

INFANTS RAISED AND BURIED: A BIOARCHAEOLOGICAL PERSPECTIVE ON
BURIAL, IDENTITY, AND PERSONHOOD OF PERINATES IN MEDIEVAL
TRANSYLVANIA

by

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Infants Raised and Buried: A Bioarchaeological Perspective on Burial, Identity, and
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DEDICATION

I would like to dedicate this thesis to my parents. They have always supported me through whatever I decided to do. I would like to thank my Mom for always keeping me laughing and my Dad for helping grow my writing by editing first drafts of my papers throughout my college experience. Your love and support helped me grow to be my very best.

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ABSTRACT

INFANTS RAISED AND BURIED: A BIOARCHAEOLOGICAL PERSPECTIVE ON BURIAL, IDENTITY, AND PERSONHOOD OF PERINATES IN MEDIEVAL TRANSYLVANIA

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Through the study of burial contexts, bioarchaeologists can identify patterns of burials to address changing concepts of identity and personhood as a reflection of the ethnogenetic process. While social and political influences have long been studied in terms of the expressions of identity in mortuary rituals, the study of children and infant burials have long been neglected. However, it is argued here the burials of perinate and infant individuals may be particularly susceptible in certain times and places to manipulations of ascribed identity reflecting the changing beliefs of a community. This work focuses on the mortuary context of 36 perinates under the age of one year from the Papdomb archaeological site located in Văleni, Romania (12th-17th century). The site encompasses the remains of a medieval church and its associated cemetery where 664 burials have been recovered. Here, perinates were studied in terms of age-at-death estimation, pathological conditions, orientation of the body, location, and associated grave goods.

These data were subjected to qualitative and quantitative analysis including correspondence analysis. The findings reveal a distinct pattern to the burial treatment of perinates and infants potentially at odds with Christian doctrine. These observations are contextualized within frameworks of larger belief systems and may reflect expressions of local pre-Christian concepts of personhood. In this way, burial of the very young may varyingly reflect dimensions of symbolic resistance, syncretism and ethnogenesis, and cultural hybridity resulting from polyethnic interactions that transformed local culture.

CHAPTER ONE: INTRODUCTION

Insight into the diverse and complex ways in which individuals perceive the world is shaped through a mind and body interface with our social worlds, and in turn, individuals shape cultures in which they reside. This perception is “how we literally incorporate biologically, the material and social world in which we live, from conception to death” (Krieger, 2001: 672). A growing perception of infants and children can be traced through the history of bioarchaeological thought and the social sciences more broadly over the last four decades. Age can be used as a measure of discrimination or acceptance within a society (Sofaer, 2011). Age can generate a range of dynamic and fluid identities as one passes through different rites of passage in culturally contingent manners. Cultural markers give guidelines of how to live, however, such expected practices of a culture do not always shape the entirety of local or individual belief systems.

How we think about children and how we study children can have significant impacts and bias in study. What is defined as “normal” or normative in the Western mindset shapes study and approach as well as limits the possibilities of knowledge in both positive and negative respects (Kuhn, 2012). How a society perceives individuals of a young age can have significant impacts the identity displayed in burials. An incorporation of the study of identity through the biological, social, and the larger

political identities can shed light and give a new and exciting series of avenues of study for bioarchaeologists (Baxter, 2008).

Current advancements to the study of children in bioarchaeology is promising and focus on life course history, child birth, breastfeeding and weaning practices, population health, identity and cultural roles of children, social age, personhood, the study of skeletal growth and development, tooth development with linear enamel hypoplasia (LEH) patterns, the use of isotopes to understand relationships and diet, embodiment, the mother/infant nexus, plasticity, fertility, epigenetics, social structures, and mortuary analysis among other areas of focus (Scott, 1999; Beauchesne and Agawal, 2018; Halcrow, 2020; Temple, 2018; Halcrow and Tayles, 2008, Sofaer, 2001; Klaus, 2014; Temple and Goodman, 2014; Gowland, 2015; Lewis, 2006). With the expansion and focus to children in bioarchaeology, it is possible to have a more complete understanding of people in the past.

