of the Únětice Culture was discovered in Vyškov-Markova cihelna in Moravia in 1948. Grave 61, containing the remains of a female and a foetus, was recovered en bloc and subsequently exhibited in the local museum (Figure 5.3). The next foetus was identified in the female Grave 42 at the cemetery of Těšetice-Vinohrady in Moravia in 1956 (Lorencová *et al.* 1986, 74-75). All the remaining finds were discovered after the year 2000. Two finds of foetuses dated to the Únětice Culture come from the territory of Bohemia and five finds from Moravia; in Slovakia, no foetal remains of this period have yet been discovered. Based on the context, the foetuses can be divided into two groups: foetuses *in utero* – finds of pregnant females with foetal remains *in situ*, and post-birth 'foetuses' (cf. Halcrow *et al.* 2018; Lewis 2007).

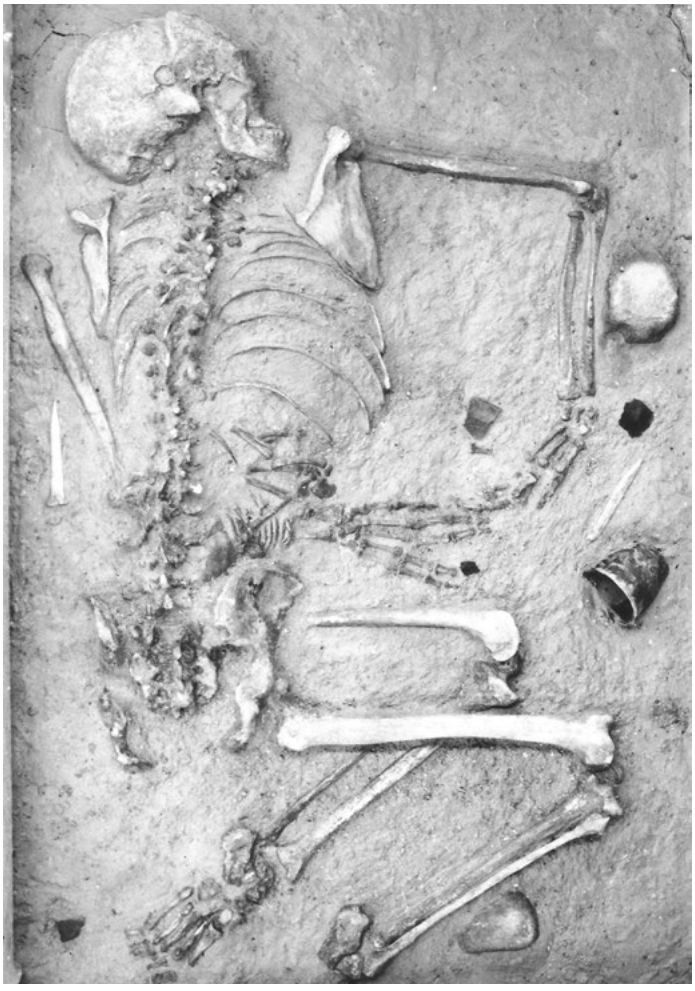

Figure 5.3. Foetus in utero, Grave 61 from Vyškov-Markova cihelna (Fojtík and Prokeš 2004, 230, Fig. 4).

Foetuses in utero

Finds of pregnant women are rather exceptional (Lewis 2007, 34; Halcrow *et al.* 2018, 88), but we recorded at least two cases within the study area. The grave of a 20-24-year-old female in late pregnancy was excavated at Vyškov-Markova cihelna, Grave 61. Her skeleton was lying in flexed position on the abdomen. The foetus of eight months gestational age was already in cephalic presentation (Figure 5.3). Grave goods included four bronze hair ornaments at the skull of the female, two bone awls, a cup, two chert flakes and fragments of mollusc shells. No marks of injuries or other causes of premature death were detected. According to marks on pelvis, the female had already given birth at least once, which lowers the probability of complications of childbirth due to a small pelvic outlet or congenital disorders (Fojtík and Prokeš 2004, 230).

Another foetus *in utero* was documented in a settlement context at Znojmo in 2015 (Humpola and Bajerová, unpubl.). Five individuals had been tossed into a settlement feature in this multiple burial (Pit 596, Figure 5.4). At the centre of the storage pit, a 20-30-year-old pregnant female came to rest in prone position. The bones of the foetus (32-34 gestational weeks) were found next to the left pelvic bone. A 25-35-year-old male individual lay in supine position near

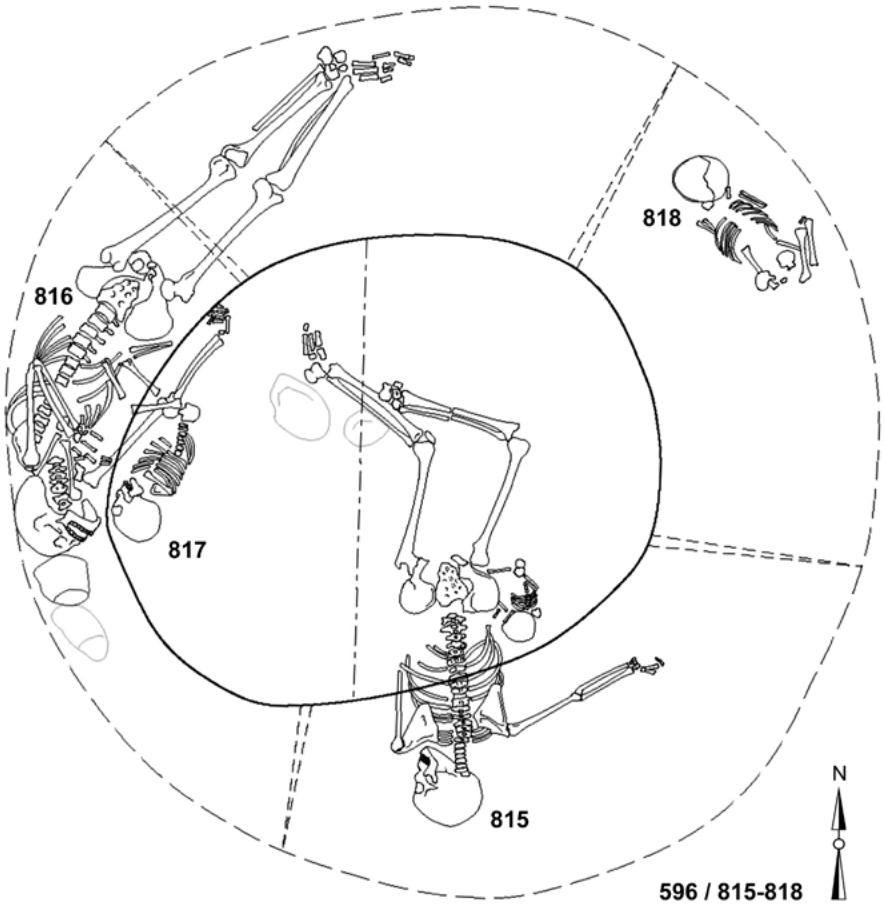

Figure 5.4. Foetus in utero, multiple burial from settlement Pit 596 from Znojmo (drawing: D. Humpola).

the western side of the pit; near him was the skeleton of a child aged 1-2 years. A third child aged 2-3 years was found in prone position near the eastern side of the pit.

Only fragmentary information is available on Grave 42 from Těšetice-Vinohrady, which includes the presence of a foetus (Lorencová *et al.* 1986, 74-75). The skeleton of a female aged approximately 20-24 years was found in flexed position on her back. Grave goods comprised the sherds of three ceramic vessels. Tiny bones of the foetus, aged eight months according to preliminary re-analysis by Tvrdý, were supposedly found in the pelvic region. It was probably the burial of a pregnant woman, although another variant cannot be excluded: a pre-term birth and subsequent placing of the newborn with the dead mother.

Post-birth 'foetuses'

A double burial of a woman and foetus was found at Modřice in Moravia (Kala and Tvrdý, unpubl.). A 30-40-year-old female was placed in a settlement Pit 15791 (Burial 3898) in flexed position on her left side. A bone pin was found at her ribs and a storage vessel had been placed behind her back. The articulated bones of a foetus of 24-26 gestational weeks have been discovered between her pelvis and her feet, outside the abdominopelvic cavity. The unusual position of the foetus allows two possible hypothesis – premature birth or post-mortem birth, or 'coffin-birth' (Lewis 2007, 34-37; Halcrow *et al.* 2018, 92-93). 'Coffin births' are cases in which the nonviable foetus of a deceased pregnant woman is expelled from her body post-mortem as a result of decomposition processes (Fojtík and Prokeš 2004, 228).

Individual burials of babies born prematurely are represented by three finds from settlements. Foetuses were found in two features at Vliněves in Bohemia. The age of the perinate from Feature 54 was 38-40 gestational weeks; that of the perinate from Feature 107 was 34-36 gestational weeks. Unfortunately, details of how the remains were positioned are not known, since the bones were detected in the laboratory. Both of the features also included similar complete small vessels, which may represent grave goods (Limburský 2018, 304-309). The skeleton of an eight months old foetus lying in supine position with the head towards the west was found in settlement Pit 2 from Uherský Brod-Kyčkov in Moravia. This burial might have been accompanied by grave goods as well, since a chert blade and a bird bone were discovered next to the skeleton. The pit further contained a complete small vessel and a range of other finds typical for a settlement pit, most likely without any relation to the burial (Pavelčík 2002, 144-146).

In summary, the group of seven individuals recognised as foetuses comprises two or three foetuses *in utero* and five perinates. The youngest individual in our evidence was aged 24-26 gestational weeks, but foetuses aged eight lunar months are most frequent. In two cases pregnant women were buried in the standard way, in cemeteries and with grave goods. The third case is part of a multiple burial in a settlement pit, where the deceased were deposited in a less respectful manner. Cutting tools were found at Vyškov-Markova cihelna; in graves of pregnant women, they are sometimes interpreted as devices for cutting the umbilical cord (Rebay-Salisbury *et al.* 2018, 110).

Archaeological evidence of newborns and infants

To observe potential differences in the treatment of remains in the Bohemian and Moravian sample, the anthropological analyses was used to separate the group of neonates from infants

up to one year of age. Remains of ten babies from Bohemia and four from Moravia were anthropologically determined as newborns. This approach was not feasible with remains of babies from Slovakia, because their age at death is most often presented as an interval from birth to six months or to one year. Newborns and other infants up to one year from Slovakia are analysed together in the category infants, as there is less data available from this area. In total, 45 infants up to one year of age were recorded, 18 babies from Bohemia, 11 from Moravia and 16 from Slovakia (Figure 5.1, Figure 5.6 c, d).

Newborns in cemeteries (Bohemia and Moravia)

Two main variations of treatment of newborns within cemeteries were recorded. The first is the burial in a single grave, in one case within a storage vessel (*pithos*); the second is the deposition of a newborn in a double or multiple burial.

Two newborns were buried in single graves. The long bones of a newborn from Grave 530 of the cemetery of Vliněves bore marks of copper oxides indicating the former presence of a bronze object. Since the shallow grave pit was large (1.75 x 1.05 m) and covered by stones, it might have been intended for an adult individual (Limburský 2018, 293-294). Another grave with the sole remains of a newborn is Grave 17 from Mušov in Moravia (Stuchlík 1987, 15, 102). It contained comparatively rich grave goods, including three vessels and a fragment of a hair ornament. In a single case, Grave 15A from Vepřek in Bohemia (Lička and Lutovský 2006, 38-40), the complete skeleton of a newborn was detected in a *pithos.*

The double burial of a newborn and a 40-50-year-old woman was excavated in Újezd u Brna in Moravia (Staňa 1973, 23-24). The woman was lying in flexed position on her right side; her arms formed a right angle, where the remains of the newborn were found. Two bronze hair ornaments and a vessel were preserved.

Newborns from settlements (Bohemia and Moravia)

The largest number of newborns from settlements – five – was recovered at Vliněves, a site with the largest amount of human (396) and children's remains (95) in the Únětice Culture study area (Limburský 2018, 531). Three single burials of newborns without grave goods were excavated at Vliněves. In Feature 2267, the rib of an adult individual was found with the remains of a newborn. The small bones of the newborn from Feature 2287 were identified in the laboratory. Feature 2357 contained a newborn in the typical flexed position on its right side (Limburský 2018, 337-347). *Pithos* burials – burials of small children in a container – were documented in Praha-Michle in Bohemia (Neustupný 1933, 15) and in Feature 575 at Brno-Tuřany in Moravia (Moravcová 2012, 70). The single deposition of a newborn in or near the house is rare; one exceptional case is the recovery of a newborn deposited near the northern wall of House LXIV from Březno u Loun in Bohemia, respecting its west-east orientation (Pleinerová 1967, 660).

The burial of a woman (15-24 years) together with a newborn was found in settlement Pit 504 from Mikulov in Moravia. The individuals were oriented west-east and interred in flexed position facing each other, with the woman lying on her right side, the infant on the left facing the womb of the woman. The arms of the woman were above the infant's head. The woman was interred with two hair ornaments, three vessels and three antler tools (Piačková 2012, 28).

Multiple graves of four individuals were identified in two features at Vliněves. A man and a woman, both aged 20-40, an infant, and a child of up to 2 years of age were deposited in Feature 379. Four individuals were interred in Feature 866, a 30-40-year-old woman, an adult individual, an infant, and a child of up to 6 years of age. No grave goods were found with these burials (Limburský 2018, 323-334). The individual from Třeboradice was part of a multiple burial of five individuals (Stránská and Řídký 2010). The small skeleton of an infant (10 lunar months) was discovered at the bottom of Feature 3 next to the heads of a woman (30-40 years) and a man (40-55 years). The hands of both adult individuals probably touched the infant. The feature also contained remains of an older woman (40-55 years) and a young child (2.5-3 years).

In summary, the category of newborns comprises fourteen individuals. Only three were buried in single graves or a *pithos* and included grave goods. The majority was found within settlements (Figure 5.6 b), half of them at a single site (Vliněves). It remains unclear if objects found in the same settlement features as the newborns represent grave goods. Two newborns were interred with a woman (one in a regular double grave, another one in a double burial in a settlement pit, which otherwise corresponds to the usual burial rite). Three newborns were part of multiple burials of four and five individuals, which always include two children and at least one woman.

Infants in cemeteries

Cemetery finds account for 31 of the remains of infants up to one year of age. Fourteen were found in single graves, including three cases of *pithos* burials. The remaining seventeen infants were placed in multiple or consecutive graves (Figure 5.6 a).

Single graves of infants are represented by only three cases in the area of Bohemia and Moravia. One example is a small grave of 0.95 x 0.97 cm lined with stones from Praha-Čimice in Bohemia (Havel 1980, 143). Grave 12 from Rebešovice in Moravia, in contrast, was spacious, and the infant was found with two vessels (Ondráček 1962, 9). Eight single infant graves are known from three sites in Slovakia. Grave goods were found in all infant single graves, except for Grave 369 from Jelšovce (Bátora 2000, 185). Bronze hair ornaments, small spirals and tubes were among the most common items. Two graves contained a bracelet each, and a single grave held an amber bead. Vessels were found in Grave 31 from Matúškovo (Benkovsky-Pivovarová and Chropovský 2015, 68) and Grave 340 from Jelšovce (Bátora 2000, 173). Three burials in *pithoi* fall into this age category, including two *pithoi* from Kamýk (Schmidt 1899, 555) and a single example from Vepřek (Neustupný 1933, 14).

We were able to identify six double burials of infants with another individual placed together in one grave. An earlier excavation in Kamýk found two graves of adults with infants. Graves of children from Kamýk were allegedly the richest ones, but it is no longer possible to link the recovered artefacts to specific graves (Schmidt 1899, 554). Grave 16 of the eponymous site of Únětice in Bohemia was that of a woman and a one-year-old infant (Rýzner 1878-81, 362). The situation of Grave 14 from Mušov is hard to assess, as it had been re-opened, probably in the course of grave robbing. The remains of a 12-14-year-old individual were found with a small pot, fragments of several hair ornaments and the lower jaw of a one-year-old baby (Stuchlík 1987, 13-14). A 20-29-year-old woman interred together with an infant (0-6 months), who had a bracelet on his/her arm, was found in Grave 395 from Jelšovce (Bátora 2000, 195-196). The infant from Grave 54 from Matúškovo was buried together with an 11-15-year-old individual,

who was interpreted as female according to the position on the left side (Benkovsky-Pivovarová and Chropovský 2015, 73-74).

Multiple graves containing remains of infants were discovered in four cases. A cist concealed the skeleton of a woman and two infants at Holubice in Bohemia (Grave 5, Schmidt 1893-1895, 120). Grave 11 from Rebešovice showed signs of re-opening, but nevertheless contained a relatively wealthy grave inventory including two bronze daggers, a bracelet, a pin and four ceramic pots. The scattered remains belonged to an adult male, a one-year-old baby and another adult person (Ondráček 1962, 9). The Slovak site Pata included Grave 6, the burial of a woman with a 6-9-month-old infant and two older children (Cheben and Miklíková 2000).

Consecutive graves with infant remains, in which individuals were laid to rest at different times, were detected six times. Usually only the remains of the last interred individual were found in anatomical order, whereas remains of the earlier burials had been moved aside. This is the case in Grave 487 from Pavlov in Moravia, which included two adults and three children aged 12 years, 6-7 years and an infant of 0-6 months (Peška 2009, 33), and in Graves 1 and 2 from Praha-Čakovice in Bohemia, which included at least eight and six individuals respectively (Kovářík 1980, 55, 57). Eight individuals, all disturbed apart from the latest addition of a younger woman, interred with grave goods, were discovered in Grave 386 from Vepřek (Lička and Lutovský 2006, 56).

Two consecutive burials were identified in Slovakia, in Grave 207 from Branč (Vladár 1973, 102) and Grave 15 from Rumanová (pers. comm. Veliačik). According to the anthropological analyses, the infants were buried together with adult men. Both infants, however, were found about 0.15 m above the adults and were therefore probably interred later. The infant from Branč lay on the left side and had a bracelet.

Infants from settlements

Remains of fourteen infants come from settlements, seven of which were placed alone and another seven were found in multiple burials (Figure 5.6 b). Five infants were interred without any unambiguous grave goods within three settlement sites in Bohemia and Moravia. Three infants come from Vliněves, which were identified during the osteological analysis in the laboratory (Limburský 2018, 320-349). Feature 558 from Branišovice, with the incomplete skeleton of a six-month-old baby, is notable because the fill also contained the skeletal remains of a horse or a bovid (Koncz 2013, 38). Two *pithos* burials from settlement contexts were discovered in Slánská hora in Bohemia (Neustupný 1933, 14) and in Blučina-Cezavy in Moravia (Tihelka 1963).

Double graves of an infant and another person are documented in three cases. Feature 3 at Praha-Čimice included the skeleton of a one-year-old infant right in front of the head of a woman over 60 years of age, who rested in tightly flexed position on her right side. Apart from an animal jawbone behind her head, there were no other artefacts in the immediate vicinity (Havel 1980, 125-129). A double burial of an old man and a one-year-old infant was detected in Vrchoslavice in Moravia (Chytilová 2006, 15, 24). The double burial in Feature 13/2004 at Dambořice in Moravia comprised the burial of a 25-30-year-old woman and a baby aged 6-7 months. The position of both bodies was unusual. The woman was lying on her back with both arms folded on her chest. Her head was violently severed according to the anthropological

Figure 5.5. Multiple burial in settlement Pit 32 from Nitra-Selenec (infant in circle, Gabulová *et al.* 2013, str. 70, obr. 19/1).

analysis. The infant was placed on the flexed legs of the woman. Grave goods were present; two hair ornaments were found on the head of woman, a bracelet on the arm of the infant and the two vessels accompanied the dead (Šmerda 2008, 205).

Multiple burials in settlements were identified three times. A woman and two infants were buried in Feature 510 at Blučina-Padělky (Salaš 2003, 223-224). Five individuals including one infant were identified in storage Pit 528 at Jelšovce (Bátora 2018, 281-283). Grave 32 from Nitra-Selenec in Slovakia (Figure 5.5) included an infant (0-4 months), two adults, a 30-39-year-old woman and a 50-59-year-old man, together with a 15-17-year-old individual and a 3-5-year-old child. The bodies were stacked on a pile, with the infant lying on top of the woman. The anthropological analysis revealed traces of violence on some skeletons (Gabulová *et al.* 2010, 60).

The infant remains from cemeteries far outnumber the remains from settlement areas, in the ratio of 31:14 (Figure 5.6 d). Regional differences can be observed within the studied areas. In comparison to Bohemia and Moravia, the infants from Slovakia were more often buried in single graves and with more grave goods. The infants had smaller graves in comparison to the graves of adults (Daňová 2012, 24). The grave goods for infants did not differ significantly from those for adults, most often there were vessels, bronze artefacts (bracelets, hair ornaments) and shells. Some types of artefacts do not occur in infant graves probably for purely practical reasons. Pins,

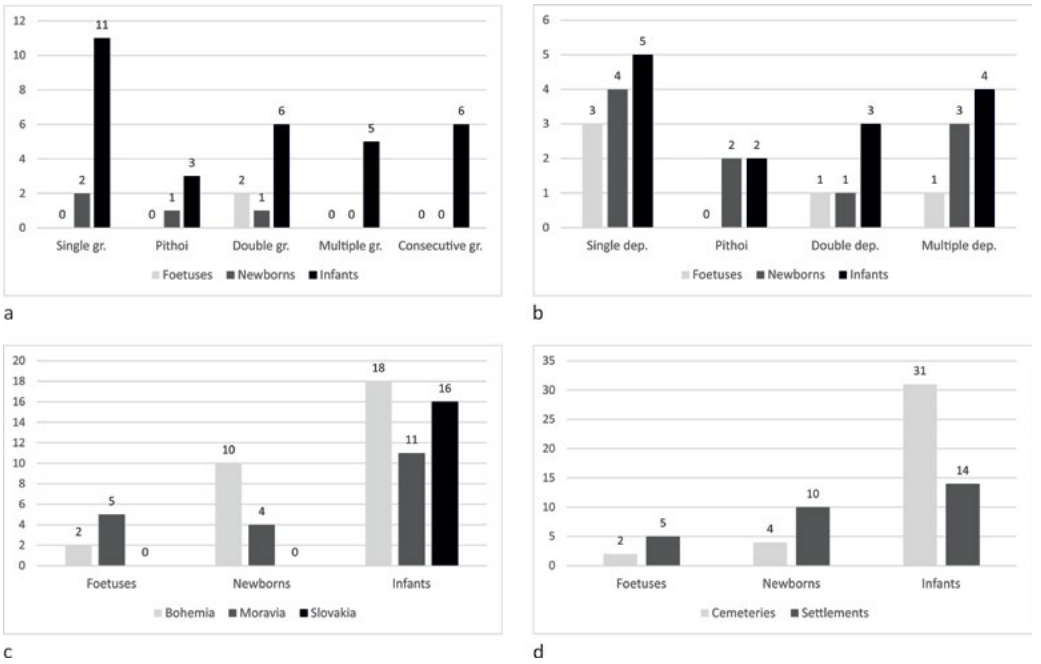

Figure 5.6. a. distribution of the youngest children in cemeteries; b: distribution of the youngest children at settlements; c: distribution of the youngest children in studied areas; d: total number of the youngest children from cemeteries and settlements.

for example, occur in graves of children from 3-4 years or higher, most likely for reasons of safety and the type of clothing usually worn. Items that are found rarely in the graves of adults, such as weapons, did not occur in the graves of the youngest children at all. Eleven infants were interred separately and seventeen within graves of multiple individuals. Similar amounts of finds are documented in double and consecutive graves (Figure 5.6 a). Individuals buried in graves with multiple burials show a significant reduction of accompanying grave goods.

We registered a slightly higher number of single burials of infants at settlements in Bohemia and Moravia (Figure 5.2). Grave goods are totally absent in settlement contexts. Infants in settlements are rare in Slovakia (Bátora 2018, 89). Thanks to new research, for instance at Vráble, Pata, Jelšovce and Nitra-Industrial Park (unpublished), we expect an increase in documented finds of infants from settlements in Slovakia as well.

Pithos burials: a special treatment of newborns and infants

Burials of uncremated bodies of children in large ceramic vessels, so called *pithoi*, are specific to the late and final phase of the Únětice Culture. *Pithos* burials are generally considered a specific form of burial rite rooted in the Eastern Mediterranean, where they were quite frequent. Other possible interpretations of burials in vessels are associated with fertility cults; the shape of the storage vessels might symbolise the womb of a pregnant woman (Kubindová 2014, 38-40).

Currently, there are 15 finds of this type and a few more cases that are uncertain. Twelve child skeletons were found in storage vessels in Bohemia, ten of which were discovered during the

early excavations (Neustupný 1933). Only three such burials are known from the territory of Moravia. In Slovakia, a few *pithos* burials are known, but they are assigned to the Maďarovce Culture (Kubindová 2014).

Considering the age of individuals buried in vessels, four were classified as children in the general sense, three children were between one and five years at death and the remaining eight individuals were newborns and children up to one year of age. Four out of these eight youngest individuals were found in cemeteries and four at settlements. Grave goods were found in four *pithoi* from Bohemian sites and in one *pithos* from Moravia; a single bronze bracelet, two bronze beads and spiral, ten shells, three flints, and a shell fragment with two animal bones were documented. No differences between *pithoi* from cemeteries and settlements were observed.

Infant mortality and the absence of infants in the archaeological record

The proportion of children of all ages in Únětice Culture cemeteries ranges from 20 to 37% (e.g. Vliněves 21%, Vepřek 36.5%, Pavlov 30%, Těšetice-Vinohrady 33%, Jelšovce 26.4%, Matúškovo 32%), which corresponds to the situation from other eras of prehistory (Siemoneit 1998, 23; Neustupný 1983). The ratio of children of less than a year is usually far lower (e.g. Mušov 5%, Jelšovce 7%, Unterhautzenthal 7%), which probably does not reflect their true mortality rate. The demographic estimates of the infant mortality rate are along the lines of 20-30% (Chamberlain 1997, 249; Neustupný 1983, 23), although some researchers suggest a lower rate (Stloukal 1999, 368-369).

The survival of a newborn baby was influenced by many factors. Critical points are the pregnancy, the birth and the first seven days after birth, when the most intensive adaptation changes take place (Košťálová *et al.* 2005, 4). The reasons for high infant mortality are most often attributed to premature and unsuccessful births (it is widely accepted that the survival of a child younger than 28 gestational weeks is highly unlikely in view of the immature state of the body, Lewis 2007, 84), insufficient afterbirth care, physical handicaps too severe to be compatible with survival, or various infections and illnesses caused or aggravated by insufficient hygiene and inadequate nutrition (Hühne-Osterloh 1989, 11; Hladíková 2013). Evidence of illness or infection was also observed in infants from the area (Ernée 2015; Limburský 2018; Bátora and Schultz 2001). Analyses of pathologies demonstrate that the conditions of life were less than ideal for children; at Jelšovce, the authors categorise them as particularly bad (Bátora and Schultz 2001, 313).

Adequate afterbirth care was a basic step towards ensuring the survival of the infant. Protection against hypothermia was an absolute necessity and could be achieved in several ways (skin to skin contact, warm ashes etc., e.g. Podolinská and Kováč 2000, 174). Breastfeeding provided an essential food intake and it is demonstrably one of the most effective ways to lower morbidity and mortality of children (Rebay-Salisbury 2017a). Another period of increased risk of morbidity and mortality is the period of weaning (Hühne-Osterloh 1989, 11-12). In most traditional societies, children are weaned between the second and third year. Regarding this transitory period, we have data pertaining to the Únětice Culture from south-western Poland. The results show that infants first take solids as early as in sixth month, but the exact timing of the completion of the weaning process cannot be specified (Pokutta and Howcroft 2015, 248-249).

Apart from death from natural causes linked to poor health and influenced by various factors, there were also cultural norms, which could negatively contribute to mortality. Infanticide, the deliberate killing of infants, existed in a number of cultures. It is very hard to separate an intentional killing of infants from natural infant mortality purely from the archaeological record. Methods most used, e.g. discarding after birth, drowning, starving, poisoning and asphyxiation, do not leave traces on the skeletal remains (Ploss 1911, 52-53, 163-165, Krauβe 1998). The reasons leading to infanticide may not appear 'logical' from a modern viewpoint. People might have been afraid of children that showed features or abnormalities incompatible with the cultural norms, e.g. children born in breech position, children born with teeth, children from multiple births etc. (Lévy-Bruhl 1999, 113-119; Ploss 1911, 52). The rites of passage themselves could also have been a contributing factor to child mortality. A newborn is perceived similar to a stranger in some traditional cultures. To be accepted into society, the newborn has to undergo all the 'prescribed' rituals, some of which could have had the character of a viability test after birth, in a manner which could lead to fatal consequences for weaker individuals (Van Gennep 1996, 46-53; Ploss 1911, 25-48).

The lack of children younger than 2-3 years in the archaeological record compared to the high estimate of infant mortality is related to various causes. It is partially connected to the problem of preservation of the fragile anthropological material of the infant remains (Hladíková 2013, 41). A significant portion of the lack of child remains can also be attributed to the inadequate state of research, which is confirmed by the vast increase in finds from the Únětice Culture during the last decades. In Bohemia alone, for example, the number of perinate finds has tripled from seven to twenty-one after the year 2000. The situation is similar at the Únětice Culture site of Unterhautzenthal in Lower Austria, where a new analysis of the anthropological material has yielded the remains of four more individuals – two foetuses and two young children (Rebay-Salisbury *et. al*. 2018, 74).

Another possible explanation for the absence of the youngest children is that infants were buried or deposited elsewhere. The archaeological literature offers several options; the most frequent explanation suggests burials/depositions within settlements. We registered the presence of the youngest children at settlements of the Únětice Culture – foetuses and newborns have been found in slightly higher numbers in settlements than in cemeteries, but the total number of these finds cannot explain the under-representation of children. It is necessary to consider other forms of funerary practices that are not archaeologically traceable, but known from written and ethnographic sources (Vélová 2014, 322-323).

Family ties

The multiple graves of the Early Bronze Age are a well-known phenomenon. Double graves containing infants together with women are often interpreted as graves of mothers with children, even though a kinship cannot be confirmed without additional analyses, with the exception of pregnant women. Based on studies of traditional cultures, we can assume that the care of a child was carried out mainly by the biological mother. This primarily concerns children up to the age of two to three years, during the time when they were breastfed. Later, others might step in the 'practice of mothering' (such as older individuals, men, women, older children), who all shared the responsibilities to care for the child, depending on the social structure (Beausang 2007, 73-75; Rebay-Salisbury 2018, 36).

The graves of pregnant women from Vyškov-Markova cihelna, Grave 61 (Fojtík and Prokeš 2004, 230), from the multiple burial in Pit 596 from Znojmo (Humpola and Bajerová, unpubl.) and possibly also one from Těšetice, Grave 45 (Lorencová *et al.* 1986, 74-75) undoubtedly belong to the category of graves of mothers and their children. The age of the pregnant women was 20-24, 20-24 and 20-30 years. The woman from Vyškov was probably multiparous, based on the anthropological observation of marks on her pelvis (Fojtík and Prokeš 2004, 230). The burial from the settlement pit in Modřice points to the death of the 30-40-year-old woman in labour and the death of the baby shortly after a preterm birth (Kala and Tvrdý, unpubl.). Further cases of death during or shortly after birth are likely represented by graves of women with newborns. Grave 54 from Matúškovo (Benkovsky-Pivovarová and Chropovský 2015, 68) included an infant laid to rest together with an 11-15-year-old individual, laid on the left side, which indicates a woman in the Únětice Culture in Slovakia. A similarly low age of the supposed mother was observed in Grave 38 from Unterhautzenthal (Rebay-Salisbury *et al.* 2018, 102). The age at death of women from other double graves was 20-30 years (Jelšovce, Grave 395, Bátora 2000, 195-196) and 15-24 years (Mikulov, Feature 504, Piačková 2012, 28). An older woman aged 40-50 years was buried with a newborn at Újezd u Brna (Staňa 1973, 23). In this case, we cannot exclude the possibility that the woman was the biological mother, but considering her higher age, we can also suggest other kinds of relationships (grandmother or social mother; cf. Grave 109 from Unterhautzenthal, Rebay-Salisbury *et al.* 2018, 104).

More complicated to interpret are the graves of women with more than one child (Pata, Grave 6, with three children, Cheben and Miklíková 2000; Blučina, Feature 510, Salaš 2003), old women with children (Praha-Čimice, Grave 1, woman aged 60 years) or with men, or consecutive burials. Burials of children that were later added to the graves of men (Branč, Grave 207, Vladár 1973, 102; Rumanová, Grave 15, Veliačik and Masnicová 2004, 165-184) may rather indicate family relationship. In general, multiple graves do not necessarily represent kinship, as is attested by the relatively common practice of burying children within the graves of adult individuals deceased at the same time within a village (Siemoneit 1998, 124).

The simultaneous death of several individuals buried in multiple graves/depositions may be evidence of epidemics or other tragedies such as raids, punishments or rituals. The use of settlement pits for this purpose appears to be the fastest way to get rid of the bodies (often in an unrespectful manner) in a short span of time (e.g. Znojmo, Feature 596). The burial in Feature 32 from Nitra-Selenec (Figure 5.5) suggests a violent death of the individuals according to traces on the skeletal remains (Gabulová *et al.* 2013, 69). The same applies to Feature 528 from Jelšovce, which the author connects to a ritual sacrifice (Bátora 2018, 283). We will see whether future DNA analyses will confirm the hypothetic family ties of the individuals within the features in question.

Discussion

Considering the under-representation of the youngest children, which does not correspond to the estimated high rate of infant mortality in prehistory, we conclude that not all deceased infants were treated according to the usual burial rite. We can therefore ask why some children were buried and others were not? What happened to the bodies of other foetuses and newborns? Why were some interred in cemeteries and others in settlement pits? What does it tell us about the status and perception of the foetuses, newborns and infants within the society?

It is apparent from written and ethnographic sources that we are simply unable to grasp some practices or rites that might account for the low number of the youngest children. Each community has its own norms, governing who has a right to join society as a full member and who does not. What was the main criterion? The first condition may have been to survive the birth. If the baby has not survived birth, it may not have been considered a member of the society and may have been treated differently. The visual similarity to the human form may have been a contributing factor to the perception of the foetus as a human being. Some prehistoric communities did take care of dead foetuses and prematurely born children (e.g. Lepenski Vir, Khirokitia, Kellis, Astypalaia, Tofet, etc.). In others, the remains were simply discarded (Ploss 1911, 163) or placed outside of regular cemeteries. Some societies had a special area set apart to bury the placenta and dead foetuses (Podolinská and Kováč 2000, 176). Written and ethnographic sources also testify to practices of extracting the foetus from the womb of a dead pregnant woman before burial (Lewis 2007, 35; Rebay-Salisbury 2017b, 176). A similar custom in prehistory may contribute to the low number of finds of pregnant women. It is important to realise that even today parents only rarely bury an unborn foetus.

If the baby survived birth and was accepted by society, she or he became a full member with the right to a proper burial. The mode of burial may have been affected by legitimacy and/or social status. The burial itself was probably connected to other rituals (van Gennep 1996) and could therefore become a costly event. The burials of members of lower social status may have occurred in a different way. The differences in the variability and amount of grave goods in infant burials might not reflect the social status of the individual, but the status of the family organising the burial (Daňová 2012, 24).

The treatment of infant remains was highly variable (Vélová 2011, 34). Remains of infants are found in cemeteries and settlements alike, in common graves, in settlement pits or even in ceramic containers – *pithoi*. The common practice of burying individuals of all age categories within settlements during prehistory may have had prosaic reasons, but is still not satisfactorily explained. Completeness or incompleteness of bodies, variability of their deposition, and presence or absence of grave goods in burials within settlements may have reflected different social perceptions of the deceased (Limburský 2018, 584).

Conclusion

This paper presents 66 remains of the youngest children of the Únětice Culture in Bohemia, Moravia and Slovakia. Seven foetuses, 14 newborns and 45 infants of up to one year of age were analysed. The lowest gestational age (24-26 weeks) was detected in Modřice. Two, perhaps three finds belong to the relatively rare category of foetuses *in utero,* i.e. finds of pregnant or labouring women. The age of these women ranged from 20 to 30 years, which corresponds to the most fertile phase of the reproductive life span. The reproductive age of women and other findings, such as graves of older women with newborns, closely spaced childbirths and similar grave goods of infant graves, are mirrored in the recently re-analysed cemetery of Unterhautzenthal (Rebay-Salisbury *et al.* 2018, 109-110).

Remains of individuals of all age categories were detected in cemeteries and settlements alike. The categories of foetuses and newborns are more often represented in settlements, while the category of infants is more often detected in cemeteries. The ratio of single graves, double- and multiple graves in cemeteries is 13:9:11; within settlements it is 12:5:8 (excluding *pithoi*). As to the

grave goods, we cannot rule out the presence of small vessels with foetuses buried in settlement features. In the age categories of newborns and infants, grave goods are detected quite often. They include up to three vessels, bronze artefacts such as bracelets and hair ornaments, as well as amber beads and shells. The analysed dataset illustrates regional differences in the funerary treatment (e.g. no foetuses in Slovakia, a higher number of infant burials in Slovakia, evidence of special treatment – *pithos* burials – in Bohemia and Moravia), in the composition of grave goods (higher frequency of grave goods for infant graves in Slovakia) and also in the perception of gender (in Slovakia, women are placed on their left side, men on their right side).

In general, the youngest children were buried with respect in cemeteries. The situation within settlements is more complicated and obscured by the fact that several finds of foetuses and newborns were not identified in the field, but in the laboratory, and we have no information about their position within the features. Some examples of multiple burials within settlement contexts perhaps point to a loving relationship (Mikulov, Feature 504; Třeboradice, Feature 3). The organisation of a proper burial for a newborn or infant suggests, besides other things, the existence of the practice of mothering/parenting (Beausang 2007, 75), as well as the acceptance of children as members of society, though perhaps not yet with all rights and responsibilities. On the other hand, infant remains were discovered also in contexts indicating some tragic events (e.g. possible epidemics: Znojmo, Feature 596; violent death: Nitra-Selenec, Feature 32).

It seems evident that how the youngest children were perceived was dependent not only on age, but also on gender, kinship and/or social status, which were culturally determined. In the Únětice Culture, foetuses were probably not seen as members of the family/society. This hypothesis is based on the absence of single graves of foetuses. If we accept the assumption that a regular burial reflects the new social position of an infant within society, it could be argued that the invisible foetus became visible as a (probably not yet gendered) newborn. The status of the newborn probably slightly changed through his or her incorporation into the family by some sort of *rite of passage*, by which the child gained membership in the society. This assumption is supported by the emergence of single graves of newborns in addition to shared graves with mothers and other relatives. Another change of the child status is evident in the infant age category: the newborn gradually changed into a gendered child. Unfortunately, the beginnings of this process cannot yet be traced in the infant age category, because only infants placed on the left side were detected (three times in Slovakia). Although this position was typical for females in the territory of Slovakia, it does not necessarily mean the infants were female. It is possible that children had the same gender as their mother up to a certain age (e.g. Turek 2013, 81-82). In Slovakia, the positioning of children on the right side is first identified in the age category of children between 2-4 years. The ongoing integration of infants into society can be seen in the increasing number of single graves and grave goods. Yet the number of infant graves is still low, and therefore we assume that the status of these infants might have been exceptional in some way. On the other hand, the remains of the youngest children were often overlooked in earlier excavations. In conclusion, it is necessary to stress that the state and quality of research have a higher impact on the under-representation of infants than was originally thought.

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Chapter 6

Ages and life stages at the Middle Bronze Age cemetery of Pitten, Lower Austria

Katharina Rebay-Salisbury, with contributions by Patrik Galeta, Walther Parson, Doris Pany-Kucera, Michaela Spannagl-Steiner and Christina Strobl

Introduction

The Middle Bronze Age (*c.* 1600-1200 BC) cemetery of Pitten in Lower Austria is in many ways exceptional: it is one of the key sites in which the transition from inhumation to cremation can be traced; with 75 inhumations and 154 cremations it encompasses enough information for the detailed observation of age and gender-based burial practices and demographic modelling; grave structures include pits, shaft graves, burial mounds and platforms; the preservation status at the time of excavation was excellent, due to repeated flooding from a nearby creek, and last, but not least, a series of cemetery publications make the findings accessible (Benkovsky-Pivovarová 1985; Benkovsky-Pivovarová 1991; Hampl *et al.* 1985; Nönnig 2002; Schlusche 1985; Teschler-Nicola 1985).

One of the most striking features is the specific association of grave goods with the burials of children. At this cemetery, even young children were buried with valuable and symbolic items such as daggers. Other evidence, such as the inclusion of a feeding spoon in the grave of a young child, suggests care and evokes emotional farewells. It is clear that children were well integrated in the social fabric at Pitten, and were understood as important members of society.

In this chapter, I will present some of the children's grave inventories in order to discuss potential age categories of the Middle Bronze Age. One of the problems of assessing stages of childhood is that age estimations of human bones often follow pre-set age categorisations, particularly when the skeletal remains are incomplete and poorly preserved - as they are particularly often with cremations. Whilst this system is useful for many types of analyses, it

hinders the investigation of age as a social category, as it presupposes age-based developmental stages. This paper aims to develop a workaround to overcome this limitation.

Bronze age burial practices

In Lower Austria, the transition from inhumation to cremation during the Middle Bronze Age between about 1600 and 1200 BC is characterised by a considerable element of experimentation with burial rituals. In this region, cremation did not replace inhumation as a 'package' of fixed and well-formulated ideas; instead, single elements of the funerary *chaîne opératoire* were employed variably (Harris *et al.* 2013; Sørensen and Rebay 2008).

In the Early Bronze Age, almost all bodies were inhumed. Inhumations in flexed position were the norm; north of the Danube, bodies were placed primarily on the right side, head south, following Únětice traditions (Lauermann 2003), whereas south of the Danube, gendered body placement prevailed, with women being buried on the right, head south, and men on the left, head north (e.g. at Franzhausen, Pottenbrunn and Gemeinlebarn, Bertemes 1989; Blesl 2006; Neugebauer and Neugebauer 1997; Neugebauer 1991).

The comparatively short Middle Bronze Age saw a gradual change from inhumation to cremation; bodies were buried individually or in groups of two and more. Burial mounds are characteristic and gave rise to the term Tumulus Culture. The archaeological record of this period is not extensive (Neugebauer 1994; Probst 2011); few settlement traces are known and it appears that only the upper strata of society are archaeologically visible in the burial record. This suggests a low population density after the Early Bronze Age, perhaps after a political collapse or waves of disease (Rasmussen *et al.* 2015). In the Late Bronze Age, cemeteries with large urn fields emerge (Lochner 2017). Cremation was the only mode of burial used in cemeteries, although burials in settlement contexts include inhumations (Griebl and Hellerschmid 2015; Hellerschmid 2015).

Cremations are rare in Early Bronze Age contexts, and usually date to the very beginning of the period or to the transition to the Middle Bronze Age. The cemetery of Franzhausen I, with its 737 individuals, did not contain any documented cremations, but its still unpublished neighbour Franzhausen II, with 1388 Early Bronze Age burials, included 11 cremations (Reiter 2008). Five bodies show signs of burning or scorching by fire at the head or extremities (Rebay-Salisbury 2015). The rest of the burial rite - placement and grave goods - followed Early Bronze Age conventions. Four scattered cremations were recorded, one inhumation grave also included a small amount of cremated remains, and only one burial was an urn burial. It is perhaps no coincidence that this early urn burial was that of a pregnant woman, or possibly a woman cremated with her newborn. Osteological analysis revealed an age at death of 25-40 years for the woman, and the ninth lunar month for the foetus. Based on the set of bronze bracelets included in the grave, the burial dates to *c.* 1600 BC (Neugebauer 1999: Fig. 18, Fig. 20). Cremating the body was still a novelty at the time, and perhaps specially applied to a woman who died in special circumstances.

The cemetery of Pitten

The cemetery of Pitten is located west of a small creek in the Pitten valley. Repeated floods during the cemetery use-life caused layers of alluvial deposits to accumulate on the graveyard, creating excellent conditions for preservation. Although the middle part of the cemetery had been destroyed by construction, a substantial part of the cemetery was excavated in the

1970s. The excavations included the areas between the mounds, providing a detailed data set of funerary activities (Hampl *et al.* 1985).

At the cemetery of Pitten there is a striking variation in the way bodies were treated and buried (Sørensen and Rebay 2008). Grave constructions include shaft graves, flat graves, burial mounds made both of soil and of stones, ditches and house constructions. They were designed for individuals, pairs and groups of people, deposited simultaneously or in later stages of the cemetery. There are also four stone structures with no human remains, interpreted as 'cremation platforms'. So far, 221 graves have been excavated, including 75 inhumations and 154 cremations. At Pitten, most of these cremated bodies remained in the place where the pyre had been constructed, and only a few were relocated or deposited in urns. Burial mound 5 is a good example of such an in-situ cremation. A woman aged between 20 and 40 years was cremated on this pyre. The pyre covered an area of about 3 x 1.5 m and three parallel logs of charcoaled oak as well as some cross-beams were preserved. At a later stage, a mature male individual was inhumed in the centre of the structure.

In order to understand which factors were involved in cremation becoming more common at Pitten during the Middle Bronze Age, we analysed the ratio of cremations and inhumations against a number of parameters. The clearest trend is chronological: the proportion of cremation rose from about 20% at the beginning to 100% at the end of the cemetery use (Sørensen and Rebay 2008, Table 2). Slightly more females than males were cremated overall, according to osteological analysis (Teschler-Nicola 1985). Assigning the graves to chronological phases of the cemetery reveals that females are archaeologically more visible than males; women's graves are more likely to include bronze artefacts such as costume elements and jewellery, which are the basis of typo-chronological dating.

The first phase of the cemetery encompassed seven inhumations and two cremations - the urn grave of a 40-60-year old male and an unidentifiable individual with fragments of spiral rings. In the second cemetery phase, the six cremations include four females, one of which was sub-adult, and two males, still a minority in comparison to the 34 inhumations of that phase. The third cemetery phase encompasses 15 inhumations and 35 cremations, of which 11 were identified as female and three as male. The majority remains unsexed and without characteristic grave good combinations. Twenty burials were assigned to the last cemetery phase, all of which are cremations (Sørensen and Rebay 2008, Table 2).

Sex and age at death

At Pitten, morphological sex was determined in varying degrees of certainty for 47 females and 41 males. Age at death information is available for 182 individuals; 86 are sub-adults under 20, and 96 are adults (Teschler-Nicola 1985). Most of the individuals under 20 years could not be aged precisely, but were assigned to an age category spanning two or more years. Inhumed children were usually aged based on dental status, long bone length measurements and morphological development of the skeleton, resulting in an age estimate precision of 1-2 years. Cremations, in contrast, frequently include only heat-damaged dental remains no longer in anatomical context; age estimations are therefore often much broader.

The German anthropological tradition consistently uses the age categories *Fetus/Neonatus* (neonate: up to three months old), *Infans* 1 (early childhood, 0-7 years), *Infans* 2 (late childhood,

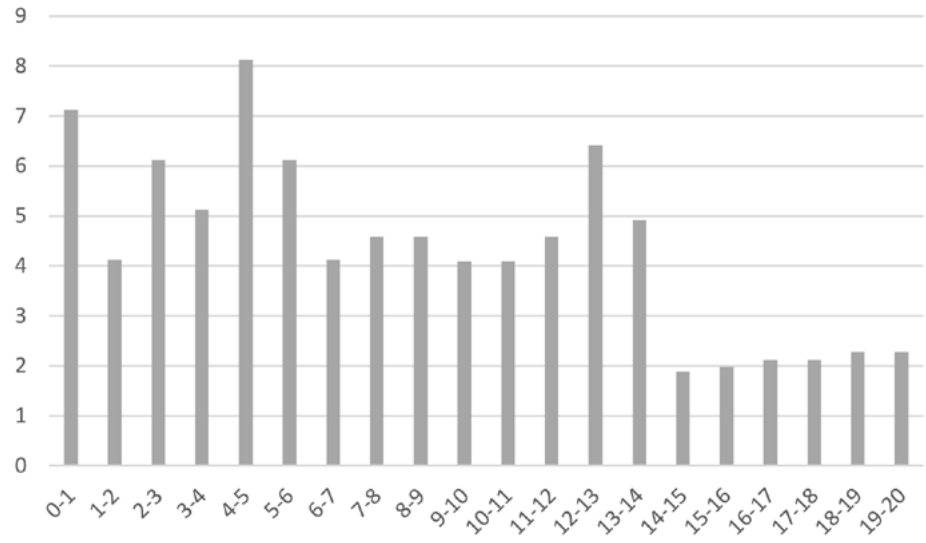

Figure 6.1. Reconstructed absolute numbers of children that died during each year of life at Pitten.

8-14 years), *Juvenis* (adolescence, 15-20 years), *Adultus* (adult, 21-40 years), *Maturus* (41-60 years) and *Senilis* (over 60 years; Grupe, Harbeck, and McGlynn 2015, 267; Knussmann *et al.* 1993; Teschler-Nicola 1985, 205); for a discussion on age group terminology in English, see Cunningham *et al.* (2016, 473-474).

Twenty-two individuals were simply classified as children between 0 and 14 years; there are five infants under one year, six toddlers between one and three years, 18 young children between four and eight years, 23 children in middle childhood, aged between eight and 14 years, and 12 adolescents between 14 and 20 years old amongst the sub-adults. Aiming to refine information on age at death, age spans were split into individual years between 0 and 20 and expressed as a fraction. For example, one seventh (0.1428) of 0-7 year olds was understood to have died between age 0 and 1, one seventh between age 1 and 2, and so on. Representative information on all aged individuals was entered in the twenty age groups representing one year of life and summarized. Visualizing the data this way (Figure 6.1), revealed that the early childhood years were the most dangerous, with a peak in the fifth year of life; death was also common in the 13th and 14th year, before the risk of dying decreased in the 15th year of life.

Demographic modelling

The demographic composition of the cemetery was used to model the population growth rate and the total fertility rate at Pitten (Bocquet-Appel 2002; Galeta 2010). The number of individuals that died over the age of one (D1+, n = 177) and five (D5+, n = 155), related to the number of individuals that died over the age of 20 (D20+, n = 97) was used in a simulation of 5000 populations.[1] The simulation is based on a fixed number of 97 adults, but variable

[1] Demographic simulations were carried out by Patrik Galeta, University of West Bohemia, Pilsen, Czech Republic.

demographic characteristics, assuming a growth rate from -2 to 2% and a life expectancy at birth between 20 and 30 years. Life expectancy, i.e. the average number of years a new-born is expected to live, is calculated as 22.5 at Pitten (Teschler-Nicola 1985, 215), although it may in fact be lower, as Maria Teschler-Nicola estimates that *c.* 30 children are missing for a complete demographic profile. The childbearing period is set between 15 and 50 years of age. Assuming a life expectancy at birth between 20 and 30 years, an average of 47 % of women survived to 15 years, entering the childbearing period, and an average of 25 % of women was still alive at age 50, the common onset of menopause.

The calculations result in an annual growth rate of 1.2 %, with a confidence interval of 0.6-1.7 %; this implies that each year, the population grew by this percentage at Pitten. The corresponding total fertility rate, the average number of children born to a woman if she survives to age 50, is 7.5 live births, with the 68% confidence interval between 6.6 and 8.4 children (for similar findings at Early Bronze Age Unterhautzenthal, see Rebay-Salisbury *et al.* 2018).

Age at death and the choice of burial practice

In previous analyses, Sørensen and Rebay (2008, 159, Table 3) had noted that 7-14 and 14-20-year olds were amongst the individuals least likely to be cremated; we had suggested that at that age, the affirmation of gender and identity is especially important and perhaps more easily done with inhumations. In order to understand more clearly how age at death intersected with burial practices, the age categories were broken down further to reflect single years as described above (Figures 6.2, 6.3). This method reveals interesting details: 82% of neonates and infants under one year of age were cremated, but only 65% of toddlers between one and three. Young children between four and seven were cremated in 75% of cases. The period of middle childhood between eight and fourteen, however, was the age at death for which cremation was

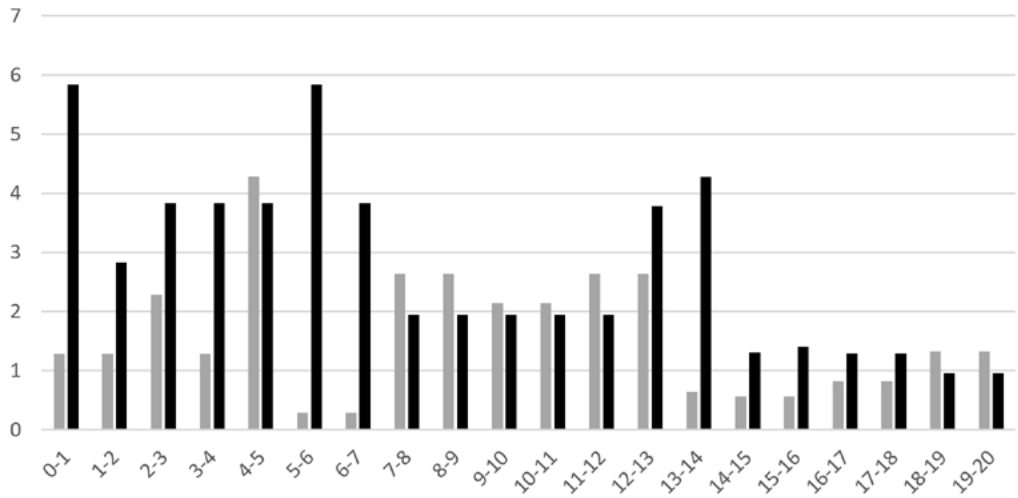

Figure 6.2. Reconstructed absolute numbers of inhumed (grey) and cremated (black) individuals assigned to each year of death between 0 and 20.