In settings where cultures come into contact, confrontation, and synthesis, the burial treatment of non-adults may be a particularly compelling cultural arena to explore (Stojanowski, 2010). With Christian mandates imposing belief systems upon communities throughout the Middle Ages in Europe, the possibility and range hybridization could vary from resilience to change (Gáll, 2013; Card, 2013). Each community, with its own history, would interact with external changes in different ways, leaving the possibility for ethnogenesis to occur. With a focus on bioarchaeological methods and the study focused on children, a deeper vision of society can be gained. If a subordinate society adopts aspects of a supraordinate society yet maintains other beliefs,

a new culture can be forged through a process of ethnogenesis (Stojanowski, 2004; Stojanowski, 2010; Stojanowski, 2013; Sturtevant, 1971). One element of this process can be embodied and enacted through the burials of children.

The Papdomb site in Transylvania, Romania, contains the landscape of a pre-Christian burial ground that was later used to construct a church. The church was in-use for nearly 600 years; its history and dynamic place within the cultural landscape over that time is an excellent setting to examine evidence of ethnogenesis. This work aims to understand the burial practices of the medieval Székler peoples surrounding the mortal remains of perinates (individuals who either died before birth or lived to one year after birth) at the Papdomb archaeological site. Perinates buried at the Papdomb archaeological site were interred in multiple ways. Several perinates were interred as part of a multi-person burial. The additional person(s) were other children or adults and on one case, such as the burial of a perinate with an adult male. Perinates were also buried alongside the walls of the church.

To address differential treatment of perinates at the Papdomb cemetery, a multi-disciplinary approach was applied. Bioarchaeology may sometimes offer a descriptive perspective or snapshot on certain questions about culture, history, or human variation. However, here, a focused and contextual approach applies theories and approaches involving ethnogenesis to the biosocial lives of children to illuminate belief systems and processes of social change. This thesis will explore broader belief systems and expectations through religion and burial practices and compare the findings to local belief systems and on identity. Furthermore, this work will explore the interrelations between

expected cultural identities of infants during the Middle Ages to individual case studies on a local scale of how infants were presented in death.

Research Hypothesis

The Szeklers are a long present but understudied group in Transylvania. They are enigmatic and significant disagreement about their origins and early history add to the challenges of this research (Lendvai, 2004). This thesis aims to develop a deeper understanding of the burial context at the Papdomb site and a broader understanding of the Székler culture. By addressing local traditions and mortuary practices and comparing them to greater mandates, it is possible to untangle different belief systems, especially in areas of highly fluctuating political landscapes.

I hypothesize that the adoption and practice of Christianity in Székler culture produced a complex, hybrid body through politics and religion. Death rituals surrounding children involved one locus of the resulting process of ethnogenesis where new kinds of ascribed identity and personhood of perinates within mortuary contexts were created as part of a larger hybrid form between previous Székler beliefs and imposing Christian beliefs. This hypothesis is further developed and tested through the remaining chapters, which will be briefly described in the next section. Each chapter presents important contexts and lines of background of information to approach and interpret the burial patterns of the Papdomb perinates.

Organization of the Thesis

Chapter Two begins setting the stage of the bioarchaeological study of burials at the Papdomb site and provides an overview on the study of children in anthropology.

This chapter specifically delves into how the multiple subfields of anthropology have approached the study of children throughout its history, and eventually comes to focus on bioarchaeology, specifically. A detailed description of the development of children is crucial in presenting a major problem of marginalized children throughout the field. Chapter Two also highlights major paradigm shifts among theoretical developments and methodological approaches in the study of children that make them critical to understanding the people of the past as a whole. This chapter presents key studies that have changed the perception and study of children throughout the multiple topic areas of anthropology and more specifically, bioarchaeology.

Chapter Three reviews the conceptual and theoretical territory surrounding burial patterns of children and the use of theoretical approaches to understand the identity and personhood of perinates. Additionally, a reflection of ethnogenesis can be gained from the study of identity and personhood of perinates. This chapter defines specific theoretical approaches and uses different studies to understand the biosocial lives of children. Such approaches to the study of children provide evidence for the importance of studying the very youngest within societies and throughout bioarchaeology.

Chapter Four provides key contextual information about the Papdomb archaeological site. To better understand the belief systems surrounding children, a history of the site is critical to consider. This chapter identifies large political, cultural, influences over the Transylvanian region, the known history of the Székler people, and religious changes during the early to middle second millennium C.E. This chapter delves into the greater Christian influence across Europe and Transylvania. Such a history

allows for a more complete and informed understanding of the factors that shape burial patterns and gives perspective to evaluations of ethnogenesis occurring in the area during the medieval time period.