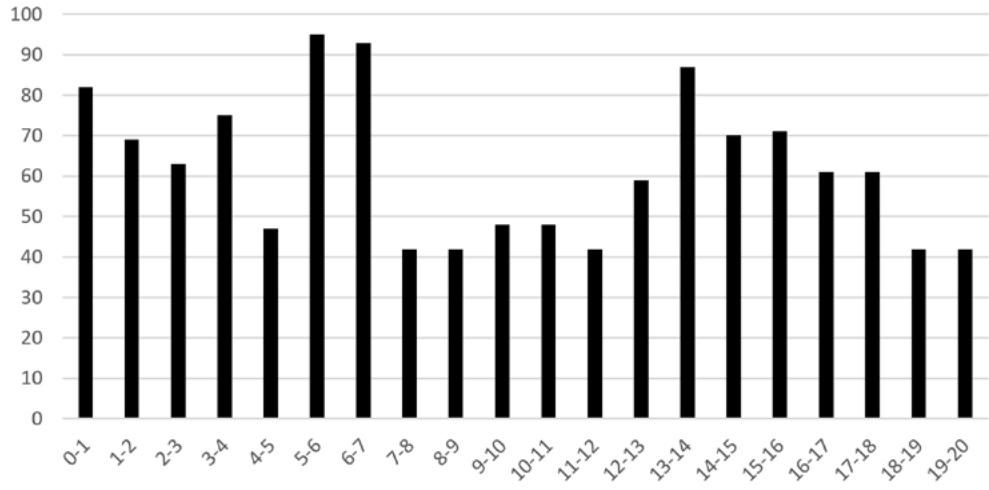

Figure 6.3. Percentage of cremated individuals assigned to each year of death between 0 and 20.

least often chosen (53%); 57% of adolescents between 14 and 20 were cremated, with a trend towards fewer cremations for young adults. It is further noteworthy that cremation is most often used for ages at which death occurs most frequently.

Child burials at Pitten

Five individuals at the cemetery of Pitten were younger than one year when they were buried - one inhumed new-born and four cremated babies. Two of the individuals were found in a ditch surrounding burial mound 153, which actually consisted of three burial mounds built on top of each other (Figure 6.4). The first grave was the inhumation of a 40-60-year old woman in an outstanding shaft grave that had been robbed; only some bronze buttons of an elaborate dress remained. The grave structure was surrounded by a 0.3-0.4 m deep ditch, with a diameter of *c.* 10.5 by 9.6 m and an opening towards the southeast. An inhumed neonate (153a1) was found at the west side of the bridge, deposited in east-west orientation with a miniature cup; a cremated infant that died before the first birthday was placed in a small ceramic urn with a bronze bracelet about 2.5 m farther west. The chronological relationship between the woman in the central grave and the babies is not entirely clear, but it seems likely that the babies were deposited relatively soon after one another. The practice of inhumation and cremation appears to be interchangeable in this context.

The toddler age group between one and three years at death encompasses three cremated and three inhumed individuals. The Graves 127 and 128, located in the south-western part of the cemetery, were in-situ cremations covered by small stone mounds. Grave 127 included a ceramic cup, deposited upside down, whereas 128 did not include any grave goods. Burial 156 is the in-situ cremation of a two-year-old, again without any grave goods. The three-year-old individual 160 was inhumed without any accompanying grave goods as a secondary deposition in burial mound 155; the 1.5-2-year-old individual 164c was likewise added to an existing burial

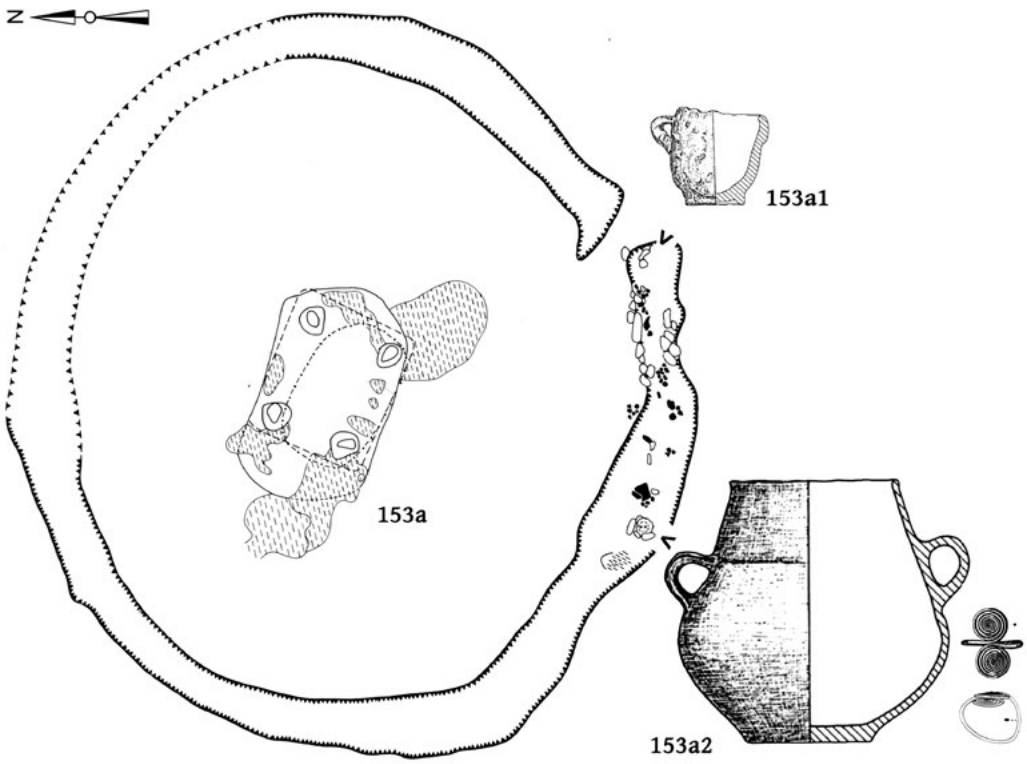

Figure 6.4. Burial mound 153, the surrounding ditch and the two infant burials found in it (153a1: inhumation, cup: 4.8 cm high; 153a2: cremation, 63 g, ceramic urn: 17 cm high, bracelet: 3.8 x 4.5 cm diameter), after Hampl, Kerchler and Benkovsky-Pivovarová 1985, pl. 66.

mound without any objects. Stone-covered grave 186c held the inhumation of a 2-3-year-old, off the centre in a burial mound for five persons. It appears that although toddlers were included in the cemetery, only minimal effort was put into the construction of their graves and the addition of objects is an exception rather than the rule.

Eighteen young children between three and seven years at death were included in the cemetery, of whom seven were inhumed and eleven cremated. Even in this young age group, bronze jewellery and dress fasteners are common; three graves include bracelets and four dress pins. Burial mound 154 contained two inhumations of young children, which were dug into the stone burial mound as secondary additions. Individual 154b was between four and five years at death, and was placed in extended position in east-west orientation. The child was equipped with a dress pin on the shoulder and a miniature dagger; despite the young age, the individual was clearly marked as male. Another, less well-preserved inhumation of a child under seven years (154a) was found directly above the child with dagger; the pair of bronze bracelets with spiral ends perhaps indicate female gender. There is no information on the orientation of the latter child. Amongst the adults in this cemetery, however, it is notable that opposite-sex pairs of individuals are often inhumed in opposite orientation in parallel chambers of one burial mound, whereas two individuals of the same sex are placed in the same orientation (Sørensen and Rebay 2008, 159). It appears that the arrangement of the bodies of the two young children 154a and 154b mirrors combinations of older individuals at this cemetery.

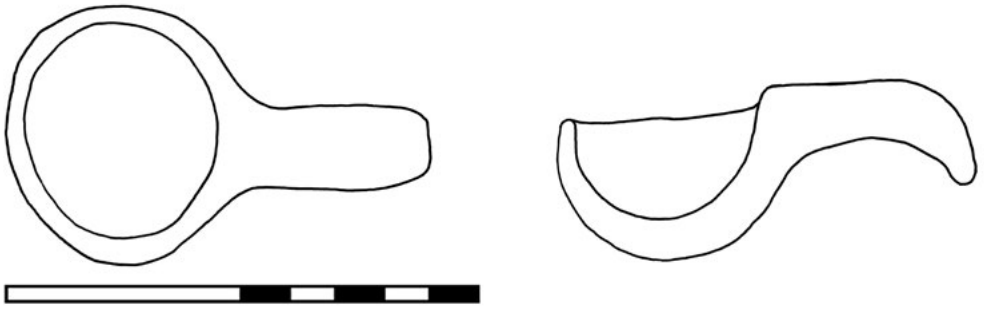

Fig. 6.5. Ceramic spoon from Grave 64 at Pitten, after Hampl, Kerchler and Benkovsky-Pivovarová 1985, pl. 208.

Grave 64, the inhumation of a 4-5 year-old in a shaft grave, is notable for the deposition of a ceramic spoon (Figure 6.5) in addition to a bronze bracelet with spiral ends. The child was placed in slightly flexed position, with legs tilted to the right side, in south-east/north-west orientation. The spoon by its side might indicate care for a sick and dying child (Oxenham and Willis 2017; Tilley and Oxenham 2011). Inflammatory changes at the internal lamina of a fragment of the left parietal[2] may support this interpretation by suggesting that the child was sick long enough for the illness to manifest in the bones.

Cremation graves of young children between three and seven years primarily take the form of simple patches of scattered bones. Only two graves are exceptions: Grave 121, a stone-built structure with a body-shaped chamber and door opening, held the double cremation of an adult and a 5-6-year-old child. The pair of bronze pins and bracelet suggests the presence of a female, but the relationship between the individuals remains elusive. The cremation of the under seven-year-old 163i was deposited with a few bronze fragments and two cups in a ceramic urn, buried as one of nine individuals in the largest burial mound at Pitten. The urn was firmly closed by using a bowl as a lid, which explains the unusually high weight of the bones for a cremated child (360 g).

Middle childhood, from the age of about eight to fourteen years, is an important time for social recognition and integration in society (Bickle and Fibiger 2014). At Pitten, burials of this age category include comparable types and quantities of grave goods to those of adults. The importance of this age group is reflected by a large proportion of inhumation graves, which facilitate the expression and display of identity in the burial arena (17 inhumations vs. 7 cremations). Amongst the most outstanding young women is the 12-14-year-old individual from Grave 57, who was buried in extended position and west-east orientation under a burial mound (Figure 6.6). The set of dress elements includes a hair or head dress with six sheet bronze cones, a pair of pins, and a necklace with bronze spirals and ten spiked disks. Although biologically immature, it is likely that girls were socially understood as women at this age. Male gender is likewise marked as one would expect for adults: four of the 13 graves with daggers fall into the middle childhood category; daggers are usually accompanied by a single pin or bracelet.

[2] The remains of child 64 were re-examined by Doris Pany-Kucera and Michaela Spannagl-Steiner to clarify the mismatch in age information (7-8 in Hampl, Kerchler and Benkovsky-Pivovarová 1985, 50; 4-5 in Teschler-Nicola 1985, 160) and to check for pathological changes in the skeleton.

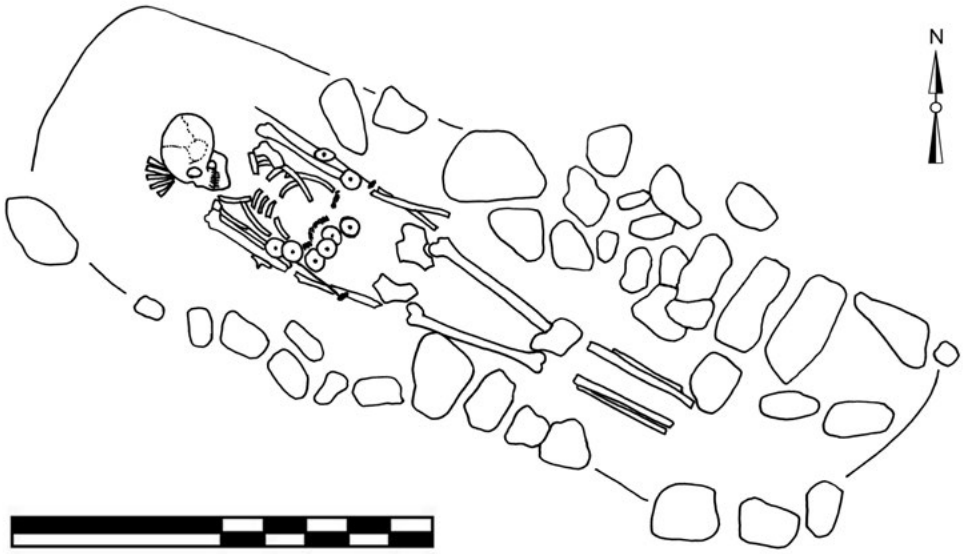

Figure 6.6. Grave 57, of a 12-14-year old woman, after Hampl, Kerchler and Benkovsky-Pivovarová 1985, pl. 35.

Particularly interesting are the personal relationships expressed through double and multiple burials (Rebay-Salisbury 2018). Two parallel, stone-lined grave chambers were built in burial mound 26; the north-south-oriented, 30-35-year-old female was buried on her back with a bronze diadem, pair of pins, and elaborate necklace that all signify her high social status; to her right, a 10-12-year-old was buried in opposite orientation with a dagger and bracelet. Based on the mitochondrial DNA of both individuals,[3] we can exclude the possibility of maternal relatedness. In Grave 59, a 40-50-year-old woman was found with bronze finger rings and traces of a necklace. She was placed on her back in extended position, with the head in the south. Parallel to her left, the body of an eight-year-old child was placed in opposite direction. Do the women of high status at Pitten require a guardian, servant or bodyguard? Or are the individuals linked by family ties? Future research on genetic relatedness may provide more detailed insights.

Seven cremation graves of the middle childhood age group are simple scattered cremations, some with pins and fragments of pottery. A possibly female, mature individual and a 12-15-year-old were cremated and deposited together with a pair of pins in Grave 167, a rather unusual rectangular ditch structure with a footed vessel, which held some cremated bones, whilst others were scattered around the area.

[3] Christina Strobl and Walther Parson carried out mtDNA analysis of two samples per individual at the Institute of Legal Medicine, Medical University of Innsbruck. One sample of the female individual 26a did not yield results, the other identified **haplogroup J1c2** (range: 1-852 8256-8739 15826-16569, haplotype: 73G, 185A, 188G, 228A, 263G, 295T, 315.1C, 462T, 489C, 750G, 16069T, 16126C, 16519C). The 10-12-year-old (male) 26b is **haplogroup X2b+226** (Sample 1 – range: 1-827 8224-8422 14397-14484 15790-16025 16073-16569, haplotype: 73G, 153G, 195C, 225A, 226C, 263G, 315.1C, 750G, 8393T, 14470C, 15927A, 16189C, 16223T, 16278T, 16519C. Sample 2 – range: 1-902 1602-1869 2138-2475 2699-2716 3396-4302 4565-4798 5066-5718 7386-7532 7613-7953 8018-9443 9473-9765 10735-11378 11591-11884 11915-12644 12846-14938 15298-16569, haplotype: 73G, 153G, 195C, 225A, 226C, 263G, 315.1C, 750G, 1719A, 2706G, 4769G, 8393T, 8860G, 11719A, 13708A, 13966G, 14470C, 14766T, 15326G, 15927A, 16189C, 16223T, 16278T, 16519C).

Still biologically not fully adult, the adolescent group between 14 and 20 years at death encompasses seven inhumations and five cremations at Pitten. Individuals that could not be aged more narrowly than 7-20 years at death are included in this group. Two of the females, the cremation burial 149 and the inhumation of a 16 to 29-year-old from Grave 98, were adorned with sheet bronze cones in addition to dress pins and other items of jewellery. These cones come in sets of 3, 5 and 6 and are exclusively found in young women's graves at Pitten, aged 12-13 years (Figure 6.6), 7-20 years (cremation) and 16-20 years. They are interpreted as part of a headcover or hair ornaments (Benkovsky-Pivovarová 1985, 73), perhaps signalling marital age or status.

The juvenile to adult individual 29b was cremated with a bronze dagger and bronze dress pin, the south-north oriented, extended inhumation 163b equally included a dagger near the face and a single pin on the right shoulder. The grave of the 16-18-year old, possibly male individual 186e (Teschler-Nicola 1985, 197), only included a dress pin, but no dagger. This suggests that not all men were staged as weapon-bearers in the funerary arena of the community.

The social status of age groups

At Pitten, it is difficult to use grave architecture, depth and volume to estimate the social status of buried persons, as burial practices were diverse. An artefact based approach, the association index (Hodson 1990; Rebay-Salisbury *et al.* 2018), calculates the value of a specific type of material culture from the average number of finds associated with this type per individual. The value of the grave good assemblage is the sum of all association values.

The average social index of all 182 buried individuals that were aged is 13.62; 6.4 for infants, 2 for toddlers, 9.11 for young children, 12.09 for middle children, 25.8 for adolescents and 14.79 for adults over 20 years at death. Plotting the median and average social index for each year

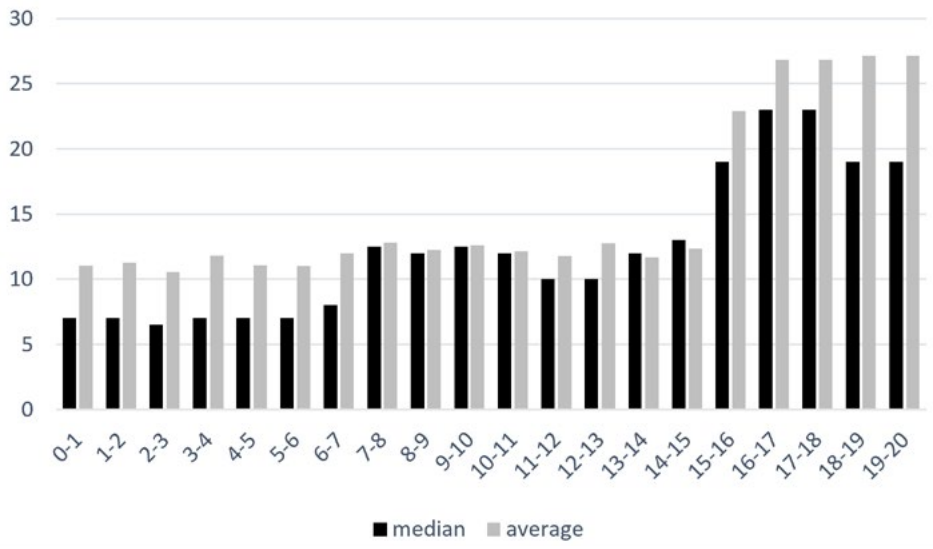

Figure 6.7. Median (black) and average (grey) social index values per year of age at death.

of life reveals more detail (Figure 6.7). If an individual's age estimation spans several years, the individual's social index is taken into account for each of them. For example, if a child aged 4-6 has an associated social index of 13, 13 is counted for both the fifth and sixth year of life. In the graph below, a clear increase in social value occurs in the eighth year of life, when children enter middle childhood, and another peak affects the adolescent years from 15 to 18, before values taper off in adulthood. It appears that childhood encompassed two important social transitions in the Middle Bronze Age - the transition to middle childhood and the transition to early adulthood.

Burials with more than one individual per grave

Personal relationships in life may be expressed through spatial vicinity in death (Rebay-Salisbury 2018). At Pitten, 14 graves include double and multiple burials with children (Table 6.1); in most of such cases, the first burial is that of an adult or older child, with the younger

Table 6.1. Double and multiple burials with sub-adults at Pitten.

Grave	First ind.	Second ind.	Contexts
13	female, 40-80	female, 14-16	mature female cremated, juvenile female inhumed, addition
15	male, 40-80	child (male), 12-14	both inhumed, same orientation, chambers in burial mound, no sequence
22/23	female, 40-60	child, 0-12	both cremated, deposited together, grave 22 and 23 probably one grave
26	female, 30-35	child (male), 10-12	both inhumed, opposite orientation, chambers in burial mound, no sequence
59	female, 40-50	child, 8	both inhumed, opposite orientation, in one grave chamber
115	(male)?	child, 9-11	male cremated, child inhumed, addition
121	(female), 20-40	child, 5-6	both cremated, deposited together, stone chamber with door opening
153	female, 40-60	neonate; child, 0-1; male, 40-60; male?	shaft grave of an inhumed mature woman, inhumed neonate and cremated infant in ditch, two stone mounds with males added later
154	(male), 4-5	child, 0-7	both inhumed, male child deposited first, second child (2 armrings - girl?) added later
163	male, 40-60	female?, 20-40; child (male?), 7-20; child, 5-7; child, 4-7; child (male?), 7-8; ?, 20-60; child, 4; child, 0-14	inurned cremation of mature male appears first, additions of inhumed and cremated individuals difficult to bring into sequence
164	child, 7	child (male), 11-12; child, 1-2	first child cremated, second and third inhumed, additions on top of each other
167	female, 40-60	child, 12-15	both cremated, deposited together
181	child (female), 8	child, 4-5; child, 5; child (male?), 10-12; male, 40-60	first child inhumed in shaft grave, stone mound with several inhumed individuals built on top
186	male, 16-18	male, 35-40; child, 8-9; child, 2-3; female, 20-40	first burial inhumed in shaft grave, stone mound with three inhumations built on top, last individual cremated

individual added later. Exceptions include Grave 164, where an 11-12-year-old and a 1-2-year-old follow the cremation of a child that died around seven years, and Grave 186, where the primary inhumation is that of a 16-18-year old male. This suggests that the sequence of burials reflects ranking according to age, with less effort put into the grave constructions of sub-adults, but a high significance attributed to individuals in the late teenage years. The stratigraphic sequence of some of the larger burial structures at Pitten, however, remains enigmatic, so that the exact order of burials can often not be reconstructed. Last burials might have been added considerably later, with no links to the first interments.

Discussion and conclusion

Intensive use of the cemetery of Pitten over almost 300 years reveals insights into childhood stages and the social value of childhood during the Middle Bronze Age in Lower Austria (*c.* 1600-1200 BC). At the time of transition from inhumation to cremation, we find a high variability of burial forms, arrangement of bodies and grave structures, all of which included children. Both inhumation and cremation are used for all age groups. There seems to be no radical shift or revolution in the performance of funerary rites; many inhumations and cremations share common characteristics. Over time, small changes in the details of how funerals and rituals are performed accumulate in a significant change - the change to exclusive cremation. Chronology is certainly the most significant factor in the choice of burial ritual, but it is also noteworthy that late childhood and adolescence have the highest proportion of inhumations. This may be connected to the importance at this age for the formulation and display of social identity (Sørensen and Rebay 2008).

Although an estimated fertility rate of 7.5 children per woman suggests a large number of infants, new-borns and under one-year-olds were included in the cemetery in low numbers and tended to be deposited in peripheral areas of burial mounds. Toddlers are preferentially placed between mounds in the southern part of the cemetery and have no or few accompanying pieces of material culture. From young childhood onwards, however, both the placement and the grave goods suggest a firm place for children within the community of Pitten. People fed and took care of (sick?) children, if not always successfully, as evidenced by a ceramic spoon included in the grave of a 4-5-year-old. Child-sized objects such as the miniature dagger in the grave of a 4-5-year-old suggest that children's needs were taken seriously, and the symbolic significance of objects extends to children.

Daggers in child graves are not exclusive to Pitten. At Wetzleinsdorf, Lower Austria, for example, a solid-hilted dagger with a hilt fitted for a child was found with the skull of a five-year-old (Kriegler 1925; Lebzelter 1925; Trnka 2019). The circumstances of its discovery, however, are not well documented, so it is unclear if they are indeed from a closed context. Nevertheless, the general rule that Middle Bronze Age males are only buried with weapons from the age of 16-18 (Wiegel 1994, 219), does not seem to hold. At Pitten, children's graves are equipped with costume elements and other grave goods in the same way as adults. The value of grave goods increases in two steps, from middle childhood at around age eight, and in adolescence around age 15 years. For girls, who were probably rather seen as young women and are sometimes equipped with a special form of headdress, the adolescent phase of life is particularly emphasised.

Pitten is perhaps unusual in comparison to contemporary burial contexts, as Middle Bronze Age graves are not normally found in such number and density. The way in which children are treated in the funerary ritual may underline the possibility that Pitten had a special role as a place in which burial rituals were leveraged to forge alliances and cement dynasties.

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Chapter 7

Children in the territory of Western Hungary during the Early and Middle Bronze Age: the recognition of developmental stages in the past

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Introduction

The social and physical bodies under study here were in a constant state of change, and, although they share aspects of biological development with today's bodies, how such changes were characterized likely varied culturally. In our paper we focus on the stages of transition from infancy to adulthood on the basis of burial evidence from the Hungarian Early and Middle Bronze Age (*c.* 2200-1500 BC). The study of burial evidence has the potential to provide important insights into the agency of children and their relationship with adults in society (Lillehammer 1989, 102-103). Even though we may be dealing with the body of a child in a grave, those who conducted the funeral would most probably have been adults. The remains of deceased children were manipulated within an adult world and the evidence for funerary processes derives from their burials. This, in turn, sheds light on how adults came to terms with such premature deaths, although it should be kept in mind that other children could influence the funerary ceremonies of their dead siblings and friends on some level (Murphy and Le Roy 2017). In addition, we shall discuss whether the age when children turn into full members of society, the so-called 'middle childhood', can be identified in the Bronze Age cemeteries under study here (Bickle and Fibiger 2014).

The age distribution of altogether 507 individuals, out of which 185 were buried under the age of 20 years, from 14 sites in the western part of Hungary is being taken into consideration and analysed briefly here. We were also interested in exploring whether the ways children were buried at these sites showed any divergence from the normative mortuary treatment adults received (O'Shea 1996) and if so, how these divergences may be related to different age categories. Our third enquiry focuses on the examination of burial goods such as dress ornaments, weapons

and tools in the burials of children, which could shed further light on how gender roles and social status was conceptualized by Bronze Age communities.

Material and methods

Archaeological background

The Central European Early Bronze Age, which dates between 2200/2100 and 1600/1500 BC, corresponds to the terminal phase of the Hungarian Early Bronze Age and the entire period of the Hungarian Middle Bronze Age. At this time, the region of Western Hungary represented a meeting point between two burial traditions: in the west, the inhumation tradition of the Únětice and related cultures (e.g. Gáta-Wieselburg) dominated, while in the east, biritual mortuary practices including both inhumation and cremation prevailed (Nagyrév, Kisapostag/Earliest Transdanubian Encrusted Pottery cultures). In the eastern region, the tradition of uniform cremation burials later became dominant (e.g. in communities of the Transdanubian Encrusted Pottery and Vatya cultures, Fischl *et al.* 2015; Krenn-Leeb 2011; Melis 2014; 2015).

During the first phase of the Central European Early Bronze Age, towards the final period of the Hungarian Early Bronze Age (Reinecke Br A1), the region of Transdanubia confined by the flow of the Danube on the east, was occupied by the Nagyrév and Kisapostag/Earliest Transdanubian Encrusted Pottery cultures, whose mortuary traditions included both cremation and inhumation practices. The area neighbouring today's Austria and Slovakia was inhabited by groups of the Gáta-Wieselburg culture with inhumation traditions.

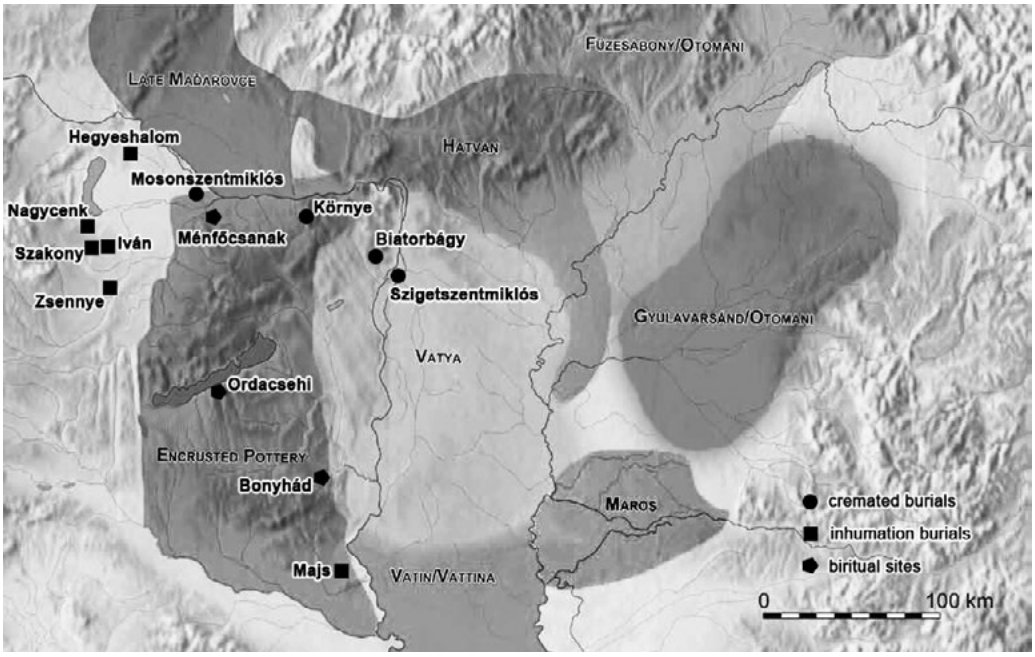

Figure 7.1. Location of the investigated sites and Middle Bronze Age cultures in the territory of Hungary (after Fischl *et al.* 2013).

At the beginning of the Hungarian Middle Bronze Age (R Br A2) the Vatya culture (Figure 7.1) emerged on Nagyrév and Kisapostag foundations in Central Hungary with the practice of cremation as normative mortuary treatment. The cemetery of Dunaújváros-Duna-dűlő, the largest Vatya urn burial ground documented in Hungary, is the best example; unfortunately, the human remains from the site are yet to be scientifically examined (Vicze 2011, 13-19). In this study, we therefore include two smaller, but anthropologically and archaeologically investigated cemeteries from the eastern regions of Transdanubia (Biatorbágy with 71 burials and Szigetszentmiklós with 70 burials, Kalicz-Schreiber 1995; Mali 2014). The continuous use of the Bonyhád cemetery (184 burials) by the Kisapostag/ Earliest Transdanubian Encrusted Pottery and later by the Transdanubian Encrusted Pottery culture indicates that the latter, which came to occupy the entire area of Transdanubia in the Middle Bronze Age, developed on robust Kisapostag roots (Szabó 2012). Another large, but chronologically later cemetery of the Encrusted Pottery culture was discovered at Mosonszentmiklós, which included 105 cremation burials (Kiss 2012; Uzsoki 1963). Furthermore, the burial ground of Környe represented by 18 cremation burials of the Encrusted Pottery culture was also considered for the study (Bándi and Nemeskéri 1971). ^{14}C dates yielded by inhumations documented at small burial sites of the Gáta-Wieselburg culture in northwest Hungary suggest that these cemeteries were used until at least 1600 BC (Gömöri *et al.* 2018; Melis 2017; Nagy 2013).

During the second half of the Hungarian Middle Bronze Age (Br A3- B1, 1800-1600/1500 BC) the percentage of burials with bronze grave goods indicating high social status decreased significantly from 10-40% to 2%, compared to the period between 2200 and 1900 BC (Dani *et al.* 2016). This phenomenon is also documented in multi-phased cremation cemeteries of the Transdanubian Encrusted Pottery (e.g. Bonyhád, Mosonszentmiklós) and the Vatya culture (e.g. Szigetszentmiklós).

Although our analysis focuses primarily on sites that have been archaeologically and anthropologically investigated and the cultures associated with them (Table 7.1), we also take into account and review relevant Hungarian anthropological literature for the interpretation and consider information published about neighbouring, better investigated cultures (e.g. Maros, Gyulavarsánd/Otomani, Füzesabony, Unterwölbing, Únětice) and their cemeteries (e.g. Mokrin, Békés 103, Polgár, Franzhausen, Gemeinlebarn, Unterhautzenthal).

Table 7.1. Summary of the analysed burials (normative treatment in bold).

Cultures	**Sites**	**Burial types**	**Analysed burials**	**Sub-adult individuals**
Late Nagyrév/Vatya	2	urn graves	141	65
Kisapostag/Encrusted Pottery	6	urn graves, scattered cremations, *in situ* cremations, inhumations	265	83
Gáta-Wieselburg	6	inhumations	101	37
Total	14		507	185

Anthropological background

The paper only includes anthropologically examined and identified burials. Although the anthropological examination of human remains is now becoming a norm of the post-excavation protocol, in several publications – even in the early 21st century – the identification of child burials was based mainly on excavation data (e.g. Thomas 2008). In the case of the most recently investigated burials, the age at death was estimated by methods based on the sequence of eruption and growth of milk and permanent teeth (Schour and Massler 1941; Ubelaker 1989), and the length of long bones (Bernert *et al.* 2007; Stloukal and Hanáková 1978). The age estimation for older children (above the age of 12-14) was based on the examination of the fusion of the epiphysis (Ferembach *et al.* 1979; Schinz *et al.* 1952).

Anthropological examinations generally distinguish between new-borns (aged 0-1 year), Infans I (aged 1-6 years) and Infans II (aged 7-14 years) and treat them as separate age categories (O'Shea 1996; Spannagl-Steiner *et al.* 2011, 27, Abb. 1, Abb. 2). However, some studies proposed the upper limit for the category of young childhood to be drawn at the age of nine or ten years (Mali 2014; Zoffmann 2015). The radical changes in child development that take place between the age of one and seven years of age cannot properly be described by the simplistic Infans I (often referred to as 'infant') category. Analyses that also consider the estimated age at death in years have the potential to identify and draw up more elaborate age-related categories.

Wherever possible, our age categorization of individuals took the most recently published archaeological methodologies into account (Bickle and Fibiger 2014; Rebay-Salisbury *et al.* 2018). Individuals under 20 years of age were categorized as sub-adults. Individuals under the age of eight were grouped as infants with the sub-categories of *babies* (under one year), *toddlers* (aged 1-4 years) and *young children* (aged 4-8 years). Children above the age of eight are referred to as *children during middle childhood*, and above the age of 12 as *adolescents,* as separate categories. Adults between the age of 20 and 40 years are distinguished from the category of mature adults (aged above 40 years). Unfortunately, the lack of common ground in the existing terminology presents a major issue for the bio-archaeological analysis of juveniles and makes our comparative study of populations a challenging task (see also Murphy and Le Roy 2017).

The distribution of individuals' age in the cemeteries under study

The availability of human remains presented a major challenge at the fully excavated Vatya cemetery of Biatorbágy: only 77% of the cremated urn burials (88 graves) contained anthropologically identifiable bone fragments. In addition, 19% of the remains proved to be unidentifiable. The analysis was therefore based on data derived from 71 burials that represented 62% of the cemetery's entire population. Within this partial dataset, the proportion of children was found to be 31%, dominated by individuals under the age of ten years of age (based on K. Köhler's anthropological examination, Mali 2014, 24, Fig. 1, 2). The partially excavated burial ground of Szigetszentmiklós was established in the late Nagyrév phase, but was still utilized during the Vatya period. Here, 70 of 100 burials (of both chronological phases) contained identifiable human remains, of which 59% were children. The ratio of child-burials was notably higher during the earlier Nagyrév phase, when the majority of graves represented burials of children (27 individuals, 69%, Zoffmann 1995). Within the category of child-burials, the age group of under eight-year-olds was the most represented (23 individuals, 61% of individuals under the age of 20 years) during both phases.

In order to assess the age distribution of individuals within the archaeological material of the Kisapostag/Earliest Transdanubian Encrusted Pottery and Transdanubian Encrusted Pottery culture, only the cemeteries of Bonyhád (184 burials) and Mosonszentmiklós (105 burials) can be taken into account. The percentage of individuals of undeterminable age (e.g. individuals above the age of eight but under 30 years) was relatively high (18%) at the cemetery of Bonyhád, due to the high occurrence of scattered cremation burials. The ratio of individuals under 20 years was 28%, and amongst these were many younger children. The proportion of under eight-year-olds amongst the sub-adults was 61%, similarly to the case documented at Szigetszentmiklós (Hajdu 2012a). At Mosonszentmiklós, age identification was possible for 96 individuals: 44 (46%) died under the age of 20 years. The number of individuals under the age of eight was significantly higher here (70% of under 20-year-olds, Zoffmann 1971). Child-burials, however, occurred in even higher numbers in smaller burial clusters or cemetery segments, such as the ones documented at Környe (Bándi and Nemeskéri 1971), Majs (Bándi and Kiss 1967), Ordacsehi (Somogyi 2004) and Győr-Ménfőcsanak (hereafter Ménfőcsanak; Dani *et al.* 2019; Melis 2013; Melis 2015; Tóth *et al.* 2016), where two-thirds of the burials were of infants (ten burials). In addition, the merely anthropologically examined cremations from Siófok, Tatabánya and Szederkény imply that the ratio of individuals under the age of 20 years ranged from 44% to 57%, and that the mortality rate among children under nine years old was quite high. The high child mortality rate was probably due to malnutrition, poor hygiene and epidemics (Zoffmann 2015).

Hegyeshalom is the largest known cemetery of the Gáta-Wieselburg culture in Hungary, where anthropological examinations identified 43 individuals (Zoffmann 1999), followed by the burial ground of Nagycenk with 29 individuals (Zoffmann 2008), and the cemetery of Zsennye, from where 24 graves with the remains of 13 individuals were recovered (Nagy 2013). Taking all 85 burials from these three cemeteries into account, only 31% of the deceased were children. Even more striking is the relatively low representation of children's burials under the age of eight, which account for 36% of the documented child-burials overall (Figure 7.2) Even in the largest Gáta-Wieselburg cemetery, Hainburg in Austria, hardly any infant burials of children under seven years were identified (8.3% of all burials), but here, the percentage of individuals under the age of 20 (43.4%) is probably closer to the expected ratio for prehistoric communities (Acsádi and Nemeskéri 1970; Spannagl-Steiner *et al.* 2011, 27, Abb. 1, Abb. 2). Studies carried out on the population represented by cemeteries of the Únětice culture, along with models describing female fertility and the sustainability of prehistoric communities in general, proposed that the proportion of children is likely to have been around 40-50% in cemeteries (Stroch 2001, 95-96). In the Únětice burial ground of Unterhautzenthal and the nearby settlement, 55% of the individuals were identified to be under the age of 20 years, 14 of which died before their fifth birthday (Lauermann 1995; Rebay-Salisbury *et al.* 2018, Fig. 1).

Similar to the 'missing child burials' of the Gáta-Wieselburg culture, few children are present in the cemeteries of the Maros and Füzesabony cultures. At the site of Kiszombor-Új Élet, the remains of a child aged between one and three years were discovered in a domestic refuse pit in the settlement associated with the Maros culture, which could serve as potential evidence for the alternative treatment of children in death (O'Shea 1996, 142-149). The larger number of individuals classified as Infans II (aged 7-14 years) and Juvenis (aged 14-23 years) in comparison to individuals classified as Infans I (aged 0-7 years) in the cemeteries of the Füzesabony culture in the vicinity of Polgár is usually explained by taphonomic reasons (Zoffmann 2006, 33). Young children are also underrepresented in the burials of the Austrian Unterwölbing culture, particularly at the sites of the Traisen valley (Teschler-Nicola and Prossinger 1997).

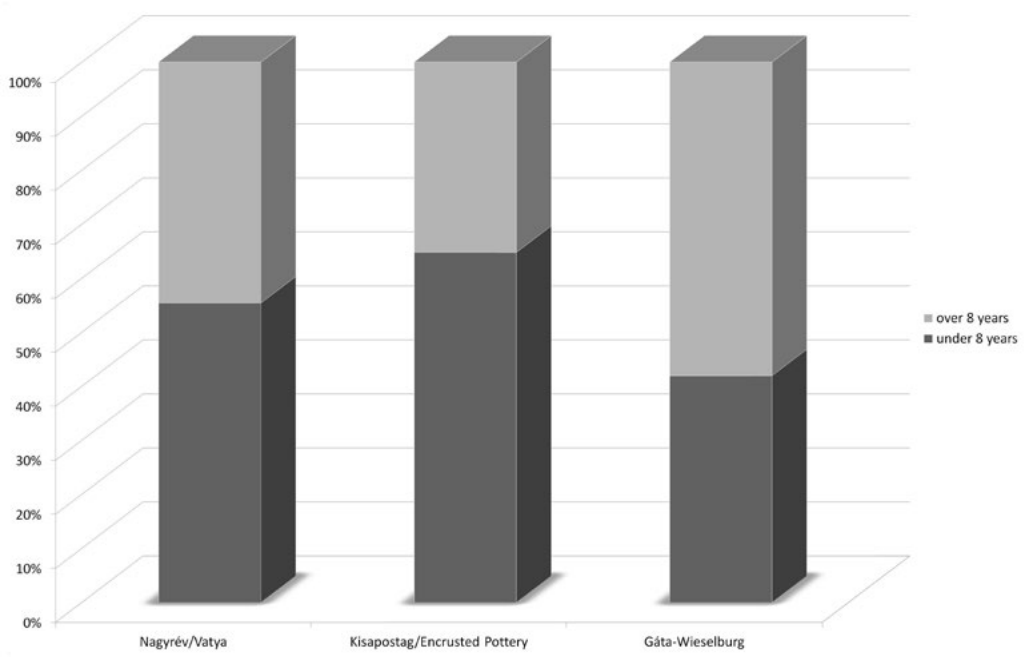

Figure 7.2. Proportion of buried children under eight years and children/adolescents from eight to twenty years in the analysed cultures.

There is no evidence so far for burials outside the boundaries of cemeteries at Gáta-Wieselburg sites located in Hungary, but the anthropological material discovered from here was in exceptionally poor condition. The absence of babies and toddlers in these cemeteries – whose mortality rate is expectedly higher – is possibly due to other factors, such as agricultural activities, earlier disturbances, methods of excavation, the shallowness of children's graves and the high fragmentation rate of infants' bones (Hajdu 2012b, 77-79). However, archaeologically invisible alternative funerary practices have to be considered to explain the 'missing child-burials', possibly similar to those documented in Southeast Asia, where infants were deposited inside tree trunks or among tree branches (Murphy and Le Roy 2017, 6).

Burial traditions

Inhumation vs. cremation

Large urn burial cemeteries associated with the late Nagyrév and Vatya cultures began to emerge around 2200/2100 BC along the Danube in Central Hungary. The burials generally contained an urn covered by a large bowl or bowls with smaller cup(s) placed next to it (Kalicz-Schreiber 1995; Sørensen and Rebay 2009; Vicze 2011). Examinations carried out on the anthropological material showed that the majority of burials followed the same scheme irrespective of the individuals' age (Zoffmann 1995; Mali 2014). Contemporary human remains were also documented at both Nagyrév and Vatya settlements. At Érd near Százhalombatta, remains of 37 individuals came to light as partial or complete skeletons from 26 different settlement features; the complete skeletons were flexed, similar to the inhumation burials, while the majority of

partial remains appear to have been thrown into disused domestic refuse pits. Preliminary anthropological examinations indicate that 41% of these inhumations were children (Pap *et al.* 2008), suggesting that this kind of non-normative mortuary treatment was not specific to a certain age group. Furthermore, current investigations propose that the human remains were deposited throughout a 500-year period (2000-1500 BC). Perimortem injuries were observed on two children's skulls from such features (Dani *et al.* 2016, 226; Szeverényi and Kiss 2018; Szeverényi *et al.* in prep.).

The site of Bonyhád plays an important role in understanding the transition from inhumation to cremation of the Kisapostag/Earliest Transdanubian Encrusted Pottery cultures. Two primary cremations that were carried out in the graves were found *in situ.* The two burials can be interpreted as an experimental phase towards the dominant cremation practice in the region (Cardarelli *et al.* in prep.; Hajdu *et al.* 2016; Köhler *et al.* in press). Burnt remains of an individual aged 14-16 were recovered in anatomical order from grave BBQ84, while the remains of another adolescent aged 10-13 years came to light from grave BBQ85. Both individuals buried in this 'transitional way' were in the transitional age of puberty; however, based purely on these exceptional cases, it cannot be determined whether this age-based selection was a deliberate act. Such *in situ* cremation processes are very rare, the only similar Bronze Age examples are known from Szőreg (cemetery of the Nagyrév culture) and Pitten (Tumulus Grave culture) in Austria (Hajdu *et al.* 2016). A total of 130 *in situ* cremations were documented at the cemetery of Pitten, but the age group Infans II (aged 8-14 years) is underrepresented and 68% of these children (17 individuals) received an inhumation burial (Sørensen and Rebay 2005). In contrast, among the 12 inhumations recovered at Bonyhád, only one was a child aged 11-13, the rest of the individuals were all over 20 years (Hajdu 2012a).

East of the Danube, in the partially excavated biritual cemeteries of Békés 103 (dating to the Middle Bronze Age) and Jobbágyi (dating to the beginning of the Late Bronze Age) nearly all inhumation burials were of children (Infans I and II, Duffy *et al.* 2019; Fülöp 2016; Paja *et al.* 2016). Pit-burials in domestic settings, which are generally considered alternative mortuary rites, have recently been identified from the territories of the Transdanubian Encrusted Pottery culture; some also contain remains of children (Kiss *et al.* 2015, 30).

Individuals accompanied by classic encrusted wares received a cremation burial almost without exception; the calcined bones were either swept into the burial-pit (scattered cremation) or were placed in a ceramic container (urn burial, Kiss 2012). At Bonyhád, 68% of the burials with identifiable rite were scattered cremations, where 61% of all child-burials were also scattered cremations (Szabó 2012). However, at Mosonszentmiklós, among burials associated with the Encrusted Pottery culture, urn burials occurred in higher numbers (55%) than scattered cremations (Kiss 2012; Uzsoki 1963). Here, a similar trend is reflected in the case of children's burials: 14 individuals were placed in urns, while ten individuals' remains were scattered. If multiple burials are taken into consideration as well, the number of children's urn burials (20 graves) is almost twice as high as the children who were cremated and their remains scattered in the burial-pit (Zoffmann 1971). The majority of multiple urn burials, where remains of individuals were identifiable, also contained burials of young children under the age of eight years (15 cases). At Mosonszentmiklós, two out of three multiple scattered cremation burials contained remains of adults, whereas remains of an adolescent individual (aged 13-22 years) and a young child were documented in burial No. 70 (Zoffmann 1971). In the 1970s, István Bóna proposed that the mortuary rite of children being buried in urns may have originated from the

pithos burial traditions of tell cultures, practiced widely in territories along the Danube and in Moravia during the period of the Hungarian Middle Bronze Age (Bóna 1975, 199-204). There are two documented examples for pithos burials in the settlement of Dunaalmás-Foktorok, dating to phase directly preceding the establishment of the Mosonszentmiklós cemetery associated with the Encrusted Pottery culture (Vadász 2001, 14-17). During the period of the Tumulus culture following the Hungarian Middle Bronze Age, pithos burials of children occur relatively frequently in the Carpathian Basin (Csányi 1980, 2016; Fojtík and Dočkalová 2007; Hajdu 2008; 2012b; Ilon 2014, 28-30). The placement of fragile remains of children into vessels can be observed among the burials of the Vatya, Füzesabony and Transdanubian Encrusted Pottery cultures, perhaps as an intention to protect or recreate the body of the young child (Sørensen and Rebay 2009). Some authors have suggested that the ceramic jar was intended to represent the female body or the womb and was perhaps linked to the hope that the dead infant would be reborn (McGeorge 2011).

This is in contrast to the situation for older members of the society, whose graves were often re-opened to facilitate the removal of grave-goods and parts of the skeleton. Perhaps the idea of the rebirth of an infant meant that its body should not be disturbed (Murphy and Le Roy 2017). Among the examined burials of the Gáta-Wieselburg culture, the deliberate re-opening of graves was documented in around 40% of the cases, whereas burials of children remained mostly undisturbed (71%). Apart from one exception, all individuals buried in re-opened child-graves were children over the age of ten years and adolescents. These burials were rich in bronze grave goods even after the partial removal of some of the burial assemblage (Melis 2017).

Multiple and consecutive burials

In the communities of the late Nagyrév/Vatya, Kisapostag/Encrusted Pottery and the Gáta-Wieselburg cultures, single burials represented the normative mortuary practice; the occurrence of multiple burials, in which two or more individuals were buried simultaneously, can be regarded as a deviation from the norm. Multiple burials were particularly rare among the inhumation graves of the Gáta-Wieselburg cemeteries. In these cases, multiple individuals were identified during anthropological examinations (Melis 2017; Rebay-Salisbury 2018, 37). The cemetery of Hainburg represents the largest burial ground of the Gáta-Wieselburg culture with 310-320 burials, among which eight multiple burials were documented (2.5% of the graves, Neugebauer 1994, 64). Consecutive burials, in which individuals were placed in the grave-pit at different times, on the other hand, occur in slightly higher numbers in Gáta-Wieselburg cemeteries (Aspöck and Banerjea 2016; Aspöck 2018). In a grave excavated at Iván, the remains of four individuals were discovered: at the bottom, the skull of a young child was placed under a ceramic vessel; the skeletal remains of an adult were placed next to it. The grave was then re-opened at least twice, in both cases to incorporate the remains of two female individuals (Melis 2017, Fig. 7; 2019). Only two males could be identified among the 18 individuals recorded in eight multiple or consecutive burials from the Gáta-Wieselburg culture in Hungary. The number of interred children within these burials was six, most of them under the age of 8-10 years (Table 7.2). Among the examined graves of the Gáta-Wieselburg culture, burials of individuals under the age of four years were identified only in four cases, out of which three (Hegyeshalom 43A-B, Szakony 2, Iván 4. grave) were part of multiple, and one of consecutive burials (Melis 2017; 2019).

Although the practice of cremation limits the differentiation between simultaneous and consecutive burials, multiple burials also occur in the late Nagyrév culture. At Szigetszentmiklós,

Table 7.2. Multiple and consecutive burials of the Gáta-Wieselburg culture in Hungary (for Austria, see Rebay-Salisbury 2018, Tab. 1-6).

Site	Grave	Individual I	Individual II, III	Description
Szakony	2	female, 22-25	child, 2.5-3.5	Individual II added following the anthropological analysis
Szakony	3, 8	male?, 20-x	adult, 18-40	Consecutive burials, the disturbed burial (Individual I) was found 0.67 m below the burial of Individual II
Szakony	6, 7	female, 45-60	Unidentified individual, 8-30	Consecutive burials, the burial of a female (Individual I) without grave goods was discovered 0.5 m below the burial of Individual II, of which only a couple of bone fragments and an amber bead remained
Iván	2, 3, 4	child, 2.5-3.5 + upper limb bones of an adult	female, 25-40; female? 25-55	Consecutive burials: the first deposition (Individual I, at the depth of 1.2 m) was a skull of a child placed under a vessel, the forearm bone and phalanges of an adult lay next to it; at the depth of 0.9 m: burial of a female (Individual II) with two mugs; at the depth of 0.5 m: burial of another female (?, Individual III) without grave goods in flexed position
Hegyeshalom	43A-B	child, 0-8	child, 5-8	Consecutive burials, 0.2 m thick undisturbed deposition layer between the two child-burials without grave goods (age determination by T. Hajdu)
Hegyeshalom	56	child, 4-10	unidentified individual, 8-30	Consecutive burials? The disturbed grave pit of a child (Individual I) contained the calcinated bones of another young individual (Individual II)
Nagycenk	65A-B	female, 23-29	male, 23-59	Double burial? The skeleton above was placed right on top of another inhumation
Nagycenk	66	female, 23-29	young child?	Double burial, the fragmented remains of Individual II were identified by anthropological re-analysis (K. Köhler)

six burials contained remains of multiple individuals, most of which were children (eight individuals, Kalicz-Schreiber 1995). Multiple burials in the Vatya and Kisapostag/ Earliest Transdanubian Encrusted Pottery culture are restricted to corpses in domestic refuse pits (Earle *et al.* 2014; Kiss *et al.* 2015; Szeverényi and Kiss 2018).

The highest number of multiple burials was documented in the cemeteries of the Transdanubian Encrusted Pottery culture. Analyses carried out on the burials of Bonyhád found only one multiple burial, where the cremated remains were kept separate (Hajdu *et al.* 2016; Szabó and Hajdu 2011, Fig. 2). Among the burials of Mosonszentmiklós 10% were identified as multiple burials: burials No. 19, 21, 38 and 50 contained the remains of two or three individuals in separate vessels (Kiss 2012, 245; Uzsoki 1963; Zoffmann 1971). In the so far unpublished Encrusted Pottery culture cemetery of Szederkény, 47 individuals were identified in 31 graves, which indicates

that almost a third of the burials were multiple burials (Zoffmann 2015). Examinations show that among the Encrusted Pottery culture's multiple burials, the combination of a child and an adult occurs most frequently (in 16 cases), and in most instances, where the sex of the adult was determinable, the remains belonged to women (in 7 cases) aged between 17 and 42-51 years (Zoffmann 2015, Tab. 4).

Our study of multiple inhumation and cremation burials from Western Hungary concluded that the most widespread form of multiple burials included the remains of an adult or mature adult, and a child under the age of eight years (20 cases). In 13 out of the 20 instances, the child interred was younger than four years old. In eight cases, children over the age of eight years were placed together with even younger children (Figure 7.3). Even in the cemeteries of the Encrusted Pottery culture, however, children under the age of four years were buried in separate graves (29), which suggests that multiple burials were carried out only in exceptional circumstances, for example if the death of a close family member occurred at the same time (Rebay-Salisbury 2017; 2018).