Chapter Five describes the materials and methods used for this thesis. This chapter provides a brief overview of the excavation and skeletal data collection from the Papdomb archaeological site. Additionally, chapter five provides a brief explanation of the correspondence analysis procedure used to explore patterns in the burial data and compare burial patterns among age groups. This chapter leads into the analysis of the data collected which is presented in the results chapter.

Chapter Six presents data from the 664 burials excavated from the Papdomb archaeological site. First, this chapter presents a brief description of the “standard” or “typical” burial patterns at the Papdomb site. This is followed by a description of the funerary contexts of the 36 perinates where at the center of this thesis is presented. Second, quantified burial data were submitted to the correspondence analysis test, and burials patterns are displayed graphically to depict specific patterns. Chapter six identifies categories of location, sex, pathological conditions, orientation, multi-person burials, and artifacts associated in burials and compares them to different age groups.

Chapter Seven discusses interpretations from the data in Chapter Six. This chapter applies key concepts and theoretical approaches to understand the patterns shown at the Văleni church. To understand perinate burials, it is important to address how all age groups were buried throughout the site. The chapter first discusses patterns of each category (discussed in Chapter Six) and compares each to age of all individuals. This

chapter then explores how concepts such as identity, personhood, and ethnogenesis relates to the specific perinate burials at the Papdomb archaeological site. Through a visitation of the theoretical perspectives and an in-depth analysis of perinate burials compared to other age group burials, the hypothesis cannot be rejected. Through the understanding of the political and religious influence of the area and compared burial patterns of perinates, it is clear that perinates held personhood and identity within the community and presents an expression of ethnogenesis.

Chapter Eight concludes the thesis by recapping each chapter presented in this thesis and summarizes major findings. This final chapter concludes with thoughts on future directions and related research. Ultimately, this thesis makes a strong argument as to why the study of children is important and reveals how the study of children's biosocial lives reflect upon larger constructs, processes, and realities within society.

Conclusion

The bioarchaeology of children in the past, once seen as superfluous or uninformative, is today growing in importance and relevance. Past studies of children in bioarchaeology usually focused on bone growth and development, pathology, and the mother/infant nexus to understand adult health culture (Beauchesne and Agarwal, 2018; Halcrow, 2019). This thesis aims to understand the greater political and religious influences of the Transylvanian region during the medieval time period by focusing on the biosocial dimensions of the burial patterning of perinates. This work delves into theoretical perspectives of identity, personhood, and ethnogenesis and apply such theories to the Papdomb archaeological site. The next chapter begins this process and scrutinizes

the study of children in anthropology and highlights the once-pervasive marginalization of children throughout the history of the field. The next chapter will then discuss theoretical developments through different paradigms as the study of children itself developed.

CHAPTER TWO: CHILDREN IN THE PAST: THEORY, APPROACH, AND BIOARCHAEOLOGICAL PERSPECTIVES

Today, bioarchaeology represents one of the most vibrant and dynamic fields of anthropology. In just over 40 years, the field emerged from earlier descriptive and processual paradigms into the nuanced study of ancient lives, human biology, culture, and the human condition in general (Buikstra and Beck, 2006; Larsen 2015, Martin et al. 2013). Many different approaches and foci have emerged, and many different peoples, time periods, and regions have received considerable bioarchaeological attention. However, until very recently, one subject matter area that has long been ignored in bioarchaeology are the biocultural lives of children. This chapter opens the background section of the thesis by discussing the history of children in anthropology and bioarchaeology specifically. This discussion provides a survey of the bioarchaeology of children, how they have been overlooked across multiple fields of anthropology, and emerging ways to study the contextual lives of children in the past through bioarchaeological research.

Bioarchaeological Science

The roots of modern bioarchaeology extend nearly 150 years into the past, with various threads first emerging in the nascent physical anthropology of the nineteenth century and were products of Western settler colonial culture. A “demand” for

understanding physical differences between people increased, which allowed for physical anthropology to grow. Skeletal remains were seen to represent artifacts of deeper, innate biological nature and early physical anthropologists gave colonizers answers to why people looked physically different (Buikstra, 2009). Racial classification bloomed, fueled by racist Western folk concepts of typological human variation using the highly flawed measurements of mental and physical traits mainly revolving around the human crania. As physical anthropology and archaeology grew, so did skeletal collections (Larsen, 2015). As knowledge and analytical toolset expanded, the field grew and moved away from such typological thinking, but one of the biggest changes was stimulated by Washburn's (1951) call for a New Physical Anthropology, explained later in this chapter.