Multiple burials were uncommon in cemeteries of the Maros region during the Middle Bronze Age. In most cases, the burials contained the remains of a child and an adult, not necessarily women in their reproductive age, but also older women and men (O'Shea 1996, 171-172, Tab. 6. 20). In the biritual cemetery of Békés site No. 103, however, the ratio of multiple burials was as much as 10%, and the interment of adults or mature adults along with a single child under the age of six years was most common (Paja *et al.* 2016, 188). In communities which followed

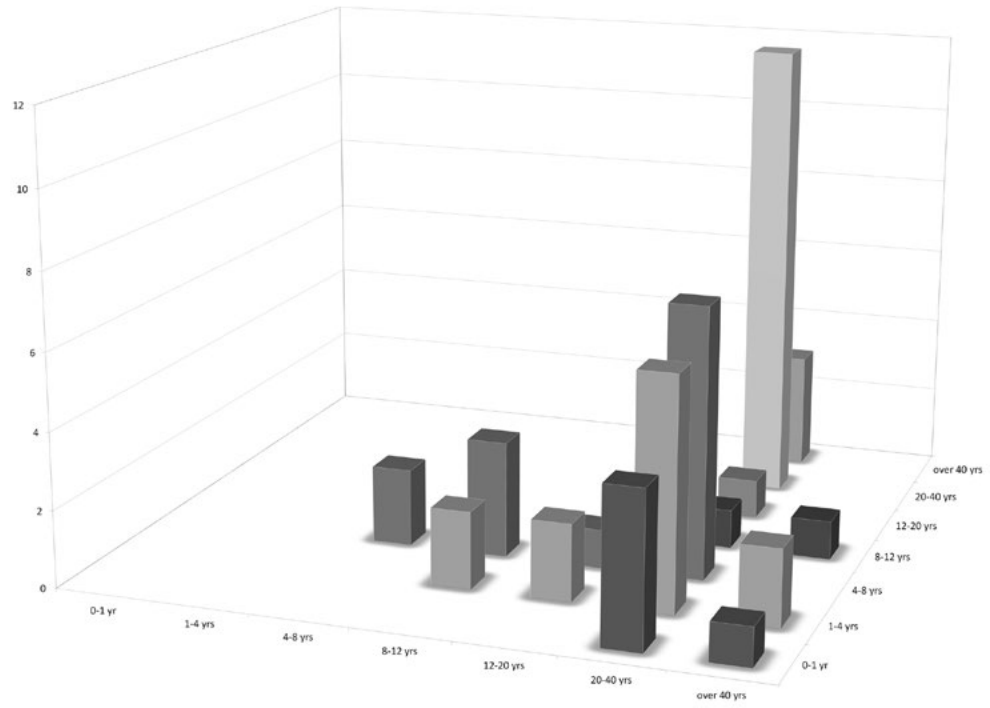

Figure 7.3. Age distribution of the co-buried individuals under study.

the mortuary practice of cremation in the Carpathian Basin (Encrusted Pottery culture – Mosonszentmiklós, Bonyhád; Nagyrév – Szigetszentmiklós; Gyulavarsánd/Otomani –Békés site 103, but not the Vatya culture), it is more likely for individuals to be interred in double or multiple burials (at least around 10% of cases). Burial 456 at Polgár-Kenderföldek could, in this regard, be considered a link between cremation and inhumation traditions. The burial was one out of three cremation burials in an inhumation cemetery including 105 burials associated with the classical phase of the Füzesabony culture; the burial contained the remains of a female, a male and a child (Dani and Szabó 2004, 98, Fig. 5.1). Reports from the Füzesabony cemeteries of Polgár, Tiszafüred, and Gelej note burials containing multiple individuals with a wider variety of age combinations (sub-adult-sub-adult, sub-adult-adult, and adult-adult combinations) and a diverse sex distribution (Dani and Szabó 2004; Hajdu 2012b; Zoffmann 2006). At the Tiszafüred cemetery in sector 'D' for example, the majority of double burials contained the remains of a male and a child under the age of 13 years (four cases; Hajdu 2012b, Tab. 2). Examinations carried out on contemporaneous inhumation cemeteries from Austria showed that burials of children interred together with adults, primarily with women, occur mainly in the region north of the Danube (Rebay-Salisbury 2018, 46).

The expression of gender roles and social status through the grave goods of children's burials

The variety of dress ornaments and other artefacts given to individuals based on their gender could be best observed in the inhumation cemeteries of the Gáta-Wieselburg culture. Bronze hair-rings, necklaces or pectorals consisting of small bronze, shell or bone elements were associated with female burials (Krenn-Leeb 2011; Melis 2017; Schumacher-Matthäus 1985, 27-28, plates 17, 18). In some rare cases, traces of a headdress made of bronze and leather were recorded in burials of a young and a mature adult female (Gömöri *et al.* 2018). Daggers, weapons and tools were buried mainly with adult and mature adult males, although the majority of precious metal hair-rings and neckrings with rolled ends are also known from male burials in Hungary. Bronze spiral armrings, pins and amber beads were associated with both genders. A dagger was discovered in the burial of a young child at Ménfőcsanak, although daggers are characteristic grave goods in male burials (Figure 7.5; Melis 2015; Tóth *et al.* 2016). Apart from this particular burial and a couple of precious metal hair-, and neckrings associated with burials of children aged between four and twelve, grave goods typical for men seem to appear only in burials of adults in the cemeteries of the Gáta-Wieselburg culture (Figure 7.4a). The handful of cremation burials from the Kisapostag, Transdanubian Encrusted Pottery, late Nagyrév and Vatya cultures that contained weapons were also linked to individuals over the age of 15 years (Bándi and Kiss 1967; Mali 2014; Szabó 2012; Szeverényi and Kiss 2018, 46). Apart from the daggers and axes, there are no typically male grave goods in cremation graves.

In the Mokrin inhumation cemetery of the Maros culture, weapons were also found only in the graves of adult males (O'Shea 1996, 276-281). Among the identifiable burials of the Únětice culture, the majority of daggers were given to males as grave goods from about the age of twelve years (Lorencová *et al.* 1987, 130, 241; Rebay-Salisbury *et al.* 2018). Examinations carried out on Early Bronze Age inhumation burials in Slovakia (Chłopice-Veselé, Nitra, Únětice, Mad'arovce cultures) showed that daggers and other status signifying objects appear first with burials of 14-20-year-olds (Bátora 2009; Danová 2012). In the Füzesabony cemeteries, gold ornaments sometimes occur in children's burials (Dani *et al.* 2016, 229). At the Gemeinlebarn cemetery of the Unterwölbing culture, weapons were exclusively associated with adult male burials,

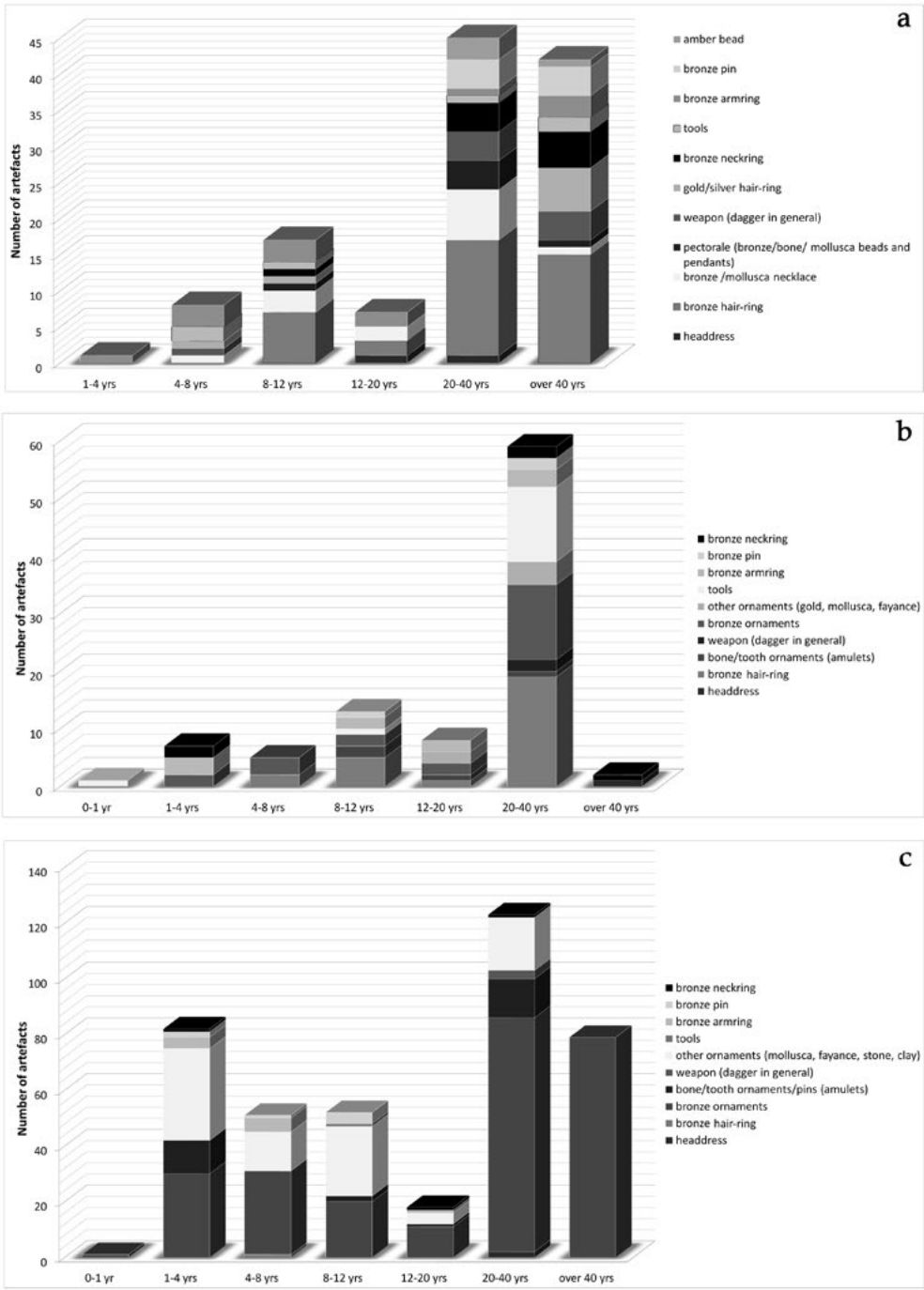

Figure 7.4. Distribution of the grave-good types among the age categories, a: Gáta-Wieselburg culture, b: Kisapostag/Transdanubian Encrusted Pottery culture, c: late Nagyrév/ Vatya culture.

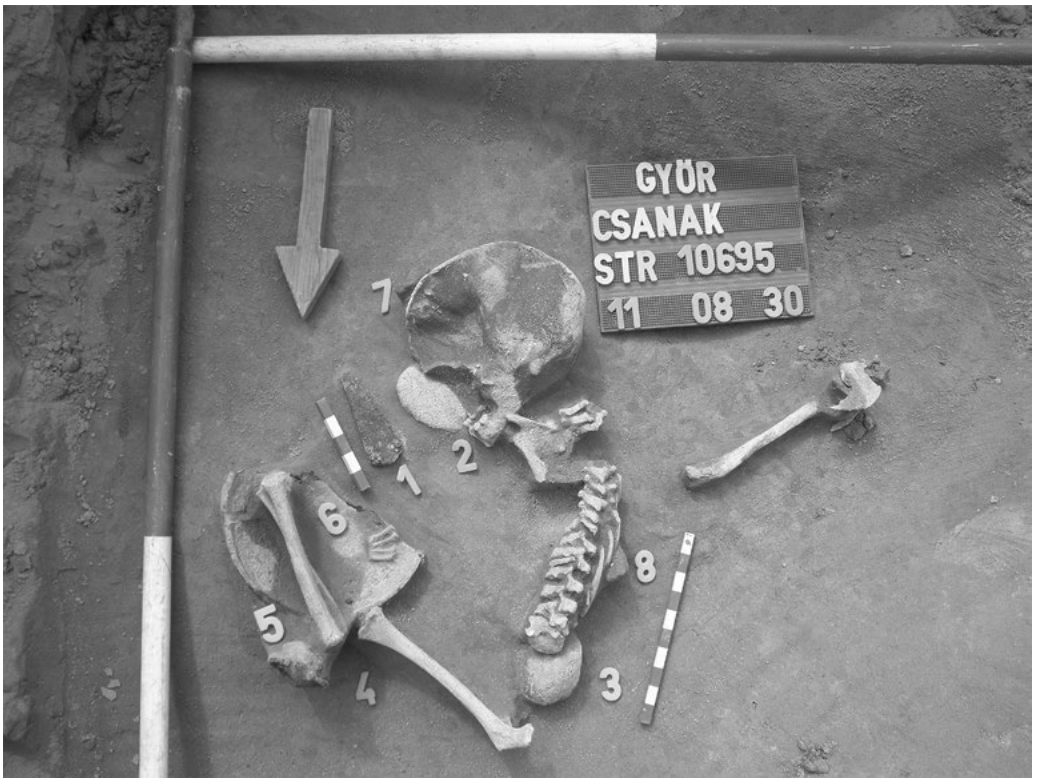

Figure 7.5. Burial of a child with dagger at Ménfőcsanak (photo: Ferenc Halász).

whereas daggers and stone axes were placed in graves from early childhood at the Franzhausen cemetery; bronze axes, however, seem to be the only object type specifically linked to adults (Appleby 2011, Tab. 4).

Dress ornaments were primarily associated with women of the Gáta-Wieselburg culture and were given to girls from the age of 8-12 years (Figure 7.4a). Similarly, in the Kisapostag and Transdanubian Encrusted Pottery cultures, women's ornaments such as bronze hair-rings, bronze dress elements, bone jewellery and animal teeth/tusks were placed in burials of children during middle childhood (Figure 7.4b). Furthermore, in the cemetery of Unterhautzenthal of the Únětice culture, the female gender in burials is referenced from the age of 8-12 (Rebay-Salisbury *et al.* 2018). Dress ornaments associated with women already appear in children's graves at Franzhausen, and the entire adult dress ornament repertoire appears already in sub-adult burials (except for diadems, the only object type associated exclusively with adult women). In the cemetery of Gemeinlebarn, there was little difference in the dress ornaments of infants, children and sub-adults; they all wore simple, ring-like accessories. Sheet bronze or wire ornaments, gold rings and bronze diadems, however, occurred only in burials of adolescents (Appleby 2011, Tab. 2, 3).

Burials of the late Nagyrév and Vatya culture, on the other hand, followed a different tradition: bronze ornaments, bone amulets and pins, which are generally interpreted as part of the

female attire, were included in burials from as early as toddler age (Figure 7.4c). Numerous small and often burnt fragments of bronze, bone, shell or faience were parts of composite necklaces, pectorals or headdresses. The exact way(s) that these pieces were worn on the body are still largely unknown, partly due to Vatya communities practicing cremation, and partly because delicate ornaments such as spiral tubes, sheet tubes, studs, bronze sheets with rolled sides, tutuli, or pendants could have been worn either as dress ornaments or as jewellery (Schumacher-Matthäus 1985, 61-74). Graves containing a combination of several pendants, bronze sheets and studs, which can be reconstructed as elements of an elaborate headdress, are associated with burials of adults (Mali 2014). In terms of female attire, a similar tendency was observed in the cemetery of Mokrin of the Maros culture: elements of headdresses were exclusive to adult women, while bone pins, necklaces and bronze ornaments were given to young children as well (O'Shea 1996, 281-283, Tab. 8.4, Fig. 8.1).

The non-gender specific elements of the attire, such as spiral armbands, were used in a similar way in the Gáta-Wieselburg, Kisapostag/Transdanubian Encrusted Pottery culture and late Nagyrév/Vatya culture burials. These types of artefacts occur in burials from toddler age onwards (Figure 7.4a, b, c). Examinations of the cemetery of Unterhautzenthal associated with the Únětice culture also identified spiral armbands as the object type given to the youngest of individuals (Rebay-Salisbury *et al.* 2018). Burials of the Gáta-Wieselburg culture had the largest number of neckrings (10 pieces), characteristically discovered in graves of adult and mature adult males. The neckrings discovered in Kisapostag and Vatya burials belonged to two toddlers around the age of three years, an adolescent, three adults and one mature adult (Figure 7.4b, c). In the Mokrin cemetery of the Maros culture, neckrings are known from burials of three adults and one sub-adult (O'Shea 1996, Tab. 8.3, Tab. 8.4). In the cemetery of Unterhautzenthal of the Únětice culture, cast neckrings were discovered in burials of adults, while a thinner, hammered variant came from a burial of a 7-8-year-old child (Lauermann 1995; Rebay-Salisbury *et al.* 2018).

Bronze pins occur only in burials of adults and mature adults at Gáta-Wieselburg cemeteries, whereas this object type is characteristic to children's burials from toddler age in Vatya cemeteries (Figure 7.4c; Mali 2014). In burials of the Maros culture, bronze pins are also known from burials of adult women (O'Shea 1996, 282). In the cemetery of Franzhausen, disc-headed pins were part of the female attire from birth to old age (Appleby 2011, Tab. 2). In addition to keeping dresses/capes in place, pins may have been used to secure the burial shroud and may have had different meanings in communities of diverse mortuary practices.

In contrast, burials of the Encrusted Pottery culture were not so well equipped with bronze ornaments, tools or weapons. At Mosonszentmiklós, small bronze ornaments came to light in burials of children under the age of ten and adults between the age of 20 and 40, although these burials date to the second half of the Middle Bronze Age (see above; Kiss 2012, Fig. 82-83). In the reconstruction of the attire worn by women of the Encrusted Pottery culture, clay human figurines and decorated ceramic vessels can also be taken into account (Schumacher-Matthäus 1985; Szabó and Hajdu 2011, Fig. 6). In the cemetery of Bonyhád the opportunity arose to contrast the anthropological identification of human remains with the designs of their grave good vessels. The examinations managed to outline certain groups of gender-specific motifs: the zig-zag or 'pearl necklace'-like designs may depict neck ornaments or pectorals, while vertical bundles of lines might have symbolised skirts on the urns associated with female burials (Hajdu *et al.* 2016; Kiss 2012, 76-78, Fig. 16, 17; Szabó and Hajdu 2011). For example, double burial No. 19 at Mosonszentmiklós contained the remains of two children aged 3-5 and

5-7 years, accompanied by a vessel of unique shape and decoration depicting swallow-tail and comb-shaped pendants on its exterior (Kiss 2012, Fig. 33; Uzsoki 1963, 18.t. 6). Stone tools and implements were almost exclusively discovered in burials of adults of the Encrusted Pottery culture. Therefore, the single case of a new-born's burial with a loom-weight among its grave goods documented at Környe can be considered unusual (Bándi and Nemeskéri 1971).

Miniature vessels occur relatively frequently in graves of children associated with the Encrusted Pottery culture and are generally interpreted as toys. Some of the burials at Bonyhád (such as BBQ38, BBQ46, BBQ75 and BBQ240) contained entire sets of miniature vessels. Examinations have also shown that small drinking horns (rhytons) were consistently buried with 1-3-year-old children. This further suggests that these objects might have served as feeding bottles for young infants (Figure 7.6; Hajdu *et al.* 2016, 362, Fig. 5; Rebay-Salisbury 2017; Szabó and Hajdu 2011, 96-97; Fig. 1). However, the execution of miniature vessels can vary a great deal even within one burial assemblage, which implies several different crafters (Sofaer 2015, 157-158). The less well-executed pieces could have been produced by less experienced apprentice potters or perhaps children (Gucsi and Szabó 2018, 223-226). The analysis of miniature vessels from the Tumulus culture cemetery of Jobbágyi outlined the different levels of knowledge of producers of such vessels (Fülöp 2016, Fig. 5). However, there seems to be no connection between the age of the deceased individual and the execution of vessels. These objects may have therefore been made by siblings or other children of the community, which further suggests the active participation of children in crafting processes and mortuary traditions during the Bronze Age (Fülöp 2016). A small, uneven bowl and a cup were placed with remains of a 51-57-year-old woman in a Gáta-Wieselburg grave at Nagycenk, which may have been made by a child (Gömöri *et al.* 2018, Fig. 11.10, 14).

Figure 7.6. Drinking horns from Bonyhád in the burials BBQ75 and BBQ240 (after Szabó 2012).

Tools and other implements occur sporadically both in adult and children's inhumations of the Gáta-Wieselburg culture, without showing any obvious patterns (Figure 7.4a). In Maros culture assemblages, objects characteristic for male burials are associated with adults, whereas artefacts linked strongly to women appear already in the graves of infants and young children (O'Shea 1996, Fig. 8.1).

Based on the composition of grave good assemblages, it appears that middle childhood was the age when gender and social status was first expressed through mortuary rites in the Gáta-Wieselburg culture. Although there are fewer objects signifying status and gender in burials of the Kisapostag and the Transdanubian Encrusted Pottery culture, the number and variety of such artefacts are higher in burials of children during middle childhood (Figure 4b).

Due to the practice of cremation at Vatya cemeteries, bronze objects were generally found in very poor condition if they survived. In the cemetery of Biatorbágy, burials of three men, three women and eight children represented the elite. While the number of children's burials containing bronze objects was higher than those of adults, some adults were interred with bronze artefacts of higher value or heavier weight (e.g. neckrings, daggers, headdresses). In this particular cemetery, the proportion of children's burials without bronze grave goods was noticeably low; children of lower social status might not have been buried within the boundaries of the communal burial grounds (Mali 2014). At the cemetery of Budapest-Növény utca of the Vatya culture, it appears that the location of the resting places was tied to social status; burials with metal and amber artefacts clustered in the centre of the burial ground (Reményi 2002, 86, Fig. 2). At Szigetszentmiklós, the eight burials of older children were the richest in dress ornaments, and bone or bronze pins were found in burials of toddlers. Dress ornaments made of bronze, bone, faience and shell were documented in fairly large numbers in graves of children from the age of 1-2 years in late Nagyrév/Vatya cemeteries, while such objects were scarce in burials of young adolescents (Figure 7.4c). These bronze ornaments could be considered expressions of economic power by the infants' kinship relations (Dani *et al.* 2016, 219). Specifically status signifying objects such as headdresses and weapons appear primarily in graves of adults or mature adults, as in the Maros culture (O'Shea 1996, 276-283).

Conclusions

In this study we attempted to go beyond the definition and comparison of age categories and outline how stages of social development were understood by Bronze Age societies through mortuary data (Sofaer 2004, 175). The condition of the archaeological material and human remains varied significantly, primarily due to different burial traditions. Perhaps this could explain the absence of young children, particularly babies and toddlers in the inhumation cemeteries of the Gáta-Wieselburg culture. However, since the absence of young children is also documented in cemeteries with better preserved inhumation burials (such as Maros and Unterwölbing cultures), it may be assumed that young children were buried elsewhere or received non-normative mortuary treatment. Only new excavations of well-documented inhumation cemeteries with well-preserved human remains will clarify this issue. The frequent occurrence of young children under the age of four years in multiple burials suggests that infants were not yet considered as independent persons, but as human beings in need of special protection provided by their adult close relatives. Small rhytons and miniature vessels in burials of young children appear to be expressions of such attitudes. Although the length of breastfeeding could have varied by community, it is likely that children were fully weaned

by the age of four years in the Bronze Age (Rebay-Salisbury 2017). The high number of rich infant burials furnished with bronze grave goods from two late Nagyrév/Vatya cemeteries indicates some form of selection based on social status: only the infant members of high prestige families were placed to rest at these locations (Mali 2014). Sentiments linked to the fragility of infants are further expressed at Mosonszentmiklós of the Encrusted Pottery culture, where the cremated remains of children under the age of four years were placed in urns in most instances. In conclusion, the mortuary treatment of babies and toddlers reflects that they received special care and protection even in their deaths, and it further implies that infants were not yet considered full-fledged members of the community.

Burials of young children aged between four and eight years occur in similar rates across cemeteries. In all examined cemeteries, children's burials were furnished with bronze implements and dress ornaments indicating that these young individuals were regarded as full members of the society. In rare cases, some burials were accompanied by status-signifying objects, such as the burial of a 4-6-year-old child interred with a dagger at Ménfőcsanak (Figure 7.5). Objects signifying status, such as heavy bronze neckrings, occur in burials of children transitioning from toddler age to young childhood, around the age of three years (e.g. Ménfőcsanak, Szigetszentmiklós). These exceptional burials might represent the offspring of the ruling class interred with the necessary material attributes of political power. The passing down of such status signifying objects, taking them out of circulation, could be interpreted as a sign of institutionalized power (Dani *et al.* 2016, 224; Earle and Kristiansen 2010; Sosna 2009, 140-142).

Grave goods linked to gender were detected in the Gáta-Wieselburg inhumation cemeteries, where gender specific objects were given to children from the age of eight to twelve years. Girls of this age received hair-rings and necklaces or pectorals similarly to adult women, implying that children had become noticed during middle childhood and active members in the eye of their communities. The grave goods may have come into their possession through transition rituals following the biological changes their bodies had undergone (Sofaer 2004, 166).

Cremation burials of women and children of the late Nagyrév/Vatya and Encrusted Pottery culture contained similar, but very fragmented dress ornaments. The unusually rich burials of toddlers and young children may reflect the social standing or prestige of their families. In the Maros culture, some burials of infants under six years of age were also outstandingly well-equipped with bronze ornaments, suggesting that possessions were redistributed according to kinship ties (O'Shea 1996, 281). Older men might have passed on their ornaments to their young descendants when still alive, or might have given them away as gifts at the funeral, which could explain the low number of such objects in the graves of mature adult males. Similarly, the number and variation of bronze ornaments decreases in burials of individuals over the age of 40 in the late Nagyrév/Vatya cemeteries (Figure 7.4c). In the Mosonszentmiklós cemetery of the Encrusted Pottery culture, there were also indications of objects being passed down to the next generation, as reflected by burials of children under ten with numerous bronze fragments in their graves. Fewer bronze objects were included with individuals over the age of 40 in cemeteries of the Kisapostag and Transdanubian Encrusted Pottery cultures (Figure 7.4b). At Mosonszentmiklós, bronze artefacts were consistently included in burials of adults between the age of 20 and 40 years (Kiss 2012). The highest number and the largest variation of bronze objects were found in burials of older children of the Kisapostag and Transdanubian Encrusted Pottery cultures; it is therefore possible that these artefacts were linked to some level of maturity or social acknowledgement. However, objects interpreted as material

attributes of power were only placed in burials of young children in exceptional cases; the youngest recipients of weapons and headdresses as grave goods were adolescents from the age of 14 years. Although material indicators of wealth frequently appear in young children's burial assemblages, inherited social status is rarely expressed in this manner. It is thus likely that social rank was earned through personal achievement rather than through inherited advantages in the Bronze Age societies examined here (2200-1600/1500 BC).

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Chapter 8

Childhood in the Late Bronze and Early Iron Age in the southern Carpathian Basin

Daria Ložnjak Dizdar and Petra Rajić Šikanjić

Introduction

Archaeological and anthropological data from several cemeteries dating from the 14th to the 7th century BC (Figure 8.1) form the basis for discussing children and childhood in the southern Carpathian Basin during the Late Bronze and Early Iron Ages. The Late Bronze and Early Iron Ages lasted from the end of the 14th to the middle of the 4th century BC in the southern Carpathian Basin, the area between the rivers Drava, Sava and Danube, where the Pannonian plain ends at the northern slopes of the Dinarides.

The cemeteries Poljana Križevačka, Slatina, Belišće, Batina, Sotin and Dolina were included in two recent projects, which combine archaeological and anthropological data to better understand mortuary practices and identities in the Late Bronze and Early Iron Ages. The analysis of children and childhood in this period relies completely on archaeological evidence from graves. Children's graves were identified through anthropological analysis; their contexts and associated finds, as well as traces of use and handling of specific objects, were then examined in detail to throw light on the status of children in Late Bronze and Early Iron Age communities in the southern Carpathian Basin.

Cremation burials became common in the Carpathian Basin at the beginning of the Bronze Age, around 2500 BC. In the Late Bronze Age, the cremation of the dead was characteristic throughout much of Europe (Fokkens 1997, 360), with regional variations in material culture and funerary customs (Pittioni 1979; Sørensen and Rebay 2008, 57). The burning of the dead on the pyre as well as the transformation and manipulation of the dead body were complex rites, which took place both during and after the cremation (Nebelsick 2016, 98 passim, Fig. 2/2, 4; Fülöp and Vaczi 2016).

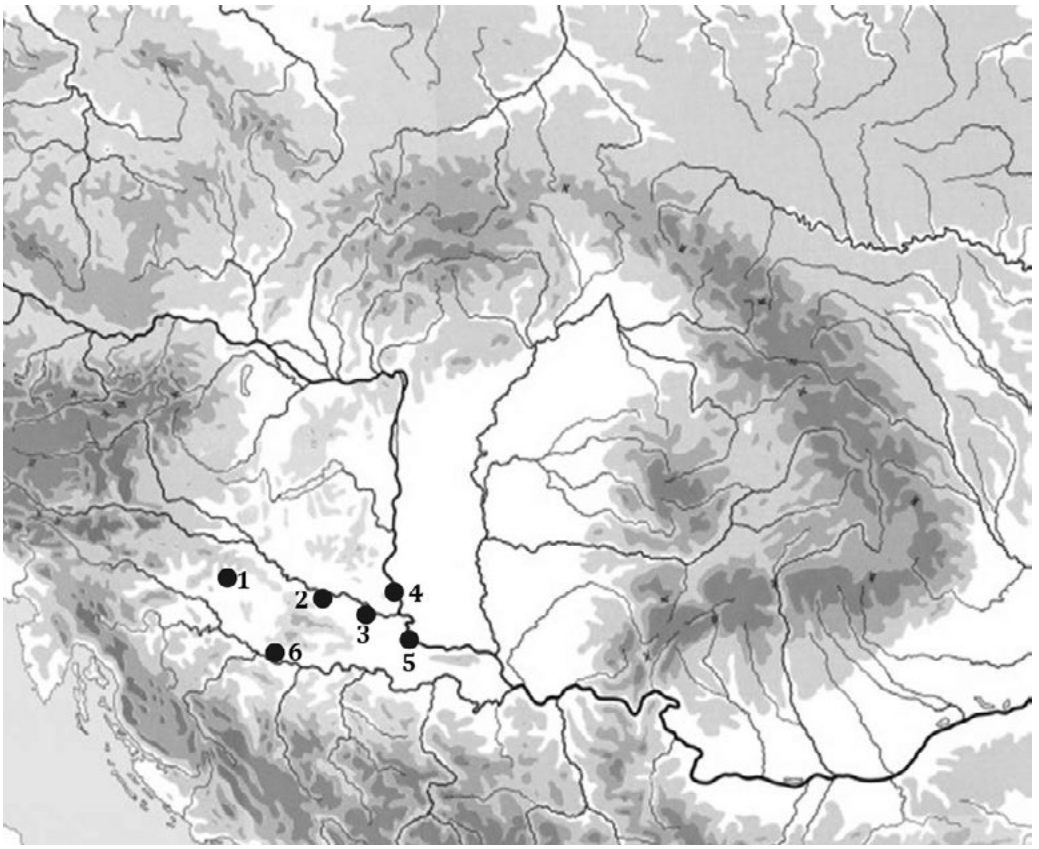

Figure 8.1. Late Bronze and Early Iron Age cemeteries in the southern Carpathian Basin mentioned in this chapter (1 Poljana Križevačka, 2 Slatina, 3 Belišće, 4 Batina, 5 Sotin, 6 Dolina, Fig.: Daria Ložnjak Dizdar).

For this chapter, 40 graves of persons under 18 years at death were selected for anthropological analysis. The analysis of skeletal remains followed a standard procedure in order to gather data on the age of the individuals as well as pathological changes. The biological age was established on the basis of the dental development and the degree of epiphyseal fusion (AlQahtani *et al.* 2010; Scheuer and Black 2000). The precision of age estimations, especially in children, greatly depend on the preservation of skeletal elements. As cremated material does not always include all the skeletal remains, age estimations must be based on those that are present. The analysis used the age categories of 0-5, 6-11 and 12-18 years at death. The highest number of individuals, 21, was in the youngest age category (0-5 years), the other two categories (6-11, 12-18 years) had similar numbers of individuals, eight and six, respectively. Individuals who could not be assigned to one of the three age categories because of the scarcity of skeletal remains were described as 'children' (five individuals). The high number of children under five years of age is somewhat expected, because they are considered to have been the most vulnerable part of society (Lewis 2007). The sex of the individuals was not estimated, because the main skeletal sex differences emerge only during and after puberty (Mays 1998).

Age

The biological age of children, estimated by standard bio-anthropological methods, might differ from their social age. Different ways of conceptualizing age have been discussed on several occasions (e.g. Sofaer-Derevenski 1994; Sofaer 2011, 286; Kamp 2001; Gowland 2006; Halcrow and Tayles 2011, 335). It can be expected that each society has its own age categories and its own definition of childhood (Kamp 2001, 4), because it is the period when the greatest changes in life take place. Childhood is considered the most sensitive part of human life (Lewis 2007, 19). The social age categories of childhood in Bronze and Iron Age communities in the southern Carpathian Basin, which are the subject of our research, are yet to be defined. Therefore, this chapter tries to define the criteria for considering childhood in accordance with the data preserved in the material remains of archaeological finds and anthropological samples. The material culture from selected graves, which were defined as those of children based on the biological age estimations of anthropological remains, will be shown to provide new information about childhood in the communities of the time and to open up new interpretive possibilities.

Mortuary practices

Evidence of burial practices such as body treatment, body deposition, selection of the urn, body ornaments and grave goods are presented here; the same categories were analysed within the 'Late Bronze Age mortuary practices and society in the southern Carpathian Basin' project for all graves excavated in several Late Bronze Age cemeteries in the southern Carpathian Basin (Ložnjak Dizdar and Rajić Šikanjić 2016a; 2016b; Ložnjak Dizdar *et al.* 2018; Ložnjak Dizdar *et al.* in press). According to these criteria, we will try to identify the social status of children and attempt to read the life stages of buried members of Late Bronze and Early Iron Age societies in the southern Carpathian Basin.

Body treatment

All the remains of children in the examined sample were cremated, which was the normative burial practice for all members of Late Bronze and Early Iron Age societies. Even though the remains of the funerary pyres were not preserved in any of the analysed cemeteries, the colour of the bones reveals how a community cremated its members. The corpse was placed on a pyre of stacked wood and the fire was lit. The remains of the pyre – human and animal bones, objects deformed by fire, and in rare cases pieces of charcoal – were deposited in the grave and testify to the cremation method. The colour of the burnt bones is mostly white or white-grey, indicating a fire temperature of more than 600°C (Mays 1998; Wahl 2015). Since there is no colour difference between the preserved skeletal elements, all the body parts were exposed to the fire at similar intensity.

The weight of the remains can determine the amount of the skeletal material gathered from the pyre and the number of individuals in the grave. Total weight of human remains per grave ranges from 3.3 g to 920.3 g, with most graves weighing between 100 g and 500 g. The comparison between children and adults showed that the weight of children's remains was lower. This result was expected since the weight of the skeleton depends on a person's age, build and height (Mays 1998).

Preserved parts

The skeletal material was separated according to the body parts in the course of the anthropological analysis. Skull bones, teeth, axial skeleton, long bones, small bones of hands and feet, and unidentified fragments were used as categories. For the majority of the individuals, the largest category was the one with unidentified elements, small fragments of long bones or parts of trabecular bone. Again, this is expected, since estimates show that only 30-50% of the preserved skeletal material can be identified and associated with specific skeletal elements after cremation (McKinley 2000). The majority of graves contained fragments from all body parts, which did not differ from the graves of adult members of the community.

Body disposal

The cremated remains of dead bodies were collected by the community that buried them in the Late Bronze and Early Iron Ages in the southern Carpathian Basin, and were placed in graves in two ways: in urns or in organic wrappings or containers, judging from the outlines of the heaps of cremated remains recorded during archaeological excavations. No regular criteria have been identified that would explain the choice of urn or organic container based on the age or sex of the deceased. In the majority of the analysed graves, the cremated remains were laid in an urn regardless of which age group the buried individual belonged to. This applies to the cremated remains of children, too. The placement in urns probably affected the preservation of the bones, when comparing our sample with those from other areas (e.g. Jaeger and Johansen 2013, 25).

Even though the majority of the analysed graves contained the remains of a single individual, in several cases there were remains of two individuals; a child and an adult. The minimum number of individuals per urn was calculated from the most frequently represented body parts, taking side and size into account. Two distinct types of graves with the remains of two individuals are present in our sample. One type is the dual or multiple burial, in which the remains of two or more individuals are commingled. Commingled remains suggest that both individuals had been burnt together on the same pyre or deliberately mixed during the burial ceremony. The presence of two individuals was confirmed during the anthropological analysis for Grave 52 from Batina, in which a child younger than five years of age was buried with a 20 to 35-year-old adult. Their remains were commingled and buried in one urn. Similar examples were found at the Early Iron Age cemetery of Sotin (Graves 1 and 69).

The second type is a grave with the remains of more than one burial. In this case, a child and an adult were cremated and buried separately, each in their own urn. The Late Bronze Age Grave 15 from Slatina included the burials of a child aged five years or under with that of a 20 to 35-year-old female. Each individual was buried in their own urn covered with the remains of charcoal and ashes from the pyre. Grave 36 from Batina is an example of a shared pyre and a separate deposition of cremated remains: the remains of an adult were piled in the western part of the grave together with a small quantity of the cremated bones of a child, while most of the cremated bones of the child were found in a vessel serving as an urn (Bojčić *et al.* 2018, 163, Fig. 1-2). Grave 69 in Sotin contained the remains of two adult women aged 20-35 in separate urns; one of them shared the urn with the cremated remains of a child aged five years or under.

The combination of an adult with a child in a multiple burial or a grave with several distinct burials is very common in archaeological populations (McKinley 1994). Although currently there is no evidence for the kind of relationship between these individuals, it is quite probable that individuals buried so closely together in a single grave were related.

At the end of the Late Bronze and the beginning of the Early Iron Age, joint graves of adults and children were much more common. In some cases, the cremated remains of the dead were found mixed together in the same urn, indicating that they shared a pyre (Sotin: Graves 1, 69; Dolina: Tumulus 6/Grave 1; Batina: Grave 52). The reasons for such deaths close in time are hard to identify from the osteological remains. The only example of a child found together with a male adult is Grave 1 in Tumulus 6 at Dolina. If we assume a common cause of death such as illnesses for female adults buried together with children, there is the question of whether this grave from Dolina should be interpreted in the same way or whether it points to something else.

Selection of the urn and grave goods

The finds in Late Bronze and Early Iron Age cremation graves can be classified as ceramic vessels, costume/jewellery, tools, defensive equipment, and weapons. Ceramic vessels are the largest group of finds in the Late Bronze Age graves of the southern Carpathian Basin. It is rare to find costume/jewellery and other goods.

According to their function in the grave, we can distinguish urns and lids, the clothes of the body, farewell gifts, as well as food and drink for the afterlife and sacrifices. Property of the deceased and property of the mourners may be differentiated according to ownership. Different criteria for the classification of grave goods, along with the spatial analysis of the position of the finds in the grave, can help to identify the reasons for their inclusion and find a possible link with their role in the person's life. Such an analysis of the position of the objects in the grave and the traces of activity in death, after death, and during the funeral, should not be confused with their function in life (Gowland and Knüsel 2006, xii).

Urns

Choosing an urn was a part of the funerary rites and even the youngest community members were buried in urns. The types of urns changed during the Late Bronze Age. The community that lived in Poljana Krizevačka 2 (Figure 8.1, no. 1), dated to the late 15th-14th century BC according to radiocarbon and typo-chronological analyses) in the south-western Carpathian Basin at the beginning of the Late Bronze Age buried its children in the same way as other community members in almost all the categories considered. The dead body was burnt on the pyre. A large quantity of the cremated bones of the dead was collected and placed in the urn (usually a pot), which was covered with a bowl, and several vessels, usually jugs and pots (for liquids), were broken above the grave. An example of this sequence is Grave 9, in which a child aged 12-15 years was buried. Moreover, Grave 5 of a child aged 0-5 years shows that the remains were sometimes wrapped in organic materials, placed into the pit and covered by a bowl. At Poljana, the material culture in graves of children under 18 years of age was the same as for adults; it was impossible to identify any differences in the funerary rite or find any archaeological traces that would differentiate them according to age. The 50 graves explored in Poljana did not include any double or multiple burials, which means that the community

treated children in the same way as adults, performing the entire funerary rite just as it did for other community members. This trend can be seen in all the cemeteries examined in this paper throughout the Late Bronze Age, with the rare exception of double Grave 15 in Slatina (Figure 8.3, 1-2). It has already been pointed out that the cemeteries at Batina and Sotin contain several Early Iron Age graves where the youngest children, aged five years or under, are buried together with an adult in the same urn.

At the beginning of the Late Bronze Age, urns for burying children and adults were the same size. This suggests that children were treated equally in the practices of the final farewell. The cemetery of Slatina, dated to the first half of the 11th century BC, reveals a different approach to the idea and practice of funerals. At this site, children are found in the smallest urns, which are often jugs or amphorae chosen according to the quantity of the cremated bones collected after the cremation (Ložnjak Dizdar and Rajić Šikanjić 2016b, 144, Fig. 1). Towards the end of the Late Bronze Age, the custom of burying the cremated bones of children in smaller urns began to disappear. Urn size and type became the same for all the community members, for instance at the cemeteries of Batina and Sotin in the Danube valley (Ložnjak Dizdar and Rajić Šikanjić 2016a, 113-115, Fig. 3). Regarding urn size, the only exception is the double burial of a mother and baby in a single urn in Grave 1 in Sotin (Figure 8.2).

This grave is interesting, because the presence of the child (age 0-6 months) in the funerary rite is indicated by a small urn placed inside the large urn containing the cremated remains of the possible mother (age 20-35); the commingled remains suggest that both were burnt

Figure 8.2. Sotin, Grave 1. Urns in situ (Photo: Daria Ložnjak Dizdar).

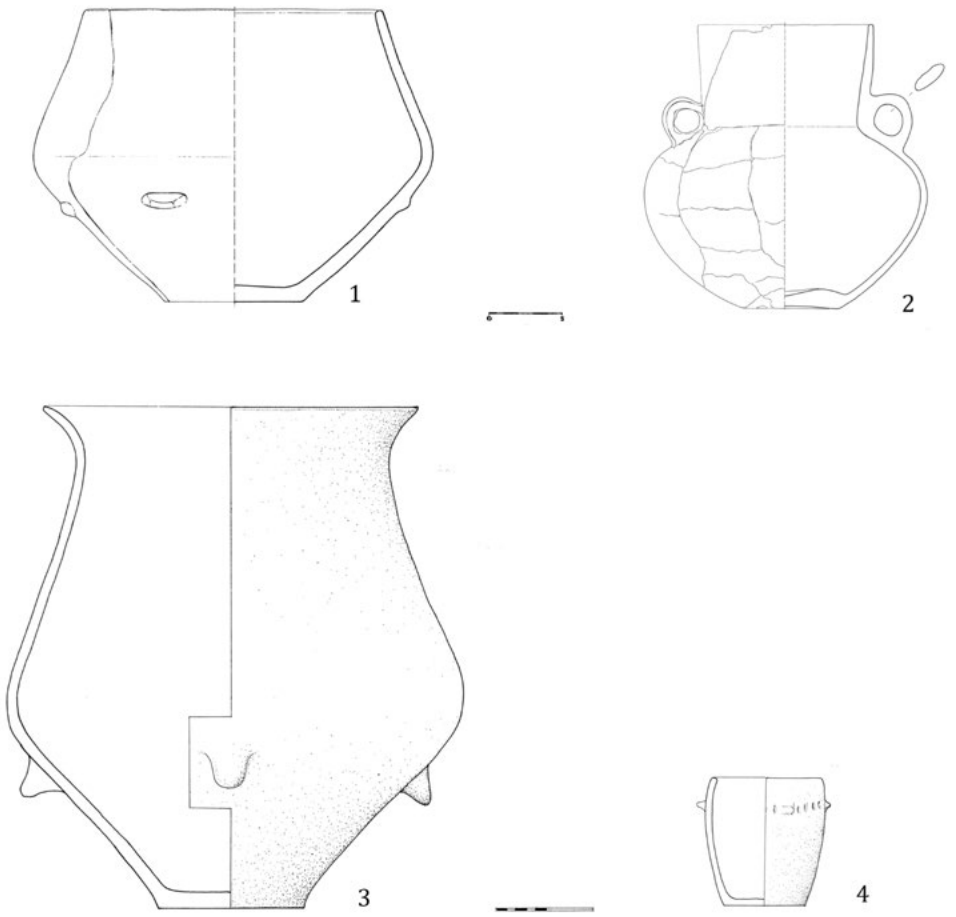

Figure 8.3. Urns in double and multiple graves (1-2: Slatina, Grave 15, 3-4: Sotin, Grave 1. Drawings: Martina Rončević, Miljenka Galić).

together on the pyre (Figure 8.2, Figure 8.3, 3-4). Curiously, a small ceramic bead is the only grave good that may indicate the presence of the child; alternatively, the ceramic bead could have been worn by the mother on a belt made of organic material. The presence of a separate urn and the small ceramic bead could indicate death in childbirth or soon after. The presence of a tooth crown of a deciduous canine made it possible to determine the age of the child as younger than six months. Documented cases of this kind are rare, since it is hard to estimate the age of a cremated child between the foetal age and year one on the basis of the preserved skeletal and dental remains (Finlay 2013, 210, Fig. 1). In this case, the small urn and possibly the ceramic bead suggest that the baby might have been born and had the status of a distinct individual in the community, still closely related to the mother, as indicated by the shared urn containing the smaller urn (Figure 8.3).

Grave goods

Excavations of children's graves revealed grave goods of a size and function that seem to indicate the category of the personal items of the deceased: the funerary costume, remains of a meal, and rarely a piece of personal property – tools or weapons. The dimensions of grave accessories in child graves might indicate personal ownership of some items (Hladikova 2011, 294).

Body ornaments and costume

Bronze costume items and jewellery have been found in the graves of children and adult women in the Late Bronze and Early Iron Age southern Carpathian Basin. Some were parts of costumes that were sewn on, such as buttons, some fastened clothes or shrouds, such as pins, and some were worn as jewellery, such as necklaces and hair ornaments. Costume items that were worn as permanent jewellery could be an indication of the person's status in the community (Sørensen 1997, 101-102), but neither the number nor the combinations of costume sets have been fully preserved in the southern Carpathian Basin because of the cremation burial practice, which makes more detailed analyses impossible.

The recovered costume items show that their selection from the pyre was random, since they include tiny fragments of fire-deformed bronze, but also larger fragments of fibulae, hair ornaments etc. It is important to distinguish pyre goods from objects that were not exposed to fire (e.g. pins and fibulae) but were often found on top of cremated bones inside or outside the urn. Grave 19 from Batina, for example (Ložnjak Dizdar *et al.* in press, Fig. 7), testifies to the possibility that the collected bones were placed in an organic container that was fastened with such clasps. Whether these objects used to belong to the person is a matter of conjecture.

As a rule, children's graves include fewer costume items, which might be explained by the simpler clothes worn by children or by parts of the costume having been made of organic materials. Examples of children's graves with large quantities of metal jewellery date to the early phase of the Late Bronze Age, the 13th and 12th centuries BC. One such example is Grave 38 from Poljana Križevačka 2, which contained the cremated remains of jewellery along with the remains of a young child. What was the meaning of the jewellery found in Grave 38? Was it a farewell gift of a close relative, such as the mother, or was it a symbolic gift indicating the status the child would have had in the community? Graves of children aged 10-12 years old with many jewellery items are frequent in the eastern sphere of the Urnfield Culture in the 13th and 12th centuries BC (Marijan 2010, 103, Pl. 67, 3; Pl. 71; Helgert 1995, 217; Rajić Šikanjić and Ložnjak Dizdar, in press).

At the cemetery of Slatina, parts of jewellery were found in two out of twelve graves of children, broken and mixed with the cremated bones. The dimensions of the objects found in the graves led to the conclusion that they belonged to children. Grave 8 contained the cremated remains of a 12-15-year-old child and the fragment of a necklace with the small diameter of 110 mm. Grave 28 contained the fragment of a bracelet with a small diameter. Another example is Grave 1, Tumulus 6, at Dolina, where an adult man and a 4-7-year-old child were buried. A small, two-loop iron fibula of only 46 mm width and 31 mm height was discovered among the cremated bones in the urn.

Based on the size of the items and the anthropological analyses, it may be concluded that parts of the costume and jewellery found in the graves of children belonged to them in life. Similar

patterns have been recorded in other contemporary cemeteries in the southern Carpathian Basin. At the cemetery of Dobova, for example, Grave 305 contained the cremated remains of a child with numerous costume items suitable for a younger person, judging by the size of the bracelets (Starè 1975, 34, Pl. 44, 2-9).

Food and drinks as goods – the number and size of vessels in graves

Ceramic vessels are the most frequent objects found in Late Bronze and Early Iron Age graves in the southern Carpathian Basin. Ceramic vessels as containers for organic goods – probably food – appear in graves in the Carpathian Basin from the Early Bronze Age onwards (Schreiber-Kalicz 1984, 137; Csányi 2003, 145). At the beginning of the Late Bronze Age, funerary rites primarily used vessels for liquids. They were usually broken near the pyre, judging from the traces of subsequent burning, or above the grave, judging from the preservation of more than two thirds of the fragments of specific vessels (Vinski-Gasparini 1983, 558; Ložnjak Dizdar *et al.* in press). This rite also applied to children's graves. The graves did not contain animal bones.

During the 11th century BC, this specific custom gradually disappeared, and the graves contained more and more unbroken vessels for food and drinks. At the end of the Late Bronze Age, there was an increase in the number of funerary vessels in the graves (Nebelsick 1994; 2016; Metzner-Nebelsick 2002), regardless of age or sex. Grave 20 from Batina, dated to the end of the 10th and the 9th century BC, for example, was identified as a child's grave by the anthropological analysis, but a more precise age determination was not possible. The grave contained two small ceramic spheres, which may have been marbles, toys of the buried child. That the deceased was a child was also indicated by the vessels – a double vessel and a small *kantharos*, which may have been the personal property of the deceased or everyday items.

In Grave 13 from Batina, a small child was buried together with a small set of ceramic vessels and iron jewellery – a set of necklaces with rings. The grave also contained eggshells, which is of interest concerning the food and drinks included in the graves. The cemeteries in the Danube region contain the remains of animal meat portions added during the funeral as a grave good, but no animal bones were found in the graves of children less than five years of age, with a single exception. This may indicate that the last meal for the deceased was prepared in accordance with what they ate in life. Residue analyses of used vessels, however, have not yet been attempted.

The analysis of graves dating to the seventh century BC revealed some cases of a child buried together with an adult woman. The richly equipped Grave 69 from Sotin, which contained a notable adult female member of the community, included a child in the same urn as the adult, and their personal property included a small vessel with three handles. The same cemetery contained graves with a child buried individually, such as Grave 50 (Figure 8.4). The small size of the bowl from Grave 50 marks it as different from contemporary graves of adults. At Sotin from the ninth to the seventh century BC, the vessels in children's graves are generally different to adults' standardized vessels for food and drink in number and size, which are also found in contemporary settlements; they might have been personal property – tableware used by the child in life, or the size of the vessel might indicate the quantity suitable for the child (Hutinec and Ložnjak Dizdar 2010, 43-47). A similar concept was identified in other contemporary cemeteries in the region, e.g. at Batina and Doroslovo (Figure 8.4, Trajković 2008, 277, Grave 122, 2; 293, Grave 133, 4, 10-11).

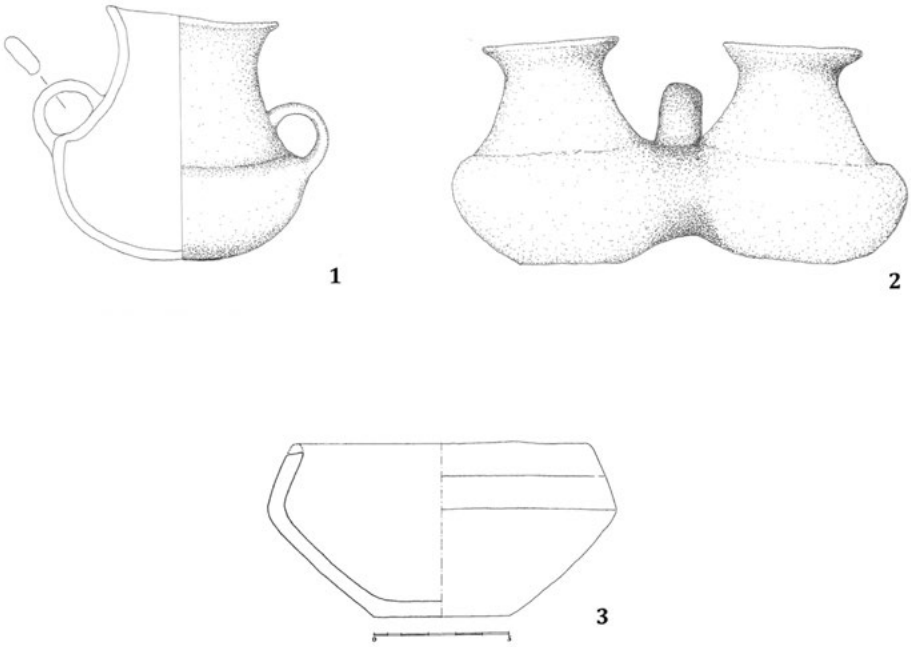

Figure 8.4. Small vessels in children's graves (1-2: Batina, Grave 20; 3: Sotin, Grave 50. Drawings: Dalibor Radman, Krešimir Rončević).

The examples indicate that children were treated differently in the funerary rites regarding food and drinks as grave goods, considering the number and size of the vessels in graves. This pattern can be followed from the end of the Late Bronze Age (ninth century BC) and during the beginning of the Early Iron Age, especially at the Danube valley cemeteries Batina and Sotin. Further research, for example residue analyses of ceramic vessels from children's graves will cast more light on this topic.

Tools and weapons

Interestingly, some children's graves contained parts of tools or weapons. Fragments of a knife were found in Grave 7 at Slatina (Ložnjak Dizdar *et al.* 2018, 52-57); the knife was broken and placed in an urn containing the remains of a 4-6-year-old child. This example might indicate that the child used the knife and was skilled with it in everyday life, contributing with work to its community. Another explanation is that the knife might have been used in the funerary rite and ended up in the grave (Eibner 1974, 69-70). It is also possible that the knife in the child's grave had an apotropaic function.

One of the latest examples in our sample, dating to the late 8th century BC, is Grave 52 from Batina, where an adult and a child were buried together with very few grave goods. This suggests that the social status of the dead or their family in the community, as well as their economic means, did influence the organisation of the last rites. A bowl was placed on the

cremated remains of the dead and the grave contained an amber bead (or spindle-whorl) that was precious property in such communities. It is assumed that amber beads had apotropaic significance; they often appear in the graves of women and children, but more rarely in the graves of men during the Italic Early Iron Age (EIA I-II, orientalising period, Hladikova 2018, 70).

Children and rituals

After examining the funerary rites of children, identified through anthropological analysis, it can be concluded that children were treated like adults in the Late Bronze Age. On the basis of the current state of research, their bodies were cremated on the pyre and laid in a separate urn in an individual grave pit. On rare occasions, the cremated remains of children appear together with those of adults, mostly women. In the Early Iron Age, there are more numerous graves where children were buried together with adults in the same grave pit, sometimes in separate urns or depositions. The anthropological analyses of the position of cremated remains suggest they were sometimes burnt together on the pyre, because their cremated bones were mixed together. Double and multiple graves at the cemeteries of Batina and Sotin usually contain children in the age group of five years or under.

The objects associated with children in graves show a different development. Several graves of young people were equipped with more numerous items of jewellery and ornaments at the beginning of the Late Bronze Age in the wider area of the Carpathian Basin. In the later phase of the Late Bronze Age (11th to 9th century BC) and in the Early Iron Age (8th to 4th century BC), such cases are not frequent and might indicate the social status of the child's family (e.g. Grave 13 from Batina).

Social age transitions

The funerary rites in our sample offer only a glimpse of how societies reflected the transition between social age groups. In addition to the change in the frequency of double and multiple burials in the Early Iron Age, this transition can be seen in the number and type of grave goods associated with children and adults. Dated to the 9th century BC, Grave 19 from Batina is a particularly interesting example for the differences between the biological and social age at the very end of the Late Bronze Age. The cremated bones of a 12-18-year-old child were heaped on a pile in the grave and surrounded by a large quantity of vessels indicative of the funerary feast and possibly the last meal of the deceased. Other grave goods include four blue glass beads, which had not been cremated, two spindle-whorls found together with the cremated bones, as well as a bronze pin, which held the organic wrapping of the jug in the grave. The pottery set included a jug, a pot, and seven bowls. The number of vessels in the pottery set can be interpreted in two ways.

The number and functional types of vessels found in graves are variable, and there does not appear to be a sex or age-based rule for their inclusion in the graves, except for children. The vessels may have been donated by household members or those near and dear to the deceased. Since the settlements of the period in the region have not yet been thoroughly researched, it is hard to know how many vessels were owned and used by an average household, or which vessels could have been personally used by the deceased. It is only possible to suggest personal belongings with some certainty with objects that were placed on the pyre together with the deceased and transformed by the fire (e.g. jewellery, costume parts, tools).

The example of Grave 19 from Batina shows that the community considered 12-18-year-old persons not to be children any more in the sense of a social category, but to be full members of the adult community. It should be pointed out that the anthropological analysis identified only a small number of graves of children from 12 to 18 years of age, which suggests a low mortality in this age group.

To determine significant cultural age categories (after Kamp 2001), a much larger number of graves would need to be analysed in detail, in terms of objects, contexts and traces of object manipulation through use and funerary rites. The beads, for example, could have been a farewell gift, since they had not been exposed to fire, but the spindle-whorls might have indicated the skills of the deceased that were known in the community or might symbolise the role ascribed to the deceased by the community.

Traces of childhood in the Late Bronze and the Early Iron Ages in the southern Carpathian Basin

The traces of childhood in the Late Bronze and Early Iron Age in the southern Carpathian Basin are found primarily in graves. The analyses of funerary customs have shown that the same funerary rites were used for children and adult community members, with some examples indicating differences in the size and quantity of grave goods (vessels or costume items) appropriate to the age or size of the deceased. The children in the southern Carpathian Basin were identified by the anthropological remains in the graves. Childhood is indicated by some aspects of the material culture associated with the cremated bones, often regarding food (small vessels) and rarely regarding objects interpreted as toys (e.g. the marbles from Batina, Grave 20). The current state of research and available archaeological sources make it difficult but motivating to interpret the cultural meaning of childhood in these communities.

During the Late Bronze Age, almost all children were buried in separate graves with all the usual elements of the funerary rites, indicating that they were seen as equal members of the community. At the end of the Late Bronze Age and the beginning of the Early Iron Age, a large number of graves appeared that included an adult, usually a woman, together with a child. In this period, richly equipped graves were common in the Danube region, which point to the economic means and status of the child's family (Graves 13 and 20 from Batina) and indicate the social age of the person, who was already able to perform tasks within the community (Grave 19 from Batina).

In the context of the funerary rites of the entire community, the graves of children show a few extraordinary traits. Some burials from the beginning of the Late Bronze Age are richly equipped with jewellery. During the 11th and 10th centuries BC, the selection of the type and the size of urns depended on the age and body proportions of the dead. In rare cases from the end of the Late Bronze Age, the graves of children aged six to eleven years contain animal bones from cuts of meat, which might point to different food habits of different age groups in the community.

The data on childhood in the Late Bronze Age and Early Iron Age in the southern Carpathian Basin, gathered during this preliminary analyses, shows that a focus on mortuary practices (Ložnjak Dizdar *et al.* 2016b; 2018) and particular groups such as women (Bojčić *et al.* 2018) can further clarify issues related to the less visible community members – children (Lillehammer 1989, 90).

The nature of the available archaeological data on childhood during the Late Bronze and Early Iron Ages in the southern Carpathian Basin offers further possibilities for exploring the health status and eating habits of children, e.g. through residue analyses of ceramic vessels and stable isotope analysis of cremated human remains. The equal status of children in the Late Bronze Age, identified in the funerary rite and burial in separate graves, offers the potential to explore the contribution of children to the everyday life of the communities, as indicated by the rare finds of tools in child graves.

Some cases of richly furnished children's graves suggest a prominent social status of their family or perhaps an emphasis on certain life phase transitions, which are yet to be defined in more detail. The potential of researching childhood in the Late Bronze and Early Iron Age in the southern Carpathian Basin is clear. A multi-layered reading of the communities that lived in the same area for a long time and buried their dead in a similar way will reveal differences in their material culture and in funerary details that had meaning in a specific time and place. The transfer of this knowledge and experience was guaranteed by children. Their role in the communities in which they grew up (Pawleta 2009, 19) may be traced at cemeteries with a long, continuous period of burials, e.g. at Batina and Sotin in the Danube area.

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Chapter 9

Mycenaean childhood: Linear B script set against archaeological artefacts

Beata Kaczmarek

Introduction

Children in Mycenaean Greece are always recognised as members of a family. Investigating childhood in this society therefore sheds light on motherhood and, more generally, the care of adults. A large number of tablets with the Linear B script list children and adolescents as workers and recipients of food rations or other goods. It is generally accepted that young persons are mentioned as apprentices or as members of a worker's family (Uchitel 1984).

This analysis of Linear B tablets has generated different interpretations of the phases of adolescence. They are based on words describing youth (ko-wa, ko-wo, me-zo, me-u-jo/me-wi-jo) and on a comparison of food rations for young individuals with adult's nutritional needs (Hiller 1989; de Fidio 1989). Researchers have always seen Mycenaean childhood through the prism of modernity with its prolonged childhood and late transition to adulthood, and always in relation to mothers, nannies or supervisors. Most studies have focussed on individual topics and single archaeological sites. More recent research tries to move away from the conventional approach in favour of incorporating approaches from fields such as art and archaeology, and referring to anthropological analogies (Chapin 2012).

Recent progress in physical anthropology and genetic studies have led to increasing applications in archaeological research (e.g. Lazaridis *et al.* 2017). In the case of Mycenaean studies, DNA and isotopic analyses are only slowly implemented, due to difficulties in accessing bone material, preservation and the costs of such analyses. Within the coming years, however, these kinds of tests are likely to become an important component of Mediterranean archaeology.

Burials of children, a cornerstone for the study of Mycenaean childhood, are a challenging research topic because of poor bone preservation and the fact that many human remains have

been lost over the years. Many graves were excavated at the beginning and middle of the 20th century, with only old excavation reports available for information. Furthermore, individual burials of children are rare; children were mostly buried in multiple graves (commonly called 'family graves'), which were frequently re-opened and used by subsequent generations. To bury another person, the previous remains were often pushed towards the wall of the graves. For this reason, data about the original placement of the body, its context, furnishings and other important details of burial are lost forever.

A major difficulty for the study of Linear B script is the fragmentation of clay tablets with inscriptions. This limits the recovered information itself, but also removes the context of the entire text. Moreover, there is still much controversy surrounding the interpretation of some of the Mycenaean words and signs. Specialists of Linear B script try to fill in the gaps in the context by comparing inscriptions from different palatial archives. This general approach, however, does not account for local variability created by each of the palaces.

This chapter discusses the possibilities of distinguishing stages of childhood in Mycenaean society on the basis of Linear B tablets found at Mycenae, Thebes, Pylos and Knossos, and compares the findings to archaeological objects. In the archaeological literature, various definitions of childhood can be found. Throughout this paper, I use the term 'childhood' to refer to the construction made by a specified society defining general norms and behaviours. The use of a numerical estimation of age based on anthropological remains has to be treated with caution, due to the difference between the biological age, which indicates the stage of the skeletal development, and the chronological age, which is counted in years (Robb 2002). Rather than 'family grave', commonly used in the literature, I shall call the subject of research 'multiple grave'. The former implies unconfirmed family correlations between buried people, which I am trying to avoid.

State of research

There is a considerable amount of literature on Linear B script, primarily on tablets from Pylos and Knossos, as a significant number of tablets and their fragments is available from these archaeological sites, providing an extensive base for studies. Traditionally, researchers assume that the presence of young people in the administrative records is related to the transfer of skills in the craft workshops from generation to generation. This suggests blood ties between craft workers and the children recorded next to them (Killen 1981; Olsen 1998; 1999; Nosch 2001; Hiller 1989). Stefan Hiller (1989) reached the conclusion that groups of children mentioned on Linear B tablets suggest their age. He focused on the size of the rations for every group and compared them to general human nutritional needs.

Hence, he proposed several stages of childhood in Mycenaean society: *ko-wa/ko-wo me-u-jo* as a child under eight years, *ko-wa/ko-wo me-zo* as a child between nine and eleven years, and *ko-wo* VIR (symbol of a man) as a boy between twelve and seventeen years. Pia de Fidio (1989) presented a comparable hypothesis: she argues that a *ko-wa / ko-wo me-u-jo* is up to six years, a *ko-wa / ko-wo me-zo* is seven to eight years, and *ko-wo* VIR nine to twelve years old. However, the rations appear inadequate for the nutritional needs of adolescents.

In the last few years, much more information on children as apprentices and learners has come to light. It has been proposed that the different terms for children mentioned on Knossos tablets indicate occupational training at various stages (Nosch 2019).

What we know about Mycenaean childhood is largely based on visual representations of children in art. Most studies of Mycenaean art focus on terracotta figurines and frescoes (French 1971; 2001; 2008; Olsen 1998). Figurines found both in domestic and funerary contexts form the backbone of such studies (Rutter 2003; Budin 2011; Koloski-Ostrow *et al.* 1997). A growing body of literature has always analysed representations of children together with representations of women, treating them as contextual integrity (Carlier 1999). Hence, in the interpretations, they have been referred to as mothers, daughters, goddesses and nurses. Bolder interpretations in more recent literature, however (Budin 2014), propose other kinship relations between Mycenaean figures such as siblings.

Children's burials in Mycenaean Greece are frequently studied in isolation, without considering Mycenaean texts (Lebegyev 2009; Pomadère 2005; 2009; 2010; 2012; Cavanagh and Mee 1998).

Methods

In order to study children and adolescents in Mycenaean society, two catalogues were created. Data from Linear B tablets and their fragments were collected in the first catalogue. I selected Linear B tablets from Knossos, Pylos, Mycenae and Thebes on the base of publications including drawings or photos of tablets (Aravantinos *et al.* 2001-2006; Bennett 1955; Chadwick *et al.* 1987; 1992; 1998; 1999). For more recent findings, I used the website LiBER[1] and publications with quasi-joins of tablets from Knossos (Firth and Melena 1997; 2000-2001; 2002-2003). The data are constituted of 165 of 1101 tablets from Pylos, five of 86 tablets from Mycenae, 22 of 294 tablets from Thebes and 141 plus joins of 9947 tablets from Knossos. The database was built separately for every Mycenaean palace archive where inscriptions with words related to children are included on the tablets (Figure 9.1).

The tablets are dated to *c.* 1400-1200 BC, from the transition of Late Minoan II and Late Minoan III A (Knossos) to Late Helladic III B2 (Thebes and Pylos). Details for the database selected from each tablet comprise the series, the number of the tablet, which word is mentioned, a part of the inscription (to provide context), the dating of the tablet and a find-spot (Firth 1997).

The method of interpretation was influenced by critical discourse analysis, which is mainly used in linguistics (Bielecka-Prus 2012; Costin 1996; Fairclough and Duszak 2008). This method assumes the construction of gender, considering cultural and social factors. Thanks to this approach, we can attempt to interpret such social phenomena. This type of research focuses on the critical, interdisciplinary choice of methods and information context (Bradley 2008; Gardiner 1992). In critical discourse analysis, the image of a woman as only a mother or potential mother is abandoned (Friedan 1992). In the current study, this approach was used to study Linear B scripts without assigning the status of a mother to a woman mentioned next to a child in the text. In the initial stage of analysis, I focused on the general designation of the text subject and allocated individual tablets to a specific topic (list of learners, list of rations for workers, list of individuals). This detailed analysis consisted of identifying the pragmatic features of the text. An important feature is how the author presents information as a text, in order to present social reality (Krzyżanowska 2013). The analyses of the tablets have shown that single words in the text may differ in size and layout throughout the entire inscription.

[1] LiBER - Linear B Electronic Resurces is a CNR-ISMA website developed by M. Del Freo and F. Di Filippo, http://liber.isma.cnr.it/cgi-bin/home.cgi

Linear B script	Greek analogy	Meaning	Archaeological site
 *ko-wo*	κόρος/κόροι	boy/children	Knossos, Pylos, Mycenae
 *ko-wa*	κόρη	girl	Knossos, Pylos, Thebes
 *ki-ra*	νεογιλλός	small girl	Mycenae V 659
 *tu-ka-te*	θυγάτηρ	daughter	Mycenae, Knossos, Pylos
 *i-jo/u-jo*	υἱός	"son of"	Knossos, Pylos, Thebes, Mycenae
 *me-zo*	μείζων	older, bigger	Knossos, Pylos
 *me-wi-jo/ me-u-jo*	μείων	smaller, younger	Knossos, Pylos
 *ne-wo/ne*	νέος	new, young	Pylos, Knossos, Thebes, Mycene
 **69 tu*	θυγάτηρ	abbreviation of *tu-ka-te*	Pylos, Knossos
 **65 ju*	υἱός	abbreviation of *i-jo*	Pylos, Thebes, Knossos
 *pa-te*	πατήρ	father	Pylos, Knossos
 *ma-te*	μήτηρ	mother	Pylos

Figure 9.1. Linear B words in connection with children.

It can thus be assumed that the scribe intentionally used smaller characters to state lesser significance, for example using an epithet for the noun (Piquette and Whitehouse 2013).

The second database contains archaeological objects like figurines, burials, potential tools and frescoes representing children and adolescents. The catalogue is divided in four tables: Mycenae - Argolid, Thebes - Boeotia, Pylos - Hither and Further Province, Knossos - north-central Crete. Contextual data on archaeological objects collected includes archaeological site, object type, description, dating and literature source. The objects were collected from palace centres and regions under their putative control. Only archaeological objects contemporary to Linear B tablets were selected; those which exceeded the set time frame (*c.* 1400-1200 BC) have not been included in the catalogue. Using excavation reports and other literature, I prepared a list for every palace and surrounding area. The data collection was based on the assumption that the palace managed and controlled the local region to a smaller or larger extent. Moreover, the regional approach aids understanding different characteristics of each palace. Objects were examined in the local museum or storage place with the permission of the regional Ephorate

of Antiquities. For seals and sealings from Knossos, the object database Arachne[2] was also consulted. As soon as these steps were carried out, I progressed to the analysis of the collected material and compared the results, using the classic comparative method.

Finally, it is important to be aware of the fragmentation of objects when studying this data. This is especially evident in the case of the Linear B script, as most tablets are broken into many parts, some of which have been lost, and the text of the remaining fragments is often devoid of context.

Results and discussion

The Mycenaean stages of childhood can be outlined in terms of occupational work for the palace (inscriptions with lists of ration recipients, miniature vessels found in the graves, tiny tools and fingerprints on the tablets) and in terms of the private sphere (pleasure time and gymnastics represented on frescoes and figurines, Tegyey 1987).

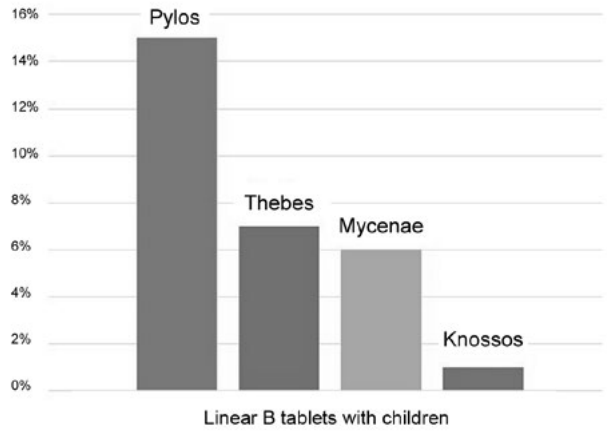

Figure 9.2. Percentage of Linear B tablets with children and adolescents mentioned.

In Linear B script overall, people were recognised separately for their family connections (son, daughter, father, mother), for their level of skill development and for their sex (boy, girl, a small girl, younger, older). This is exemplified by inscriptions with named individuals, which indicate the father's or mother's name and using 'son of' and 'daughter of'. No more than 15% of the all tablets from each of the palace mention children and adolescents (Figure 9.2).

The majority of children and adolescents were learners and apprentices. Worth noticing is that children were mentioned next to the following occupational names:

- Knossos tablets - *to-te-ja* ('maker of kind of garment called *to-ta*'), *da-te-we-ja* (unknown name), *e-ne-re-ja* ('makers of *e-ne-ra*), *a-ke-ti-ri-ja* ('finishers/decorators'). One specialization occurred only with boys – *we-ke-i-ja* ('workers') and one only with girls – *a-ra-ka-te-ja* ('spinner');

[2] Arachne, the central object database of the German Archaeological Institute (DAI) and the Archaeological Institute of the University of Cologne, administrated by Reinhard Foertsch, https://arachne.uni-koeln.de/drupal/

- Pylos tablets - *me-re-ti-ri-ja* ('grain grinders'), *a-ke-ti-ri-ja* ('finishers /decorators'), *no-ri-wo-ko* ('nori-workers'), *a-ra-ka-te-ja* ('spinner'), *o-ti-ri-ja* ('*triai*-workers'), *pa-ke-te-ja* (makers of vessel *pa-ko-to*'), *ne-we-wi-ja* ('textile workers'), *we-we-si-je-ja* ('wool-workers'), *re-wo-to-ro-ko-wo* ('bath attendants'), *ka-pa-ra-de* ('textile workers'), *pa-wo-ke* ('maids with a variety of tasks'), *a-pi-qo-ro* ('attendants'), *o-nu-ke-ja* ('makers of cloth *o-nu-ke*'), *ra-qi-ti-ra*$_2$ ('attendants'), *ra-pi-ti-ra*$_2$ ('sewers'), *pe-ki-ti-ra*$_2$ ('wool carders'), *ri-ne-ja* ('linen workers'). There is no specialization only for girls, but boys are separately mentioned for the following craftworks – *ka-ke-u* ('bronze-smith'), *a-pu-ko-wo-ko* ('head-band makers'), *i-te-ja-o* ('weaver'), *e-ke-ro-qo-no* ('wage-earners'), *a-ro-po* ('anointers/painters'), *si-to-ko-wo* ('grain measurers'), *e-re-ta* ('aarsmen') and *te-pe-ja-o* ('textile maker of *te-pa*');
- Mycenae tablet Oe 121 - one occupation name is mentioned with an adolescent – *ka-ke-we* ('bronze-smith').

Children also appear on the lists as family members of workers, as recipients of rations and simply as individuals; only boys, however, were named. Unfortunately, no age-related features or clear indications of childhood stages were found. Only the following stages of occupational training are mentioned on tablets from Knossos:

ko-wa/ko-wo de-di-ku-ja (a girl/a boy after training)
ko-wa me-zo (older girl)
ko-wa me-wi-jo (younger girl)
ko-wo/ko-wa di-da-ka-le (a boy/a girl under training)
ko-wo me-zo (older boy)
ko-wo me-wi-jo (younger boy)

This supports previous findings in the literature (Nosch 2019). Surprisingly, girls are always mentioned before boys in the sentence, regardless of whether the boy was older or younger than the girl. The priority given to girls is apparent without exception on all the Knossos tablets on which boys and girls are mentioned together. On 95% of the tablets from Pylos, too, girls are mentioned before boys on tablets that mention both. Exceptions are the three tablets on which individual boys are referred to by their occupational name (Aa 783, Ab 553, Ad 295). They probably already worked for the Mycenaean palace.

Very characteristic in the archaeological record are clay figurines of a woman with a child or with children, the so-called '*kourotrophoi*' (French 1971; 2001). Interestingly, the analysis did not confirm a connection between children's graves and '*kourotrophos*' figurines. Most of the figurines were found in domestic contexts. Taking into account merely the figures from burials, 56% accompanied the burials of adults and 44% those of children or adolescents.

No significant difference in type was observed between miniature vessels from children's graves and normal sized pottery from adult's graves. The so-called 'feeding-bottles', conventionally associated with children (Gallou 2004), are equally represented in adults' and children's graves. The analysis did not show any general characteristic manner of children's burials in Mycenaean society. Juveniles of different ages were buried in multiple graves, in niches of the *dromoi* of tombs, in individual graves and under houses (Kanta 1997; Voutsaki 1995). Further examinations showed significant differences between the Mycenaean regions (Figure 9.3).

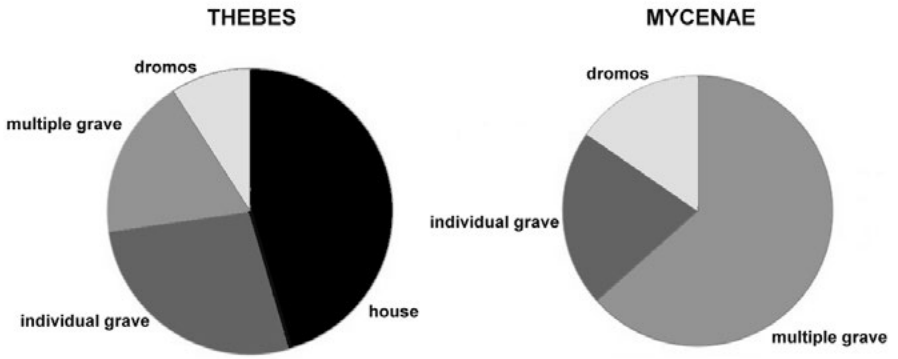

Figure 9.3. Children's burials at Thebes and Mycenae.

The largest proportion of Late Helladic III children's burials in Thebes were buried under the floor of houses. From this period, there are also individual graves, multiple graves and burials in the niches of *dromoi*. In contrast to findings from Thebes, children's graves from Mycenae were commonly burials in multiple graves. A smaller number of individual graves and burials was found in the niches of *dromoi*. Children and adolescents from the area of Pylos were most often buried in multiple graves, but also in individual graves and in the niches of tombs' *dromoi*. These results correlate with research at Mycenae (Figure 9.4). A small number of children's burials were found in multiple and individual graves in the Late Minoan north-central part of Crete. Sharp objects, probably tools, were included in graves as grave goods. These, however, were found in only a limited number of burials.

Unlike previous research carried out in this area (Blegen 1937; Cavanagh and Mee 1998), I did not find anything particularly characteristic in the burials of children from this period. These results could be due to differing subjects of interest. Perhaps rather than looking for differences

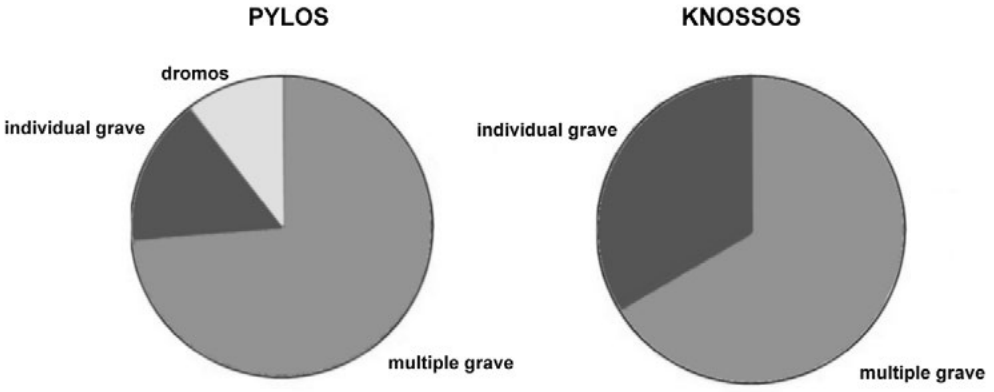

Figure 9.4. Children's burials at Pylos and Knossos.

between the treatment of children and adults, we should pay more attention to social structure and hierarchy. Overall, there are certainly several possible explanations for these results.

Frescoes and representations of young persons on sealings were also examined; they primarily represent young individuals playing with each other or with animals (boxing, bull-leaping). Frescoes are known from Mycenaean palaces, the abodes of the elites, where adolescents had enough time to play with their peers. Another possible explanation for the prevalence of these motifs might be the artists' intention to show beautiful young bodies during gymnastic feats. A significant number of sealings depicts small figures of boys and girls helping adults with their work, for example the gold ring from the cemetery of Panagia at Mycenae (Xenaki-Sakellariou 1985). Finally, several seals with portraits of adolescents are also known, such as seal 180 from Knossos (Evans 1930).

Conclusions

As anticipated, there were some limitations to the study due to the fragmentation of Linear B tablets, the selectivity of archaeological objects and representations of young people in art, as well as the diversification in objects in and types of children's burials. Despite these limitations, this study has provided new insights into the representations of children and adolescents in Mycenaean society. For example, this research has led me to conclude that the status of Mycenaean children was not dependent on sex or age; rather, hierarchy and origin was of uttermost importance also for children. I have demonstrated that advancement in child occupational training was significant in Mycenaean society. That fact that girls are mentioned before boys in Linear B script is a promising and interesting result; it may not only enlighten social relations, but the knowledge of such repetitive sequences might help efforts to join fragments to a whole tablet.

The research highlighted important differences in children's participation in craftwork at palaces: a large number of tablets from Knossos that mention adolescents note only a few occupational names. Most of the occupational names are connected with groups of boys and girls working together in textile and pottery production, as 'attendants', with millers and carrying out more general activities (vaguely mentioned in texts). A noticeable number of eight specializations are intended only for boys. Among five tablets with children from Mycenae, just one mentions an occupational name and it is a *ka-ke-u* (bronze-smith), mentioned with a boy (MY Oe 121). Only one occupation refers exclusively to girl's work – *a-ra-ka-te-ja* ('spinner'). Finally, the analysis did not identify a correlation between boys and girls with any specialization name on inscriptions from Thebes.

Since it is a modern construct, we cannot directly apply the concept of 'childhood' to Mycenaean Greece. To understand 'stages of childhood', the picture is still too incomplete.

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Chapter 10

Dumu.gaba, *ṣiḫru* e Guruš/sal.Tur.tur: the recognition of developmental stages in Ancient Mesopotamia

Nadia Pezzulla

Introduction

The Archaeology of Childhood usually interprets sub-adults as children. Equating a sub-adult skeleton with a child is dangerous, however, as it presumes to identify a specific stage of life in a completely different culture (Baxter 2005, 83). But what is a child? The terms 'child' and 'childhood' are today connected with the concept of an age of innocence and absolute dependence on parents. The adult, in contrast, is defined as a sexually mature and active individual with political and social control over the production of material culture and social ideology. In ancient times, this only means that the child had not yet achieved complete social power, and it does not exclude the possibility that he or she had an essential economic role for the community. The image of the child who does not have a role in the economy of production is prevalent in contemporary Western society, in which children are destined to be educated and are very dependent on their parents until they come of age. This may taint the way children's lives in antiquity are studied (Sofaer Derevenski 1997).

In order to study the lives of children and their relationships with adults, it is therefore essential to understand how childhood was defined from a socio-cultural point of view. The first approach of this type of analysis in a Near Eastern context was made by Garroway (2014), who focused on the Levant and included the contribution of texts from Mesopotamia. In this chapter, I aim to reconstruct developmental stages in Mesopotamia between the second and the first millennium BC from ancient texts.

The relationship between the place of burial and age

We can understand the value of children in society by how they were treated in funerary rituals (Cohen 2005), as a different burial treatment also corresponds to a different social role

(Lillie 2008, 40). Children have an assigned space in the urban fabric and sometimes a similar treatment to that intended for adults (Torres-Rouff and Pestle 2012, 35). In recent years, a number of projects have started studying burials in all their aspects (form, location, content), in order to reconstruct, as far as possible, the link with the social structure that created them (Porter and Boutin 2014, 5-7; Lillie 2008, 33). In Mesopotamia, there are two types of burial placement: extra-urban necropolises and burials within the urban space, below the floor of the houses (both in still inhabited houses and in abandoned areas). Since in other archaeological contexts, the differentiation between 'inside' or 'outside' may have implications for social marginalization (Kogălniceanu 2008, 101), it is necessary to clarify the meaning of these concepts for Mesopotamia.

Social relationships can be recognized by repeated practices linked to the life of the group, including burial methods. Children are an archaeological category that is difficult to study through material culture. The distribution of the available material is not homogeneous: children's graves have not been found at all the sites, for most of the graves there is no published documentation or, beyond a simple description, an osteological study that confirms the age of the dead. Even where studies have been carried out, there are a substantial percentage of unidentifiable remains due to the low level of preservation. Some of the sites have been completely excavated, others have not: there is a problem of numbers to attempt statistical analysis. Another problem arises from chronologies: not all the burials have been dated. Furthermore, there is a problem of data collection: archaeologists tend to avoid children because they are often unclear, poorly preserved and difficult to excavate (Torres-Rouff and Pestle 2012, 37).

Age is a discriminating element both for the choice of the burial location and the variability of burial types. Baxter (2005, 96-97), analysing Carr's studies on the social factor in determining the characteristics of burial, has found that newborns are excluded from the necropolis in most of the archaeological contexts of different areas and periods. Even when they are included, their burials still show a certain degree of separation from the rest of the community. The context seems to underline that they keep at a distance from the newcomer (Scott 1999, 4). Children, especially very young ones, had the same rights as foreigners in many ancient societies, and the custom of relegating them to certain 'appropriate' spaces is still just as active in our society as it was in ancient times (for example, playgrounds, children's rooms separate from those of the parents, etc.). Often, children's remains are found in domestic contexts in the earliest stages of life, and in fields or at the edge of the necropolis for the other stages: this suggests that they may not be understood as full members of society (Pollock 1999, 205). This custom has very ancient roots and is widespread throughout the Mediterranean countries; infant burials in jars inside houses first appear in the Neolithic of the Levantine area at the end of the 4th millennium BC (Orrelle 2008, 71). Sites with the oldest evidence (Bacvarov 2008, 61) include Tell Kurdu, Tell el-Kerkh, Tell Halula, Tell Hazna II, Tell Sotto and Tell Hassuna (c. 5900 BC). The oldest burial jar was found at Tell Hazna; it included a one-year-old infant with 200 stone, copper and shell beads, a small cup and a stone vase. Other children in the Levant are reported from Skhul, Qafzeh, Kevara Cave and Amud Cave and Dederiyeh in Syria from the Middle Palaeolithic (Tillier 2008, 3). These are deliberate burials of children in small pits, but the funerary treatment does not differ much from that of adults. Similar burials are known from Greece, Egypt and Cyprus. In classical Greece (Vermeule 1979, 55), children are buried in the earth to return them to a 'womb', as a message of death and rebirth to new life and new fertility to the family. In 1889 excavations at Kahun (Egypt), W. M. Flinders Petrie found many infants buried beneath the floors of houses (Janssen and Janssen 2007, 19), most of which

were deposited in reused containers such as boxes for clothes or baskets. In Deir el-Medina, about 100 infants were found buried in baskets or vases (jars or amphorae), whereas some, in contrast, were buried in sarcophagi within the necropolis. A similar practice is known from Pre-Ceramic Cyprus (Le Mort 2008, 25-26 for the site of Khirokitia).

One of the reasons for burying small children under the house floor in Mesopotamia is the cult of the spirit, the *kūbu* (Galli and Valentini 2006, 86). The cult of the spirit, essential in Mesopotamian culture to lead the deceased to the afterlife, was performed with offerings, usually of food, delivered during a condolence period, in which family members performed rituals (Cohen 2005, 15). Children's spirits receive the same treatment as those of adults, who may have been ancestors. Even unborn children, aborted foetuses, require cult practices to appease the spirit (Torres-Rouff and Pestle 2012, 53); in the 'spirit status' there were no particular differences between adults and children, they all required cult rituals.

The Mesopotamian sites that include enough data to make some observations on how children were treated are Tell Es-Sawwan and Tepe Gawra for the Chalcolithic, Ur, Kish and Abu Salabikh for the Early Bronze Age, Isin-Išān Bahrīyāt and Kafajeh for the Middle and Late Bronze Age, and Nippur for the Iron Age; Pezzulla (2018) analysed 1645 burials from 31 sites from excavation reports, although with inconsistent data presentation.

The most common type of burial in the Chalcolithic was the single pit, but there is also a good number of jar burials. In the Early Bronze Age, the situation was different, with a division by age: a prevalence of jar burials for newborns, both jar and pit burials for infants, and pit burials for older children. For the Middle and Late Bronze Age, the data are inadequate, but the trend of preference for single pit and jar burials seems to have continued. In the Iron Age, the jar burial is prevalent for newborns and infants, and pits for others.

The spatial distribution of burials in the Chalcolithic is not specific; there are numerous burials both in domestic settings and in the necropolis. In the Early Bronze Age, the situation changed, with a clear preference of burials at the sites of the living. In the Iron Age, domestic burials are still predominant, but a significant number were within the necropolis. Adolescents must be discussed separately: their number is low, which is probably due to a reduced mortality in that age range, particularly in the first phase of adolescence, between 14 and 16 years. The practice of burying children under house floors is therefore a typical, but not exclusive choice, as is shown by the high number of adults who received the same treatment. Except for newborns, and in some cases infants, development stages cannot be solely established from the observation of burials.

The problem of the 'biological age-age category' link

Ideas about children and childhood are socially constructed, and sub-adults in the necropolis may or may not have been understood as children. The problem is summed up in the relationship between biological age and age category. It is the socio-cultural vision that adults have of children: what they can do in terms of physical capacity, and whether they can act in a socially appropriate manner to demonstrate a certain level of maturation (Scott 1999, 9-11). To solve these issues, it is necessary to distinguish between 'biological' and 'social' aspects of childhood. Under three years of age, the interaction between society and children is minimal due to their limited abilities: children begin to learn a few words, understand simple concepts,

recognize people, but are not able to learn sequences of operations to be performed and are not accurate in their actions. For this reason, infants must be considered as a separate category. Some of the childhood categories can be observed from infant burials, from ration texts and from the iconographies used to represent children. It would be very interesting to be able to consider the 'rites of passage' that marked life, and while this is possible for the early stages of development, it is quite impossible for the others, due to a lack of sources.

A summary from the texts

Differences in the way 'children' are termed in ancient texts and lexical records can indicate different stages of childhood life (Bolger 2008, 8). The presence of a varied vocabulary within the same text to refer to 'non-adult' people is the best indicator of different stages of childhood.

Children receive their first classification during intrauterine life. There is a rich lexicon (Stol 2000, 4-39) to describe the unborn child, derived from medical texts (Table 10.1: terms during pregnancy). After the birth, different ways to call the baby depend on his or her condition (Table 10.1: terms for newborns). Different terms are used for older children (Table 10.1: terms for children).

Shortly after birth, children were subjected to their first ritual to admit them into the family. First, they were cleaned: in the Code of Hammurabi, law 185 (Westbrook 2003, 392), states that if a newborn is left on the street covered in its amniotic fluid, it is abandoned and adoptable (so the residue of the amniotic fluid suggests that if the child was accepted by his family it would be cleaned). A similar situation is in the Palaeo-Babylonian text UET 5 260, where a child could be adopted only if it is clearly abandoned, covered in amniotic fluid, and not simply lost by the family. Then children received their name (in Rome, in contrast, naming could be as late as after 40 days) and some omens about their lives; finally, they were given objects typical of their gender (YOS 11.85 Polonsky 2006, 303; Limet 1980, 10.), symbols of the roles of males and females in society. 'If it is a male the weapon is placed in his hand, if it is a female the spindle is placed in her hand...' A similar ritual is performed in classical Athens: an olive branch was placed at the family door to indicate sex, plain in case the baby was male, and with threads of wool if it was female (Denning-Bolle 1994, 20; Golden 1990, 23). These ritual elements accompany the birth event as a first rite of passage (Scott 1999, 2).

The rites of passage are essential for the construction of the social status of an individual in order to be accepted by his or her peers and 'superiors'. Any change in ritual allows us to identify a change in social relations (Peltenburg 1999, 427). Even dying involves a ritual of passage because the person passes into the state of spirit and in that form continues to be part of society (Fowler 2004, 80-81).

Another passage between childhood stages happened when the child was 'two cubits tall', about two to three years of age. This may coincide with weaning of the infant. In administrative and legal texts, the difference between children 'attached to the mother' and children already weaned is emphasized (Livingstone 2007, 18). These texts report measurements of the height of children in half-cubits (23 cm). Children of five (females) or six (males) half-cubits are treated differently to newborns of two (for females) or three (for males) half-cubits; their age may be around two or three years.

A very important source about childhood is the information in rations texts, in which children are listed along with the ration received in exchange for work (Table 10.2). Rations are measured in volume: one gur equals approximately 302 litres, one sìla – sometimes called a bowl approximately 1 litre (Biga 2002). Various philologists have dealt with the subject and have proposed comparisons between ration and age, observing texts that report data of consecutive years that show how the 'status' of a small worker varies. Furthermore, it is possible to observe the nutritional quality of the rations and infer the age based on nutritional requirements. In all periods there are records of children together with a woman, probably the mother, and it is plausible that they are babies or very young children; women's rations are increased, but the name of the infant is not mentioned.

Children are first attested on lists of workers in the Uruk period (3300-2900 BC): in text W 23999, an infant is listed with the word 'womb-suckling' (Englund 2011, 46). In the proto-dynastic texts from Girsu (Magid 2001, 322) twenty-one texts dated to the Early Dynastic period IIIb, c. 2450-2300 BC, at the reigns of the kings Lugalbanda and Urukagina, the category of gemé-dumu 'women (and their) children' is recorded. In the texts from the temple of Bau in Lagash there is another class named only as dumu/ša-du$_{10}$-nita/mí. During the Early Dynastic period IIIb (2850-2800 BC), weavers were always listed with their immature children; those capable of independent work were listed separately. The ration registers dated between the 6th year of the reign of Lugal-an-da and the 4th of Uru-Inimina provide most of the information in this period (Maekawa 1980, 90-94: VAT 4717, STH I 21, VAT 4612, BIN VIII 345, CTC 4 12, CT L 34, VAT 4612, STH I 23, TSA 11, STH I 21).

For the Akkadian period (2335-2164 BC), texts are available from Susa (Maekawa 1980, 95-97; Gelb 1965, 231 texts MVN VI 492, MVN VI 532, MVN VI 456, MDP XIV 11; 51;61; 71), Gasur (Maekawa 1980, 95-97; Gelb 1965, 231 texts HSS X 183-184,187-188 e 190, HSS X 183, MDP XIV 71, HSS X 184, MAD I 7) and Nippur (Gelb 1965, 234-240 texts TMH V 39, 44, 107), with a richer lexicon: DUMU.GABA (Susa)/DUMU.GA (Gasur) infant/AMAR.GABA (Gelb 1965, 234-240, texts from Nippur TMH V 39, 44, 107) suckling, DUMU.NITA male child, DUMU.SAL female child.

For the Ur III period (2120-2112 BC; Limet 1980, 11), the documents from Susa (Maekawa 1980, 99-106 texts MVN II 176, BM 14614, TuT 159, BM 12919, RTC 404, TUT 162, HLC III 238), Lagash (ITT 4 7341 15 men, 2 women and 2 infants, 7378 84 women and 18 infants, 7447 26 infants perhaps females, 7481 32 women and 12 infants plus 38 women with 13 infants, 7561 9 women with 14 infants plus 7 women with 10 infants, 7305 120 infants, 23 women and 503 men), Nippur (Text BE 3, 40 '1 gur and 120 barley sìla to feed women and infants') and Ur (UET 3, 1047 30 children earn 1 sìla and a half of oil, 43 do not earn anything) use a wide range of terms to define small workers (Milano 1989, 78-79 and McDonald 1976, 66): dumu-nita = *ṣuḫāru* = boy, dumu-mí or dumu-SAL = *ṣuḫārtu* = girl, dumu-nita-gaba = child / infant, dumu-maba-gaba = female baby / infant, dumu-ga = suckling (undefined sex), dumu-gaba = suckling (undefined sex). Younger workers do not seem to receive anything, the boys 12 sìla of barley, against the men who earn from 18 to 48 sìla and the women from 18 to 36 sìla .

The text HCL III 238 (Maekawa 1980, 99-106) from Susa is very interesting: children are rigidly subdivided into retribution categories, but the words for children change only according to gender: dumu-nitá are males that pass from an unpaid category to a salary of 20 sìla , and dumu-mí are females, divided into two categories of 10 and 15 sìla.

Table 10.1. Childhood Lexicon (terms during pregnancy, terms for new-borns, terms for children).

Terms for children during pregnancy

sag.itu.nu.til.la 'one who has not completed his month' (equivalent to *kūbu)*	*dadum* 'foetus', lit. 'fish' (*ibid*, 10)
a.ba.gar.ra 'sitting in his water'	*eṣemtu* 'bone', 'dead foetus' (*ibid*, 28)
nigìn 'foetus'	*birūtu* 'brood' (*ibid*,10)
u_4-mu-ul 'abortion' (Pittle 2015, 476)	*āšib ekleti* 'sitting in the darkness' (*ibid*,10)
ša *libbiša* 'foetus', lit. '(fruit) of her belly' (Torres-Rouff and Pestle 2012, 43)	*bimît amēlūti* 'creature of humanity'
nigìn gar 'aborted foetus'	*izbû* 'deformed foetus' (*ibid*,159; Geller 2007, 262)
nìg šà.ga.na 'abortion'	*lillidum* 'child' (Stol 2000, 10)
nīd libbi 'expelled from the womb'	*kūbu* 'dead foetus' (*ibid*, 28; Geller 2006, 262)
kirṣu 'clot' (Stol 2000, 28)	'whom has never suckled his mother breast' a child dead in the last months of pregnancy, with human shape
edamukku 'embryo'	

Terms for newborns (Harris 2000, 9-10; Chicago Assyrian Dictionary)

ina mêšu 'newborn with amniotic fluid'[1]	*qudāu* 'little child'
šilip *rēmim* 'who has been extracted from the womb'[2]	*dumugabû* 'suckling'
šerru (sum. lú.tur): neonate/infant	tur.gaba 'young infant' not weaned
ṣiḫru: small child, literally 'little (one)' *daqqu*: small	*lakû* 'infant' (Stol 2000, 176)
	la'û 'newborn'(*ibid*, 176)
	mār irti 'suckling'
	māšu 'twins' (*ibid*, 208)

Terms for children

pirsu 'weaned child'	*inbu* 'child', lit. 'fruit'
ginû 'weaned child'	*Mār-māri* 'nephew', lit. 'son of son'
guruš.tur.tur 'child'	*lillidu* 'offspring'
dumu.nita /mí 'male/female child' (Alster 2005, 96)	guruš.tur, *batūlu* 'adolescent'
tur.meš, *ṣiḫru* 'little child' or 'young'	*mār šatti* 'child'
per'u 'discendent'	*zēru* 'progeny', lit. 'seed'

In other texts,[1]also[2]from Lagash of the Shulgi kingdom period (2029-1982 BC), dumu-eger-tu-da, 'children born afterwards' (probably after the last inspection) are mentioned, part of the temple or palace staff, who received 10 sìla of barley (CT texts 16f.18343, HLC 3 239, RTC 399). Text RTC 399 provides information to establish the age of the children who receive rations of 10 sìla and 15 sìla. In the text there is a woman, Igisisi, who receives five rations: one for her which amounts to 30 sìla of barley and 3 mana of wool (mana is a unit of weight of approx. 0.5

[1] Suurmeijer 2010,11 hypothesizes that ina *mêšu*, *šilip rēmim*, *ina šiliptim* were used as terms to distinguish adoptions of infants of a maximum of 2-3 years of age from temporary adoptions for breastfeeding.
[2] The translation of this term is contested and might refer to the medical procedure of a caesarean section. This term appears in six adoption texts from Sippar of the Paleo-Babylonian period: BM 97108A, BM97489B, CT 48.70, BM 78811, BE 6/1, MAH 15951. Oppenheim 1960, 292 argues that the translation indicates an obstetric operation such as a caesarean section or the use of an instrument such as forceps: in text BE 6/1 the child's mother is still alive, so the caesarean section is less likely. Veenhof 1994, 143 proposes the alternative translation 'a child which had lost its mother prematurely', an 'orphan'. Bergmann 2008, 9, 45 and 47 considers it as a legal term related to the status of an orphan, without a specific medical meaning.

Table 10.2. Young workers' age classes.

Age class	**Ration**	**Age interpretation**
Dumu.(nita/mí).ga/gaba	10 sila of barley (5 if not weaned)	up to 5-year-old (probably 2 if not weaned)
Lú.tur, *ṣiḫru*	15 sila of barley 1.5 mana of wool	5-10-year-old
Guruš/sal.Tur.tur, *ṣuḫāru/ ṣuḫartu*	20 sila of barley	10-13-year-old ♀ 10-14-year-old ♂
Lú o Guruš /geme. mí	minimal adult ration (40-50 sila of barley)	14-16-year-old ♂ 13-16-year-old ♀
Lú o Guruš /geme. mí	adult ration (60 sila of barley)	16-year-old ♂ 15-year-old and over ♀

Correspondences Measurements unit
1 sila =1 *qû* = c. 1 litre
1 mana = 50 grams
1 gur = 120-350 sila (depending on historical period)

kg), three for her sons Ninḫili, Uršulpae and Lunarua, each amounting to 10 sìla of barley and 1 mana of wool, finally another ration for the daughter Gemebaba classified as dumu-eger-tu-da of 10 sìla of barley and 1 mana of wool. Considering that all four children are in the group of those paid with 10 sìla of barley, and that between one birth and another there could have been a period of around a year and a half, it is likely that the elder was less than five years old (Waetzoldt 1987, 133). Similar conclusions can be drawn from text TU 159, where the four older children receive a ration of 15 sìla, and the younger a ration of 10 sìla, so if we admit that the older child cannot be more than ten years old, the younger could have been about four years of age. According to these observations and to the nutritional needs of the child it can be assumed that the rations each covered a range of about five years of age, therefore 10 sìla up to five years, 15 sìla up to 10 years and probably 20 sìla for adolescents up to 15 years. Text TU 162 confirms the 20 sìla ration for the adolescent group, in which a girl who perceives 20 sìla is already indicated as the mother of a child: the age of reaching puberty was not much different from today, and girls may have had children of their own from the age of thirteen or fourteen years. The estimation of age, without a clear indication in the texts, is based on the analogy between the calories (kcal) of monthly barley rations and the nutritional requirements needed at a certain age: the first ration is around 10 sìla of barley, *c.* 820 kcal, for a child of 3-5 years of age; the second one is around 15 sìla of barley, *c.* 1230 kcal, for a child of 5-10 years; the last one is around 20 sìla of barley, *c.* 1640 kcal, for a boy of 10-12 years of age or a girl of 10-14 years of age (the idea of using the correspondence between ration calories and basic necessities comes from Ellison 1981, Milano 1981, 89-94). The amount of calories mentioned do not appear sufficient for children of the age groups in question, but there is a strong possibility that a part of their barley ration was exchanged. For example, 8 sìla of barley were equivalent of 20 sìla of fish (text UET III from Ur, Gelb 1965, 237). In addition, there are cases of *cribra orbitalia*, an iron deficiency indicator, among dead children in Mesopotamia (Pezzulla 2018, 232), although barley contains high iron levels.

In the texts of the Cassite period (1600-1150 BC) from Nippur (Brinkman 1982, 18 texts BE 14 58, BE 14 60, BE 14, 62, BE 15 84, BE 14 91, BE 14 105, PBS 2/2 53, BE 15 96, BE 15 111), age classes are much more detailed than in the third millennium and divide children by age and sex (Del Monte 1988, 19). Qû is equivalent to sìla , about 1 litre: boy (GURUŠ.TUR, akk. *batūlu*) 15-30 *qû,* girl (MÍ/SAL.TUR, akk. *ṣeḫertu*) 15-25 *qû,* child (GURUŠ.TUR.TUR, akk. *mār irti*) 10-20 *qû,* little girl (MÍ/SAL.TUR.TUR) 20 *qû,* babies (DUMU.GABA, DUMU.MÍ/SAL.GABA) 5 *qû* or 10 *qû* if *pirsu/ pirsatu* 'weaned' (*ibid.*, 19; Brinkman 1982, 3). This archive is very interesting, as there are cases of personal names of children that occur in the texts BE 14 58 and BE 14 91, separated by sixteen years:

- Tuqqin-ilu and Lultamar-nusku in the text BE 14 58 are in the category GURUŠ.TUR.TUR, with rations of 20 and 15 qû but in BE 14 91 instead receive a ration from GURUŠ of 60 qû.
- Dīn-ili-lūmur, DUMU.MÍ.GABA with a ration of 5 qû in BE 14 58, in BE 14 91 passes to 60 qû as āmītu 'spinner'.
- The infant Ina-pî-marduk-dīnu passes from 5 to 15 qû, a ration typical of male children
- The female infant Ḫulalātu passes from 10 to 15 qû, but shared with another woman, Kikkijaenni.

A male child reached adulthood by the age of 16 years; the same is true for a female infant. In conclusion, there is a mismatch between the two categories, male/female, and within the categories between single individuals, based on the duties they were supposed to carry out, probably due to the different timeframes required by the apprenticeship. The attribution of the ages of the small workers is very hard as it is never clearly stated in the texts, and for the occurrence of other factors, besides age (for example, the productivity or the type of job).

Gehlken (2005, 102-105) statistically analyses Sippar's rations and hypothesizes that girls become adult between thirteen and fourteen years of age and boys between fourteen and fifteen years of age. In Sippar, an apprenticeship lasted three to four years, so people began to carry out their profession as adults between sixteen and twenty years of age. From the texts of Middle-Babylonian rations Gehlken hypothesizes that the beginning of work can be placed already at the age of twelve, in adolescence, performing less important but nevertheless consistent tasks; this was an intermediate phase in which the child was already capable of work even if not at his/her maximum capacity. In these texts, the beginning of adulthood for a girl (valid at least for the Old-Babylonian period) is in their sixteenth year (with BE 14 58 and 91a, the same person being sixteen years old, Ina- pî-marduk-dīnu, is mentioned in the first as dumu-mí-gaba and in the second among adults). From the texts of the archives of the Ur III period (Waetzoldt 1987, 132) it is possible to deduce the age of the youngest children: up to five years old they were counted among the infants, or at least among the minors who do not work and eventually receive small rations for sustenance; between five and ten years they begin to perform tasks of little importance. According to Stol (1995, 496), with regard to the food rations of children and young people at the end of the second millennium BC, a rough division can be implemented: the group paid with 10 litres of barley per month was for children up to five years old, the one with 15 litres up to ten years old and the one with 20 litres up to thirteen years old. Over the age of thirteen they were considered as adults, and probably for a few years they received the lowest ration for adults. There was no excessive variability in the age of the small workers and in their relative rations in the different periods, and therefore it is possible to summarize the age classes of the small workers (Table 10.2).

Childhood through images

Artistic representations of children by adults show the relationships between adults and children (Baxter 2005, 81-91). These representations always depict children according to their gender and social role, in their activities or in the relationships they have with adults. They never depict the child in a natural or 'free' way. The images are often distorted by their political and propagandistic nature as well as for aesthetic purposes. However, despite the limitations, we can consider that at least a part of the lives of children is represented quite faithfully: for example, the vision that parents and society had of the result of their education, how children appeared to the world.

This section focuses on the appearance of the children and the social relationships depicted. As far as this aspect is concerned, we do not take the images as some sort of 'photograph' of the situation; rather, we suggest society distinguished the phases of childhood within its repertoire of social conventions. Interpreting ancient images concerning children is a complex operation: in the representations of the sovereign or of important personages, possible alterations for propaganda purposes must be considered. Not all the small figures necessarily refer to children, so the safest way to interpret these images is to consider scenes in which there are no possible distinctions of rank, and body heights of children and adults are significant. The Ur-Nanshe stele, for example, describes an occasion on which the king, accompanied by his sons, carries out representational activities for his dynasty (Livingstone 2007, 20). At the same time, it represents children – the young princes are depicted in reduced dimensions compared to their father, and in different sizes according to age. The propaganda purpose of this stele makes it imprudent to consider the representation of princes as realistic images of children; they are shorter because of their lower rank.

The representations of children in Mesopotamia are usually limited to nursing scenes, with a newborn held in the arms of the mother. The medium depends on the period: clay figurines are common in the Ubaid period (about 4500 BC), cylinder-seals in the Proto-Dynastic and Akkadian period, clay plaques in the Old and Neo-Babylonian periods. The theme of the nursing maternal figure is very common in ancient civilizations and develops from the Neolithic to the Christian era (York and Schlossman 1982, 40). Early examples from Çatalhöyük date to the sixth millennium BC, in Mesopotamia and Syria between the fourth and first millennium BC. In Egypt, mother and child scenes depict Isis with Horus. Mycenaean terracotta Kurotrophos from the late Helladic period, *c.* 1400-1200 BC, represent infants like in Mesopotamia, supported on the left (Olsen in Baxter 2005, 89; Rutter 2003, 30-33). In classical Greece, newborns are generally wrapped in a cloth in their mother's arms, whereas infants are generally naked (Rutter 2003, 59-81, Shapiro 2003, 85-108). The Roman world sees a reprise of Isis with Horus, and finally the Christian era depicts the Madonna with child.

This indicates that childcare was a purely feminine activity, at least as far as the first stages of a child's life are concerned, but they give us very little information about the child: nursing is an obvious necessity and the newborn is normally naked. In the Neo-Assyrian period, the representation of children develops in the deportation reliefs of the palaces of Niniveh and Nimrud, in which children are depicted in different activities. Infants and very young children almost never have gender characterisations, as happens in Egypt, where during the Old Kingdom, the nakedness in the depictions of children continues until almost puberty. In the Middle Kingdom, on the other hand, nudity is maintained only for young children, while the

older ones dress like their more mature peers in terms of social status. Finally, both versions are found in the New Kingdom. After puberty, nudity was no longer considered appropriate (Janssen and Janssen 2007, 23-28). In classical Greece, in contrast, children are depicted on vases with clear indications of gender and social class. Infants are naked (females sometimes wear a short tunic), but adolescents are depicted in adult clothing. Young aristocratic males, for example, were depicted sitting and reading in front of their teacher or practicing gymnastics, practicing with the lyre, or on horseback. Girls, meanwhile, were represented while cooking, weaving or dancing with an older teacher. Children of the lower classes were employed in different activities; for example, a young slave is shown accompanying his drunken master home, the children of artisans are represented in apprenticeships or in the fields, and girls are engaged in taking care of smaller children. Other materials, such as statuettes and frescoes, show children involved in games: little girls play with rattles and spindles, children play with yoyos and on swings, and there are even depictions of children climbing trees (Baxter 2005, 88; Beaumont 2000, 40).

In the last centuries of the third millennium BC, we find depictions of the royal couple with little princes: the king and queen are seated on the throne, the queen holding a smaller child in her lap, an older one standing in front of the king (Ornan 2002, 465). The child is always on the mother's lap, it is larger than a newborn, it is not attached to the breast, and in some cases it seems to wear a robe. In the later seals of the Akkadian period, the theme focuses on the queen with the child in her arms and the figure of the king tends to disappear from this iconography. In this kind of seals, one or more vases are often shown: they relate to the delivery of children according to spells used to support women during childbirth (there is always a vase of pure water and oil).

Old-Babylonian terracotta plaques very frequently depict children with their mothers (Figure 10.1), with the child attached to the breast and always naked, wrapped in the arms of the mother who supports them on the left side (except for a single case in the Girsu plaque). The child always has a hand placed on the mother's breast or wrist, a very natural and realistic gesture of nursing infants. Large numbers of terracotta plaques come from Ur, Tello, Uruk, Nippur, Girsu, Larsa, Susa, and from the centres of the Diyala region (Budin 2011, 194 and 214; Barrelet 1968, 292-293 and 319).

For the Neo-Assyrian period, most of the information comes from the numerous depictions of deported children on the reliefs depicting the battles of the Assyrian Empire against the Levant (Schwyn 2006; Turner 2001). The Assyrians practiced a policy of resettling population groups in their territories, in order to strengthen the empire's power in conquered lands, deporting entire families in convoys. The iconographic sources are available for the battles of Sennacherib (701 BC), Assurbanipal, Assurnasirpal II, Salmanassar III and Tiglat-Pileser III. Liverani (1976, 81) and Bahrani (2001, 127) describe the Neo-Assyrian reliefs dated to 630 BC of the palace of Nineveh by Sennacherib and Assurbanipal, which show long lines of women and children in procession. Reliefs of Sennacherib are in the South-West Palace of Nineveh, and there are only three relief plaques depicting children, two relating to the campaign against the city of Lachish, and one to the campaign against Babylon. In the texts that describe Ashurbanipal's exploits against Elam and its allies, Ashurbanipal describes his booty by listing 'men and women, small and [large]' (BIWA F col. V 60). Similarly, regarding the defeat of the ally of the king of Elam, Dunanu writes 'I took away and counted his wife, his sons, his daughters as booty' (Barbato 2008, 579). The infants are always naked (Dosch 1993, 305), just to indicate

their young age; their sex is rarely indicated. They show typical childhood gestures and body positions, e.g. the hand brought to the mouth or leaning on their parent's leg (Bahrani 2001, 127). The relationship with the mother (Parayre 1997, 63) in these reliefs is very close and is represented with standard motifs: breastfeeding, bottle-feeding with a jar or a wineskin, kissing and embracing. Breastfeeding, above all, is a typical act in processions of prisoners of war, both in the biblical context and in other contexts such as Greek and Persian (Kruger 2016). Older children, especially girls, are dressed, but differently from adults. They are held by the hand, sit on their parents' shoulders or are carried on a mule (Littauer and Crouwel 1979, 139). The older ones do some work, like pulling a pack animal by a rope (Gallagher 1999, fig. 7); girls are often seated on carts (Albenda 1987, 19). Figures of stature slightly shorter than adults, but with the same clothes, may indicate teenagers. The motif of the newborn in the arms of the mother or the young child on the shoulders of a parent (also the father) also occur in a different context, the funerary stelae of Palmyra from the Roman era (3rd century AD), to underline family unity as a matter of the lineage (Heyn 2010, 639), the Iron Age stelae in the Syro-Hittite area (Strube and Herrmann 2009, 42, with examples from Zincirli), where children are shown in the company of the dedicator while serving as attendants, and in a terracotta figurine from the Archaic period in Greece (500-475 BC), where a woman carries a naked infant on her shoulders (Golden 2003, 12-13).

The representation of the *kūbu*, who has never become a real child, and stands as a demon, requires a separate discussion. There are elements in its depiction that refer to a foetus: the lack of hair, the thinness, the ribs and protruding vertebrae, as well as the crouching position that vaguely resembles a foetal position. It can therefore be assumed that anyone who produced these depictions attempted to copy an aborted foetus in the sixth or seventh month of gestation.

In summary, newborns are naked and held in their mothers' arms; infants are also naked but walk on their own. There are two intermediate childhood stages in which children are dressed, with the older ones also engaged in activities. Finally, a last phase depicts 'adolescents' as slightly shorter than adults but dressed in the same way. To relate these characteristics to the biological age of children, it is possible to compare the proportions between the heights of children to those of adults according to the standard scheme of body proportions. This is based on the number of times the size of the head fits into the full height of a person. Infants can be placed in a category that varies between one and three years of age, children, who do not perform tasks, between four and seven years, children who perform tasks between seven and ten years, and finally teenagers between ten and fifteen years (girls probably reach this stage at a lower age compared to boys).

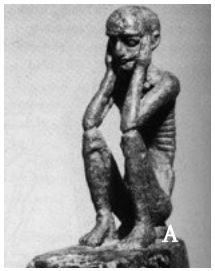
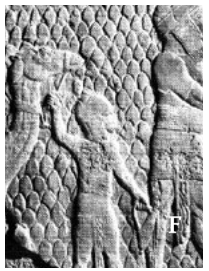
The definition of phases

Based on the observation of age groups deducible from the texts, and from the physical characteristics of children in the Assurbanipal reliefs, it has been possible to outline a hypothesis of age groups in Ancient Mesopotamia. The results are summarized in Table 10.3, which considers examples of depictions of children in the different groups identified, divided by gender where possible, and the terms known for the definition of children, divided according to the indications of the ration texts. Observations on the possible ages can be found in the summary section of the table; age categories are based on the rations received, and by comparisons of sizes of adults and children in representations. Establishing biological ages for each age group is nevertheless guesswork.

Figure 10.1. Old-Babylonian plaque of a sitting woman breastfeeding her infant, Southern Mesopotamia, Iraq, c. 2003-1595 BCE. Sulaymaniyah Museum, Photo: Osama Shukir Muhammed Amin FRCP (Glasg) [CC BY-SA (https://creativecommons.org/licenses/by-sa/4.0)].

The most important element that emerges from this analysis is the clear division of age stages. There were five phases of childhood. There is a phase before that during intra-uterine life, in which the baby starts to be considered, but the foetus has not yet reached the connotation of being human. The first phase is that of the newborn, from birth to around one or two years old, completely dependent and not self-aware, still breastfeeding, requiring all the attention of the mother, and for obvious reasons the child does not have a productive role in society. The second phase is early childhood, from one or two years to four years, in which the infant is weaned, but not able to look after him or herself and still unproductive. The following phase is a phase of transition, when younger children, three to four years up to six years old, enter the work and school environment, but were not autonomous in the tasks. The child of the fourth phase, from seven to twelve or thirteen years old, is fully aware of him or herself and of the activities assigned, which he or she already does independently. Older children, especially girls, would look after their younger brothers and sisters and help with household chores. In Egypt, there are also numerous examples of activities related to childhood, with textual references regarding the duties of children and suggestions for girls to care for siblings, and iconographic representations of naked infants holding their sisters' hand (Janssen and Janssen 2007, 43). The last phase of childhood is adolescence, from twelve or thirteen to around fifteen years, already in adult dress performing adult activities: it is possible that adolescents were fully capable of performing the tasks assigned to them but were less productive for reasons of physical strength; alternatively, they were depicted shorter for the actual difference in stature. Girls were not yet married.

Table 10.3. Summary of the ancient age groups based on texts and iconography.

Ancient terminology	ina mêšu, šilip rēmim, *kūbu*	Dumu.(nita/mí).ga/ gaba, *lakû, mār irti*	Dumu.(nita/mí).ga/ gaba, *mār šatti, ginû*	Lú.tur, *ṣiḫru*	Guruš/sal.Tur.tur, *ṣuḫāru/ṣuḫartu*	Lú o Guruš /geme. mí
Representations of boys	 A	 B	 C	 D	 F	 H
Representations of girls (or unisex)				 E	 G	 I
Age estimations based on texts	8 months of pregnancy, neonate	0-1 year	1-3 years	4-7 years	7-10 years	10-15 years
Age estimations based on images	stillborn, aborted foetus	from birth to 2 years	up to 5 years	5-10 years	10-13 years ♀ 10-14 years ♂	14-16 years ♂ 13-16 years ♀
Final estimation	perinatal	from birth to 1-2 years	from 1-2 to 3-4 years	from 3-4 to 6 years	from 7 to 12-13 years	c. 15 years

A Bronze figurine of kūbu, from Larsa (Cincinnati Art Museum, Parayre 1997, fig. 10b); **B** Deportation of Elamite prisoners, Ninive North Palace, Assurbanipal (Musée du Louvre, Parayre 1997, fig. 15b); **C** Deportation of Elamite prisoners, Ninive North Palace, Assurbanipal, stanza F muro SW (BM 124935/7, Barnett 1976, Pl. 19); **D** Slab WA 124801c from Ninive, palace S-W room XXXIII (Curtis and Reade 1995, 75); **E** Deportation of Elamite prisoners, Ninive North Palace, Assurbanipal, stanza F muro SW (BM 124935/7, Barnett 1976, Pl. 19; **F** Deportation of prisoners from Lachish, Palace SW Ninive reliefs of Sennacherib (BM 124907/8 Cohen 2010, 134); **G** Deportation of prisoners from Lachish, Palace SW Ninive reliefs of Sennacherib (BM 124907/8 Cohen 2010, 134); **H** Deportation of Elamite prisoners, Ninive North Palace, Assurbanipal (Musée du Louvre, Parayre 1997, fig. 15f); **I** Deportation of Elamite prisoners, Ninive North Palace, Assurbanipal (Musée du Louvre, Parayre 1997, fig. 15f)

Regarding rites of passage, there is a rite for the newborn in Ancient Mesopotamia: the presentation of the baby to the family, which gives him or her legitimacy and a place in society (as opposed to the *kūbu* that transforms into a demon, because he had no access to the world, see Geller 2007). A second step, *pirsu*, took place at the time of weaning. This is much less clear as there is not much data on the subject, except for the depictions of bottle-feeding of infants. However, the presence of a different representation, the use of a different word in ration texts and the survival of the newborn (surviving weaning in pre-industrial communities constituted a challenge in itself) are good elements to suggest a passage to another phase of childhood, not necessary accompanied by a ritual. There is a lack of information about the passage to other phases. It can be suspected that for girls, a point of passage was the menarche, as in many other cultures, and perhaps for boys reaching puberty, but there is no information about this. In the same way, establishing an equivalent of the current age of maturity is almost impossible. Perhaps the final passage from childhood to adulthood was marriage: it certainly marked an essential passage for girls, who left their home to join their husband. Another possibility is the end of apprenticeship and reaching a higher salary range. Among the Greeks and Romans, for example, the age of maturity was set at 12 years for females and 14 years for males (Niccoli 1993, 10).

One more observation can be pointed out about the gender of children: the presence of a rich vocabulary, for both males and females, and the clear coding of iconographic representations that show males and females differently in attire, gestures and postures, suggests that a clear division of gender was made very early. Only newborns and infants, all represented naked and without visible sexual characteristics, are not differentiated by gender. In Assyrian reliefs, boys are shown active, performing tasks, whilst girls maintain a rigid posture, very close to their parents or sitting on a cart.

In the definition of the infancy phases in ancient Mesopotamia there are many unknowns and at times speculative parts: ancient texts never tell the age of the 'not-adult-yet' person they were written about, images refer only to a limited time span, archaeological and biological materials from the excavations do not add much to the general information on infancy. Working on infancy in this situation can be hard and frustrating, but it is essential to chase children in history, even if they play hide and seek with us. After all, they represent from a third to a half of the ancient society.

> "As so frequently in ancient studies, it seems we can invoke the observation made by J. H. Elliot, who writes, 'Historical voyeurism is a frustrating occupation when the keyhole is too small'. But that statement does not mean that we should stop peering; we may yet see something good." (Snell 1982, 96).

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Chapter 11

Identifying social and cultural thresholds in sub-adult burials of Central Italy during the first millennium BC

Francesca Fulminante

Introduction

Traditional anthropological and socio-historical literature identifies an important threshold in the life course of individuals, both males and females, at the passage between childhood and adulthood, generally marked by the stage of puberty and celebrated in many societies by specific ceremonies. Since the classic work by Arnold van Gennep (1909) transitions that mark personal or collective changes of identity (childbirth, puberty, marriage, motherhood, and death), as well as collective celebrations of seasonal change (Easter, harvest) have been recognised and studied as rites of passages. In these rituals, the individual goes through three phases: (1) separation, when the individual or the group is distanced from their former identities; (2) liminality, the phase in between two conditions (the one from which the individual/group departs and the one which they will enter); and (3) reaggregation (or incorporation), the final stage in which the individual/group is readmitted to society as the bearer of new status.

The flexibility of van Gennep's theory led to its application to a vast array of contexts in different human sciences (such as anthropology, sociology and history). Van Gennep's theory of the rites of passages is still very much present and persists even in very secularized and desacralized societies. This theory has been used to contextualize and better understand rituals and ceremonies surrounding puberty and adolescence in various societies around the world (e.g. Markstrom and Iborra 2003) and to better understand adolescent and young people's behaviour and educational needs in modern societies (Venable 1997; McCarthy *et al.* 2010; Ahovi and Moro 2010), including in specific ethnic groups (Warfield-Coppock 1992; West-Olatunji *et al.* 2008).

A few years after van Gennep, Margaret Mead focused on the life-course and life-stages by studying adolescence in Samoa (Mead 2001) and early childhood in Manus, New Guinea (Mead

1931). In his introduction to the 2001 edition of Mead's *Coming of Age in Samoa*, Bateson observed that 'Writers have been telling parents how to raise their children for centuries' (Bateson 2001, xi-xii), and the past two decades have seen no decline in this genre. In 1928, however, Mead was at the forefront of employing systematic cross-cultural observations of child development to provide concrete examples of alternative ways of child rearing. Moreover, Mead combined her interests in children and childcare with her strong advocacy for equality and women's rights. Despite Mead's pioneering works, however, the transition from infancy to childhood has not been considered from the perspective of the rites of passage as puberty and adolescence has.

In the context of the classical world and Italy, Mario Torelli's classic work '*Lavinio e Roma. Riti iniziatici e matrimonio tra archeologia e storia*' (Lavinium and Rome. Initiation rituals and marriage between archaeology and history, 1984) deserves to be mentioned. Torelli combined a deep investigation of literary sources with a contextual analysis of the material evidence from the Oriental Sanctuary of Pratica di Mare (Lavinium), and delineated a detailed and vivid picture of male and female rites of passages to adulthood in the Pre-Roman and Roman world (Torelli 1984). As shown in Torelli's book, there are a few statues representing young males and females that discard their old toys or pets in order to show the deity that they have abandoned childhood and are now ready for adulthood and marriage (Figure 11.1). A similar work for the transition from infancy to childhood has yet to be written.

Figure 11.1. Lavinium, Oriental Santuary: girl offering a dove, mid- 5th century BC (reproduced with kind permission of the Museo di Pratica di Mare/Lavinium, Rome, Italy).

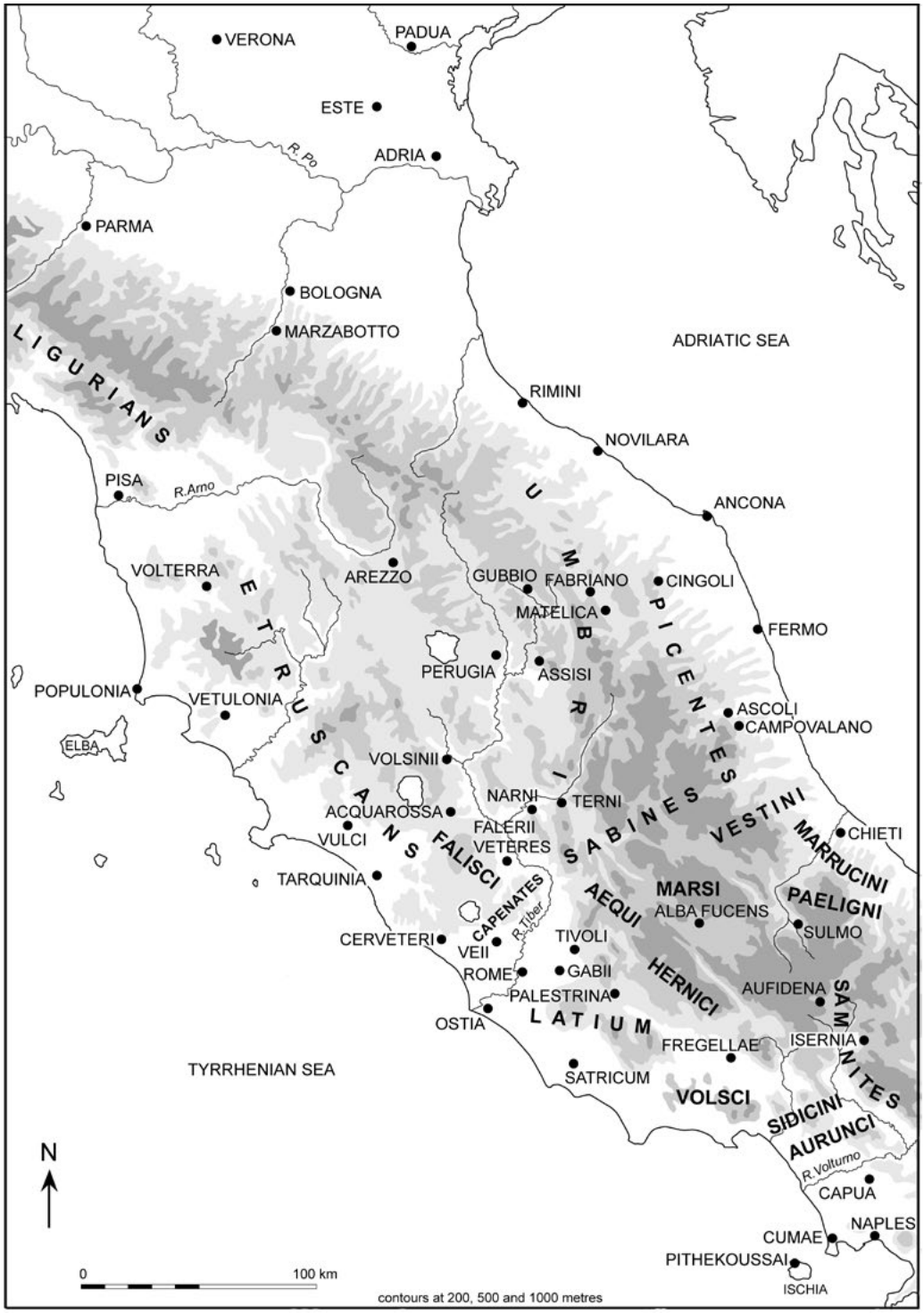

Figure 11.2. Central Italy with selected Pre-Roman sites (Farney and Bradley 2017, map 2, reproduced with kind permission).

This chapter suggests that ancient societies marked the transition between infants under three to five years of age and children older than this age as an important age threshold. Following preliminary work by Maria Assunta Cuozzo (2003) and Valentino Nizzo (2011), I conduct a contextual analysis of Latin burials between the end of the Final Bronze Age and the end of the Orientalizing Age, with a comparative perspective on Etruscan and other central Italian populations (Figure 11.2). As will be shown, children below the age of four to five years generally lack gender and status role indicators, while children above this age can have these types of indicators. By taking an interdisciplinary perspective combining archaeological data with literary sources, and integrating ethnographic accounts, it is further suggested that this threshold might have been much more widely significant both in the past and in the present, as it might have been linked with the physical and social development of children at that age.[1]

Both literary sources and ethnographic analogies show that children between four to five years of age and eight to ten years of age acquire a new status different from that of infants, due to the development of important social abilities and skills together with gender awareness. This is also confirmed by modern medical and psychological studies, which identify an important developmental threshold around three to four years of age, which often coincides with the cessation of breastfeeding, the completion of weaning and the emancipation of the child from exclusive maternal care. In the final part of the chapter, I will discuss how this convergence of multiple disciplines might be used to inform current discussions on education and health policies.

Infants and children in Central Italy during the Early Iron Age

Introducing the historical and archaeological context

The period between the Final Bronze Age/beginning of the Early Iron Age and the end of the Archaic Age (*c.*1050-500 BC) is a time of changes and developments in the Italian Peninsula, which led to the creation of regional ethnic and political groups and to the formation of the first city-states in Western Europe (on the emergence of ethnic and state identities in Italy for a traditional approach see Pallottino 1991; for a more recent discussion see Bradley 2000; Bradley *et al.* 2007; Herring and Lomas 2000; for a recent network approach, Blake 2014). This process of urbanization has been intensively investigated, and changes that occurred in settlement organization, political structure, economy and society have been largely identified and debated (see e.g. Barker and Rasmussen 1998; Iaia 1999a; Peroni 2000; Pacciarelli 2001; Haynes 2000; Vanzetti 2002; Guidi 2006; Guidi, 2010; Attema 2004; Attema *et al.* 2016; Riva 2010; Fulminante 2014; Rendeli 2015; Perego and Scopacasa 2016). In order to better contextualize the patterns and changes detected in infant and children burials in the following section, Table 11.1 delineates the development of Central Italian communities with special reference to burial practices.

With reference to the potential biases related to the analysis of burial practices, archaeologists today are well aware of the ideological and ritual biases that might affect the interpretation of this type of evidence (see e.g. Morris 1987; Morris 1992; Parker Pearson 1999; Cuozzo 1996; Cuozzo 2003; Fulminante 2003, 7-19; Nizzo 2015, 220-286 with reference to Central Italian archaeology). However, while communities were not always fully represented from a demographic point of view, the social persona of the deceased was represented in the deposition by accompanying

[1] For a comprehensive discussion of the potential comparison between 'social age' and 'biological age' and the potential integration of these different perspectives and fields of research to better understand sub-adults lives in the past and present, see Halcrow and Tayles 2008.

Table 11.1. Social differentiation as reflected in burial customs in southern Etruria and Latium vetus from the Final Bronze Age to the Archaic Period (1050-500 BC).

Pre-urban/ Proto-urban	**Proto-urban**		**Proto-urban/ urban**	**Urban**	
Final Bronze Age 3 (Latial Period I)	Early Iron Age 1 Early (Latial Period IIA)	Early Iron Age 1 Late (Latial Period IIB)	Early Iron Age 2 (Latial Period IIIA-IIIB)	Early and Middle Orientalizing Age (Latial Period IVA)	Recent Orientalizing Age (Latial Period IVB) and Archaic Period
1050/1025-950/925 BC	950/925-900 BC	900-850/825 BC	850/825-750/725 BC	750/725-640/630 BC	640/630-509 BC
EMERGING BURIALS	SHARED SYMBOLS OF POWER		WARRIORS AND RICH FEMALE BURIALS	PRINCELY BURIALS	REDUCTION AND DISAPPEARANCE OF GRAVE GOODS
Political and religious leaders: complete suit of armour, knife, cart, incense-burner, vase stand Absence of exceptionally rich female burials	Prestige and power symbols distributed among various individuals Males: weapons Females: spinning and weaving tools Both: hut-urn, statuettes, knife		Warrior graves: complete suits of armour and prestige goods: flabellum (fan), incense-burner, metal vases etc. Rich female burials: many ornaments, bronze cists, spinning and weaving tools	Princely burials (both males and females) with hundreds of pottery vases, precious material vases and ornaments (gold, silver, amber, ivory), drinking-sets, oriental power symbols: flabellum (fan), footrest and sceptre	Drastic reduction until complete absence of grave goods. Diffusion of family chamber tombs (importance of the *gens* or family clan)
Note: Rich infant burial (Le Caprine tomb 5, *Latium vetus*) with spinning and weaving instruments and a knife	Note: Exceptional tomb 6 Tenuta Cancelliera (Santa Palomba): offensive and defensive weapons, cart, statuettes, working tools, knife, gold, many vases				

grave goods in *Latium vetus*, and Central Italy in general during the Early Iron Age and the Orientalizing Period.

This is confirmed by the contrasting evidence of the Late Orientalizing and Archaic Period in *Latium vetus,* when grave goods are drastically reduced or completely absent. This simplicity has been convincingly interpreted as an ideological choice, codified in the law of the Twelve Tables, which can be dated to the end of the seventh or the first half of the 6th century BC, the time of Tarquinius Priscus or Servius Tullius at the latest. These tyrannical kings wanted to contrast the lavish Etruscan funerary customs with an ideal of austerity and frugality, modelled on the old egalitarian communal ideology of the Latin Patres in order to reduce the power of competing aristocratic families (Colonna 1977; Colonna 1981; Ampolo 1984; Bartoloni *et al.* 2009).

The demographic representation of infant and children burials within the community and the association between grave goods and age classes have been studied in order to detect changes in the perception of infancy and childhood in Early Iron Age *Latium vetus,* Etruria and other

central Italian regions, and a number of patterns have been identified. Following the important study of Osteria dell'Osa by Anna Maria Bietti Sestieri (1992), the analysis conducted in this study has adopted the following age classes: young children between 0 and 5 years of age were included in the class of infants; the class of children is reserved to individuals between 6 and 11 years of age; young individuals between 12 and 19 years of age were grouped in the class of adolescents; individuals between 20 and 40 years of age were considered adults; individuals between 40 years and 60 years of age were considered mature adults and individuals above 60 years of age elderly. In addition, infants and children were grouped in the general category of sub-adults, while adolescents, adults and elderly were grouped together as adults (Bietti Sestieri 1992, 222-223).

Contextual analysis of burials during the Early Iron Age in Central Italy

Latium Vetus

In the earliest phase of the Latin culture (Latial Period I, 1050/1025-950/925 BC), only the most prominent members of society such as the chiefs entitled with religious and political power have access to formal burials within small plots of up to 20 burials. Among those, children and infant burials are virtually absent, apart from exceptional cases such as Le Caprine Tomb 5, a two-year-old female equipped with spinning and weaving instruments, many ornaments including bone and ivory combs, and numerous vases. These exceptional individuals might have been granted burial rites because of their hereditary status (Fulminante and Stoddart, in press).

In the Latial Period IIA-IIB (950/925-850/825 BC), children start to be buried in the same burial community as well as the adults, but they are greatly underrepresented (in Latium they represent less than 15-20 % of all buried individuals and at Osteria dell'Osa they are also strongly underrepresented, Becker 1992, 60). In this phase, infant burials have generally no indication of gender or role, that is, I mean a link with an activity socially recognised without the implication of status, considered as position in the social hierarchy, but sometimes implying gender such as weapons and *fibulae* in male and spinning and weaving instruments in female burials (Pacciarelli 2001, 218). Children's burials might sometimes have indicators of sex or role such as *fibulae serpeggianti* (male) and spindle whorls (female in Latial Period IIB). Female infant and child burials generally include at least one fibula and many ornaments in Latial Period IIA.[2] Most common types of pottery in infant and child burials of this time are cups, bowls and liquid containers such as *orcioli* or *amphorae* (Fulminante and Stoddart, in press).

Infant burials below the age of three to four years are found among houses within the settlement area during the late Latial Period IIB and more clearly in Latial Period III in *Latium vetus* (Table 11.2, Table 11.3). According to most scholars, this phenomenon (called *suggrundaria* by ancient authors) was the way in which aristocratic families affirmed their ownership of a plot or piece of land (Bietti Sestieri and De Santis 1985; De Santis *et al.* 2007-2008; Modica 1993; Modica 2007). This was an act of structured deposition with a strong domestic connotation, in which domestic and communal identities were negotiated (van Rossenberg 2008). Finally, according to Francesca Roncoroni, this might have been the custom at the origin of the cult of Lares and Penates in the Roman religion (Roncoroni 2000 ; Zifferero 2013). During Latial Period III and IVa

[2] As observed by Bietti Sestieri and others from the analysis of Osteria dell'Osa and Gabii, female infants and children appear to be generally more wealthy than males of the same age (Bietti Sestieri *et al.* 2013).

Table 11.2. Distribution of role indicators in Latin sub-adult burials (male and undetermined burials).

	Infants									**Children**							
	IIB	IIB1	IIB2	IIIA-IIIB	IIIB	IIIB-IVA1	IVA1	IVA2		I	IIA1	IIB	IIIA	IIIB	IVA2	IVB
small bronze rings	1	1	2						small bronze rings						1	
suspension ring							1		suspension ring					1	2	
digital ring					1		1									
small plaque						1										
bracelet					2		2		bracelet				1			
small bronze chain					1	1										
sea shell							1									
arch fibula				1		1	1		arch fibula	1			1		2	
serpeggiante fibula					1		1		serpeggiante fibula		1	3		1		
sword holder					1											
spear					1			1	spear						1	1
ornament					1											
pendant					2	1	5		pendant				2		5	1
									conical spear point						1	
									spiral ornament				1	1		
sword					1				sword					1		
									spit						1	
beads					1		1		beads				1			

(850/825-640/630 BC) infant and child burials in *Latium vetus* do not represent more than 20% of the total at any time, whereas in Latial Period IVB (640/630-580 BC) their proportion rises to about 30% (Fulminante and Stoddart, in press).

During these phases, infant burials have generally no indication of social roles and only exceptional burials might have weapons (males), a spindle whorl (females) or a knife (both). Child burials, on the other hand, might sometimes have indicators of gender or role such as *fibulae serpeggianti* or weapons (male) and spindle whorls (female) or knives (both). From Latial Period III it is common to find bracelets and pendants in infant and child burials, especially bullae (see Zifferero 1995; 2013; Table 11.3). Similarly to earlier periods, the most common types of pottery in infant and children burials are cups, bowls (probably related to infant feeding, Bietti Sestieri *et al.* 2013) and liquid containers such as *amphorae* or jugs (see Bietti Sestieri *et al.* 2013 on Osteria dell'Osa and Gabii); in Latial Period IVB the *aryballos*

Table 11.3. Distribution of role indicators in Latin sub-adult burials (female burials).

	Infants															Children										
	I	II	IIA	IIA1	IIA2	IIB	IIB1	IIB2	III	IIIA	IIIB	IVA1	IVA2	IVB		IIA	IIA1	IIA2	IIB	IIB1	IIB2	III	IIIA	IV	IVA1	IVB
needle									1																	
small bronze rings	1		2	1		1	4	4							small bronze rings	1	9	1	2	2	2		1			
ring														1												
suspension ring			2		1		8	2	1	1	4	2	2	1	suspension ring	1	6	1	2	4	1	2		2		
digital ring	1						4	1			1		1	1	digital ring		2	1		3		1				
small plaque								2							small plaque		2						1			
															button					1						
bracelet							2		1		3	3		2	bracelet		1									
small bronze chain					1						1				small bronze chain					1					1	
															knife							1				
sea shell											1	1		2												
distaff	1																									
pendant/ necklace element	1														pendant/ necklace element		1			1						
hair ties	1		1	1	1	2	2	2			2	1			hair ties		4	1	1	3	2	1	1			
arch fibula	1	1	2	1	1	2	8	2	2	1	3	7	1	3	arch fibula	1	9	1	2	5	2	1	1	1	1	
amber arch fibula	1						1	1	1		3	2			amber arch fibula					1	1			1		
spindle whorl	1						4		1		1			1	spindle whorl		3	2	1	8	2	1	1	1	1	
spindle	1								1																	
belt hook												1														
pendant	1		1				2		1		12	6	1		pendant		9	1		3		1	1	1		1
bead			5				3	3			1															
large bead/ spindle whorl							1																			
small bead			2		1		7	2			1	4			small bead		3	2		5						
															loom weigh					1						
comb	2																									
spool	1														spool					1						
spiral ornament							1				1				spiral ornament		1									
scarabeo													1													
torques														1												
beads	3								1	2	6	5	1	3	beads		7	2	2	6	4	2	1	2		
long amber beads															long amber beads					1						

Table 11.4. Distribution of pottery types in Latin sub-adult burials (male and undetermined).

	Infants														Children											
	IIA1	IIA2	IIB	IIB1	IIB2	IIIA	IIIA-IIIB	IIIB	IIIB-IVA1	IVA	IVA1	IVA2	IVB		II	IIA	IIA1	IIA2	IIB	IIB2	IIIA	IIIB	IVA1	IVA2	IVB
amphora	1				3			4	1	2	4		4	amphora			2				2	2	1	3	3
small amphora-kantharos						1			2																
aryballos												1	6	aryballos											1
askos													2	askos							1				
basin								1																	
beaker				2									1	beaker		1	1		1	1			1		
ovoid beaker					1									ovoid beaker					1						
jug													1	jug											1
calice												2	2	calice										2	1
bowl			1						1				2	bowl											2
big bowl											1			big bowl											1
														lid					1						
														footed cup											1
kantharos										1	1	1	2	kantharos									1	2	1
kotyle												1		kotyle											1
														kyathos											1
kylix									1		1		1	kylix											1
														oinochoe										1	2
olla									1			1	3	olla								1		2	4
small olla													1	small olla	1										
stamnoide olla													1	stamnoide olla										1	1
														olpe											1
rounded jug	2	1	3	8	5	2								rounded jug		1	2		6						
patera									1																
plate							1			1	1			plate							1				1
low bowl	2	3	1				1	2				1		low bowl			8	1	1	1			2	2	
skyphos									1			1		skyphos										1	2
cup	7	3	5	5	3	1	1	3	1		2	1	2	cup			8	1	7		2	1	1	3	1
low large cup	1																								
big cup	1	1	2											big cup			1		2						
big deep cup			2																						
flask vase					1									flask vase					1	1					
														two handled vase	1		2								
bottle vase						1								bottle vase			1								
unidentifiable vase								1			1		4	unidentifiable vase											2

Table 11.5. Distribution of pottery types in Latin sub-adult burials (female).

	Infants														Children										
	I	II	IIA	IIA1	IIA2	IIB	IIB1	IIB2	III	IIIB	IVA1	IVA2	IVB		IIA	IIA1	IIA2	IIB	IIB1	IIB2	III	IIIA	IVA1	IVA2	IVB
alabastron													1												
amphora			1	1		1			1	2	6			amphora		7	1		5			1	1		
small amphora					1																				
aryballos											1		3												
askos	1																								
basin											1														
beaker				1		1		1			1			beaker											
jug										1			1	jug	2	1	1								
calice											3			calice										1	
														bowl										1	1
emispheric cup										1														1	
footed bowl											1			footed bowl											
kantharos											2			kantharos											1
kotyle											2	2												1	
														kylix											1
olla										1	4			olla							1			1	
small olla	2																								
stamnoide olla											1			stamnoide olla										1	
rounded jug				2	2	3	8	4			1			rounded jug	2	5		4	7	3					
small plate	1													small plate			1								
plate										1															
box											1														
low bowl			1	2	2	1	2	1	1	3	3			low bowl	1	6	6	1	2			1			
skyphos										1	2														
cup	2	1	2	1	1	3	5	1	3	7	3			cup	1	8	2	2	4	2		1	1		1
														large and low cup		2	1								
big cup								1		1				big cup		1	1								
large deep cup								1						large deep cup			1								
two handled vase				1										two handled vase			2		1	1					
unidentifiable vase											1			unidentifiable vase			1	1							

is very common and it has been suggested that it might have contained some special essence and/or oil used in the funerary treatment of infants and children (Fulminante and Stoddart, in press; Table 11.4, Table 11.5).

Other Central Italian regions

A similar quantitative analysis of role indicators and pottery objects in burials of other Central Italian regions has not yet been undertaken. However, similar trends can be observed in several regions of middle Tyrrhenian Italy, judging from the examination of excavation reports and from other summaries about demographics and object distributions in burials of different ages (Fulminante 2018a; 2018b; Fulminante and Stoddart, in press).

At Tarquinia and Veii in Etruria, for example, very young children (below five years of age) are strongly underrepresented, and particularly in Veii, infants below three years of age are virtually absent (Fulminante and Stoddart, in press). Role indicators are generally absent in infant and child burials at Tarquinia. Infant burials from Tarquinia are often associated with a bronze *sistrum* (infant rattle) and from Period II, infant burials of higher status are associated with *bullae*, semi-circular or circular pendants (Zifferero 1995; 2013). Cristiano Iaia further distinguishes between proper *bullae* (composed of folded bivalve sheets) and bullae-pendants (composed of one single sheet and sometimes covered with gold leaf). According to Iaia, the proper *bullae* are generally associated with infants of higher status, but bullae-pendants are also found in young women's burials and might refer more specifically to young girls of marriageable age (Iaia 1999b, 59).

In his study of the cemetery of Veii, Quattro Fontanili, Pacciarelli identifies three different social levels represented within the burial community, with infants and children present in all three (Pacciarelli 2001: 267-271). Female infants and children seem not to have had gender or role indicators, apart from ornaments; some male children had a fibula *arco serpeggiante,* while some male infants and children of exceptional status had weapons. In particular, Tomb HH 6-7 containing two male children, dated to the mid/late 8th century BC, was remarkable for the presence of weapons, an axe, a razor (possibly a paternal offering), a spit, many vases including a bronze basin and female ornaments (possibly a maternal offering). Many of the objects were broken and 'killed', and they possibly indicated a potential status inherited by birth but not yet achieved (Nizzo 2011, 62-63).

Infants and children are strongly underrepresented in the older phases of the Early Iron Age at Pontecagnano. With the Orientalizing Period, they begin to be represented in nearly normal percentages, with sub-adults represented by about 50%. With the advent of the Orientalizing Period, an important threshold seems to be represented by three to four years of age, especially in the Chiancone cemetery. Generally, infants below three to four years of age have no indication of gender or role at Ina Casa, Chiancone and Via Piacenza Posidonia. Commonly they have ornaments such as shells, pendants, beads or small rings. In the Chiancone cemetery, infant burials (up to three to four years) can have the Southern Irpino pottery service (amphora with complex handles, jug with trumpet shaped neck, feeding-cup, cup, bowl with complex handle), which they had in common with their mothers (Cuozzo 2003, 205). In this cemetery, children above three to four years can have gendered ornaments (fibula *arco serpeggiante* for males; rich jewellery sets for females; Cuozzo 2003). In Chiancone and the Via Piacenza/Via Posidonia cemeteries, some exceptionally rich child burials might have status indicators together with

gender and role indicators: bronze vessels, imports, weapons in male and knife in female (Cuozzo 2003).

At Pithekoussai, the Greek emporium founded by Euboean colonists from Eretria and Chalcis around the mid of the 8th century BC, the ratio of adults to infants/children was about 50%, which means that it was fully representative of the living community (Nizzo 2007, 27). Cremations were generally reserved for adults, but some cases of child cremation are found. Inhumation was generally reserved for infants and children, and rarely used for adults, mainly for those of lower status; *enchytrismos* burial in particular was reserved for infants and represents between 10% and 30% of all inhumations in different periods (Nizzo 2007, 27-28).

Much like adult burials, infant and child burials contained indicators of sex, role and status. Tomb 656 of a nine-month-old male infant was particularly exceptional, because the deceased was buried in a wooden coffin under a tumulus, with many vases and precious ornaments and holding a *kotyle* (cup with two horizontal handles) in his hand as if he were mimicking a symposium (Nizzo 2011, 69-70). In this way, the child would complete his ritual passage to adult life (Nizzo 2011, 75). Infants and children were often associated with amulets and *scaraboids* and some infants were buried with feeding bottles.

In Early Iron Age and Orientalizing Period Abruzzo, infant and child burials were generally underrepresented, but in the later cemetery of Campovalano, the percentage of infants increased dramatically in comparison with the older cemetery of Fossa. In the Fossa cemetery (9-7th century BC) and in the later phase of the Campovalano cemetery (Archaic Period), tumuli were also used for infant and child burials, while in other cemeteries of the region and other periods they were reserved for male adults (Cosentino *et al.* 2001; Chiaramonte Trere' *et al.* 2010, 4-5).

In addition, at the Fossa cemetery, children under four to six years of age generally had no pottery (however, the numbers are not statistically valid). While gender indicators such as weapons in male graves and ornaments in female graves seem to have been in use, female burials never included spinning or weaving tools (Cosentino *et al.* 2001, 455-456). At the later cemetery of Campovalano, burials of infants below three to four years of age were generally placed between adults' tumuli and had no role or gender indicators unless they were exceptionally rich. Children above four years of age received the same ritual as adults (Chiaramonte Trere' *et al.* 2010, 2-5).

The three-year threshold between infancy and childhood

Literary Sources

Various ancient literary sources indicate that three years of age is an important threshold in the life of ancient Roman and Pre-Roman populations, as suggested by several scholars, including Nizzo (2011) and Cuozzo (2003). This is attested by certain rules and customs observed in different social domains, for example funerary rituals, regulations for killing, punishment and religion. Dionysius of Halicarnassus (*c*. 60 BC - after 7 BC), reports about Romulus in his *Historiae* (II, 15): 'in the first place, he obliged the inhabitants to bring up all their male children and the first-born of the females, and forbade them to destroy any children less than three years of age unless they were maimed or monstrous from their very birth'.

Similarly, Plutharcus (*c.* AD 46 - AD 120), in his *Parallel Lives* (12, 3) says that 'Numa himself also regulated the periods of mourning according to ages. For instance, over a child of less than three years there was to be no mourning at all; over one older than that, the mourning was not to last more months than it had lived years, up to ten; and no age was to be mourned longer than that, but ten months was the period set for the longest mourning'.

In the Greek world, three years is the threshold above which the child enters another age-class (*ephebia*) and participates in the Anthesteria festival. During this celebration, in the day of Choes, as the introduction to social and religious life '[...] three years old children are given flower wreaths [...]' (Philostratus, AD 170/172-247/250, *Heroika*, 12.2.720) and are admitted in the competition of drinking wine from small cups that often are also found in children's graves. As suggested by Cuozzo, this is also mentioned as a landmark in a women's life in an epitaph 'wedding, birth, *choes*, *ephebia* [...]' (IG II/III 2 1368 130). In a later context, Gregory of Nazianzus (*c.* AD 329-390) says that three years is the age for baptism because at that age the child can understand and answer questions (*Orationes Theologiae: In sanctum baptisma*, 40, PG 36.400).

Most ancient authors seem to link this threshold and the distinction between infants and children with the development of speech and rational abilities. One particularly well known passage is from Accius (170-86 BC) *'Infans' a non fando dictus est . . . Et est quod aut dici non debeat aut fari non possit*. 'Infans' is a term derived from 'non fari' . . . It means either something which ought not to be uttered or something which cannot speak' (*Tragedies*, 156 Nonius, grammarian of the 4-5th century AD, 55, 26).

Orators, however, often define non-eloquent magistrates as infants. For example, Cicerus (106-43 BC), Brutus, 305:

> '*Erat enim tribunus plebis tum C. Curio, quamquam is quidem silebat ut erat semel a contione universa relictus; Q. Metellus Celer non ille quidem orator, sed tamen non infans; diserti autem Q. Varius C. Carbo Cn. Pomponius, et hi quidem habitabant in rostris; C. etiam Iulius aedilis curulis cotidie fere accuratas contiones habebat'...* 'Gaius Curio was then tribune of the people, but he too no longer spoke after having once been deserted by the whole assembly; Quintus Metellus, also, no real orator, yet not without some capacity for public speech. But speakers of real ability were Quintus Varius, Gaius Carbo, Gnaeus Pomponius, who all but lived on the rostra. Gaius Julius too as a curule aedile delivered carefully prepared harangues almost daily' (Loeb Classical Library 342, 264-265).[3]

Anthropological Perspectives

In addition, a number of ethnographic accounts and modern psychology studies suggest that this threshold is linked to other important developmental stages of a child, such as the cessation of breastfeeding and the completion of weaning (this time varies between societies from one to two years to four to five years, but we could say that on average by two to three years of age this process is completed), first independent activities, and probably most of all to engage in social activities.

Among the Bambara of Senegal, Michelle Fellous (1981) observes that 'after cessation of breastfeeding [2 years] the child is included among other family members and the other children.

[3] See https://www.loebclassics.com/view/marcus_tullius_cicero-brutus/1939/pb_LCL342.265.xml.

Around three years of age he belongs to an institutionalized group [...] Children's associations are included in various religious festivals [...] these associations prepare the child to social and community life [...]'. The same author notes that there is no distinction between the world of the children and that of adults among the Bambara; the children's play and feasts take place in the village main square. There is full integration among age classes and children are not separate entities from adults' (Fellous 1981, translated by the author from the original in French).

The importance of the cessation of breastfeeding as an important event in child development is also suggested by Edin Schildkrout, who observed the Muslim community of the Hausa in urban Kano (Nigeria). The major trauma in the life of most Hausa children is weaning, particularly if this is immediately followed by another birth: 'Until weaning, the child is given the breast on demand and when the mother feels the need to breast feed [...] It is important that a child should be weaned soon after it can walk, for if another birth follows right after, the child can join the group of older children, in and around his or her own compound' (Schildkrout 1978).

In her account on early education among the Manus of New Guinea, Margaret Mead describes how little children grow up with the freedom to face measured risks and peril in order to learn from their mistakes, but are never left to face overly dangerous situations. She again identifies three years of age as an important age threshold.

> *'By a system of training which is sure, unhesitant, unremitting in its insistence and vigilance, the baby is given the necessary physical base upon which he builds through years of imitation of older children and adults. The most onerous part of his physical education is over by the time he is three. For the rest it is play for which he is provided with every necessary equipment, a safe and pleasant playground, a jolly group of companions of all ages and both sexes....But the Manus' conception of social discipline is as loose as their standards of physical training are rigid. They demand nothing beyond physical efficiency and respect for property except a proper observance of the canons of shame'* (Mead 1931, 37-38).

Coming of age in Samoa is more focused on adolescence and older age; nevertheless, Mead devotes a chapter to the education of the Samoan child. Samoan women nurse their children until two or three years of age (unless they have another child), after which the children are looked after by other older siblings or relatives – members of the community who can be as young as six or seven years old (Mead 2001, 16-18).

A new state after four to five years of age

Both literary sources, ethnographic accounts and modern psychology studies agree that children after three to four years of age enter a new stage of life, when they become socially integrated in various activities in their community according their age and status, such as religious festivals, work or production activities and the care of younger siblings.

Literary sources

Ancient authors report about children of aristocratic families from main cities in the Etruscan world, educated in the art of divination on the model of the childlike figure of Tages, the mythical founder of the Etruscan divinatory arts (*Etrusca disciplina*; Torelli 2000).

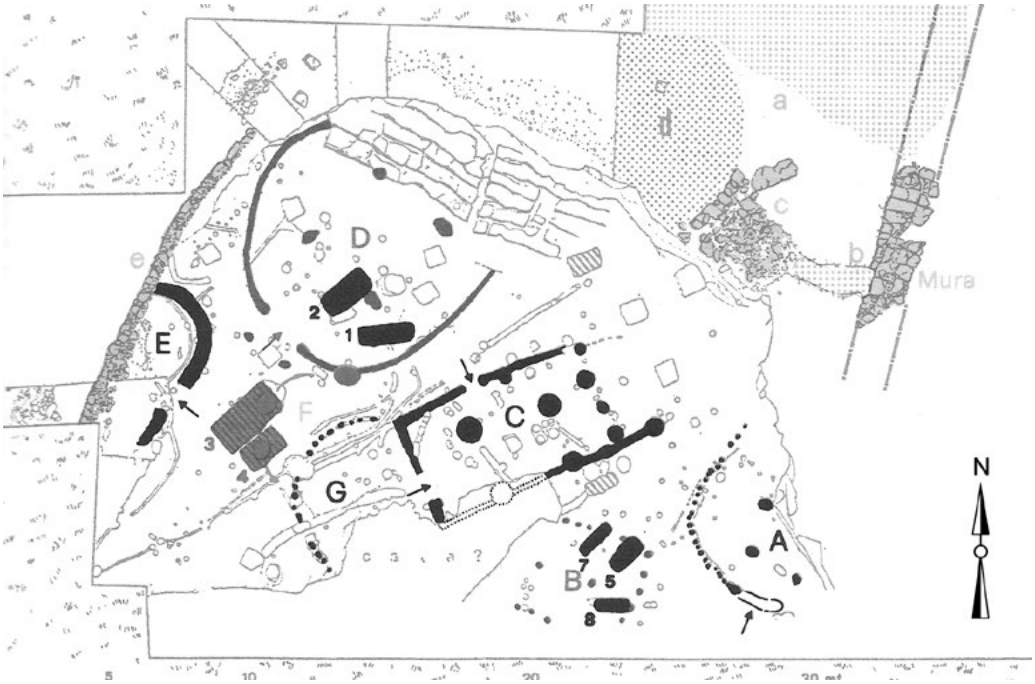

Figure 11.3. Lavinium, suggrundaria 8th -7th century BC (from Colonna 1988, pl. XVII, based on excavations by Maria Fenelli; reproduced with kind permission of the author).

In Attica, at the sanctuary of Artemis in Brauron, 'little bear girls' between five and ten years of age were involved in various activities and cult services to the deity. The cult of Artemis Brauronia was practised in Athens, too, at the Braunoeion. Every four years, a procession to the other Artemis sanctuary in Brauron took place, where young Athenian girls preparing for marriage were grouped in sacred factions called the *arktoi* (the little bear girls). They performed ritual dances and sacrifices, they raced, and they wore yellow robes. Much like in the Oriental sanctuary in Lavinium (Figure 11.3), many statues of girls giving away their childhood toys in preparation for marriage were found at the Brauron sanctuary in Attica (Montepaone 1999, 13-14; Sourvinou Inwood 1988).

In Rome, the Vestals were committed to priestesshood before puberty (between 6-10 years old) and sworn to celibacy for a period of 30 years. These 30 years were divided into decade-long periods, during which Vestals were students, servants, and teachers respectively. After her 30-year term of service, each Vestal retired and was replaced by a new inductee. Once retired, a former Vestal was given a pension and allowed to marry. The Pontifex Maximus, acting as the father of the bride, would typically arrange a marriage with a suitable Roman nobleman. A marriage to a former Vestal was highly honoured, and thought to bring good fortune, as well as comfortable material wealth (Wildfang 2006).

Lakedaimonian Gymnopaidies was a dramatic festival, probably instituted in Sparta in 668 BC and still practiced in Roman times, which included choral presentations by boys and girls, *ephebes* (adolescents) and adults. Pausanias associates the festival with the sanctuaries of Apollo, Artemis and Leto in the Agora of Sparta (Paus. 3.11.7). The political aspect of the festival is also clear, as it is essentially a transition rite from childhood to *ephebes* to adulthood (Martin 1951, 204-208).

Anthropological perspectives

Among ethnographic studies on the Hausa in Africa, the observations by anthropologist Enid Schildkrout are illuminating. Hausa children 'develop awareness or cleverness (*wayo*) during infancy. [...] they also develop wisdom (*hikima*) and creativity (*dabara*) quite early. A four-year-old who shaves a large stick to fit onto a small hole is said to be demonstrating *hikima,* while older girls who invent new embroidery designs, or boys who build airplanes and cars out of millet stalks or old tin cans, are demonstrating *dabara*. By about seven years, children are said to develop *hankali*, understanding or sense. [...] (For boys and girls) *hankali* implies the ability to discriminate between actions that are morally good and those that are bad. This understanding is said to develop with and be part of understanding the significance of male/female differences ... and the quality of modesty (*kunya*)' (Schildkrout 1978, 122-123).

Another important remark is that 'Hausa children enjoy a freedom that no other group in the society commands - the right to wander in and out of people's houses [...]". In this way, they can learn 'by observing many facets of the society that they will be excluded from as adult', because of the separate domains of female and male activities in this Muslim society (Schildkrout 1978, 124).

Interesting observations about the different status of slightly older children among the Coniuagui near Youkounkoun (Guinea) before independence in 1958 were made by Guessain and Sara (1981). In this community, children up to eight to ten years eat a simple soup with their mothers. When they are older, they join the male community and eat proper meals. When younger infants/children do not want to eat a particular food, they are given something else until they eat something; older children and young adults are not given any substitution if they do not want to eat their food. It is interesting to note that slightly older children are given small responsibilities and tasks such as looking after younger children and guarding the crops in the fields after harvesting (Guessain and Sara 1981).

In 'Coming of Age in Samoa', Mead describes how older children often take care of younger siblings/relatives. However, boys are relieved of this task, start being involved in adult activities and soon learn the advantages of co-operation. Girls, in contrast, are asked to look after younger children until they reach puberty or are strong enough to carry heavy loads back from the plantations. Another important skill for young girls to develop is weaving, from simple baskets to blinds to complex floor mats. A girl has to be apt and not lazy in domestic tasks to hope for a good marriage. With marriage, however, comes responsibility and greater loads of work, so in a way, for some girls, marriage is deferred as long as possible (Mead 2001, 22-24). In general, 'the community ignores both boys and girls from birth until they are fifteen or sixteen years of age. Children under this age have no social standing, no recognised group activities, no part in the social life except when they are conscripted for the informal dance floor' (Mead 2001, 52).

Convergence with psychological/medical studies and the relevance for us today

Psychological/medical studies

Modern psychology studies suggest that the development of speech, the cessation of breastfeeding, the start of social games and the acquisition of first independent behaviours are important aspects of child development that occur around three years of age. This threshold is regarded as a crucial time in the development of a child and is codified in many European countries as the beginning of infant pre-school, for example in Italy and the UK. This, in fact, is the time when the UK government provides subsidies for all children to support a certain number of hours education in nurseries and pre-school facilities.

Recent psychology studies have also noticed important developments in children older than four to five years of age with reference to social skills and interaction. In particular, acquiring an understanding of others' minds is a landmark milestone in children's socio-cognitive development that is often delayed in children with autism, or children with hearing impairments whose parents are not fluent users of sign language. To establish whether a child can understand that thoughts and feelings govern human behaviour or that people may hold different beliefs about the same situation, psychologists use simple story-based tasks involving mistaken beliefs. Like learning to read print, learning to 'mindread' may depend on support from more expert social partners (Astington and Hughes 2013).

Relevance of ancient data and interpretations for the discussion of educational and health policies today

As emphasised by Bateson, one of the most important lessons from Mead's studies on childhood and coming of age in ethnographical population is that 'differences in expected behaviour and character between societies (for instance between the Samoans and the Manus) are largely learned in childhood, shaped by cultural patterns passed on through the generations that channel the biological potential of every child, rather than by genetics. Because culture is a human artefact that can be reshaped, rather than an inborn destiny, she [Margaret Mead] was not a simple determinist, and her convictions about social policy always included a faith in the human capacity to learn'. She was studying those populations not only because Western societies could learn about people from the Pacific, but because they 'could learn from them' (Bateson 2001, xi-xii).

Mary Pipher (2001) observed that Mead's 'analysis of the problems of teens is curiously modern. At root, Mead believed the problems for American teens were too many choices, too much pressure, and too little exposure to real world phenomena such as birth and death. She believed in teaching children how to think, not what to think, and in the importance of intentionality in decision making. Her conclusions, that adolescence need not to be a time of stress and strain and that growing up could be freer and easier than we make it in America, are still being discussed in the beginning of the new century' (Pipher 2001, xix).

Recent scholarship shows how van Gennep's theory on rites of passages, especially with reference to adolescence/puberty, not only had a great resonance and application in research, but also has been used to inform current educational policy (Fasick 1988; Blumenkrantz and Goldstein 2014) and contemporary community practices in several different contexts (Blumenkrantz and Goldstein 2010; West-Olatunji *et al.* 2008). These applications show the importance of recognising

and studying age thresholds in past and present societies not as an end in itself, but something which helps to inform current educational and health policy discussion.

It is possible that recognition of the important transition around three to five years of age and understanding its significance and impact on the perceptions, behaviour and development of past and recent societies will help in discussions about educational and health policies. For example, the long-standing debate about the most suitable schooling age for children is well known. In the UK, it is set at about four to five years of age, while in Scandinavia is much later, at six to seven years of age. Claims that a later start to formal school education is preferable are supported by better outcomes over time (e.g. Palmer 2016; More Than a Score 2019). Some of the debate revolves also around mother-child interaction patterns and attachment theory (e.g. Moss *et al.* 1998; Granot and Mayseless 2001).

Just as the recognition of the puberty threshold as a rite of passage had positive effects on actual policy and community practice, the recognition of an earlier threshold between infancy and childhood and a discussion where it might be identified could be fruitful, for example in the current debate on the most suitable age for starting school (compare also the political and sociological perspective on children's agency in Milne 2013). As historians and archaeologists, we can provide data and interpretations about people and cultures that can better inform discussions and decisions by educators and politicians.

Conclusions

Traditional anthropological studies, from those by Arnold van Gennep and Margaret Mead to Mary Douglas and Victor Turner, have identified important thresholds in individuals' lives at birth, puberty, marriage, initiation to the priesthood or death. However, more recent anthropological observations, psychological studies and now archaeological investigations seem to indicate that another important threshold should be identified between infancy and childhood around three to five years of age.

As far as it concerns archaeology, this paper analysed Latin burials between the end of the Final Bronze Age and the end of the Orientalizing Age and compared them to Etruscan and other central Italian funerary assemblages, and suggested that there was an important age threshold between infants below three to five years of age and children older than this age. Children below this age generally lack gender and status role indicators, whereas children above this age might have these types of indicators.

A conspicuous number of ancient authors seem to relate this threshold to an important developmental stage in a growing child such as the development of speech. However, many ethnographical observations emphasise also the importance of the cessation of breastfeeding around the same age and the emancipation of the child from exclusive maternal care.

Both literary sources – especially about ancient religious initiations – and ethnographic accounts agree that between four to five and eight to ten years of age, children develop new skills and social abilities, and learn gender awareness. During this process, they acquire social status different from that of infants, becoming socially integrated in various activities in their community according to their age and status, such as religious festivals, work or production activities and the care of younger siblings.

Archaeology provides further evidence, which substantiates this perspective. This paper has shown that in Central Italy during the Early Iron Age, infants below three to five years of age generally did not have role or sex indicators, while children older than this age have them more often. The analysis of funerary assemblages from sites proceeding toward urbanization also suggest that with the advent of cities, more infants from exceptionally wealthy families tend to receive gender as well as status indicators. This seems to suggest that by this time, belonging to the aristocratic group intersects and overrules sex and age boundaries.

By taking an interdisciplinary perspective and by combining archaeological data with literary sources and ethnographic accounts, it is further suggested that this threshold might have been much more widely significant both in the past and in the present, as it is linked with the physical and social development of children at that age. Modern medical and psychological studies identify an important developmental threshold around three to four years of age, with the cessation of breastfeeding, the completion of weaning and the emancipation of the child from exclusive maternal care.

This convergence of data and ideas from different disciplines opens new perspectives for the importance of using ancient datasets and their interpretations to inform current discussions on education and health policies.

Acknowledgements

Some of the data and ideas presented in this chapter have already been published in other works, but the focus on age thresholds and their significance for the past and present has been developed in a new project and in discussion with Katharina Rebay-Salisbury and other scholars during the conference 'Interdisciplinary Approaches to the Lives of Infant and Children in Past and Present Urban Communities. Promoting Debate to Shape Current Policies in Health and Education', held at Bristol University in 2019 and funded by the Bioethics, Biolaw and Biosociety Research Strand of the Elizabeth Blackwell Institute, the Institute of Greece, Rome, and the Classical Tradition and the Arts Faculty Seeds Research Funds. The author is grateful to these institutions.

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Chapter 12

Child personhood in Iron Age Veneto: insights from micro-scale contextual analysis and burial taphonomy

Elisa Perego, Veronica Tamorri and Rafael Scopacasa

Introduction

This chapter tackles child personhood in Iron Age Veneto (Italy) by proposing a micro-scale contextual analysis of the recently published cemetery of Emo Palazzo Capodilista in Padua, *c.* 950-450 BC (Figure 12.1). We also detail theoretical and methodological issues concerning the study of child personhood in the past, a topic of growing interest in archaeology (Perego and Scopacasa 2018; on childhood in archaeology see e.g. Halcrow and Tayles 2008; Lally and Moore 2011; Lillehammer and Murphy 2018; Tabolli 2018). The anthropological concept of personhood offers a powerful framework for studying dynamics of social inclusion vs. exclusion in a more flexible manner, moving beyond standard discussions of rank and status in past societies (Perego 2016). By focusing on a sample of around 170 burials from Iron Age Veneto, we discuss possible attitudes towards infants and children in a phase of growing inequality and environmental stress (Perego and Scopacasa 2019). We also address challenges presented by the available material, such as the degree of preservation of sub-adult skeletal remains and the partial lack of published bioarchaeological data from Emo. Finally, we adopt archaeothanatology, a taphonomy-based method for the excavation and analysis of human burials, to provide further insights into funerary practices in our sample (Duday 2009; Nilsson Stutz 2003; Tamorri 2019).

Micro-scale contextual analysis affords a fine-grained assessment of past social dynamics and mortuary practices (*cf.* Perego and Scopacasa 2019). It also allows us to explore social change and its consequences on potentially vulnerable social segments, such as the infants and children who are the focus of this chapter. Our analysis will contribute towards a framework for the archaeological study of child personhood and its connection with past inequality – while discussing limitations in evidence and methods. Ultimately, this chapter intends to contribute to the ongoing personhood debate in scholarly analysis and society, by exploring how notions of personhood are socially constructed, culturally variable and in flux.

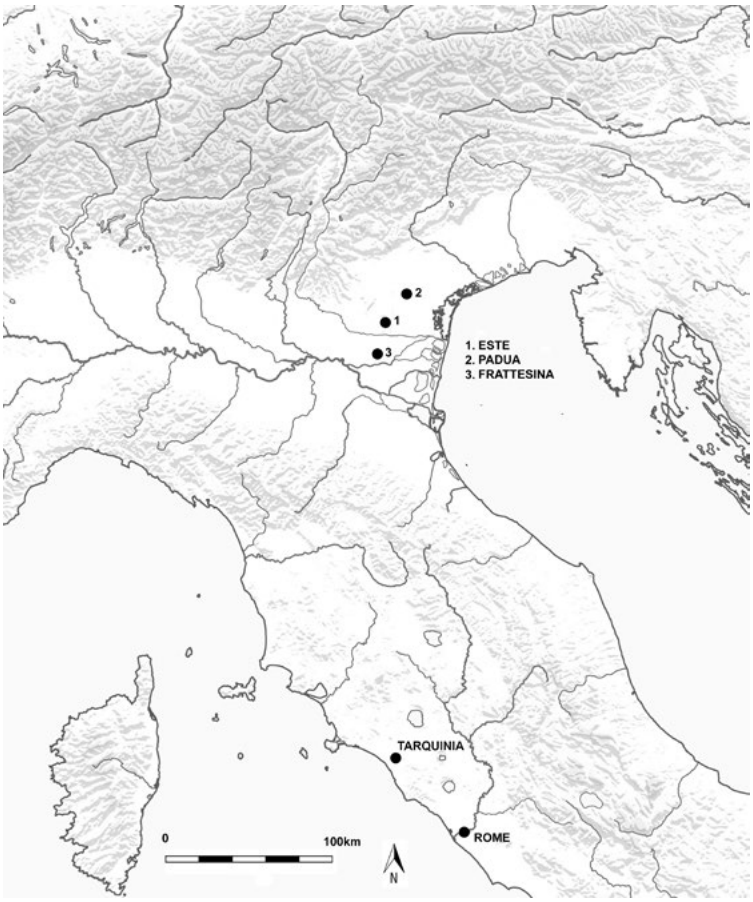

Figure 12.1. Map of Italy with the main sites mentioned in the chapter (by Elisa Perego and Lars Heinze, base map courtesy of the Ancient World Mapping Center).

Power and personhood

Personhood research represents a key strand of studies on the nature of 'humanity' in both the present and the past. The archaeological debate on personhood has developed along different lines. These address, for example, ideas of relationality and individuality (Chapman 2000; Fowler 2016) and dynamics of power and inclusion vs. exclusion from society (Perego 2012; 2016; Perego and Scopacasa 2018).

In current anthropological literature, 'persons' are usually defined as individuals – generally humans, but not exclusively – who receive full or partial membership in society (Appell-Warren 2014; Fowler 2004; Morgan 1989; 1997; 2006; Conklin and Morgan 1996). Membership criteria are defined by power dynamics and culturally specific ideas, for instance, on the body and the self. Cross-culturally, the category 'person' – i.e. an entity that possesses personhood – is not exclusive to humans, but may also include other beings, such as animals and plants (Bird-David 1999). In contrast, in certain societies personhood is not granted to all humans regardless of their social standing (Morgan 1989; 1997; 2006; Ingstad and Whyte 1995). Individuals can achieve different degrees of personhood in society and their personhood can increase or decrease during their life. In many societies worldwide, personhood is incremental: its gaining is a gradual process of transition that can last for many years after birth, or even cover a full

biological life (Morgan 1989; Conklin and Morgan 1996). Decreased levels of personhood can be noted in instances of disability, gender-related discrimination, extreme poverty and other conditions of social marginality – including potentially infancy (Ingstad and Whyte 1995; Lamb 1997; Desjarlais 1999; Kaufman and Morgan 2005; Sharpe and McMahon 2007; Denham 2017).

Notions of personhood and humanness are both socially constructed and intertwined in complex ways that vary across cultures. For instance, humanness has been defined as 'a categorization based on cultural perceptions of biology' while personhood is a 'moral, socially defined status that supersedes biology' itself (Morgan 1989, 92). In some cultures, for example, foetuses or disabled children may be regarded as animals or supernatural beings, rather than humans (Morgan 1989; Denham 2017). While certain societies conflate personhood and humanness, others draw a clear distinction between the two. The foetal personhood debate in the US highlights the tension between notions of humanness and personhood: humanness is a status that can be granted at conception or shortly afterwards, either legally or in popular attitudes towards prenatal life; personhood is a juridical condition that is usually gained at birth, but is undergoing reassessment because of pro-life movements to prohibit abortion (Morgan 1989; 1997; 2006).

Burial practices offer a crucial means to investigate personhood in both the present and the past. Case studies from ethnography and archaeology suggest recurring links between the granting of personhood and mortuary practices (Morgan 1989; 1997; Finlay 2000; 2013; Perego and Scopacasa 2016). Anomalous mortuary treatments, abuse of corpses and exclusion from formal burial may indicate the full or partial denial of personhood to the dead (Sheper Hughes 1993; Sorensen 2011; Perego 2016). Ethnographic research has also addressed the concept of social birth, which takes place when individuals are given complete or partial social membership – and can be entitled to formal burial rites after death. Social birth may not coincide with biological birth, thereby determining cases of 'delayed' personhood (Morgan 1989). Mortuary rituals – or forms of disposal – involving embryos, foetuses, stillbirths and young children can offer insights into past conceptions of child personhood and prenatal life. Anthropological research shows that such individuals are often – but not universally – considered nonpersons or incomplete persons; therefore, they are frequently granted only minimal funerary rites, if any (Morgan 1989; Sheper Hughes 1993). In many contemporary Western societies, however, there is a growing tendency to grant personhood to stillbirths and foetuses, with sophisticated forms of remembrance for these individuals being created anew (Garattini 2007; Peelen 2009; Sorensen 2011). Funerary rituals for infants can also offer insights into power dynamics that go beyond emotional responses to infant death. In many societies worldwide, the construction of personhood – and the granting of social significance to children – is a crucial political act. In the US, for example, diverging ideas on the social status of embryos and foetuses have caused intense debate concerning abortion, foetal personhood, and the role of religion, bodily autonomy and maternal rights in society (Morgan 1989; 1997; 2006; Bordo and Heywood 1993).

Methodology

Funerary archaeology

A key assumption of our work, therefore, is that the study of burial practices can provide insights into the degree of personhood granted to sub-adults in Iron Age Veneto, with a focus on foetuses, infants and children (Table 12.1).

Table 12.1. Age estimation of human osteological samples (modified after Buikstra and Ubelaker 1994). We also use the category of neonates to indicate individuals of an age range between birth and six months.

Age categories	Foetus	Infant	Child	Adolescent	Young Adult	Middle Adult	Late Adult
Age in years	Before birth	0-3 Years	3-12 Years	12-20 Years	20-35 Years	35-50 Years	50+ Years

However, the connection between burial practices and personhood is not direct or easy to discern. Mortuary rites do not necessarily mirror the social standing (Parker Pearson 1999) or the personhood status (Perego 2012; 2016) of an individual in life. People's roles in society can be renegotiated by the adoption of certain mortuary practices. Burial practices may serve to ideologically reconstruct or even crystallise an individual's personhood status, which might have been fluid during their life. Death itself can determine changes in an individual's personhood, i.e. their degree of social inclusion (Kaufman and Morgan 2005). Such processes might be mirrored in burial: secondary burial, for example, may generate further changes both in the ideological presentation of the deceased individual's identity, and their personhood status as created by the living – possibly as a consequence of forms of social death postdating biological death.

Research on mortuary rituals is increasingly focusing on the social and demographic representativeness of past burial sites (Morris 1987). This research stresses how formal burial may become restricted to specific individuals or groups, in view of mortuary policies based on marginalisation and discrimination. Access to formal burial may be grounded in criteria including rank, sex, gender, health, and age (on the situation in Italy *cf.* Cavazzuti and Salvadei 2014; Perego 2014; Perego and Scopacasa 2016; Tabolli 2018). In agricultural societies predating the introduction of modern medicine and vaccination, such as Iron Age Veneto, infants and younger children up to around five years of age generally amount to a considerable portion of the living population (Morris 1987; Chamberlain 2006; estimates of ancient child mortality can vary between 30 and 70%: Lewis 2013, 22). Pregnancy loss is also relatively common, especially in the first stages of gestation, and abortions might have occurred (Finlay 2013). In view of this, the lack or underrepresentation of foetuses, infants and younger children in past cemeteries can offer a clear indication of selectivity in formal burial. However, skeletal preservation or demographic-related phenomena (e.g. significant adult inward migration) may skew the profile of past funerary populations. This must be considered when assessing funerary dynamics concerning sub-adults. The recovery and proper documentation of sub-adult remains, therefore, is key to tackling past personhood via an analysis of ancient burial sites.

Burial taphonomy

A taphonomy-based method such as archaeothanatology can provide additional tools for recovering and assessing sub-adult skeletal remains (e.g. Duday and Tiller 1990). This is especially the case for the remains of foetuses and infants up to six months, which do not survive as well as those of older sub-adults or adults (on differential preservation see e.g. Baker *et al.* 2005, 11). Due to their small size, structure and fragility, the bones of younger sub-adults may be more easily destroyed or overlooked during excavation (Duday and Tiller 1990; Duday

2009; see Baker *et al.* 2005; Trentacoste *et al.* 2018). In this respect, archaeothanatology can maximise the amount of osteological evidence recovered in the field. It is also key to analyse post-excavation documentation of burials such as photos, drawings and reports (Nilsson-Stutz 2003; Duday 2009; Tamorri 2017a; 2017b; 2019), which is the perspective adopted in this chapter.

Archaeothanatology focuses on corpse taphonomy, the reconstruction of decomposition processes and the study of skeletal remains from an interdisciplinary perspective (Duday 2009). Analysis focuses on a) the relative chronology of disarticulation of labile and persistent joints; b) the dynamics of formation and infilling of the internal volume of the corpse; and c) the spatial distribution of bones in their surrounding environment (i.e. space of decomposition). The observation of evidence relating to these elements can provide information on:

1. the original position of cadavers at the time of interment;
2. how decaying corpses interacted with their surrounding environment (e.g. coffins) throughout decomposition;
3. anthropogenic interventions on human remains, such as intentional manipulations vs. tomb looting;
4. non-anthropogenic factors influencing bone distribution in the space of decomposition (e.g. passage of scavengers).

Overall, archaeothanatology can yield information on events occurring to human remains between death and excavation, while providing insights into the chronological sequence of such events. In the case of disturbed funerary contexts, for example, it may be possible to determine whether a tomb was reopened when the cadaver was in an advanced or early state of decay (Duday 2009). This, in turn, can provide a better understanding of the funerary actions involved in the creation of burials and, consequently, of the socio-cultural role of the dead.

Personhood in Iron Age Veneto

In the 1st millennium BC, Veneto and Padua were undergoing processes of urbanisation, and possibly of state formation (De Min *et al.* 2005; Capuis 2009; Gamba *et al.* 2013). Such developments can be traced to some extent in changes in funerary practices in the region. Pyre cremation followed by interment in tombs, generally with grave goods, was the normative funerary rite. Inhumation was far less common but is attested in frequencies that vary significantly between sites (e.g. Gamba *et al.* 2013; 2014). Inhumation could be used to underline social diversity and in more extreme cases social marginality (e.g. Perego 2016; Gamba and Voltolini 2018).

Previous research on Venetic personhood (Perego 2012; 2016) suggests that individuals in 1st millennium BC Veneto obtained recognition as persons in an incremental manner throughout their lives, and that full personhood was not granted to all. Thresholds, such as the passage between childhood and adulthood, seem to have marked the acquisition of increasingly important levels of social recognition in the life course. This is in line with evidence from both ethnographic research (Morgan 1989) and other Iron Age societies in Italy (Perego and Scopacasa 2018).

Venetic personhood – as expressed in the funerary record – was hierarchical, changeable and embedded in practices of power negotiation. It was a spectrum ranging from the full social recognition granted to cremated elite individuals buried inside formal cemeteries, to

the exclusion of those who were denied formal burial and were exploited, or abused, in life. Within the two ends of the spectrum, there are myriads of individual cases involving single human beings and burying groups. The variability of Venetic mortuary practices reflected both social differentiation between Venetic centres and changing ideologies of personhood throughout the 1st millennium BC. The role of formal burial in creating socially recognised human beings – persons – is first suggested by the complex ritual activities involving the delimitation of burial *tumuli* and cemeteries (e.g. creation of stone/wooden boundaries; deposition of offerings, including human and animal remains, under/near such boundaries). It is also suggested by the abnormal treatment of inhumations deposited outside formal burial sites (e.g. prone deposition in a settlement). Exclusion from normative funerary rites, such as exclusion from burial inside a *tumulus* or a cemetery, might have been a key means to erase or diminish the personhood status of an individual in death. In certain cases, anomalous ritual practices may have delineated forms of extreme marginalisation and violent deletion of personhood (Perego 2014; 2016), potentially involving human sacrifice (Michelini and Ruta Serafini 2013).

Among the criteria for the acquisition of personhood that are visible in the mortuary sphere, age, rank, kinship and social affiliation seem to have been crucial (Perego 2012; 2016). Gender, origin and health status might have also played an important role. The widespread absence or scarcity of foetuses, infants and younger children in formal cemeteries has been noted in scholarship on ancient Italy (for a recent discussion on the topic and different case studies *cf.* Tabolli 2018 and Weidig and Bruni 2015 on the presence of neonatal/foetal burials at Spoleto). However, exclusion of these age groups from formal burial was not necessarily the norm in 1st millennium BC Veneto – excepting foetuses. Many children, and sometimes neonates, were buried in formal cemeteries and *tumuli*. Some were even accompanied by lavish grave good assemblages: such cases were possibly meant to advertise the privileged status of these children's families. At the same time, some recurring features of infant and child burials point to the different status, and potentially incomplete personhood, of sub-adults vs. adults (Perego 2012; 2014). These features include the occurrence of infant burials in settlements; the scarcity or lack of grave goods in a number of child and neonatal graves, and the use of inhumation for foetuses and infants directly associated with cremation tombs.

Dataset

The case study sample comprises *c.* 170 burials, including around 72 sub-adults, from the cemetery of Emo Palazzo Capodilista. Emo developed south of Venetic Padua from the 9th century BC and was excavated in 2002-2003. It yielded around 692 tombs and three horse burials. The preserved graves mostly date to *c.* 950-450 BC. The later phases are poorly preserved, but the cemetery was used until the Roman period. The percentage of inhumation tombs is one of the highest in 1st millennium BC Veneto (n=156 i.e. 23%; cremation tombs, however, may contain more than one burial). The cemetery is only partially published. Gamba *et al.* (2014) published twelve inhumation and twenty-three cremation tombs dating to the early 1st millennium. Gamba and Voltolini (2018, table 1) released preliminary information of all remaining inhumations (chronology, age, sex, list of grave goods), and also provided detailed information about some inhumations (ritual practice, drawings of grave goods, photos) as well as preliminary plans of the cemetery in different phases. Other information about Emo was published in earlier reports (e.g. Gamba and Tuzzato 2008). Overall, in-depth bioarchaeological and taphonomic information remains unpublished. Stratigraphic data show

a change in cemetery organisation in different phases, but stratigraphy is sometimes poorly preserved owing to the intense use of the funerary space in antiquity. Tombs tended to cluster, with the size and shape of clusters changing over time. The use of earthen *tumuli* to cover tomb clusters, as in other Venetic sites, is possible but remains unconfirmed. An area probably used for cremating the dead (*ustrinum*) appears around 650 BC. Anomalous inhumation burials were deposited on or near the boundary of the *ustrinum* alongside dozens of pyre debris pits. Such depositions (prone, crouched, dismembered etc.) might represent human sacrifices used as ritual offerings to sacralise the *ustrinum* or its boundary.

In this chapter, we propose a micro-scale contextual analysis of the available evidence in view of personhood theory (Perego 2016; Perego and Scopacasa 2018, 167) and archaeothanatology applied to photographic and post-excavation material (Tamorri 2017a; 2017b; 2019). We did not perform osteological analysis ourselves and did not take part in the excavation. Key evidence dates to the period between *c.* 650-550 BC, which seems to show an increase in abnormal inhumation practices at Emo. This period also coincides with a phase of increased inequality, anomalous burial activities and environmental stress, as already shown in our previous work on central and western Veneto (Perego 2012; 2016; Perego and Scopacasa 2019; Tamorri 2019).

Analysis

Age

The published Emo cremation sample (Gamba *et al.* 2014, with osteological analysis and definition of age classes by Onisto) includes nineteen adults (21+ years, 63%) and eleven sub-adults (0-20 years, 37%). The latter are eight individuals between 0-7 years (26.6%) and three adolescents (14-20 years, 11.4%). In more detail, the sub-adults are:

1. one neonate of around six months;
2. one infant of around two years;
3. four individuals of around 0-7 years;
4. two children of around 6-7 years (buried with the neonate in a single urn from Tomb 178);
5. three adolescents;
6. in addition, one individual was estimated to be a young-adult female around 20 years, which is confirmed by the burial ritual pointing to adulthood.

The Emo inhumation sample includes 94 adults (61%) and 61 sub-adults (39%) (Gamba and Voltolini 2018). At least one individual was too poorly preserved for an evaluation of their sex and biological age. According to the published osteological data, the sub-adults are:

1. one foetus;
2. 38 infants (24.5%), including 27 neonates (17.4%), mostly estimated to have been around or under five months at the time of death (compare with the cremations above, where neonates might have been between 3 and 13% of the published sample);
3. 15 children approximately between four and twelve (most between eight and twelve);
4. six adolescents, including one individual between 13 and 15 years;
5. the incomplete individual in Tomb 306 has been estimated as a sub-adult.

Burial posture

Most inhumation burials at Emo were supine, as was the norm in formal cemeteries across 1st millennium BC Veneto (Perego 2012; Gamba and Voltolini 2018). Twelve prone and ten crouched inhumations are also attested at Emo. As elsewhere in Veneto, such burials were often additionally characterised by other anomalous features (e.g. deposition outside a burial cluster, careless interment, lack of grave goods). Prone and crouched individuals at Emo seem to have been mostly middle- to late-adult females. For individuals up to around two years, the 'foetal' position is prevalent (*cf.* Gamba and Voltolini 2018 for a precise description of the positioning): the neonate in Tomb 183, for which a photo is available in Gamba and Voltolini 2018 (Fig. 5, T. 183), was arranged on the right side and oriented west. However, the posture of many infants could not be recorded, and several individuals in this age range are among the supine burials. The supine position, similar to that of most adults, becomes more frequent at around eight to nine years of age, and is favoured for individuals aged twelve years or older. These patterns may provide insights into thresholds for the attainment of different levels of personhood: biological children started to align with adults, at least in regard to burial posture, between eight and twelve. Thresholds, however, seem to have been relatively fluid. As noted below, most of the sub-adults with grave goods were supine. This might point to the young deceased being presented as adults in death, possibly attaining higher degrees of personhood than others in their age range.

In contrast, prone and crouched individuals might have been presented as not fully developed persons, akin to infants, or been deprived of personhood in death. Only one older child (9-12 years) was crouched, and no infants or children were prone. This is in line with evidence from the whole 1st millennium BC Veneto, where crouched infants and children are sometimes attested, but prone burials in this age range are absent or extremely rare (*cf.* dataset in Perego 2012). At least one prone child is attested in the Frattesina Narde sample (Rovigo), which however dates to *c.* 1200-1000 BC. This variation in burial treatment suggests diverse practices of denying personhood to younger children vs. prone adults: both groups might not have been fully integrated into society, but for different reasons (e.g. premature death preventing full personhood acquisition vs. deviant behaviour in life leading to personhood erasure in adulthood).

Burial location

Tombs from Emo tended to cluster, and the shape and size of the clusters varied significantly between different phases. Only preliminary maps of the cemetery are available. Therefore, not all tombs considered here could be precisely placed in the funerary space. Both inhumation and cremation tombs could be deposited inside or outside the identifiable burial clusters. Anomalous prone and crouched individuals, however, were generally deposited outside; these individuals were often middle- to late-adult females (according to osteological data made available in Gamba and Voltolini 2018, table 1). With the activation of the *ustrinum c.* 650 BC, and in the phase immediately preceding its creation, such anomalous depositions tended to coalesce near the *ustrinum* area or on/inside its boundary (Gamba and Voltolini 2018). Dismembered individuals dating *c.* 625-575 BC were all placed near or inside the *ustrinum* itself (Tombs 121a, 121b, 123 and 306, as published in Gamba and Voltolini 2018). This phase is characterised by growing instability and environmental stress in both the main Venetic centres of Este and Padua, including an increase in flooding episodes documented in the stratigraphy of settlement and cemetery areas (Perego 2016; Perego and Scopacasa 2019;

stratigraphic data in e.g. Balista *et al.* 1992; Bianchin Citton *et al.* 1998; Gamba *et al.* 2014). Environmental and social instability might have motivated increasing ritual violence and funerary deviancy at Emo as well.

Sub-adults, including infants and children, could be fully integrated within the burial clusters. This suggests some degree of social inclusion and personhood acquisition, even when inhumation was chosen instead of cremation, and infants were buried in the foetal position with no grave goods. Two cases of interest are inhumation Tombs 183 and 241, both with grave goods and buried within a cluster between *c.* 625-575 BC. Some sub-adults, however, received anomalous treatments and were deposited outside the clusters, in isolation or near/within the *ustrinum*. Such cases might indicate forms of violent erasure of personhood, which seem to have involved older sub-adult individuals as well as adults. These sub-adults include:

1. the crouched child in Tomb 650, 9-12 years at death and found with no grave goods near Tomb 442, also with no grave goods (*c.* 750-675 BC). Tomb 442 belonged to a late-adult female placed in an extremely flexed/crouched position near the area where the *ustrinum* was to be created *c.* 650 BC;
2. the dismembered male in Tomb 123, with reported evidence of spina bifida (a detailed description of which remains unpublished). He was around 18-21 years at death and was deposited inside the *ustrinum* near other abnormal depositions, such as inhumation Tombs 124, 121a and 121b;
3. the sub-adult remains in Tomb 306. The pit was placed near the *ustrinum* and contained a partially cremated human spine with charcoal and fragmented pottery.

Grave goods

Grave goods are absent or scarce in cremation tombs dating to the earliest phases of use of the Emo cemetery (but *cf.* child Tombs 552, with a *boccale* pot, a bowl and eyed glass beads). Grave assemblages in cremation tombs, however, become more complex and sophisticated from *c.* 750 BC and seem to have often been associated with sub-adults (Gamba and Tuzzato 2008; Gamba *et al.* 2014, 114). The deposition of grave goods with cremations was a widespread practice across Veneto for most of the 1st millennium (e.g. Bianchin Citton *et al.* 1998; Chieco Bianchi and Calzavara Capuis 2006; Gamba *et al.* 2013).

Objects such as ornaments, pots and tools were discovered with thirty-five inhumations from Emo out of 156 (22%). This is lower than the figure noted for a sample of a few hundred inhumation burials in formal cemeteries across the region (35% in Perego 2012), possibly because of the numerous infant and abnormal inhumations at Emo. Grave assemblages in the Emo inhumation sample were usually very simple, except for four or five middle-adult or late-adult individuals, both males and females (e.g. Tombs 403, 605 and 468). As elsewhere in Veneto, when grave assemblages appear at Emo they were generally associated with supine adults. According to Gamba and Voltolini (2018), the percentage of inhumations with objects drops from 30% in the early 1st millennium, to 20% in later phases, suggesting a change in the meaning of inhumation rites (note the opposite trend with cremations; abnormal inhumations seem also to be absent in the earliest phase of the cemetery). This may suggest that either more people of low status had access to the burial site (*cf.* Gamba and Voltolini 2018, 214) or that increasing marginalisation of buried individuals took place in a phase of growing social and environmental stress.

Most sub-adults in the Emo inhumation sample were buried with no visible or surviving grave goods. This might indicate incomplete personhood or, at least, that the status or role of these individuals was not delineated through the deposition of grave goods.

Exceptions are:

1. the neonate in Tomb 90 (0-2 months) associated with a coarse-ware small pot (*bicchiere*);
2. the neonate in Tomb 183 (around 2 months) with two bracelets and glass beads;
3. the infant in Tomb 241 (around 2 years) with a fine-ware *a stralucido* cup (*tazzina ad ansa sopraelevata*) and a fine-ware *a stralucido* pot (*boccale*);
4. the child in Tomb 150 (7-8 years) with a serpentine fibula fragment and a pebble;
5. the adolescent from Tomb 443 with shells and an *olletta* pot;
6. the adolescent (13-15 years) from Tomb 601b with a *bicchiere*.

Four out of six sub-adults with grave goods were in a supine position. The burial posture from Tomb 90 could not be recorded. The neonate in Tomb 183 was in the foetal position (*cf.* photo in Gamba and Voltolini 2018), and was also associated with tiny glass beads and spiral bracelets, items that often appear in infant or child cremations of the period (e.g. Chieco Bianchi and Calzavara Capuis 2006; Gamba *et al.* 2014). Both the grave goods and the burial posture point to the infant being presented as such in death.

Glass beads appear in the Emo inhumation sample only in relation to the prone late-adult female in Tomb 542, who was deposited in the *ustrinum* area. She was also associated with a pebble. The only other pebble in the published Emo sample is in child Tomb 150. Pebbles and glass beads from Venetic contexts have been discussed in view of their possible role as toys, ornaments and, crucially, amulets (Perego 2010, with a special emphasis on blue glass beads, as in Tombs 542 and 183). Pebbles were also found with some Venetic anomalous inhumations (Gamba and Voltolini 2018), including the potential human sacrifice from Via Tiepolo *Tumulus* A in Padua, which appeared after flooding *c.* 600-575 BC (Gamba *et al.* 2015; Perego and Scopacasa 2019). The presence in Tomb 542 of possible amulets, otherwise only attested in neonatal and child inhumations at Emo, might further underline the abnormality of the prone female in this tomb, or suggest that her (personhood) status was comparable to that of a child.

Shells, found in adolescent inhumation Tomb 443, seem to have also been used in Veneto as amulets, ornaments and/or toys, and were often associated with sub-adult and female burials (e.g. Chieco Bianchi and Calzavara Capuis 2006; Gamba and Tuzzato 2008 on the Emo cremations; Perego 2010). The vessel shape from Tomb 443, an *olletta*, appears in the same phase only with the anomalous crouched female in Tomb 421, discussed below. Additional potential amulets (amber, coral, animal teeth etc.) appear in few other Emo inhumations (less than ten). All Emo inhumations with possible amulets seem to have been middle/late adults, sub-adults and abnormal burials, potentially indicating a need for 'magical' protection against disease, the dangers of child mortality or old age, and the like. Such items are relatively widespread in cremation tombs, including wealthy ones, generally in connection with sub-adults and women (Perego 2010). The supine late-adult female in Tomb 468 boasted the richest grave assemblage in the Emo inhumation sample; her grave goods included coral, amber and animal teeth. The available osteological analysis, pointing to advanced old age, might be indicative of extensive physical strain and/or anomalous longevity for the time, perhaps justifying the adoption of the less common inhumation rite and protective devices.

The cup from infant Tomb 241 is a type used in drinking practices, potentially involving elite alcohol consumption. Such cups generally accompany adult cremations (e.g. Chieco Bianchi and Calzavara Capuis 2006; Gamba *et al.* 2014). The association with a supine infant suggests a high degree of social recognition for the young deceased. The other pot in the tomb, a *boccale*, has similarities with the vessel shape from the earlier, and relatively well-endowed, Emo child cremation Tomb 552 (*cf.* Gamba *et al.* 2014, tav. 5, fig. 5; above). If such *boccali* were considered vessels for children (e.g. a sort of feeding vessel), then their deposition with these individuals might point to the infant or child sphere. Alternatively, if *boccali* were used as part of wine drinking sets, which in the infant inhumation Tomb 241 included the cup, they could signal the attribution of aspects of an adult identity to the cremated child from Tomb 552, too. The *bicchieri* in neonatal Tomb 90 and adolescent Tomb 601b are unpublished. Vessels defined as *bicchieri* are associated with fourteen inhumations from Emo, including five late-adult burials, such as Tomb 468 (female with possible amulets, above). They also appear with abnormal depositions, such as Tombs 421 (crouched adult female with an *olletta*, above), 98 (prone late-adult female, fragment of a *bicchiere*) and 121a (potentially dismembered adult male). The content or specific use of such vessels remains unconfirmed. Their frequent low quality (Gamba and Voltolini 2018, 219), closed shape and occasional association with lids point to a soft and non-prestigious content, possibly used as baby or sick food, at least occasionally. It is possible, however, that vessels such as the *bicchieri* were multifunctional and put to different uses in different contexts; at Emo this is suggested by the association of *bicchieri* with a variety of different vessel shapes, with such pottery assemblages becoming more complex in the tombs of older individuals (for further discussion see Perego *et al.* 2020). The *bicchiere* in neonatal Tomb 90, therefore, could indicate an offering, the will to present the neonate as an adult, or an early attempt at weaning.

Gender and biological sex

The published Emo cremation sample includes 17 possible females and 11 possible males, but cremations have often been difficult to sex (Cavazzuti *et al.* 2019). The Emo inhumation sample includes around 51 females and 38 males. Buried females were roughly twice as numerous as males between the 9th and the mid-7th century BC. Only in later phases do male inhumations seem slightly prevalent (Gamba and Voltolini 2018).

Preliminary osteological data from the Emo inhumation sample show that pathologies – including those potentially linked to poor nutrition – were more widespread among females (Gamba and Voltolini 2018, 214 with previous bibliography). Most prone and crouched individuals were also females: eight prone females vs. three prone males are reported; while seven crouched females and two crouched males were identified. Most of the anomalous burials have been estimated to be middle- or late-adults, with only one male and one female being early-adults and one individual being an older child (according to data in Gamba and Voltolini 2018, table 1). In the earliest phases of use of the cemetery, half of the anomalous burials appear to have been late-adult females. Most anomalous depositions outside burial clusters are also females. These trends point to forms of gender-based discrimination or personhood erasure, potentially focusing on certain late-adult females (but certainly not all: e.g. Gamba *et al.* 2014, 214). A similarity with the foetal posture of infants cannot be discounted: the denial of supine burial to infants and prone/crouched individuals, mostly women, might have delineated social integration to a lesser degree in both cases. The overrepresentation of buried females in the earlier phases of Emo might further point to

gender-based discrimination, if it were confirmed that male individuals had been preferably cremated in this period (but *cf.* the osteological data from Gamba *et al.* 2014, above). However, it is also possible that forms of marginalisation involved some categories of men, if such individuals were intentionally excluded from formal burial *tout court*.

Some grave assemblages associated with the Emo inhumations include items probably indicative of the gender of the deceased (e.g. a spindle whorl for women, pins for men). Gender, however, does not seem to have been routinely highlighted through the deposition of grave goods, especially in regard to sub-adults. This is possibly because the expression of gender in burial was linked to status, and many Emo inhumations might have been low-status or marginalised individuals. As noted above, grave assemblages in cremation tombs were usually more sophisticated, also as regards gender delineation. Cases are also attested in which the osteological sexing of an individual is at odds with the gender significance of their grave goods. A case in point is inhumation Tomb 24, where an individual estimated as a 19-25-year-old male was buried with a tiny leech fibula, the only surviving item in the tomb. Small-size leech fibulae in central Veneto are usually associated with female and sub-adult cremations (e.g. Bianchin Citton *et al.* 1998; Chieco Bianchi and Calzavara Capuis 2006). The case of Tomb 24 could therefore point to an offering given to the deceased, for example by a relative, or to the ideological construction or display of gender and age categories that did not correspond to the norm for that context.

Burial structure

Preliminary data indicate that a variety of burial structures were used, probably in relation to the status, rank and investment of the burying community in the deceased (Gamba *et al.* 2014; Gamba and Voltolini 2018). Pits and containers in perishable materials were often associated with cremations, with such structures becoming more sophisticated with time. According to Gamba and Voltolini (2018), inhumations were generally deposited in pits, either directly in contact with the ground or possibly wrapped in a shroud. In some rare cases, such as late-adult female Tomb 468, a wooden container might have been used. Anomalous inhumations (e.g. prone) seem to have been disposed of in simple pits, sometimes in a careless manner.

Our archaeothanatological analysis of neonatal Tomb 183 provides further insights into burial structures at Emo, especially concerning the possible use of covers over the body (see Perego *et al.* 2020 for an additional case study). The small, fragile remains in the grave are poorly preserved; the upper and lower limbs appear incomplete in the photo available (Gamba and Voltolini 2018). However, the incompleteness of the skeleton (e.g. lack of bones of hands and feet) seems due to erosion or other post-depositional processes (e.g. passage of scavengers), rather than to intentional anthropogenic interventions on the human remains.

Overall, the anatomically correct distribution of bones in the tomb indicates a primary burial, namely the first and final resting place of this individual. The collapse of the ribcage suggests the possibility that the corpse (or at least this part of the cadaver) underwent a so-called delayed filling of its original volume (Duday 2009). This hypothesis is also supported by the collapse of the skull within its internal volume. Delayed filling takes place when the voids created inside the cadaver following organs and soft tissue decomposition are not immediately re-occupied by sediment (and/or bones), but persist for some time (Duday 2009, 53; Tamorri 2017a; 2017b; 2019). Indeed, in the present case, the deceased seems to have been placed in direct contact

with the ground and not in a coffin. However, the delayed filling of the thoracic volume may also suggest the possible use of a cover over the body, which if present, decomposed after the cadaver's soft tissue (e.g. leather; Duday 2009, 34). Such element, along with the thick and lumpy texture of the soil covering the cadaver, may explain the distribution of bones in the thoracic area of the burial.

In terms of grave goods, glass beads are visible in the neck area of the burial, but it is unclear whether they were part of a necklace. Their position may not be primary; the passage of a scavenger or the presence of air pockets may have caused them to shift from their original location in the tomb. One bracelet was in the wrist area, thereby suggesting that the deceased wore it, while another was behind the lower back of the individual. The possibility that the latter was worn at the wrist at the time of interment is unlikely. Rather, it could represent an offering placed in contact with the body or even over the burial cover. Notably, offerings were often placed on the cover of cremation tombs in Venetic cemeteries (e.g. Capuis 2009). The use of grave goods and an offering, the interment inside a burial cluster and the possible presence of a cover protecting the body would indicate care for the young deceased and a degree of social inclusion.

Discussion

The Emo funerary population is not representative of a standard living population for an agricultural society predating the introduction of modern medicine and vaccination. Females are overrepresented in certain phases, while neonates and young children are underrepresented overall. However, the intense use of the funerary space and preservation issues with infant burials could have diminished the funerary visibility of younger sub-adults in our sample. The lack of data from most cremations contributes to hindering full recognition of funerary practices at Emo. However, the occurrence of infant settlement burials in Padua (*cf.* dataset in Perego 2012) proves that not all infants were granted a place in the formal cemetery.

Despite being underrepresented overall, numerous infants are still attested in the Emo sample, especially among the inhumations. We are presently unable to provide a precise age estimation of most sampled neonates, who may have survived for days or even weeks after birth. With the available evidence, it is not possible to clarify whether the Emo burying community distinguished between biological and social birth, the latter possibly occurring a few days after the former. Notable is the presence of several individuals in the inhumation sample estimated to have died around or less than five months: this might point to the five- or six-month age threshold for a passage in personhood status, after which it might have been more common for infants to be cremated. Differences in burial ritual between children and adults also point to incremental personhood or, at least, to the recognition of infancy and childhood as distinct categories in the life course.

The precise age *in utero* of the only foetus is not reported in Gamba and Voltolini (2018). The apparent absence or scarcity of foetal burials in Venetic cemeteries such as Emo, may point to biological birth close to term, and/or live birth, as major thresholds for the attainment of personhood, or at least some degrees of it. This raises questions concerning conceptions of prenatal life, the personhood/humanness of preborn beings, and the social recognition of pregnancy loss in Venetic communities.

Deposition outside a *tumulus* or a burial cluster in Venetic cemeteries has already been suggested to delineate lower social status (e.g. Bianchin Citton *et al.* 1998) or aspects of an individual's personhood status, such as personhood deprivation or diminished social inclusion (Perego 2012; 2016). At Emo, deposition outside a cluster involved both sub-adult and adult inhumations as well as some cremations (Gamba and Voltolini 2018). It is worth noting, however, that precise stratigraphic identification of such clusters is sometimes difficult because of the intense use of the funerary space. Abnormal depositions (prone, crouched, dismembered etc.), mostly of adults, are often associated with the *ustrinum*. Overall, burial location at Emo does seem to delineate forms of social exclusion vs. inclusion; these, however, were most likely not related, or primarily related, to biological age. Burial posture and grave goods, on the contrary, may delineate different stages in incremental personhood, as well as differentiation based on gender/sex, age, status and rank. However, moving from one personhood stage to another was not necessarily about one's position in the life course. Adults could be granted less social recognition than infants, while sub-adults of similar biological ages received different funerary treatments. Forms of inclusion vs. exclusion from society – or their funerary presentation – were most likely related to a variety of individual circumstances beyond one's age, such as gender, health, social/kin affiliation, socio-economic status, cause of death, deviant behaviour in life, stigma etc.

Very rarely, infants and children in the inhumation sample could be buried akin to normative adults (e.g. Tomb 241, discussed above). This is, by far, more common in wealthy cremation tombs, possibly as an expression of high status. Social age, therefore, may not have always corresponded to biological or chronological age in 1st millennium BC Veneto. In addition, sub-adult burials, including neonatal ones, sometimes display similarities with abnormal adult inhumations, especially with some females (e.g. denial of supine position). Both categories of individuals, namely sub-adults and abnormal adults, might not have attained full personhood, or might have been deprived of personhood in death.

Variability in burial practices at Emo may indicate different degrees of emotional and practical investment into the deceased, including the younger members of the community; it could also point to the existence of competing beliefs about life and death among the mourners, especially as regards the beginning of meaningful life. Nevertheless, power dynamics involving the broader community might have determined the funerary treatment granted to our sub-adult sample. For example, the burial of infants and children with grave goods typical of adults might have served to advertise the status of their family, especially in phases of growing social inequality. This would cohere with anthropological studies (Morgan 1989; 1997; 2006), which emphasise the socio-political nature of child personhood in many societies worldwide.

Conclusion

Our analysis of the Emo Palazzo Capodilista burial sample in Padua provided new insights into the construction of personhood in a context of growing inequality and environmental stress. Overall, the evidence from Emo confirms that in Iron Age Veneto, individuals gained recognition as persons in an incremental manner, and that full personhood was not granted to all. Foetuses, infants and children were among those possibly denied full personhood – as were adults given abnormal burial treatments. The adoption of the rare inhumation rite could underline social exclusion, especially in certain chronological phases, or social diversity and

the expression of marginal identities in death. Variety in inhumation practices might provide insights into incomplete personhood and different forms of personhood erasure – at least in death. Age almost certainly contributed to determine the degree of personhood granted to the deceased, but was not the only factor at play. Child and even neonate burials at Emo are sometimes characterised by features pointing to deeper levels of social inclusion than many sampled adults. These features include the use of cremation and grave goods, inhumation with supine posture and deposition inside burial clusters. Significant variation in practices associated with sub-adults even in the same age range, further suggests that factors other than biological or chronological age (e.g. birth right, health, social affiliation, cause of death) played a role in determining the funerary treatment and degree of social inclusion of the young deceased. A wide range of factors – including status, rank and impairment – might have also determined the different levels of social recognition granted to adults, such as older women.

Between 900 and 450 BC, growing social stratification and environmental stress seem connected with the spread of new social control mechanisms in Venetic funerary contexts. The groups who managed cemeteries such as Padua Emo may have manipulated notions of personhood, age and social integration to reassert their authority and survival in the face of social and environmental instability. This is especially evident between *c.* 650 and 550 BC, a phase which is characterised by major floods, accelerated socio-political change and increased deviancy in the funerary sphere (Perego and Scopacasa 2019). In this highly charged ideological environment, it remains unclear to what extent notions of childhood and social inclusion – or their denial – might have reflected the everyday treatment of sub-adults and individuals who appear to have been marginalised in death.

The publication of all data pertaining to the Emo sample, including paleopathological evidence, will shed further light on the matter. The identification and publication of precise age classes in sub-adult samples would be vital for further discussions on past burial practices involving children (e.g. Siebke *et al.* 2019 on the identification of the so-called neonatal line via thin section). Routine application of archaeothanatology to both photographic material and in the field can yield important information on child burials in past funerary contexts, including Veneto. A wide-ranging analysis of grave good types will shed further light on the significance of artefacts buried with children, in view of the broader Venetic cultural context. A focus on care-related artefacts (e.g. feeding vessels, amulets) can uncover dynamics concerning impairment, disability and inequality (Perego *et al.* 2020).

Overall, our discussion of the Emo sample and of Veneto in general suggests that notions of personhood vary cross-culturally and are not universal. While the link between personhood and funerary practices is not necessarily direct, this chapter demonstrates that archaeology can contribute significantly to the wider personhood debate. Particularly, multi-disciplinary archaeological analysis can help understand practices relating to personhood in deep time and from a cross-cultural perspective. A personhood-focused approach to mortuary evidence can offer new insights into past conceptions of prenatal life, pregnancy loss, and the social role of children.

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Author contributions

Elisa Perego: concept, funding acquisition, data acquisition, methods, analysis, interpretation, writing (first draft, editing); Veronica Tamorri: method, analysis and interpretation (archaeothanatology), writing (first draft: burial taphonomy, editing); Rafael Scopacasa: interpretation and writing (first draft, editing).

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Chapter 13

The recognition of children and child-specific burial practices at the necropolis of Spina, Italy

Anna Serra

The study of childhood in Etruscan Studies

During the last decades, interest in the archaeology of children and childhood has increased. However, a complete and systematic study of childhood in Etruscan society has yet to be carried out; the focus of research on past childhood has been primarily in pre- and proto-historic, Greek, Roman and Gallo-Roman archaeology (e.g. Bonnard *et al.* 2017; Carroll 2018; Nenna 2012; Dasen 2004, 11; Guimier-Sorbets and Morizot 2010; Hermary and Dubois 2012).

The lack of attention dedicated to children within Etruscan Studies contrasts strongly with the available literary and ritual evidence, which, albeit scarce, testifies to children's importance in both social and religious spheres. For instance, the literary sources recall the myth of the sage child *Tages,* who taught the religious laws, the *etrusca disciplina,* at the beginning of Etruscan history (Nizzo 2015). Nevertheless, Etruscan funerary rituals for children have been rarely addressed as a distinct topic of research (Tabolli 2018) and were only partially discussed in relation to single contexts or necropolises (e.g. Becker 2011; Hladikova 2013; Muggia 2004), selected chronological phases (e.g. Nizzo 2011) or particular topics (e.g. depositions inside inhabited areas: Zanoni 2012). The analysis of the presence of children within a necropolis or selected geographical area represents a fundamental step in the archaeology of Etruscan childhood (e.g. the necropolises of Pontecagnano; Cuozzo 2003). The exceptional discovery of child depositions within Etruscan sacred areas has shed new light on childhood in Etruria and promoted increasing attention to children in the ritual and religious sphere (Bartoloni and Benedettini 2009; Govi 2018; Stopponi 2016). In particular, the discovery of an infant deposited inside the sanctuary of the Etruscan goddess *Uni* in the city of Marzabotto (Govi 2018) has encouraged research, leading to the creation of the project BIRTH (Burial/ Infant/ Ritual/ Theme), led by Elisabetta Govi, PI and Chair of Etruscology of the University of Bologna, and funded by the University of Bologna with an ALMA IDEA Senior grant.

A systematic analysis of childhood within Etruscan society must start with a complete survey of the archaeological evidence. Emphasis should be put on the funerary evidence, and the observation of all related information, such as the reconstruction of the burial context, the spatial distribution of tombs in a cemetery, the analysis of rites or customs reserved for children, and the presence of age 'markers' in graves (e.g. Contursi 2017, 30; Muggia 2004, 19-21). In Tyrrhenian Etruria, such a systematic analysis may prove challenging due to the methodology applied during antiquarian excavations and difficulties in reconstructing the original burial contexts. During the entire time-span of the Etruscan civilisation, the deceased were normally buried with grave goods (Colonna 2014, 27), which offer crucial information on funerary rites and customs. However, many necropolises of Tyrrhenian Etruria were excavated during the 19th century, and insufficient data were collected about the contexts, grave goods, osteological materials and the spatial organisation of cemeteries. Therefore, most of the data have been lost, along with the human remains, which were rarely preserved and were generally analysed only with a focus on the population and its origin (Mallegni and Vitiello 1997). In addition, multiple burials or chamber tombs are common in Tyrrhenian Etruria; this increases the difficulty of identifying any connection between the individual and their grave goods and may present a methodological barrier to the analysis of funerary rites. Overall, these aspects are important challenges to the study of particular types of rites or 'less visible' social groups such as children, which are the most difficult to recognise within the archaeological record (Mallegni *et al.* 1979, 193; Mallegni and Vitiello 1997, 21).

Given all the above, the Etruscan Po Valley represents an ideal area to develop new approaches to studying Etruscan childhood. In this region, necropolises are characterised by single depositions, which can be systematically analysed to shed new light on funerary rites for children and their social role. A pioneering study of child burials at the Valle Trebba necropolis of Spina (Muggia 2004) offered a key reference for research on funerary archaeology in the Etruscan Po Valley. When this study was carried out, however, systematic research of the whole necropolis was lacking. In fact, Valle Trebba was nearly completely unpublished and unknown, with the exception of a few single burials. Child tombs were considered in isolation from the rest of the necropolis, and research focused on reconstructing ritual practices within the selected sample. In recent decades, however, the Chair of Etruscology of the University of Bologna has endorsed systematic research on the necropolises and settlement areas of the Etruscan Po Valley dating from the 6th-3rd centuries BC (Gaucci *et al.* 2018; Govi 2017).

The purpose of this chapter is to draw attention to the potential of an archaeology of childhood in this geographical area as part of broader research, using the Valle Trebba necropolis of Spina as a starting point. Current international publications on childhood provide valuable material for comparison and inspire the development of analytical methods useful for overcoming local problems and limitations, such as issues related to identifying children even in the absence of skeletal remains. Reconstructing whole burial contexts will allow a complete analysis of the possible inclusion of children in the funerary sphere. This can be achieved by contextualizing the funerary rites and spatial choices in order to better comprehend ritual continuities and discontinuities, as well as anomalies in burial treatments (D'Agostino 1985; Cuozzo 2003).

The Etruscan Po Valley and the city of Spina

The city of Spina was founded in the second half of the 6th century BC in the Valle del Mezzano on an ancient branch of the Po River, known as Po Spinete. The Etruscan city of Bologna, the

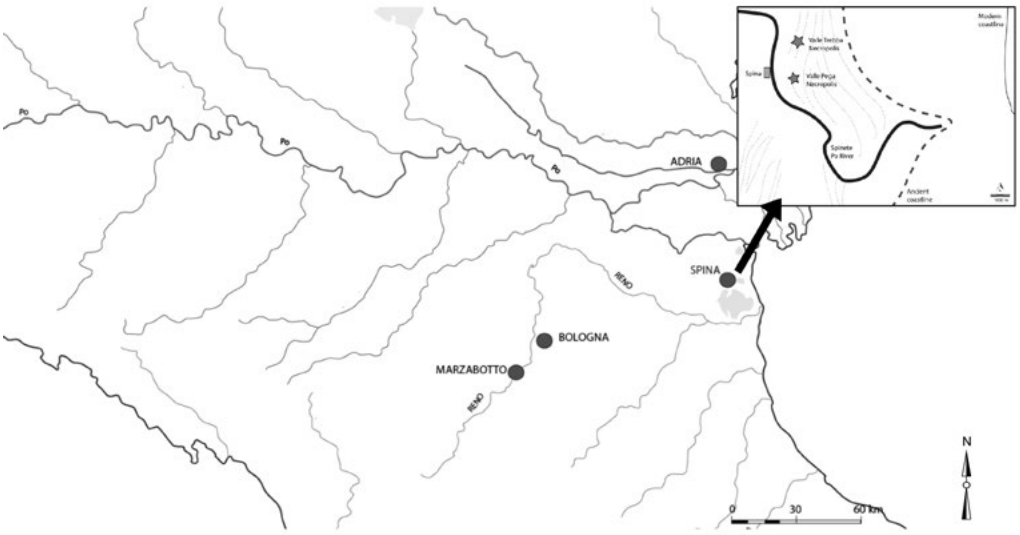

Figure 13.1. Map of the Etruscan Po Valley. Detail: geomorphological map of Spina during the Etruscan period (edited by Anna Serra, from the original in Berti *et al.* 2007, pl. 7).

ancient Felsina and the most important city of the Etruscan Po Valley, was instrumental in the establishment of Spina. Because of a new geo-political situation, Bologna became the focal point of a new territorial system, based on the foundation of other settlements strategically located on the major trade routes (e.g. Marzabotto, Mantova and Spina) and the development of ancient centres, such as Adria (Sassatelli 1990; 1993; 1999; 2008).

The city of Spina (Figure 13.1) was situated in an area of the Po Delta, with specific access to Adriatic trade routes and markets. Archaeological excavations have reconstructed the inhabited area, which was built on a system of islets and enclosed by secondary branches of the Po River (Patitucci Uggeri 2009; Zamboni 2016, 16-17). A key feature of Spina was the necropolises located on the eastern islets. Archaeological excavations conducted in the first half of the 20th century documented more than 4000 graves. These graves were topographically divided in two necropolises, namely Valle Pega and Valle Trebba, which remain largely unpublished (Alfieri and Arias 1960; Alfieri 1993; Aurigemma 1960; Desantis 2015).

The Valle Trebba Project

The systematic study of the Valle Trebba necropolis is an ongoing project led by G. Sassatelli from 2008 and recently by E. Govi (Govi 2017). The project aims to gather documentation in the archives, recreate the original contexts, analyse the unpublished grave goods and reconstruct the ancient landscape and geomorphology of the area. The final aim is to fully understand the internal organisation of the cemetery and the local funerary rituals (Gaucci 2015; 2016; Gaucci *et al.* 2018).

The burial site includes 1215 graves dated between the end of the 6th and the 3rd centuries BC; of these, *c.* 960 graves (*c.* 80%) have been fully recorded and studied. The burials were located on sandy islets connected to the sea and the settlement by a network of canals (Gaucci 2015; Gaucci and Mancuso 2016). Both cremation and inhumation were practiced, and the tombs normally contained a single individual (Berti 1993). The graves were generally organized in *plots* (D'Agostino 1998) with clusters of people connected by family origin or religious rituals that shared strategies of communication and self-representation; this was achieved, for example, through sharing recurring iconographical themes, ritual elements, spatial arrangements or shared onomastics, documented through inscriptions (Gaucci 2015; Pizzirani 2009; 2017).

The available documentation

Valle Trebba was excavated between 1922 and 1935, after the discovery of archaeological remains during the regulation of the Po Delta near the city of Comacchio (Alfieri 1993, 17-18). Long trenches were dug to retrieve the finds as quickly as possible. Despite such precautions, many burials were literary pulled out from water because the rising water levels of the swamp prevented an accurate excavation. F. Proni, the assistant of the Soprintendenza agli Scavi e ai Musei di Bologna, supervised the entire campaign and systematically documented the archaeological excavations in his daily journals. In the following decades, the grave goods were moved several times between Comacchio and Bologna before their present relocation in the National Archaeological Museum of Ferrara. The modality of the excavations and the relocation of the archaeological finds created complex problems that have to be taken into consideration in view of a systematic study. In fact, one of the first steps of the project has focused on reconstructing the original contexts by studying the archive documentation, which includes original drawings and photographic documentation of the burials (Gaucci 2015). The Department of Biomedical and Specialty Surgical Sciences of the University of Ferrara is currently analysing the osteological remains from both necropolises of Spina (Masotti *et al.* 2013; Manzon *et al.* 2014). So far, however, the available anthropological data are limited. Therefore, the first step towards recognizing children inside the necropolis should consider the data recorded and collected during the excavation.

As I have noted above, burials generally consist of single depositions. During the excavation, Proni recognized 71 graves of sub-adults based on the observation of the human remains, e.g. teeth and the development of cranial and long bones. In the documentation, young deceased are labelled as '*piccolino*', '*piccino*', '*fanciullo*' and '*giovinetto*', without giving more information except for brief descriptions of the recovered bones. Proni further identified five additional burials as those of '*persona giovanissima*'; future osteological analyses will help to understand if these individuals were adolescents or adults. These burials, however, have been excluded in the following analysis to avoid a bias in burial selection.

Osteological analyses on a small number of burials in 1998 identified eight more children, thereby increasing the number of known sub-adult burials. Within this limited sample, the estimated age of death appears to have been between two/three and ten years (Muggia 2004, 31, 214). In view of these data, it seems that children had access to formal burial inside the necropolis from a very young age. Osteological analyses conducted on a broader sample of graves from the nearby necropolis of Valle Pega seem to confirm this observation, recording even the deposition of infants who were only a few months old (Desantis 2015, 178, 16). More information on age ranges and related funerary customs will be available as the osteological

analysis progresses; however, age does not seem to represent an obstacle to formal burial in these necropolises.

With 79 of 1215 burials belonging to sub-adults (6.5%), however, the percentage of sub-adult burials is much lower than the expected mortality rate (Lambrugo 2012, 4, 54; cf. Morpurgo 2018, 526 for Bologna). Various factors could have affected the recorded number of children buried in the cemetery and many hypotheses have been proposed to interpret the data. For example, many infant graves were probably not correctly recognised during the excavations due to bad skeletal preservation or because of the excavation methodology. The number of burials recognised so far may represent only a part of the actual occurrence of child graves, which would indicate a problem of visibility. During the osteological analyses conducted in 1998, three of the eight newly identified children were described as being in a 'terrible state of preservation'. On the other hand, it is possible that not every child had the right to formal burial in this necropolis: necropolises cannot be considered a faithful representation of ancient societies. Indeed, formal burial should not be taken for granted and access to funerary rites may be greatly influenced by the political and ideological context of any given society, or by deliberate strategies of discrimination or distinction (D'Agostino 1985; 1990; Cuozzo 2003, 23-24).

Burial practices at Spina provide an example of this issue. In Valle Trebba, both cremation and inhumation were practiced. Proni recognised child tombs in both cases, but only 16 of the 79 children attested were cremations (*c.* 20%), which represent a small percentage compared to the global trend of the necropolis (*c.* 40%). During the excavations, child cremations were certainly less recognizable than inhumations. Lesser visibility could have influenced the data, leading to the higher proportion of inhumations. This hypothesis is supported by the description of some child cremation as being only composed of 'little and frail bones' recovered in the urn, which indeed could be difficult to recover if not placed inside a container. We cannot exclude, however, that inhumation was the favoured rite for children in this context, an interpretation that could also have ideological reasons (Muggia 2004, 27; D'Agostino 1990, 405).

Problems related to the visibility/invisibility and recognition of child graves have become a major topic of discussion since the beginning of the research. Only the study of graves safely attributed to children is useful to shed light on local funerary customs, which can then be contextualised in view of the rites of the whole necropolis (a similar approach was preliminarily applied to the De Luca necropolis of Bologna: Morpurgo 2018, 529-530).

The recognition of children through funerary rites

Muggia's research (2004) focused on graves from Valle Trebba that could be safely attributed to children and developed a complete and thorough analysis. At the time, the necropolis was largely unpublished and it was not possible to compare sub-adult burials to those of adults. During the recent study of the entire necropolis by the University of Bologna, a complete classification of the funerary rites has been conducted, which identified important ritual evidence such as pouring and drinking vessels, great vases and the use of particular containers, e.g. *unguentaria* (small oil- or perfume- containers made of glass, stone or ceramic; Gaucci 2015; Govi 2017, 101). This work has afforded a new study of funerary rites for children at Valle Trebba, by focusing on child graves in context.

Preparation of the burial

The analysis of the internal organisation of child tombs included the examination of the position of the body or the cremated remains in relation to the objects and grave structures. The tombs of children were structurally similar and seem to have been constructed with the same care as those belonging to adults. In most cases, graves were simple pits that housed either cremations or inhumations. Rarely, the graves included a wooden chamber, of which the floor or the sides were documented in 19% of all graves, and 14% of child graves, thereby presenting almost the same frequency.

Burial practices and inner arrangements were considered next. Generally, inhumations are slightly more frequent than cremations in the necropolis overall (683 inhumations, nearly 56%), and children are deposited as inhumations in 79% of cases (even if the precise percentage can be debated). In inhumation graves, grave goods were normally placed in a line or grouped on the right side of the deceased (325 graves, nearly 48%), a feature which also applies to children (31 graves of 63 child inhumations, 49%). Grave goods could also be divided into separate groups (as documented in eight infant tombs), a common practice in the necropolis. Single objects may be placed in a peculiar position – e.g. near the hands, the feet or the head – whilst the rest was deposited on the right side. This pattern may suggest a peculiar ritual function for particular objects, such as the *unguentaria* (Ruscelli *et al.* in press). Grave goods were rarely placed on the left side of the deceased (thirteen inhumations, one of them a child), the opposite of the custom documented in Etruscan necropolis of Bologna (Gaucci 2015, 134, 120). Vessels may be positioned even directly over the body, an arrangement that is relatively frequent in child graves (Berti 1994, 193).

Cremations are documented in 490 tombs (nearly 40%). Most frequently, the remains were placed inside a large vessel of local production; Attic vases were only used in seventeen graves. The remains were simply deposited wrapped in a textile or in a perishable container in 11% of the cremations. Only 16 cremations of children were recognised during the excavations, six of which had no container for the cremated remains. The bones were lined or covered by grave goods. Two tombs contained cremated remains that were covered by a local mortar turned upside down, an arrangement that seems to be documented only for children within the necropolis. If a container was used for the remains (eight tombs), the grave goods were placed outside, inside or over it. In Tomb 598, dated to the second half of the 5th century BC, the cremated remains were placed inside an Attic red-figured krater. This is documented only rarely in the whole necropolis and appear to be even more interesting regarding the possible deposition of a child, as the description of the discovery suggests (on the significance of this practice in the necropolises of Bologna, see Govi 2009, 35, 61).

To sum up the current stage of research, infant burials at Valle Trebba seem to be an established component of the local burial tradition. The organisation of the burials – the selection of the burial rite and the deposition of grave goods – does not seem to follow rules strictly related to age ranges. However, some arrangements seem to occur more frequently in child graves, such as the placing of the grave goods on top of the body, or seem reserved for children, such as covering the cremated remains with mortars.

In previous analyses, only single burials were considered: double burials are particularly rare at Spina and the deceased normally share the same rite. Overall, Proni documented eight double

burials, of which only two included an adult and a child. Tomb 506 represents a unique case in the necropolis (Figure 13.2), because it is the only deposition in which both cremation and inhumation were documented together. The first deceased was cremated and placed at the bottom of the urn; subsequently, the unburned body of a little child, probably an infant, was placed on top and covered with a small bowl, whilst the grave goods were deposited outside the urn. A similar context with at least one double deposition has recently been documented at the other necropolis of Spina, Valle Pega (Desantis 2017, 95). Osteological analysis has recognised the remains of a young woman and a little child, probably a newborn, placed in the same container. Just as for the similar deposition in Tomb 506 of Valle Trebba, it may be suggested that this double deposition within the same urn recalls a family connection between the two individuals.

Selection of grave goods

The study and the selection of the grave goods may offer important information to better define the funerary rituals granted to children. The combination of grave goods (e.g. great vessels, drinking and pouring vessels, etc.) can be analysed in terms of chronology and contextualised with the whole necropolis. It should also be considered that some graves of Valle Trebba – both inhumations and cremations – did not include grave goods (nearly 22%). In fact, six cremations of children were deposited without any object except for the cinerary urn or the mortar covering the cremated remains. Thus, the following analysis will focus only on the burials that included grave goods.

First, 'great vessels' were only present in a restricted number of child tombs (*c.* 11%). The Tomb 625 is a unique case, in which two little red figured *hydriai* were discovered. 'Great vessels' are containers designed for the *symposium* (kraters, *pelikai, stamnoi*) or as containers of other liquids with an important ritual function (*hydriai*). The ideological connection to the *symposium* is stronger in the necropolis of Bologna (Govi 2017; Morpurgo 2014) than at Valle Trebba (Govi 2006; 2017, 105). Graves containing such vessels are generally inhumations dated to the

Figure 13.2. Photo of Grave 506 during the excavations (photographer unknown; Guzzo 1993, 221).

Figure 13.3. Red-figured Attic chous (1764) from Tomb 1007 of Valle Trebba, end of the 5th century BC (© National Archaeological Museum of Ferrara, used with permission).

5th century BC; this was the early phase of the necropolis, when the first ancient plots were founded and the deposition of 'great vessels' was more common. Overall, nearly 18% of graves in Valle Trebba include such vessels; they occur more rarely in child burials.

Second, the preliminary study has shown that more than 60% of child graves included at least one *skyphos,* sometimes more. This evident selection of drinking vessels for children appears to be a fundamental part of children's burial rites. However, some child burials did not include any drinking vessels (nearly 15%), thus their presence is not compulsory. The incidence of *skyphoi* in child graves has also been noted in the Greek world. There, these vessels seem to appear mostly in women's and children's graves, a selection that has been interpreted as pertaining to 'liminal social group' (Batino 2002, 23-24). In the De Luca necropolis of Bologna, the *skyphos* is often paired with a pouring vessel (Morpurgo 2018, 527). In Valle Trebba, the *skyphos* seems to be generally widespread, even in adult graves; however, in adult burials, a higher variety of shapes and combinations of drinking vessel types was documented within the same tomb (e.g. *kylix, kantharos* or stemless cup). In child graves, these kinds of combinations are rare (8%) and

Figure 13.4. Red-figured Attic chous (1765) from Tomb 1007 of Valle Trebba, end of the 5th century BC (© National Archaeological Museum of Ferrara, used with permission).

may indicate different modulations of the ritual function of the shape, maybe suggested even by the duplication of the same vessels within a single tomb.

Another fundamental topic in the study of grave goods is the identification of objects that relate to rites of passage or developmental stages. For example, Muggia (2004, 213-216) suggested that the presence of objects relating to adulthood (such as *pyxis* vessel or, rarely, weapons) might hint at the imagined future of the young deceased within the world of adults. Iconography might provide important clues, too, although one must be cautious in interpreting the evidence. The depictions of children holding jugs on *choes* offer an example of this complex issue; this iconography is related to the Attic *Anthesterie* festivals (Muggia 2000, 90-93), during which three-year-old children were introduced in society for the first time through the consumption of wine. In Valle Trebba, five graves contained one or two *choes* with this iconography. Only two graves, however, could be safely attributed to children, because of the size of the bones (Tomb 1007: Proni 1928, 94; Tomb 564: Proni 1926, 189-191). The two *choes* from Tomb 1007 (Figures 13. 3-4) can be classified as small, exactly the vessel type that Hamilton connects to the Attic festival of the *Anthesterie* (Hamilton 1992, 84-88). Presently, however, the lack of anthropological data for the other three graves does not allow us to establish a direct connection between the selection of this iconographic theme and the age of the deceased. Moreover, it is difficult to understand the reason for the selection of this peculiar iconography. Is it possibly an identification of the deceased child with the depiction? Had these particular vases a ritual value within the Etruscan burial site? Could the iconography recall something else? The ongoing systematic study of recurring iconographies in child burials may shed further light on local customs in selecting images.

Disputed markers: the bullae

Previous studies have considered a range of objects as possible 'markers' of child burials, for example seashells, terracotta statuettes, *bullae* and feeding vessels (Lambrugo 2012, 57-58; Contursi 2017, 26, 29). The possibility of identifying child graves in Valle Trebba by these markers, even when the available documentation did not record information about the skeletal remains, has been suggested (Muggia 2004, 229). Future research will focus on each of these debated elements, by considering them within the local socio-ideological context and by focusing on their occurrence in the whole necropolis. Some of the considered objects do not appear only in child graves, but rather are widespread and their function as age markers should be re-evaluated in light of the local context.

Bullae and multiple *bullae* beads offer an example of the complexity of this research. In the Roman world, the singular *bulla* has been considered an attribute of the *pueri ingenui* (freeborn children), who dedicated the ornament to the *Lari* during the *Liberalia* to mark the passage to adulthood (Torelli 1984, 23). The ancient literature connects this tradition to the Etruscan culture. As indicated by Warden (1983), Pliny and other ancient authors connected the introduction of the *bulla* in the Roman society to the Etruscan monarch Lucius Tarquinius Priscus, who for the first time gave the ornament to his son (Nat. Hist. III, 4).

Bullae are found in child graves from the first half of the 8th century BC in Tyrrhenian Etruria (Haack 2008; Warden 1983). Necklaces or bracelets with multiple beads seem generally widespread in women's graves, as has been demonstrated by an extensive analysis of funerary contexts with human remains from Etruria and Latium (Coen 1998, 93). In the iconography,

Figure 13.5. Amber and bone necklace (27977) from Tomb 1185 of Valle Trebba, second half of the 4th century BC (© National Archaeological Museum of Ferrara, used with permission).

multiple *bullae* seem to be linked to both genders from the 6th to the 4th centuries BC, whilst in the 3rd century BC the ornament mainly occurred in relation to women and to Dionysian representations (Coen 1998, 93). In the Etruscan world during the 4th and 3rd centuries BC, the iconography frequently shows children wearing singular *bullae*, including new-borns and young divinities (Coen 1998, 93; Cagianelli and Sannibale 1999, 117-118). Based on these differences in funerary customs and iconographic documentation, Coen (1998) suggested distinct functions for singular *bulla* and multiple *bullae* beads, respectively – the latter with no direct significance as markers of age.

The presence of *bulla* beads is also documented in the necropolises of Marzabotto in the Etruscan Po Valley during the Certosa phase between the middle of the 6th and the middle of the 4th century BC. There, two golden bullae were recovered in the 19th century (Marchesi 2005, 209). *Bullae* are also attested in Bologna (Morpurgo 2018, 304). In Valle Trebba, nearly 20 tombs include these particular ornaments, of which only one certainly belongs to a child, and at least three to adults. The most common type is the *bulla* bead made of bone, amber or metal with a diameter of 20 to 40 mm (Figure 13.5). *Bullae* may be used as a single element or be part of a composite necklace. They were generally found near the neck of the deceased in inhumations, recalling the dressing of the body before the funeral. Only one singular bronze *bulla* was identified in Tomb 309, dated to 470 BC (Pozzi 2011, 97-98); this seems to be an isolated case at Valle Trebba. The rarest are golden *bullae*, which are scarcely attested in Spina and generally recovered out of context (Coen 1998, 91; Sassatelli 1993, 178). Golden *bullae* represent the most prestigious type of these ornaments: they are often decorated in small relief with vegetal motifs or mythological themes.

Despite their wide spatial and chronological diffusion, *bullae* are rarely documented in Valle Trebba; their deposition probably did not correlate with a particular age range, which reinforces the ambiguous nature of the amulet.

Spatial distribution

Thanks to the new systematic study of the necropolis, it is possible to consider the spatial and chronological documentation together, thereby observing the distribution of child graves at both levels. A complete map of the area (Romagnoli 2017) allows a systematic analysis of the burials in their context, by focusing on spatial patterns and discontinuities. The study also included the reconstruction of the original geomorphology of the area (Gaucci 2015), recreating the ancient landscape in which the necropolis developed. During the first phase of the 5th century BC, the burials occupied primarily the western part of the necropolis, near the settlement and on both sides of the main canal, which connected Spina to the northern Etruscan city of Adria. Later tombs were located both near the ancient ones and in new empty areas, gradually filling unoccupied portions of the necropolis (Gaucci 2015).

In terms of the internal organization, Muggia (2004, 169) observed that the distribution of sub-adult graves follows the general chronological development of the necropolis: it is not possible to identify an area exclusively reserved for sub-adults. On the contrary, child graves were widespread in the entire necropolis, and were inserted in the plots.

However, some groups or plots included a higher number of child graves, often connected to women's burials, a pattern first identified in the southern sector by Romagnoli (2015, 109-114). Another example of this tendency was recognized in the eastern sector of Valle Trebba during the 4th and 3rd centuries BC, where a group of graves with a higher proportion of children and women was present. This plot shares a funerary ritual characterized by a higher occurrence of imported grave goods from southern and central Italy. The use of the area seems to begin with two isolated women's burials in the first half of the 4th century BC; these were gradually surrounded by forty graves in the following four generations, among which at least seven children are documented (16.7% of the plot). The selection of grave goods and the major building effort dedicated to this group of tombs – a high proportion of wooden chambers was documented in this area – may indicate a shared convention. Despite their young age, the display of social status was comparable to that of adults. This preliminary spatial study, therefore, underlines the presence of a new pattern of spatial organization, in which plots with a high number of children and women share a common strategy of self-representation that displays the cultural and social level of the group.

Conclusion

The necropolis of Valle Trebba represents an excellent opportunity to observe the social organization and funeral rites of the Etruscan Po Valley between the 6th and the 3rd centuries BC. A complete study of the necropolis is underway and this paper highlights some preliminary results. It has become clear that children had access to formal burial in the necropolis of Valle Trebba, albeit the lower incidence of child graves in the necropolis may suggest strategies of selection, as not every child seems to have had the right to be interred within this burial site. Moreover, the wealth and care displayed by some tombs and their position within the burial plots shed light on children's role as representatives of their family and/or social group. Only

one certain infant deposition was identified, as part of the double Tomb 506. Even if it is not possible to exclude the presence of other infant burials that probably went unrecognized, present data suggests a different practice (perhaps exclusion or seclusion by age). The ongoing systematic analysis of the preserved osteological remains will shed more light on the rites related to age.

In the southern and eastern sectors of the necropolis, child graves consistently follow ritual choices of the groups they belong to. Thanks to the rich documentation available, the funerary dynamics within the necropolis of Valle Trebba can be analysed from both a diachronic and spatial perspective. Future research will expand the study of child burials to other sites of the area and develop a complete analysis of the funerary custom.

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Chapter 14

Greek children and their wheel carts on Attic Vases

Hanna Ammar

Introduction

During the second half of the 5th century BC, Attic vase painters developed an increasing taste for depictions of children engaging in playful activities.[1] From *c.* 440 BC, boys and girls, from the crawling toddler to the young teenager, were depicted alone or interacting through games and play, thereby becoming an independent topic of red-figure pottery. Before that time, children were portrayed among adults, without any morphological distinction aside from their smaller size (Golden 2015, 30 = Stuttgart 65.1). As of the second half of the 5th century BC, children were depicted without adults playing with them or watching them. Iconographic standards for depicting childhood-specific morphology developed at that time: their faces became chubbier, and their limbs plumper.

The main frame for this new iconography was a particular type of vessel called *choes* (*chous* in singular form). These small jugs decorated with childhood images come in very different sizes, with the smallest being no more than 40 mm high (Brussels A1955), and the largest 240 mm (Munich 2453). All produced in Attica, they have plump bodies, trefoil mouths, back handles, and decorations on only one side. In a very short period of time (from *c.* 440 to *c.* 370 BC), numerous *choes* seem to have been produced in Athens. In 1951, a catalogue of these vases was developed by G. Van Hoorn (1951), who counted more than 1100 *choes* with 540 illustrations among museum and private collections at the time. Ten years later, Van Hoorn's catalogue was completed by J. R. Green (1961).

Not all the *choes* were illustrated with child-like figures. In fact, a large part of Van Hoorn's list comprises images that allude to completely different topics (for example Louvre L74). Hence,

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childhood and play were not the exclusive motif of the *choes*; likewise, *choes* were not the exclusive frame for representations of children: a very similar iconography is found on other types of pottery, especially on small red-figure perfume vases called squat *lekythoi*, also produced in Athens between the late fifth and early fourth centuries BC. An example from the Athens Agora shows a little boy crawling to a small spherical object on the floor (Agora P10557). He is as chubby as children can be depicted on small *choes* (for example Louvre CA2915), has the same crawling posture, and wears the same amulet string (Dasen 2003).

Across these vases, children are differentiated from adults by engaging in distinctive activities. They are shown playing games, sometimes using specific toys. Balls (BM E548) and rattles (Dasen 2017; BM 1910,0615.4), as well as *choes* (Louvre CA2915) and small animals (Louvre CA2910), are involved as toys and playmates for children. Among this panoply of toys, the most frequent is the wheel cart. A singular vase shows the early stages of this motif on black-figure pottery (Munich S56), but wheel carts are mostly associated with young children on red-figure *choes*, since no wheel carts are depicted on squat *lekythoi*. On the small jugs, children play with the cart in different ways, and the toy itself features in various shapes, sizes and uses.

The typology of a toy

Three main types of wheel carts can be distinguished. The first one is shaped most simply: it is composed of two wheels connected by a board, all of which are then linked to a long stick, sometimes including a handle to help the child roll the toy (Louvre L72). This first shape is the

Figure 14.1. Attic red-figured chous, Athens, National Archaeological Museum, 1267 © Hellenic Ministry of Culture and Sports, photo Hanna Ammar.

most frequent wheel cart depicted by vase painters. A suitable example is an 85 mm *chous* at the National Archaeological Museum of Athens (Figure 14.1); it shows a standing child, probably a girl, holding her toy roller in her right hand (no handle is visible in this example), and stretching out both her arms. It is easy to conclude that the cart should be small, since it is always depicted as smaller than the child using it, and also light, since several vases show children holding it on their shoulders or above their head. On a *chous* kept in Munich, for example (Munich 8933), a boy is shown walking while holding his toy on his left shoulder. On another *chous*, a girl raises the same type of roller above her head, using it as a weapon to threaten a small bird (Worcester 1931.56).

Scholars chose a range of words to describe this toy: in English, it can equally be called a *toy roller* (Beaumont 2012, 58; Van Hoorn 1951, 46), *wheeled stick* (Beaumont 2012, 36; Golden 2015, 61), *wheeled cart* (Golden 2015, 61), *toy wheels* (Van Hoorn 1951, 30) or *toy cart* (Beaumont 2012, 36; Van Hoorn 1951, 44). French scholars call it a *chariot à roulettes* (Dasen 2012, 9; Ammar 2018, 34; Papaikonomou 2008, 688), or *bâton à roulettes* (Dasen 2012, 11). In German, it is called a *Roller* (Crelier 2008, 156), and in Italian, it is called a *carriola* (De' Siena 2009, 189). In this paper, it is called a toy roller. Ancient literary sources offer a name for this specific toy. It seems to be the *hamax* to which Strepsiades referred when talking about his son Phidippides: 'When he was still a tyke this high, he could make clay houses at home, and carve boats, and fashion fig wood carts, and he'd make frogs out of pomegranates as pretty as you please' (Aristophanes, *Clouds*, 878-881, translation by J. Henderson 1998).

As no toy roller like the ones depicted on the vases has been found at archaeological excavations, one might suppose that it was made of perishable material, as mentioned in the text by Aristophanes. Dasen (2012, 13, Fig. 2) compared this particular shape of toy to one made of wood and used today by Masai children in Kenya, although the middle board seems to be smaller or non-existent.

The use of the toy roller seems quite simple: children pull it, push it, or roll it while they walk or run. On most *choes*, the toy is depicted in profile, showing only one wheel. However, rare examples offer a frontal view of the toy roller, as on a *chous* kept in Bellinzona, on which a young boy is running fast enough to turn the roller on its side and reveal the second wheel and the centre board of the toy (Dasen 2012, 13, Fig. 3 = Bellinzona 1). Furthermore, as Van Hoorn has well observed in the introductory text to his catalogue (Van Hoorn 1951, 15-57), the toy roller is often depicted carrying small objects, such as cakes (Oxford 1966.879) or *choes* (Brunswick 1915.038), placed on the centre board. In that sense, the toy roller differs from a simple wheel and leaves no room to doubt that it was made of two wheels, a board, and a stick.

This particular use of the toy roller leads us to the second main shape of the wheel carts identified on small *choes:* this model has the same base of two wheels, which are connected to the same long stick as with the toy roller, but the centre board features a seat between the two wheels. This addition of the seat changes the use of the toy roller: it is still pushed or pulled by a child, but can carry a small human being, a small object, or a small animal. On a *chous* at the Metropolitan Museum of New York, a naked boy pushes or pulls a toy roller on which the seat is empty but clearly visible (Met 06.1021.202). On another jug kept in Geneva (Geneva 16901), a boy pulls a smaller child, wrapped in clothes – if not swaddled – and seated on the toy roller. If the first type of wheeled cart could only be used by a single child, this second type may have allowed two children to play with the same toy.

Richard Hamilton, who produced a very detailed statistical analysis of the corpus, calls this second type of toy a *cart*, and specifies that the only element distinguishing it from the first type, which he calls a *roller*, is the carrying of an object (Hamilton 1992, 175). We follow Hamilton in his use of terms, but we distinguish between the two types by the addition of the seat. In this way, the *chous* from New York (Met 06.1021.202), even if its seat is depicted as empty, should belong to the 'cart' type, while the *chous* from the Ashmolean Museum (Oxford 1966.879), showing a toy with a cake set directly on the centre board, without any seat depicted, remains in the 'roller' category.

The characteristics of the third shape of wheeled carts on red-figure vases are connected to their particular use, since they are often pulled by small animals harnessed to the stick. A *chous* from Athens shows a young boy standing behind a cart attached to two small dogs, who raises a stick with his right hand to lead them (NAM 12141). In this scene, the harnessing of the animals is clearly visible, and depicted in what seems to be great detail. Other animals can pull this type of cart, including goats (Met 21.88.80), a deer (NAM 14534), and large birds. Children can substitute for animals by being harnessed to the cart themselves. A *chous* kept in the British Museum, for instance, shows two naked boys, both running and one holding the cart stick, while a third child is seated and holds a stick, as if he is about to whip his comrades (Figure 14.2). In these cases, the shape of the toy is not far from that of the previous variant: it still has two wheels, between which a seat is set, large enough to contain a small child. This time, however, the cart either is pulled by an animal instead of a human child or is pulled by at least two children, who replace the animals.

Figure 14.2. Attic red-figured chous, London, British Museum, 1910,0615.5 (© Trustees of the British Museum).

The word used by Hamilton to define this third shape is *chariot* (1992, 175). Once again, we follow him by using the same term, but for different reasons than his. Indeed, Hamilton differentiated the chariot from the cart and the roller, as it has spoked wheels, while the two others do not. Yet, again, our focus in classifying wheel carts is on their different use by children. For this reason, the word *chariot* appears particularly suitable, since it is the use of the third shape, which brings it closer to adult racing chariots as depicted on Greek vases. Then, on a *chous* kept in the Metropolitan Museum, a young boy is standing and driving a cart harnessed to two goats (Met 21.88.80). The design of the cart is more sophisticated than usual, the seat strong enough to support a standing child makes the object look like a racing chariot, and the boy is wearing ornate clothes that make him look like a miniature charioteer. Here, the reference to adult racing chariots is taken to the extreme; the only part of the scene that brings it back to childhood is the goats, as adult chariots are usually harnessed to horses. Only children's playmates are depicted by their side; no doubt exists that with this third shape of cart, children have their own small chariots.

Nevertheless, this typology of wheel carts was not followed by Attic vase painters as an inflexible code. Some examples are unique and cannot be strictly assigned to one of these three large categories. A fragmentary *chous* shows a cart pulled by a boy, with another child about to climb aboard (Agora P10676). The toy could be considered a cart of the second type, but the shape of the seat between the two wheels makes it look more like a barrow, since its shape is quadrangular, and it seems that at least two children could be seated on it. On another vase, a young girl rides a cart harnessed to a deer, but she seems to be standing directly on the centre board, and neither a seat nor a basket is set between the wheels (NAM 14534).

Moreover, the uses of wheel carts seem to allow a certain fluidity. A jug kept in Brussels shows a boy pulling a cart, on which a smaller boy is seated (Brussels A2319). The seated one is making an unusual gesture, raising his hands above the cart. He seems to pretend holding the reins of a chariot, whereas it is not an animal but a child who is pulling the cart, and no harnessing system is depicted. This particular scene is a key piece allowing us to connect the three main shapes of carts. The addition of a seat turns the simple roller into a cart, opening up new possibilities to use it and leading the toy more closely approximating the chariot of adults.

A gift for the festival?

The *choes* corpus and the iconography of children at play have often been studied through the supposed connection between the specific shape of these vases and the Anthesteria (Deubner 1932; Ham 1999; Hamilton 1992; Van Hoorn 1951). In fact, the second day of this Athenian festival is called the 'Day of the *Choes*' (Spineto 2005). The small jugs we call *choes* today are considered through the particularity of their shape, and not for the particularity of their depictions. Additionally, the whole corpus is usually called 'The Anthesteria *Choes*' and the Anthesteria is considered a festival involving the participation of children. From there, wheel carts depicted on the *choes* are interpreted as a gift that children may have received during the festival (Dasen 2012, 14; Deubner 1932, 239; Golden 2015, 37; Van Hoorn 1951, 30, 44). For Beaumont, whose publication focuses on childhood and its depictions, the use of the wheel cart, in its three main types of shapes, should itself be interpreted as a reference to the Day of the *Choes* (Beaumont 2012, 78).

The connection between childhood and the Anthesteria is difficult to demonstrate, however, since no literary or epigraphic sources have established such a link for the classical period

(Spineto 2005). Another text from Aristophanes *Clouds* alludes to a toy roller, but this time Strepsiades mentions that he had bought the toy for his son Phidippides on the occasion of another Athenian festival, the Diasia: 'When you were a lisping six-year-old, the very first obol of jury pay I earned I spent on a toy cart for you at the Diasia' (Aristophanes, *Clouds*, 863-864, translation by J. Henderson 1998).

It is clear that a significant number of *choes* images refer to a festival context. Some children are depicted involved in ritual activities, which no doubt involved games and play. The text from *Clouds*, however, creates space for alternatives to the traditional association between childhood and the Anthesteria, and opens possibilities concerning other festivals.

Furthermore, the fact that the iconography of childhood is not the exclusive topic depicted on *choes*, and that it can be found on vases of other shapes, leads us to examine the images for themselves as witnesses of a Greek outlook on childhood. It is possible that the images, if interpreted outside of the Anthesteria context, depict children engaging in their everyday-life activities (Golden 2015, 37). Golden's interpretation offers the advantage of taking a step back from the systematic link made between childhood iconography and the Anthesteria – without rejecting that connection completely – but the particularities of the images lead us to another understanding. We choose to look at *choes* iconography as representing a Greek taste for depicting childhood in all its distinctive activities. The scenes are pleasant to look at, for they show beautiful children engaging in their own activities, which differ from those of adults.

Georges Raepsaet and Claude Decocq (1987, 13) have rightly observed that children's panoply of games does not seem to involve a wide range of toys. Indeed, other ludic objects, known thanks to literary sources, are not depicted. We consider that omission a conscious choice made by Attic vase painters. For example, dolls are never found on *choes*, while they are often depicted on Attic tombstones, being held by young girls (for example Clairmont 1993, plate 0.915). The same authors have mentioned that popular games like knucklebones are only rarely found on small *choes*, and that spinning tops are completely absent. Based on this observation, it is clear that the depiction of wheel carts represents a conscious choice: if the purpose of these images is not to show the reality of a child's life, the playful activities depicted assume a more metaphorical meaning, which must be defined.

The toy roller as a gender marker

One possible interpretation is the use of the first shape of cart, the toy roller, as a marker of a child's gender identity. In fact, this seems to be the case with depictions in different media: a very comparable object is found on Attic tombstones. On a stele dating to *c.* 325 BC, for example, the late child, named Philokrates, is portrayed holding a small bird to a dog, which it is trying to reach. In his other hand, the boy is holding a toy roller by its stick (*ibid.* plate 0.873a). On Attic tombstones, as in this example, the toy roller is always associated with young boys. The presence of the toy allows us to identify the child's gender, since no girls are ever depicted holding such an object.

On the other hand, the identification of young girls on Attic tombstones is possible since they are associated with their own exclusive toys, the dolls. On the stele of Melisto, dating to *c.* 350 BC, a girl is also holding a bird to a small dog, but this time she holds a small doll in her left hand (*ibid.* plate 0.915). Again, this particular toy is never associated with boys and can be used as a gender marker for young girls.

At this point, two differences between vase images and tombstones are worth bringing to the fore. First, no doll is ever depicted on small *choes* in association with either girls or boys. Furthermore, children do not use their toy rollers in the same way on tombstones as they do in vases depictions. On stelae, boys only hold the stick of the object, but never seem to roll it, run with it, or carry it. In other words, they do not play. This difference in use stems from the difference in context: the funerary context of tombstone depictions seems to deprive the toy of its playful function. It becomes an attribute labelling boys' male identity and distinguishing them from girls in death. Another kind of funerary object, a few white-ground *lekythoi,* give the same message, with young boys depicted taking their roller with them in death. For example, on a *lekythos* kept in the National Museum of Athens (NAM 1936), a boy holds his toy roller in the same peaceful way as Philokrates on his tombstone. Again, on these Attic funerary vases, no girl is depicted with a roller. A unique example shows a child holding a doll on a white-ground *lekythos* (Crelier 2008, Fig. L34A), and her hair and clothes easily allow us to identify her as a girl.

Attic *choes* offer a much livelier picture of childhood at play: the toy roller is pushed, pulled, held, carried, and lifted by children who walk, run, and, above all, play. In other words, they act like children with their toy. In this lively context, wheel carts are not the preserve of male children, since the three main shapes we have identified are associated with both boys and girls.

Figure 14.3. Attic red-figured chous, Athens, National Archaeological Museum, 11738 (© Hellenic Ministry of Culture and Sports, photo Hanna Ammar).

The simplest shape can be found held by all kinds of children on *choes*. We have already mentioned a *chous* from Athens (Figure 14.1) on which the child playing with the toy roller is identified as a girl. Beaumont (2012, 15-42) has described several indicators of gender distinguishing boys from girls in classical iconography. Following her work, the hair and clothes as depicted on this *chous* help distinguish the figure as a little girl. On another vase also kept at the National Museum of Athens (Figure 14.3), the nudity of the child makes him identifiable as a boy; he plays with a similarly shaped roller, the wheel decorated with an eye gazing directly at the child. No noticeable differences seem to exist in how the two genders use the wheel cart: the scene depicted on a *chous* kept in Cambridge shows a boy rolling his cart, this time with an added seat (Cambridge GR.8.1952). He is stretching his two arms out, and his position is reminiscent of the young girl on the *chous* from Athens (Figure 14.1).

In contrast to what Raepsaet and Decocq (1987, 13) have written, we cannot conclude that the third type of cart, the racing chariot, is exclusively depicted as used by young boys. The image is obviously uncommon, but at least one vase contradicts this statement. On the vase, a girl, identifiable by her hair and clothes, is riding a cart harnessed to a deer, raising a stick to whip the animal (NAM 14534). We admit that the shape of the cart is closer to the roller than to the chariot, but our classification rests on the use of the cart more than on its design. The girl is standing on the cart and is clearly engaged in a race. The fact that the girl is here associated with a deer can be considered a gender-specific marker, but this example invalidates the suggestion that young girls were deemed unable to drive such a cart.

At this point, it appears that the toy roller, taken outside its ludic functions, can only be viewed as a gender indicator in the funerary sphere. The wheel cart, as a toy used by children and depicted by Attic vase painters, cannot be considered in the same way.

Wheel carts and age groups differentiation

Another possible interpretation is to consider the wheel carts on Attic vases as an age group indicator. Beaumont (2012, 15-42) has suggested several criteria to distinguish age groups, focusing on postures in particular. We follow her suggestions, which are particularly suitable for *choes* images. Some children crawl on the ground, as on a *chous* kept in Berlin (Berlin 4982.26), while others stand upright on two legs (BM 1928,0117.61). Between these two postures, some children are depicted seated on the ground or on a cart (Heidelberg K14). An example is a *chous* from the British Museum (Figure 14.4) on which two boys are depicted, both naked and crowned. The first one stands looking at the other and holding a bunch of grapes out to his peer. The second boy is seated on the floor, raising an arm to reach the grapes. The fact that one boy can stand easily on his two feet and the second one cannot, indicates that the two boys belong to different age groups. Given the small size of the vase (60 mm high), this indicator is more reliable than the height difference between the two figures observable with a naked eye; moreover, a smaller-sized figure in vase painting can sometimes indicate a difference in status. On this *chous*, the painter clearly treated the two boys equally, and their difference lies in their postures. Therefore, we can safely assume that the seated child is younger than the standing boy.

The fact that both boys are holding a wheel cart is, of course, highly interesting for this research. The two carts look similar, although it is not clear if the element on the far left of the scene is part of the toy or not. Indeed, it could be either a very high cart seat on which a *chous* is placed, or a simple table in the background. Either way, the cart held by the younger child seems to

Figure 14.4. Attic red-figured chous, London, British Museum, E536 (© Trustees of the British Museum).

have a visible board or seat. Looking at this scene, we wonder if the wheel cart has a part to play in the iconographic age group differentiation.

For Beaumont, the toy roller is an attribute associated with children 'between infancy and the arrival of puberty' (Beaumont 2012, 36). She has noticed that few crawling toddlers or seated children are depicted actually using the toy; rather, the roller often simply stands next to the child (*ibid.* 238, n. 114). We agree with the author's observation, but disagree with her interpretations. She has suggested that the key to understanding these images rests in the association with the Anthesteria. In her view, children actually using the toy roller – because they are more often depicted with objects referring to the festival, following Hamilton's (1992, 106) statistical analysis – have reached the age of the participation in the Anthesteria and left infancy and its crawling posture (Beaumont 2012, 238, n. 115). Additionally, she considers the use of the miniature racing chariot as a potential reference to the Anthesteria festivities, and from there, the simple toy roller itself becomes a reference to the chariot and to the rites (*ibid*. 78).

Instead, we connect the three main shapes of wheel carts outside the Anthesteria context. We agree that a connection exists between the toy roller, the cart, and the racing chariot and that we are encountering various versions of the same toy. Nonetheless, we believe that this connection rests on the learning process involved in attaining a certain ability.

Wheel carts, childhood and abilities

A last possible interpretation is to consider wheel carts as a reference to the process of children learning a new ability. On the *chous* from the British Museum, the standing boy holds his roller by the stick. He uses it in a traditional manner, since it allows the wheels to roll and the toy to operate properly. The seated boy has his own roller, but because he does not yet have the ability to stand, he rather holds his toy parallel to the ground. Based on this observation, the toy roller enables differentiation between the child who has already learned to walk and the child who has not. Beyond the age group differentiation, vase painters identified a real learning process through this iconographical code. Wheel carts play a key role in this identification, since the first roller stands upright, as the boy does, and the second toy is parallel to the ground, referring to the seated boy's inability to stand.

In another vase from the British Museum, a child is seated in a pot and surrounded by his panoply of toys: he holds and waves a rattle, a *chous* lies on the floor, and a toy roller leans against the frame of the scene (Dasen 2017, 105). On this jug, the roller is not depicted as being actually used, but it may refer to the process of learning to walk (Dasen 2017, 103). On a *chous* kept in Munich (Munich J193), the child crawls, this time actively, looking at his roller in front of him: he does not walk yet, but he travels towards the toy as he moves towards his new ability. The child engaged in this learning process should have been a pleasant picture for the Greeks to enjoy. A vase – this time not a *chous*, but a *pelike* – depicts the adult gaze on childhood learning (BM E396). A child crawls between a man and a woman, who may be his parents. The two adults watch the child, and the woman raises her hands to express her support or her enthusiasm. He returns her gaze and extends his arms to lift his upper body, as if he was trying to stand up.

A last example, kept in the Louvre (Louvre CA2961), supports our interpretation. On this *chous*, a naked boy pushes a cart with a singular design: a third wheel is added on the front, forming a new object that the child can use in a standing position, while leaning to make walking easier. We can assume that for this boy, walking is still a novelty. The cart, looking more like a walker, helps him with his first hesitant steps.

It is only once this learning has been achieved that a child can actually play with the toy roller, as many examples have demonstrated. This new ability allowed children to use more elaborate toys, which more closely approximate adult chariots. These imitative activities are a requirement for Plato, who writes in his *Laws* that from a young age, children should learn by imitating the activities of adults (Plato, *Laws*, I, 643bcd). Moreover, as we have seen, scenes with carts and chariots sometimes involved several children. Once the ability to walk was attained, a child's initial socialization process began, in which wheel carts played a major role.

Conclusions

The wheel cart, in its variety of shapes, is depicted as an object of play with several benefits. The two texts from Aristophanes' *Clouds* evoke the idea that wheel carts, at least those with the simplest design, could have been made by children themselves, but were also produced, sold and purchased as gifts for children, perhaps at the occasion of an Athenian festival. The second text by Aristophanes therefore questions the existence of a specialized workshop and of the selling of these objects. Unfortunately, the lack of archaeological sources has left the answers to those questions unconfirmed until the present day.

The images on *choes* connect childhood, games and learning, and the wheel cart seems to be a key object in this connection. First, the toy roller refers to the toddler's process of learning to walk and marks this achievement for older children. Second, the cart involves the child playing among playmates, whether animals or humans. As such, the toy contributes to a first socialization process. Finally, the most developed shape of the toy engages children in the process of learning through imitation.

As we have seen, it is only outside of its ludic function that the wheel cart serves as an indicator of children's gender identity. In Attic vase painting, however, the cart expresses childhood itself: a phase of life for growing, evolving, and engaging in learning new abilities through playful activities and toys.

Abbreviations

All mentioned vases in the text are referenced with their conservation site in short form, followed with their inventory number.

Agora *Museum of the Ancient Agora of Athens*
Bellinzon *Bellinzona, Museo Civico Villa dei Cedri*
Berlin *Berlin, Antikensammlung*
BM *London, British Museum*
Brunswick *Brunswick, Maine, Bowdoin College*
Brussels *Brussels, Musées Royaux*
Geneva *Geneva, Musée d'Art et d'Histoire*
Heidelberg *Heidelberg, Ruprecht-Karls-Universität*
Louvre *Paris, Musée du Louvre*
Met *New York, Metropolitan Museum of Art*
Munich *Munich, Antikensammlungen*
NAM *National Archaeological Museum of Athens*
Oxford *Oxford, Ashmolean Museum*
Stuttgart *Württembergisches Landesmuseum*

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Chapter 15

Teeny-tiny little coffins: from the embrace of the mother to the embrace of Hades in ancient Greek society

Alexandra Syrogianni

The discussion of the cultural parameters of the ancient Greek society, which had a great impact on infant morbidity and mortality, presupposes a definition of infancy. Nowadays, infancy covers the period in the life of a child from birth up to one year of age (Markantonis 1990, 155; Baker *et al.* 2005, 10) and this is the age limit which will be adopted in this chapter. Yet in antiquity, according to Plato (Pl. *Leg*. 792-A), infants were considered 'children' up to three years of age (Beaumont 2012, 45). On the second day of the festival of *Ἀνθεστήρια* (Anthestiria) the ritual of *Χοές* (Choes) took place, which focused on young children (Parke 1977; Hamilton 1992, 64). On that day, all three-year-old children (Dasen 2011, 312; Beaumont 2012, 70), probably of both sexes (Beaumont 2012, 76, 196), were officially incorporated into the world of adults as participants of the festival and recipients of small red-figured jugs, the so-called *choes* (Oakley 2003, 177; Beaumont 2012, 69).

The purpose of this article is not an exhaustive presentation of the world of infants and their interaction within ancient society, since this topic has been discussed by many researchers throughout the years (Demand 1994; Neils and Oakley 2003; Dasen 2011; Beaumont 2012). Rather, the aim is to comment on medical practices that integrally related to the social frame of the era and compare them to modern, science-based infant care practices, in order to explain the high rates of perinatal and postnatal infant mortality in ancient Greek society.

The social frame

Women's diet

Although life in antiquity was dangerous for infants, it was primarily hazardous for the mothers, who seemed to have faced constant starvation through all stages of their lives (Brickley and Ives 2008, 8). The philosophical perception of the era regarding sex and the

physiology of women bore out the idea of the physical fragility and inferiority of women, from the beginning of intrauterine life (King 1998, 134; Papanikolaou 1999, 109). With the exception of Sparta (Parker 2012, 89), the female element was believed to be weaker and less dominating (Fantham *et al.* 2001, 263). Therefore, women were considered to be inferior to men, a status seen as totally consistent with their nature to eat less (Arist. *Hist. An.* 608 a 32b 19; Demand 1994, 8; Garland 1998, 65; Fantham *et al.* 2001). In addition to the philosophical beliefs of the time, there was also the doctors' general ignorance of some matters of female functionality as evidenced in the Hippocratic Corpus: Chlorosis or Virgin's disease, for example, a kind of hypochromic anaemia (King 1998; Papaioannou and Gatsa 2013, 1) and pica, an eating disorder causing individuals to consume inedible material (Wing and Brown 1979, 68; Weinberger 2000, 968), are both attributable to iron deficiency. Moreover, society imposed excessive restrictions of nutritious food on young girls and women (with the exception of women in pregnancy and in the puerperal period, Garnsey 1999, 107).

Although there was some knowledge regarding the correlation between diet and physical growth ('food creates blood', *cf.* King 1998, 201, for relevant references in Homer and Aristotle), the diet of young girls was neither proper nor balanced, as it would lead to the beginning of menarche. The onset of puberty would bring the first awakening of the sexual instinct and the continence of virgins would be at stake (*cf.* Garnsey 1999, 102 for relevant medical texts by Rufus from Ephesus and Athenaeus of Attaleia). Additionally, even in the cases of young wives to be, reduced appetite and abstinence from excessive food was highly valued (Xen. *Oec.* 7.6.; Garnsey 1999, 109; Evans 2012).

At this point, a particularly crucial constraint emerges: when these undernourished women got pregnant, it is highly likely that they experienced severe and fatal complications during pregnancy and labour such as dystocia, post-partum haemorrhage or detachment of the placenta, to name just a few (Demand 1994, 8; Mandalenakis 2005; Collins *et al.* 2008). However, a synergistic reaction between malnutrition and infectious diseases (Scrimshaw *et al.* 1968) may be partly attributed to the suppressed immune system of the mother (Ortner 1998, 79*).* It also holds true that many complications during pregnancy are related to the malformation of the pelvis, brought on by chronic undernourishment (Demand 1994, 8, 189; Brickley and Ives 2008, 85). In the case of osteomalacia and lack of Vitamin D, a major obstacle in the replacement of the mineral elements comes into play, leading to insufficient biomechanical bone structure and distortion of the pelvis (Ortner and Theobald 2000, 36; Brickley and Ives 2008, 85; Walker 2005).

The mother's poor nutritional status, especially if it derives from restricted access to animal sourced foods (Walker *et al.* 2009, 114), and folic acid deficiency during pregnancy not only contributes to megaloblastic anaemia in the mother, increasing the rates of maternal perinatal morbidity and mortality, but also affects the foetus in a negative way, since it is associated with congenital anomalies of the neural tube (Leonidopoulou 2013, 93).

The lack of both quality and quantity of nutritious food in a mother's diet may result in intrauterine growth retardation of the foetus, indicated by low birth weight (Tasker *et al.* 2013, 308, 456). If women are anaemic during the first half of pregnancy, the risk of low birth weight preterm delivery (less than 2.5 kg, Fleischer Michaelsen *et al.* 2000, 15) and perinatal mortality doubles, while iron deficiency anaemia during pregnancy adversely affects the quantity of iron inherited by the infant at birth (Fleischer Michaelsen *et al.* 2000, 118). Furthermore, deficiency of iodine during early foetal life has a considerable impact on the normal neurological

development and may even lead to cretinism (Nutrition Essentials 1999, 21). Iodine deficiency is also associated with neonatal deaths, stillbirths and miscarriages (*ibid*., 21). According to epidemiological studies, impaired intrauterine growth is associated with an increased incidence of cardiovascular and metabolic diseases in later life (Daskalaki *et al.* 2006). More specifically, low birth weight or low ponderal index (weight-length ratio used as indicator of asymmetric foetal growth), is correlated with metabolic diseases (i.e. hypertension, ischemic heart disease, type 2 diabetes, etc.), stroke, cancer and reproductive disorders later in life (Daskalaki *et al.* 2006, 242, Table 2). In light of the above, it is evident that vulnerable infants of low birth weight are not only at high risk of morbidity and mortality during the first two years of life, but are at a higher risk of severe diseases in their lives as adults.

Age of marriage

Another social parameter, marriage for young women from the onset of menarche at around fourteen to eighteen years of age, posed a serious danger to their health (Xen. *Oec*. 7.5; Pomeroy 1975; Scheidel 2007; Cox 2011). Aristotle (Arist. *Pol*. 1335a 13-23) postulated in the 4th century BC that the body of a very young girl cannot carry a pregnancy successfully to term and endure labour (Olausson *et al.* 2005) and some centuries later, Soranus (Sor. *Gyn*. 1.60) is extremely concerned about a possible uterine rupture in the case of early pregnancy (Rouselle 1988, 35; Garland 1998). Moreover, recent studies have shown that a young maternal age (< 20 years) may increase the risk of Sudden Infant Death Syndrome (Dunkan and Byard 2018).

Figure 15.1. Grave stele of Irene from Byzantium, MP 3582 (375-350 BC). The seated figure is the commemorated dead, the servant standing in front of her is holding the infant (© Ministry of Culture and Sports/ Archaeological Museum of Piraeus).

Figure 15.2. Grave stele, MP 5812 (c. 350-330 BC). The seated figure is the commemorated dead. Gathered around her are her husband, her mother and the servant holding the infant with its head covered with a small cap (© Ministry of Culture and Sports/Archaeological Museum of Piraeus).

Women's death during pregnancy and labour is often depicted on the grave stelae of ancient Greece (e.g. Syrogianni 2015, 233 n.147; grave stele of Irene from Byzantium MP 3582, c. 375-350 BC, Fig. 15.1; grave stele MP 5812, c. 350-330 BC, Fig. 15.2; both in the Archaeological Museum of Piraeus; Steinhauer 2001, 325, 346). Archaeological examples of skeletons of women who died while pregnant are not often recovered during excavation (e.g. Devault *et al.* 2017).

In modern paediatrics, infant mortality encompasses perinatal mortality, including all stillbirths and neonatal deaths before twenty-eight days after birth, as well as post-neonatal deaths between twenty-eight days and one year of age (Tasker *et al.* 2013, 110). Aristotle, fully aware of the frequency of neonatal mortality, advises that, since many children die within the first week, it is safer to give them names only after the critical period ends, in a ritual called Ἀμφιδρόμια (Amphidromia) (Arist. *Hist. An.* 7.588 a8-10; Beaumont 2012, 68).

Infant exposure

The period between the birth of a child and Ἀμφιδρόμια (Amphidromia) was crucial, because the infant did not exist socially yet and it was up to the Master of *Οἶκος* (Oikos) to decide whether or not the baby would stay in the family or would be exposed to die (Oakley 2003, 178; for the terminology of exposure, Ἔκθεσις (Ekthesis) and *ἀπόθεσις* (apothesis), see Huys 1989); however, some of the exposed children may have ended up as slaves or prostitutes (Lindenlauf 2001, 91). Infant exposure was practiced for a variety of reasons, i.e. because infants were sick

or disfigured (Golden 1981, 316; Garland 1998, 60), or just unwanted because of poverty and legitimacy issues (Garland 1998, 60). According to some researchers, the infant exposure rate was as high as approximately 10% (Scheidel 2007, 69; Engels 1980; Garland 1998, 60; Golden 1981, 316; Roubineau 2014, 147, 331). Infant exposure aimed principally at female infants, for economic and social reasons (Syrogianni 2015, 251, 54). Since modern science has established that male perinates are more susceptible to death than female perinates (Wells 2000) and that Sudden Infant Death Syndrome seems to affect more boys than girls (60%, Duncan and Byard 2018; Fleming *et al.* 2015, 984, 86), it is indeed worth wondering whether ancient people had acquired the same knowledge through observation and manifested a looser approach towards the abandonment of female infants for this reason.

Taking care of infants

Swaddling

Swaddling is known both from literary sources and votive figurines found at excavations (Dasen 2011, 302). The practice of swaddling was endorsed by philosophers (Arist. *Hist. An.* VII, IV; Pl. *Leg*. 7789e), and Soranus recommended it for the first sixty days of an infant's life (Sor. *Gyn*. II.19.42; Beaumont 2012, 50). In any case, it seems to reflect a much older tradition, originating from the dawn of *Homo sapiens* (Sommer 2011, 152). In ancient art, there are figurines of swaddled infants, both from Greece (e.g. Archaeological Museum of Piraeus, MP 5383, end of 4th–3rd c. BC, Palaiokrassa 1991, 119; Fig. 15.3) and from Italy (Ammerman 2007).

Figure 15.3. Swaddled infant, MP 5383 (end of 4th-3rd century BC). Find from the Sanctuary of Artemis Mounichia, near ancient Piraeus (© Ministry of Culture and Sports/Archaeological Museum of Piraeus).

Although children were swaddled to keep them warm (Carroll 2018), it seems that swaddling had more than one advantage. Indeed, practical studies have shown that swaddling promotes better quality sleep for children and that its overall benefits (Sommer 2011, 152), are even higher for preterm infants (for infants born before thirty-seven completed weeks of gestation, see Rudolf and Levene 2006, 346). The main aim of swaddling in antiquity was to prevent distortion of the limbs (Dasen 2011) and ensure proper growth (Sommer 2011, 153). Notwithstanding its advantages, the practice of swaddling can also be blamed for serious side effects, such as hyperthermia, and – if misapplied – uneven pressure to the infant (Dasen 2011), which may cause physiological stress on cardiorespiratory systems (Dunkan and Byard 2018). Perhaps this type of stress would be more intense for female infants, since there is evidence that male and female infants were swaddled differently: the latter were wrapped tighter in the thoracic area of the breasts and looser in the area of the genitalia (Sor. *Gyn.* 2.14-15; Baker 2017).

Both these conditions, hyperthermia and uneven pressure, could act as exogenous factors for Sudden Infant Death Syndrome. Furthermore, swaddling tight around the hips is strongly associated with developmental dysplasia of the hip (Nelson 2017), because, as the International Hip Dysplasia Institute[1] points out, 'the sudden straightening of the legs to a standing position can loosen the joints and damage the soft cartilage of the socket'. Finally, the immobilization of the infant, in combination with the lack of natural light, could result in rickets (Tasker *et al.* 2013, 444; Garnsey 1998, 248).

Wool fabric, being soft, warm and breathable, was considered to be most suitable for swaddling clothes (Sor. *Gyn. 2*.14-15). But even so, no matter how frequently the clothing was changed and olive oil was rubbed on the baby's body (Carroll 2018), it was still not possible to prevent skin irritation from infants' excreta, frictional contact dermatitis (Tasker *et al.* 2013, 811) and the feeling of pain and discomfort caused by it. The ointment recipes recommended by Soranus, containing common myrtle (*Myrtus communis L.*), were applied to relieve the pain from skin ulcers (Sor. *Gyn.* 2.52; Jashemski 1999, 72).

The use of feeding vessels

Today's ideal of infant care dictates that all infants should be exclusively breastfed from birth to about six months of age and at least for the first four months of life (Fleischer Michaelsen *et al.* 2000, xv). Ancient doctors, however, were opposed to the use of colostrum, the initial milk of high nutritional value, rich in protective proteins (Rudolf and Levene 2006, 8). More precisely, because of its difference in colour and consistency from mature milk, it was considered to be unsuitable for infants (Lewis 2007, 99, 102; Chammoux 2000, 626). According to Soranus '...it is produced by bodies which are in a bad state...' (Sor. *Gyn.* II.17-18; Garnsey 1998, 263). As a result of this notion, infants were fed with a special kind of vessel, the so-called Βομβύλιοι (Bombylioi) from the first days of their lives. Vessels of this type are widely known as grave goods from many burials of young children (Demand 1994, 188; Beaumont 2012, 54).

Honey residues were found along with another ingredient as contents of these vessels (Beaumont 2012, 55; Neils and Oakley 2003, no. 30; Cilliers and Retief 2008, 17). A feeding bottle from Midea near Nafplion confirms what we know from Soranus, who recommended honey mixed with hot water for the first two post-partum days as digestible beverage (Sor. *Gyn.* II. 11.17;

[1] See https://hipdysplasia.org/

Mantalenakis 2005, 2; Beaumont 2012, 55*)*. Modern paediatric healthcare is completely opposed to this suggestion, based on research indicating that the spores of the bacterium *Clostridium botulinum* may cause a form of food poisoning to the undeveloped digestive system of babies (Fleischer Michaelsen *et al.* 2000, 193). Goat's milk mixed with honey was the favoured milk of animal origin (Sor. *Gyn*. II 17-18; Garnsey 1998, 263). Doctors in ancient Greece were probably aware that undiluted animal milk is too heavy for infants to digest, l*et* al.ne that cow's milk may trigger life-threatening gastrointestinal bleeding, if offered unmodified during the first six months of life (Fleischer Michaelsen *et al.* 2000, 109, 115). This may lead to the depletion of iron stores and the development of iron deficiency (Fleischer Michaelsen *et al.* 2000, 109; Tasker *et al.* 2013, 614). However, cattle were less popular than sheep and goats in antiquity (Hodkinson 1988, 60) and therefore their milk was less available. Nevertheless, even goat's milk may result in folate deficiency (Tasker *et al.* 2013, 615). Moreover, feeding infants with cups under poor hygiene conditions increases the risk of diarrhoea and makes it harder for the infant to attach correctly to the breast (Fleischer Michaelsen *et al.* 2000, 160). For this reason, the international breastfeeding policy encourages breastfeeding within an hour after birth (*ibid.,* 142).

Breastfeeding and complementary food

What we know about breastfeeding comes mainly from medical literary sources and funerary epigrams for wet nurses (Garland 1998, 58), since its depiction in Greek art is far from common (Beaumont 2012, 52). Breastfeeding scenes are also rare in funerary art, but not absent, despite Beaumont's arguments to the contrary (Bosnakis 2003-2009, 381). All in all, infants were breastfed after the first two post-partum days, by the mother or by a wet nurse (Beaumont 2012, 56) if the latter was an affordable option for the family. Given that Soranus strongly disapproved of women who chose to breastfeed for a period less than 40 days (although social factors did not come into play, as his clientele belonged to the upper class), it is reasonable to assume that this was a rather common practice. Mothers, instead of exclusively breastfeeding their infants, used a kind of gruel made out of wheat as complementary food (Garnsey 1998, 268). Nowadays, this practice would certainly not meet the approval of paediatricians, since according to the latter, gluten is only acceptable after the age of six months (Tasker *et al.* 2013, 298); additionally, early introduction of food or beverages into the infantile diet, as well as their inappropriate intake, may cause failure to thrive and growth retardation (Fleischer Michaelsen *et al.* 2000) and result in allergies (Sariachvili *et al.* 2010). Another important medical issue is that of nursing infants who are breastfed by mothers whose diet is deficient in Vitamin B12; the low Vitamin B12 concentration is transmitted to the infant and severe megaloblastic anaemia is induced (Walker *et al.* 2009, 114). This may have serious consequences for the neurological development of the child, who may face the risk of encephalopathy (Fleischer Michaelsen *et al.* 2000, 74).

As the baby gets older, larger and more active, nutritional requirements can no longer be covered by breast milk alone (Wing and Brown 1979, 35; Fleischer Michaelsen *et al.* 2000, 50) and it is time for the use of complementary (transitional) foods, which have to be of high nutritional value and iron-rich (e.g. red meat, egg yolk, fish, pulses etc., Fleischer Michaelsen *et al.* 2000, xiv; Tasker *et al.* 2013, 298). The recommended diet in antiquity for infants after the period of the first six months of age was crumbs of bread steeped in wine (Sor. *Gyn*. II 45; Rouselle 1988, 57; Sallares 1991). Although the diet of wealthy members of society was better, access to nutritious food of plant and animal origin was impeded for the people of the lower and unprivileged social ranks (Garnsey 1999, 107). In ancient societies, however, food availability

was periodically insufficient for reasons unrelated to the individual's economic status (see Garnsey 1988, for famines and food distribution system failures). Nonetheless, penury provides a good explanation as to why poor families often opted for a prolonged weaning process of exclusive breastfeeding with no intake of complementary food.

Breastfeeding is recommended to continue after the transitional period of complementary food, in combination with it (Fleischer Michaelsen *et al.* 2000, 145). If the diet of infants is not enriched with an adequate amount of nutritious ingredients, it will have a negative impact on the health of children (e.g. exclusive breastfeeding for six to twelve months during infancy is a widely recognized cause of rickets, Tasker *et al.* 2013, 444, and megaloblastic anaemia is often encountered in cases of prolonged breastfeeding, Walker *et al.* 2009, 114). As it seems, early as well as late additions to the infants' diet account for many problems in their growth rates (Fleischer Michaelsen *et al.* 2000, 175), while nutrition-related health problems during the first three years of life can have short and long-term physical consequences. Furthermore, infants are particularly vulnerable to iron deficiency anaemia, and if they do not have their iron needs met during the period of complementary feeding between six and twenty-four months of age, they are prone to mental and psychomotor development impairment (Fleischer Michaelsen *et al.* 2000, 112).

The weaning period

The most critical point in an infant's life in antiquity, according to Soranus, is the period of weaning (Katzenberg *et al.* 1996, 178) between eighteen and twenty-five months of age (Chammoux 2000, 626). The age of weaning is again a cultural parameter. Since boys were more highly valued than girls, it comes as no surprise that even in infancy they were treated differently. Indeed, girls tend to be neglected in feeding and care and were weaned earlier than male infants (Demand 1994, 7; Garnsey 1999, 112). This practice indicates that baby girls were exposed to the risks of unsanitary food preparation sooner, as well as being deprived of the immunological bioactive substances contained in breast milk (Fleischer Michaelsen *et al.* 2000, 127). According to some researchers, the poor care and early weaning for female babies may be regarded as 'delayed infanticide' (Mays 2000, 183).

After breastfeeding, infants were exposed to microbial pathogens present in contaminated foods and fluids such as unsafe drinking water (Fleischer Michaelsen *et al.* 2000, 133, 237) and as a consequence of the loss of passive immunity, they were more likely to be affected by foodborne diseases, which could lead to severe and long-lasting damage to health (Fleischer Michaelsen *et al.* 2000, 236, 237, Table 47). The exposure of infants to microbial pathogens in combination with practices that undermined their physiology made them suffer from diarrhoea (caused by organisms such as *Shigella* and *Salmonella,* Wing and Brown 1979, 74; Rudolf and Levene 2006, 111, Table 10.5). The term *weanling's dilemma* expresses the delicate balance of infant feeding between the risk of giving complementary foods, probably contaminated and causing diarrhoeal episodes, and continuing exclusive breastfeeding for too long and thus risking growth faltering (Katzenberg *et al.* 1996, 180, 86). Many vulnerable children eventually died of dehydration, the loss of fluids and salts necessary for survival. Even if the outcome was not death, less than optimum feeding practices, such as the use of gruel made of wheat, could lead to the appearance of celiac disease (in genetically predisposed children), a disorder that results from a permanent inability to tolerate gluten, a substance found in wheat, barley and rye (Fleischer Michaelsen *et al.* 2000, 56; Tasker *et al.* 2013, 336; Rudolf and Levene 2006, 114; Harris 2011, 249). Celiac

crisis manifests during the complementary feeding period (Fleischer Michaelsen *et al.* 2000, 56) and can be life-threatening due to diarrhoea accompanying malabsorption and the loss of essential elements (Tasker *et al.* 2013, 335, Box 10.5). As noted earlier, infants with low levels of Vitamin B12 who are not receiving replacement are prone to develop megaloblastic anaemia (Walker *et al.* 2009, 115) or to suffer from iron deficiency anaemia (Fleischer Michaelsen *et al.* 2000, 108). Insufficient food availability in periods of famine, lack of care or poverty may culminate in severe protein energy malnutrition and micronutrient deficiencies, resulting in the clinical syndromes of marasmus (severe malnutrition characterised by energy deficiency) and kwashiorkor (severe protein deficiency, Wing and Brown 1979, 35; Fleischer Michaelsen *et al.* 2000, 58; Tasker *et al.* 2013, 320). Linked to malnutrition is another factor of morbidity: poor nutritional status compromises the immune system of young children and makes them more susceptible to infections, particularly to those affecting the respiratory and gastrointestinal tracts (Scrimshaw *et al.* 1968; Fleischer Michaelsen *et al.* 2000, 15; Simoes *et al.* 2006). All in all, although it may not be possible to establish a direct link between malnutrition and mortality, it is certain that 'even mild and moderate malnutrition have severe consequences' (Fleischer Michaelsen *et al.* 2000, 1).

Another risk factor: Sudden Infant Death Syndrome (SIDS)

The term Sudden Infant Death Syndrome (SIDS) was first proposed in 1969 in order to describe the sudden and unexpected death of infants for which no sufficient explanation could be found (Fleming *et al.* 2015, 984, 986; Duncan and Byard 2018). The phenomenon peaks between two and four months of age. Given that SIDS seems to be an old phenomenon, with a case recorded in the Bible (I *Kings* 3:19; Norvenius 1993, 3), we have every reason to presume that this syndrome affected infants in antiquity, too. The phenomenon seems to apply in particular to vulnerable infants, i.e. infants who are born preterm or with a low birth weight, or infants with certain metabolic abnormalities (Fleming *et al.* 2015, 985). In addition to intrinsic factors, i.e. unrecognized pathologies, extrinsic factors may also be involved, e.g. physical stressors experienced around the time of death, prone or side sleeping positions (Duncan and Byard 2018). In this context, the age at which the practice of swaddling is discontinued is important (Carroll 2018). Infants usually roll over in the cot at around the age of four to seven months, and it would probably be difficult – although not impossible – for a swaddled baby to move this way (for swaddling and its depiction in art as indicator of a child's age, see Sommer 2011, 157). Extrinsic factors for SIDS may further include soft surfaces such as mattresses (Fleming *et al.* 2015, 986). In ancient Greece, sheepskins and wool may form a potential threat by forming a trough under the weight of the infant (Duncan and Byard 2018). Overheating due to tight swaddling and covering the infant's face or head are additional exogenous factors for SIDS. An infant with a small cap on the head is depicted on a grave stele in the Archaeological Museum of Piraeus (MP 5812, Fig. 15.2). The sudden death of an infant during sleep may also be attributed to overlaying by their mothers or nurses, as it is highly likely that bed sharing was commonly practiced to facilitate breastfeeding during the night (Fleming *et al.* 2015; Duncan and Byard 2018).

Out of concern for the health of their infants, ancient Greeks put infants under the protection of certain deities, the so-called *Κουροτρόφοι* (Kourotrophoi) such as Ge, Demeter, Athena, Artemis and Kephissos (Beaumont 2012, 62, 64). Small children depicted on *choes* (Fig. 15.4) wear protective amulets bearing circles, snakes or moon-crescents for protection against evil elements (Dasen 2011, 210-211; Beaumont 2012, 50-61). Unfortunately, these practices were of little consequence. Before vaccinations, approximately 30-40% (Demand 1994, 71) or even 50%

Figure 15.4. Choes, MP 3348, MP 3349, MP 3350 (c. 5th century BC). Red-figured jugs, with the depiction of small children wearing protective amulets (© Ministry of Culture and Sports/Archaeological Museum of Piraeus).

of children (Beaumont 2012, 87, 157) died before reaching the first year of life (Grmek 1989, 100; Lagia 2007; Ingvarsson-Sundstrom 2008).

Conclusion

The literary sources of antiquity provide us with valuable information on childhood diseases, such as bladder stones (Garnsey 1998, 112; more common in boys, Demand 1994, 7) or eye diseases (Garnsey 1998, 113), which were largely caused by Vitamin A deficiency in children from the age of six months (Nutrition Essentials 1999, 18).

Contemporary advanced laboratory methods such as biochemical and microstructural techniques (Buikstra and Ubelaker 1994; Katzenberg and Saunders, 2008) applied to children's skeletal remains enable us to shed light on almost every aspect of childhood in the past: e.g. at which age children were weaned, the type of diet after weaning, the kind of metabolic stress children suffered from, or specific dietary deficiencies. In other words, it is now possible to reconstruct the interaction of children with ancient societies, as far as their nutrition, pathologies and their life course are concerned.

The world of antiquity was harsh for both mothers and their infants; especially the latter seemed to pay a heavy toll due to social beliefs and subsequent infant care practices. In direct contrast, the breakthroughs of modern medicine substantially decreased the perinatal and postnatal rates of infant mortality. At the same time, they offer a solid background for the recognition and the study of patterns concerning the morbidity and mortality of infants of the past.

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Chapter 16

Pueri nascentes: rituals, birth and social recognition in Ancient Rome

Irene Mañas Romero and José Nicolás Saiz López

Introduction

Children, especially newborns, were the objects and, at the same time, the subjects of a series of practices and rituals associated with their status as beings between the worlds of the living and the dead, the purpose of which was to humanise them (Dasen 2009, 199) and turn them into members of the community. This concern derived from the importance of reproduction in ancient societies and particularly in the Roman world. There were various reasons for this, all of which can be summed up in one: it was a social imperative.

Magic and religion were considered powerful tools to protect reproduction, from conception to pregnancy, giving birth and the care given to the newborn child during its first days of life. These were known as *primordia*, a term that alluded to the space of time between the *dies natalis* (the biological birth) and the *dies lustricus* (the social birth that signified the entry of the newborns into the family).

The purpose of this study is to analyse and succinctly summarise all the events that Roman children had to undergo during their first days of life, between birth and social recognition.

Rites and rituals to foster fertility, pregnancy and giving birth

Encouraging reproduction was a fundamental social concern in an ancient world that suffered from high infant mortality. From an individual perspective, the inability to produce children seems to have been the source of deep-seated fear and anxiety, especially among women, to whom the medical tradition well established since the Hippocratic Corpus (5th-4th centuries BC) generally attributed failures in the reproductive process (Flemming 2013, 570).

The official Roman calendar lists various festivities that were designed to boost the fertility of both nature and women, whose intimate connection with reproduction was widely perceived. Both of these reproductive abilities were considered to be in the common interest and were therefore protected by public rites (Oria Segura 2015, 145-148). Among them, of particular note was the *Lupercalia*, one of Rome's most traditional religious festivals. One of the ritual moments of this celebration included whipping women on the hands and the back to increase their fecundity (Ov., *Fast.* 2, 435-449). Plutarch (*Vit. Caes.* 61) tells us that the whips were made of strips of skin from a recently immolated male goat. This animal's link with female fertility can be found in another festival, the *Nonae Caprotinae*, in which freedwomen and female slaves made offerings of the milk of a wild fig tree to *Iuno Caprotina* and held a feast that involved uninhibited and festive behaviour (Oria Segura 2015, 146). Another of the most important rituals took place during the *Veneralia*, a festival in honour of *Fortuna Viril* and *Venus Verticordia* (Ov., *Fast.* 4, 133-162). This involved holding a ritual bath that, in the case of the *humiliores*, was held in the male baths, thus reinforcing its symbolism as a fecundating bath (Böels-Janssen 1993, 332). Other reports tell us of local events, such as a nocturnal procession of pregnant women carrying torches to the shrine of Diana of Nemi to plead for a good outcome to their pregnancies (Ov., *Fast.* 3, 267-270)

Women also attempted to boost their reproductive ability by using folk remedies such as ointments, drinks and pessaries made with animal or plant ingredients (Theophr., *Hist. Pl.* 9.18.5; Plin., *HN*. 28.27,92; 28.27,102-103) and by resorting, mainly in private, to religion and magic. Women would often plead for the intervention of different deities to help them conceive. We have evidence of this in various inscriptions in which maternity was achieved, according to the dedicators themselves, thanks to the favour of a divinity (*AE* 1969/70, 658; *CIL* II2/7, 540). Thus, an invisible control of procreation and its successful culmination –giving birth – was placed in the hands of the gods or magical forces that were invoked through incantations and spells. These have left little evidence in the archaeological record and have only occasionally been handed down to us, for example, in the form of inscriptions on amulets (BM2009, 8042.1, Tomlin 2008). However, in the material record we have many objects that evidence these practices in the magical-religious sphere. Firstly, we have many Roman fertility amulet pendants depicting male or female genitals that were designed to favour a generic condition of fecundity. There are also diverse categories of more specialised objects aimed at achieving procreation through divine intercession.

In one such category are the small votive sculptures (*donaria*) made of terracotta and offered to the divinity at certain shrines or holy sites, either with the aim of achieving a cure (*pro salute*) or to give thanks for a favour that had already been bestowed (*post salutem*). Their use was very common in the Rome of the Republican era and the beginning of the Imperial period, although it appears to have declined after the 1st century AD. The most frequent representations related to increasing fertility were votive *uteri* (Ducaté-Paarmann, 2007), highly stylised representations of wombs. This is a part of the female anatomy in which reproduction was centralised both symbolically and physiologically, because of the ignorance on the rest of the female reproductive system. These *uteri* took the form of a vase with fluting. Their intensive votive use is evidence of the considerable concern among women regarding their fertility. For example, in Fontanile di Legnisina (Vulci) and Gravisca and Ara della Regina (Tarquinia) more than two hundred *uteri* dated to between the 3rd century BC and 1st century AD have been found. Many similar objects have also been found in Gaul, in the shrine of Apollo Moritasgus in Alesia (De Cazanove 2017, 63-76). Their concentration at certain religious sites probably implies that there were shrines specialising in ailments related to fecundity/sterility. At some shrines

Figure 16.1. Pregnant woman. Terracotta figurine discovered in Caura (Coria del Río, Seville, Spain) (Oria Segura and Escacena Carrasco 2016: 101, fig. 2, © CC BY-NC 4.0).

we also find another type of ex-voto that depicts a swaddled newborn, another Roman custom that was also prescribed by Soranus (*Gyn.* 2.9) and that appealed directly to the deity to achieve or celebrate a birth (De Cazanove 2017). Although somewhat fewer, there are also terracotta figures from the Italian Peninsula depicting the pregnant torsos of women (Graham and Draycott 2017, 13). In the south of the Iberian Peninsula, a significant number of votive terracotta figures have been found with bulging bellies (Figure 16.1) that possibly depict pregnant women; their iconography is presumably linked to local, pre-Roman traditions (Oria Segura and Escacena Carrasco 2016, 107).

There are also numerous amulets in the form of gems with a function to appeal to the magical powers and influence the outcome of the reproductive process (Michel 2001). These were magic amulets designed to stave off the generic sickness known as 'uterine suffocation' (Hanson 1995) through the depiction of a uterus with its characteristic appearance of an upside-down vase. In many cases they are accompanied by a key, a reference to their ability to open and close, which was also believed to prevent the loss of the foetus (Dasen 2015, 69). Their use is documented above all in the eastern part of the Roman Empire between the 2nd and the 4th centuries AD. The images were sometimes accompanied by magical texts that offered protection from malign forces and were presumably used in conjunction with these items of adornment (Faraone 2011, 19, Footnote 91).

Within this group there is a type of gem whose face depicts a seated naked woman (sometimes on a kind of schematic obstetric chair) with her legs open in one of the most common iconographies of labour in ancient times. The woman's hair appears to be loose, as the presence of knots was believed to have a negative influence on giving birth (Gagé 1963, 67). Below her, a uterus may be depicted

in the habitual shape. Surrounding this image is the figure of a *uoroboros* or a serpentiform animal that eats its own tail and is symbolically related to the life cycle. The reverse side usually bears the image of another uterus, sometimes depicted in the form of an octopus (Michel 2001). These gems are normally carved out of hematite gemstones, because that stone was believed to have the power to stop the flow of blood (Faraone 2011, 19), meaning that they guaranteed against haemorrhaging and therefore favoured the adequate nourishment of the foetus by the maternal blood (Dasen 2015, 37). These gems were believed to have the power to facilitate the birth, alleviate the pain involved in the expulsion of the foetus and avoid the inherent dangers of the liminal moment of the birth.

Indeed, the moment of giving birth was critical and undoubtedly complications were very common, so much so that the deaths of mothers and children are frequently expressed in the funerary epigraphy (*CIL* III, 3572; VI, 28753; IX, 3968). Death of the mother during birth was considered to presage a fortunate destiny for the child (Plin., *HN* 7, 47). The suffering and risks of giving birth resulted in an intense need, both individual and collective, to place this moment of transition under holy protection. Therefore, the Romans had numerous deities – mainly female – to whom a pregnant woman could offer sacrifices to fend off difficulties while giving birth. This is the case of the nymph Egeria (Paul. Fest., 67, L) or the *Dii Nixi,* who even had a group of sculptures dedicated to them opposite the temple of Minerva on the Capitoline Hill.

Iuno Lucina is the protector goddess par excellence of giving birth, she who leads newborns along their path to the light (or *lux*, from which the name of the goddess derives). According to Ovid (*Fast.* 3, 258), a ritual to her was performed just before giving birth. He describes a ceremony exclusively for women in which they knelt on the ground with their hair and dresses loose, in other words, free of any knots that could symbolically impede the birth of the child (Gagé 1963, 136-137). *Iuno Lucina* protected the children born of legitimate marriages and received offerings in the name of those that were born healthy (Gagé 1963, 35).

The period of labour and the child were also accompanied during that time of transition by a cohort of female deities enumerated in a lost work by Varro, *Antiquitatum rerum humanarum et divinarum*, which was repeated by other authors such as Plutarch, Aulus Gellius, Augustine and Tertullian. These goddesses had specific protective attributions for certain stages of giving birth. Unfortunately, we have little information about their functions, due to the lack of written texts referring to them in the private, female environment, although many of them had monuments dedicated to them in public spaces (Gell., *NA* 16.16). Of particular note among them was *Carmenta* under her two personas, *Prorsa* who presided over the birth if the child was delivered in a cephalic position, and *Postverta*, who did so when the birth was in a breech presentation (Gell., *NA* 16.16). Immediately after the birth, *Vagitanus* opened the mouth of the newborn baby for the first time so it could breathe and cry (Gell., *NA* 16.17). *Opis* protected the child when it was placed on the ground and *Levana* helped raise the child from where he or she had been placed on the ground by the midwife (Dasen 2015, 234). Other lesser goddesses, like *Februalis* and *Rumina*, were charged with highly specific functions such as the expulsion of the placenta and breastfeeding, which were frequently taken on by *Iuno Lucina* as secondary avocations (Boëls-Hansen 1993, 423).

According to the physician Soranus (*Gyn.* 2.10), the midwife inspected the newborns, examining their vigour and determining whether they had any physical abnormalities (Dasen 2015, 153-177). Such abnormalities were considered an interruption of the order of nature (*prodigia*) and, in the

most serious cases, could have resulted in the ritual abandonment of the newborn, who would be left to its fate in front of the Temple of Pietas or the Columna Lactaria, or even drowned (Sen., De *ira* 1.15.2.). After the examination, the midwife cut the umbilical cord (*Gyn.* 2.11). One 1st century satirical author, Perseus, describes another ritual in which a female relative of the mother took the newborn in her arms and, with her middle finger moistened in the *lustral saliva*, dampened the baby's forehead and lips in a magical gesture aimed at warding off the evil eye. Then she asked that he or she be endowed with fortune during their life (Pers. 2, 31-39). According to some interpretations, these female rites, which were carried out in private, were the counterpart to the *dies lustricus* rites performed by the father days after the birth (Boëls-Hansen 1993, 265).

The puerperium was also a complex phase for women and newborns. The mortality rate for infants under one month is estimated to have been around forty per cent (Carroll 2018, 15) and affected all social strata. Cicero, in an attempt to console his friend Marcia after the death of her son, tells her of the number of great men who have seen their young children die (Sen., *Cons. Marc.* 12-6). The story of Marcus Cornelius Fronto and his wife Cratia, who lost five children in a row, is even more heart-breaking (Fronto, De *nep. Am.* 2.1).

At some shrines we find numerous terracotta figures of mothers with their babies in their arms, such as those dedicated to the goddess Diana in Nemi, as well as other ex-votos representing swaddled newborns found mainly at shrines in Gaul and Etruria (De Cazanove 2017). Perhaps they symbolise a happy labour or perhaps they are a moving document of the fear when faced with the death of the newborn before they have even been able to fully integrate into society, which takes place with the ceremony of the *dies lustricus*.

Rites and practices surrounding the biological birth: the *dies natalis*

Despite the fact that the rites and ceremonies designed to boost fertility and a successful gestation were closely connected with public worship and celebrations, the moment of biological birth was a private act (Hänninen 2005, 54). It took place in an eminently female environment in the presence of family members, especially the mother of the woman in labour (Gell., *NA* 12, 1, 1-5), the midwife and her assistants, slaves and, on occasion, a male doctor (Gourevitch 1984, 173; 1987, 187-193). He was the only man allowed in a place from which men were intentionally excluded (Köves-Zulauf 1990, 183).

After carrying out the examination, the midwife, encouraged by goddess *Levana* (Tert., *Ad nat.* 2, 11; August., De *civ. D.* 4, 11), began a series of rituals aimed at purifying both the mother and the newborn, placing them under divine protection, ensuring the survival of the baby and assessing the ability of the family to maintain it (Garnsey 1991, 53).

The first ritual was the cutting of the umbilical cord. The cutting ceremony always took place after the midwife's inspection (Dasen 2011, 298) and the child had had time to rest after the birth (Sor., *Gyn.* 2.11). At this time, the newborn was raised from the floor, a prior position that has been interpreted in ritual terms by diverse researchers, although with very different nuances. Hänninen (2005, 55) considers that contact with the ground alludes to the symbolic limbo in which the newborn baby finds itself, between the prenatal sphere and the world of the living, and reveals the union with its ancestors. Montanini (2010, 6), on the other hand, attributes a completely different meaning to it, linking it to the great veneration the ancients declared for the earth as a mother, the origin of life and a rest place after death.

Soranus informs us of the exact distance to where the cut should be made – four fingerbreadths from the abdomen – and that it should be made with a sharpened object. In his passage he refers to the superstition of some midwives who refused to use iron because it was deemed of ill omen; he thought it ridiculous that these women preferred to use a piece of glass, a reed, a potsherd or the thin crust of bread (Sor., *Gyn.* 2.11).

With reference to this rite, a series of glass pastes and gems from the imperial period can be observed. Weiss (1992) identified the presence of the *Parcae* or *Moirae*, with their attributes (a torch, a spindle and a distaff). Those divinities are charged with setting the destiny of human beings. In his analysis of one of these jewels (BM1885, 0612.1), together with the depiction of the three deities and their characteristic instruments, there is what appears to be a newborn baby. Dasen (2009, 202; 2011, 299; 2014, 234-235 and 2015, 238-241) concludes that the use of these objects could be a metaphoric reference to the cutting of the umbilical cord, in which case the midwife is the human equivalent of the *Parcae* or *Moirae*.

Once the newborn baby and its mother had been completely separated (the first stage – separation – of the three that, according to Van Gennep (1909) characterised the rites of any historical society), it was the midwife, and not the child's father (Köves-Zulauf 1990), as has

Figure 16.2. Bathing scene. Marble sarcophagus, 2nd century AD. Archaeological Museum of Agrigento, Sicily, Italy (Photo: Regional Archaeological Museum of Agrigento © CC BY-NC 4.0, Wikimedia Commons).

traditionally been stated in studies of infancy in ancient Rome, who fully raised the baby, with a gesture (*levare infantem*) that confirmed even more, if needed, the value and viability of the life of the little one. Judging from the information found in the literary and iconographic sources, this *levare infantem* was carried out by the midwife and completely different from the *tollere liberos* or *suscipere liberos* that, if they existed as such, consisted of the paternal acceptance of the newborn and his or her integration into the family, as we will see later.

Next came the newborn's first bath, in which the baby came into contact with water, a symbolic element that purified it and freed it of any possible remains of its uterine life. Soranus (*Gyn.* 2.13) also refers to the use of salts, while avoiding contact with the baby's eyes and mouth. Its nose was cleaned of mucus and its anus was dilated in order to eject the *meconium* or first faeces.

There are several depictions of the first bath on biographical sarcophagi with life-course scenes (2nd-3rd century AD) that have been extensively studied by several researchers (Kampen 1981; Amedick 1991; Huskinson 1993, 2005; Schulze 1998; George 2000; Mander 2012; Carroll 2014, 2018). One example is the sarcophagus preserved in the Archaeological Museum of Agrigento in Sicily (Figure 16.2). On it we can see how the midwife bathed the newborn baby under the watchful eye of its mother, who is reclining in a chair. In the background of the scene we can see three women with diverse attributes that have been interpreted as deities. It is consistent with the idea of an eminently feminine sphere where a combination of human and divine influences come together.

After the first bath came the massages, which were extremely important given the *infirmitas puerorum* (Cic., *Sen.* 33) that characterised this stage of life. Soranus (*Gyn.* 2.12) believed that the body of a newborn was malleable and therefore care had to be taken not to change it in any way. The purpose of this practice was mainly to check the mobility of the extremities and to rule out any previously undetected abnormality.

Finally, there was the swaddling, which was sometimes even practiced up to the age of two months. It was the first time a human being was differentiated in gender terms, as the way in which newborns were swaddled depended on whether they were male or female: 'in females, one should bind the parts at the breast more tightly, yet keeping the region of the loins loose, for in women this form is more becoming' (Sor., *Gyn.* 2.15).

There are surviving material representations of swaddled children as the iconography was also used on amulets to foster fertility among women of the age of conception. We have a considerable body of iconographic and archaeological representations from Roman Gaul (Deyts 2004; De Cazanove 2016 and 2017), as well as others of a more global nature (Hughes 2017). Some epigraphic evidence has also been preserved, for example, in Lusitania (part of Roman Hispania) on a funerary stela (CIL II, 497) dedicated to Iulia Saturnina, referred as a medica, but who was probably a midwife (Alfaro Giner 2010, 120-121) or even possibly both (Alonso Alonso 2011, 89-90). The interest of the piece lies in the fact that it has a relief of a newborn baby wrapped in swaddling clothes on the back of the altar (Figure 16.3); this refers to the profession of Iulia Saturnina, as is confirmed by the inscription, and not the unlikely event that she died giving birth.

The final ritual act of the *dies natalis* was the newborn's first meal. This consisted of mead or honey boiled in water (Sor., *Gyn.* 2.17) or, failing that, a little goat's milk that the baby drank with the help of the goddess Rumina (Augenti 2016, 45). It was not considered advisable for the newborn to be breastfed by its mother immediately after birth, as it was believed that her first

Figure 16.3. Swaddled child. Funerary stele of Iulia Saturnina (CIL II, 497), 1st century AD. National Museum of Roman Art, Merida, Spain (Photo © Archivo Fotográfico Museo Nacional de Arte Romano – Mérida).

milk, the *colostrum*, could coagulate in the little one's stomach and cause it to die (Plin., *HN.* 28, 123). This does not mean that it was permanently prejudicial, as Pliny also suggests that the milk that springs forth from the woman before the seventh month had no nutritional value, but from that time, when the foetus was formed, it was good for it (Plin., *HN.* 11, 236).

Lactation took place after the second day. Breastfeeding was not only a biological process, but it was also considered a moral concern. Different and contradictory opinions were expressed by Latin writers (Mañas Romero 2019, 91). Aulus Gellius (*NA*. 12.1.4-7) tells of the dissertation of the philosopher Favorinus exhorting a woman of senatorial class who had just given birth to feed her descendants with her own milk, thus avoiding the use of a wet nurse. Other classical writers expressed themselves in the same moral terms, including Cicero (*Tusc.* 3.1.2), Tacitus (*Dial.* 28-9; *Germ.* 20.1) and Plutarch (*Cat. Mai.* 20.3). Nevertheless, the physician Soranus (*Gyn.*, 2, 17) assumes the presence of a *nutrix* (wet-nurse), at least during the first twenty days of life, which led him to offer some advice on choosing one (*Gyn.*, 2, 17), promoting the perpetuation of a practice that has been interpreted as a profession (Mangas 2000; Medina Quintana 2010; Cid López 2016), to which not every woman was suited (López Pérez 2004-2005), or even as a type of servitude (Rubiera Cancelas 2014, 147-53). Thus, despite the criticisms of conservative voices that favoured maternal lactation in their discourses and extolled those who attempted it in life for different reasons (*CIL* VI, 19128; *CIL* IX, 4864; *CIL* IX, 1154), historical research has provided more than enough evidence that alternatives to breastfeeding were available (Centlivres Challet 2017).

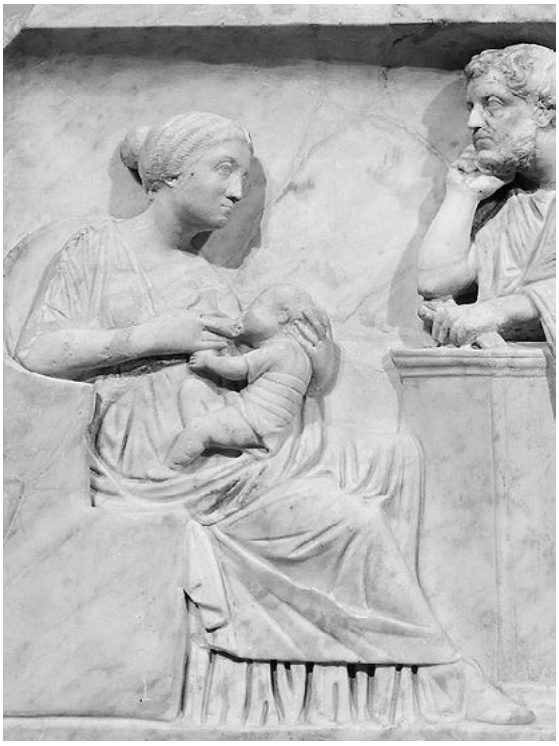

Figure 16.4. Mother breastfeeding a baby in the presence of the father. Sarcophagus of Marcus Cornelius Statius, c. 150 BC (Photo: Marie-Lan Nguyen, The Louvre Museum, Paris, France © CC BY 3.0, Wikimedia Commons).

Although the act of breastfeeding newborns proliferates in various literary passages, it is not very well represented from an iconographic point of view. However, once again we can resort to biographical sarcophagi with life-course scenes. Of particular interest is that of Marcus Cornelius Statius (Figure 16.4), probably from Ostia Antica and dated to the 2nd century BC. It has a brief inscription (*CIL* XIV, 4875) and several scenes from the life of a Roman child of that time, the first of which shows a mother breastfeeding a baby in the presence of the father.

In conclusion, we can state that from the moment of the biological birth, during its first hours of life, the newborn was the object and subject of a series of rites and practices with a single purpose: to guarantee its survival, providing, naturally, that it had been declared worthy of it. In this process, which did not imply its social recognition, female figures were absolutely in charge, especially the midwife. This led Dasen (2009, 2011, 2014 and 2015) to refer to an empowerment of the role of women in this *dies natalis*, in contrast to the traditional discourse that relegated them to a secondary position below that of the *pater familias*.

Primordia and social recognition: the *dies lustricus*

The days following the *dies natalis* and prior to the *dies lustricus* (also called the *dies nominis* or *nominalia*) were known as *primordia* (Johnston 1903). This was a period to confirm once again the survival of the newborn that, according to Plutarch (*Mor. Quaest. Rom.* 102), was eight days for girls and nine for boys. The reason given for this gender differentiation in the execution of the ritual was simple: females grew, matured and reached perfection before males. During that

period, the newborn remained unnamed and was referred to colloquially as *pupus* (if male) and *pupa* (if female).

The motives for postponing the *dies lustricus* are not entirely clear. Aristotle (*De an.* 588A, 8-10) alluded in his writing to the high rate of infant mortality in the first days after birth, which could be an explanation. For his part, Plutarch (*Mor. Quaest. Rom.* 102) argues that it was habitually during the seventh day after the *dies natalis* that the by-then dry remains of the umbilical cord fell off, ceasing to resemble a plant.

During the *primordia*, both the child and the mother, neither of whom had yet been purified, needed protection. In this case, it was the responsibility of the *pater familias*, although a certain pre-eminence continued to be given the female figures in some rituals such as in those described by Perseus (2, 31-39). One of the main fears when faced with vulnerability, in this case of the new mother, was the appearance of *Silvanus*, a primordial divinity and forest dweller, possibly based by the Romans on a similar god from the Etruscan pantheon. This deity was extremely hostile to women (Hänninen 2005, 55-56), who were forbidden from worshipping him.

The counterpart to *Silvanus* was *Pilumnus*, the tutelary deity of newborns who, along with other gods, such as *Intercidona*, *Deverra, Iuno Lucina* and *Rumina*, watched over the safety of the mother and, above all, of the child until the day they received their *nomen* and therefore came under the protection of the family gods of the *domus*.

After the birth of the child, the house, and particularly the entrance, would be adorned with flowers (Dixon 1992, 101, 134) and the family, especially the mother, would receive visitors (Gell., *NA* 12, 1), while the ceremony that would finally signify the newborn's integration into the family and, consequently, into the community was being organised.

At this point, it is useful to take another look at a controversial question from a historiographical point of view: that of the *tollere liberos* (or *suscipere liberos*). It has traditionally been thought that the child was placed at the feet of the father after birth and that only if he picked it up and raised it in his own arms would it be accepted into the community; otherwise it would be exposed. In his eye-opening work *Römische Geburtsriten* (1990), Köves-Zulauf determined that this ritual never existed, providing a series of arguments that years later were revised and reinforced by Shaw (2001). Both researchers believed that the *tollere liberos* had their origin not in the Roman world, but in the postulates of the Romanist Declareuil (1912), who, in the late 19th and early 20th century, argued that among the prerogatives of the *pater familias* was the acceptance or rejection of a newborn, even if it had been the fruit of his own marriage.

Other scholars of Roman law expressed their opinions on this idea, which Shaw (2001, 33) defined as quite colourful, but almost entirely unproven by any evidence. Two of them were Perozzi (1917) and Volterra (1951). The latter maintained that he had found the proof that had eluded his predecessors: that the rite of the *tollere liberos* was described in the classical sources and more specifically in some *diplomata* (military diplomas).

Among the most outstanding arguments put forward by Köves-Zulauf (1990) and Shaw (2001) to demolish this false rite was the testimony of Soranus himself, who, despite giving a highly detailed description of the moments after giving birth, does not refer to the *tollere liberos* at any time, or to the fact that, legally, the birth of a child as the fruit of a *iustiae nuptiae* did not require

any type of ceremony. To these reasons, they add others, such as the finds of various papyri in the Roman province of Egypt that record births but make no reference to this ritual (Shaw 2001, 36), or that of Cicero (widely quoted by defenders of the existence of this ceremony), which uses the derivative terms *tollere* and *suscipere* metaphorically. Neither has any iconographic depiction of this ceremony been found to date.

In conclusion, although very recent studies continue to give validity to this ritual (Augenti 2016, 36), what is true is that it has been placed in doubt by numerous specialists in the subject, including Hänninen (2005), Dasen (2009, 2014 and 2015) and many others. The *tollere liberos*, if it really existed, would not have been a physical act, as was the *levare infantem* carried out by the midwife, as the mere fact that the newborn was the result of an *iustum matrimonium* between two free citizens already implied paternal acceptance. Neither should we forget that in the hypothetical case that the *pater familias* wished to rid himself of the *infans*, there was a legal formula, the *patria potestas*, which legally allowed him to decide on the life or death of his family members. Exposure, although it is very difficult to quantify in statistical terms, was a legal and socially acceptable practice for those fathers who, for whatever reason, wished to abandon their children (Hänninen 2005, 59), meaning that we can rule out the need to resort to a ceremony of this type.

What is certain, given what we are told by the literary sources, is that one week after the *dies natalis* a sacrifice was made to *Iuno Lucina* (Tert., De *anim.* 39, 2), as a precursor to the *dies lustricus*.

Finally, in the *dies nominis*, the mother and her child were purified in the presence of the assistants, who were witnesses to the imposition of the *praenomen* (i.e. the personal name) on the new family member, followed by the family *nomen*. From then on, the newborn would be protected by the household deities. However, despite the fact that it was at this time that the baby was identified in a rite that bears no relationship to Christian baptism, we know that during the imperial period, a new citizen was not registered until after approximately thirty days (Dasen 2009, 207-208).

We know that the ceremony included a lunch, known as the *solemnitas convivium* (Tert., De *idol.* 16), although we do not have a comprehensive description of it in the literary sources nor is it represented in the iconography.

Finally, it is quite possible that the *dies lustricus* was the time when friends and family would offer further protection to newborns by presenting them with different amulets, such the *bulla* (for boys) or the *lunula* (in the shape of a half moon, for girls). This type of material culture has been well studied by researchers such as Dasen (2003), who, after an exhaustive analysis of the rites associated with birth in the Roman world, questioned the importance of this ceremony (Dasen 2015, 243-247).

Conclusions

Birth in Roman society was not just a biological event, but a multidimensional process that involved a complex series of rites from the moment of arrival of the newborn to its social recognition. These practices are well known through written sources and material culture and have been interpreted by most historians not as simple care, but as religious rites (Hänninen 2005, 55), judging by the precision with which they are described in some cases.

The Roman *infans* was born twice: the first time on the day they came out of their mother's womb under the watchful eye of a group almost exclusively made up of women, who decided on the viability of its life in those first moments. This contrasts to the view that it was the father who maintained that prerogative. The second time was the social birth on the day that he or she received his or her name – not only the personal name (*praenomen*), but also that of the family, their *gens*, which also meant protection by the deities of the *domus*.

In all the rites covering both scenarios, the *dies natalis* and the *dies lustricus*, as well as during the intermediate period, *primordia* (which varied, as we have seen, depending on the gender of the newborn), there was a tutelar omnipresence of diverse divinities. Despite all this divine assistance, it is estimated that infant mortality rates were very high. This did not go unnoticed among the classical authors, who faced up to these continuous losses with very different attitudes. Exposure and abandonment, which are barely mentioned in this text but widely studied (Evans Grubbs 2013), could not have been excessively common, if we take into account the large number of rituals surrounding conception, pregnancy, giving birth and the first days of life. In general terms, birth was something desirable for the survival of the community.

Abbreviations

References to Classical texts, inscriptions and some figures included in this work have been cited according to the abbreviations list provided in *The Oxford Classical Dictionary* (4th edition, 2012).

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Childhood in the Past: Monograph Series 9

AGES AND ABILITIES

Ages and Abilities explores social responses to childhood stages from the late Neolithic to Classical Antiquity in Central Europe and the Mediterranean and includes cross-cultural comparison to expand the theoretical and methodological framework. By comparing osteological and archaeological evidence, as well as integrating images and texts, authors consider whether childhood age classes are archaeologically recognizable, at which approximated ages transitions took place, whether they are gradual or abrupt and different for girls and boys. Age transitions may be marked by celebrations and rituals; cultural accentuation of developmental stages may be reflected by inclusion or exclusion at cemeteries, by objects associated with childhood such as feeding vessels and toys, and gradual access to adult material culture. Access to tools, weapons and status symbols, as well as children's agency, rank and social status, are recurrent themes. The volume accounts for the variability in how a range of chronologically and geographically diverse communities perceived children and childhood, and at the same time, discloses universal trends in child development in the (pre-)historic past.

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