Bioarchaeology was a term first coined by Clark (1972) in reference to animal and other organic remains in the archaeological record. The term was then redefined by Buikstra (1977) who laid the foundation for the study of human remains in archaeological sites. Researchers in the field today aim to understand the past by using multiple lines of evidence and incorporate cross-disciplinary approaches through examining skeletal remains and their contexts.

Buikstra and Lane (2006), Larsen (2015), Martin et al. (2013), and others stress that it is imperative to contextualize the study of human remains by understanding the interplay between culture and biology. By using new technological developments and different theoretical and philosophical perspectives, bioarchaeologists can approach both overarching and specific patterns of behavior, lifestyle, disease, adaptation, variation, and other topics regarding humans in the past. A synthesis of topics focused within the field

include biological stress as it relates to growth and development, infectious pathogens, trauma and violence, degenerative joint diseases, biomechanical adaptations to the environment including the adaptive nature of cranial and dental functional morphology, studying diet and life history through isotopes and oral disease, understanding human variation through biological distance, paleodemography, and incorporating contextual approaches and ethical frameworks within bioarchaeology. Bioarchaeology is also a multidisciplinary field, and as it assembles a contextual picture of its subject matter, it also uses other scientific methods, ethnographic data, historical documents, archaeology, and other methods to inform on lifestyle of those from the past. Larsen (2015) highlights the major topics in the field, which hold the ultimate goal to uncover the “rich record of the human experience...in consideration of the context from which the remains derive” (Larsen, 2015: 422). However, there is a major element missing throughout the book and throughout main topics within the bioarchaeology field as a whole: children.

When children are studied within the main topic areas of bioarchaeology, it is usually only done as a proxy for understanding some aspect of adult biology (Lucy, 2005). Although non-adult remains are present in the archaeological record, they often are missing in archaeological research. Furthermore, understanding of the social nature and life histories of children has also been long underdeveloped in bioarchaeology (Halcrow et al., 2017).

Marginalized Children

Throughout the history of archaeology, children, and especially infants, are often overlooked or simply ignored. At the same time, the study of children and infants are

crucial to anthropological understandings of the multiple complex dimensions of past societies and span a diversity of anthropological issues (McHugh, 1999). In particular, the study of children and infants can give deeper understanding to broader questions of health, diet, care, dependency, identity, social class, religious practices, political organization, and belief systems (Halcrow and Tayles, 2011; Sofaer Derevenski, 2000). Past work has also illuminated problems regarding the study of children and infants through rigid and etic definitions of age that impose western perspectives and interpretations on burials (Sofaer, 2011). By placing aside universal or positivist assumptions and defining age as fluid and dependent on culture, we can be optimistic that a better understanding children and childhood in the past is attainable.

New, holistic, and compelling perceptions of children and infants can be provided especially via contextualized bioarchaeological approaches. Our own cultural attitudes and belief systems inexorably influence the interpretations of our findings (Kamp, 2001). To confront bias, mainstream perception of children must be carefully examined, redefined, and identified to look beyond biased ways of thinking. The reverence and importance that biological and social scientists place on certain age groups may differ from the definitions that other cultures place on social and biological maturation (Baxter, 2008). By exploring different theoretical approaches and perceptions to the study of children, it is possible to identify underlying assumptions and open a contextual window to the short lives and death of infants in Transylvania during the Middle Ages.

In sum, for more than a century of scientific archaeology, infants and children in archaeological contexts were ignored because children were seen uninformative small

versions of adults, to the point where there were practically non-persons (Hirschfeld, 2002). From the 1960s to the 1990s, typological approaches peaked, and the scientific study of growth and development of children made major leaps forward. During the 2000s, the focus of study shifted towards a life course history of children (Agarwal, 2012), with an emergent postprocessually-inspired theoretical interest involving the recognition of the importance of the social and cultural contexts of a child's agency and roles in society (Bengston and Allen, 1993; Lillehammer, 1989). Today, with a combination of life course history approach, along with multi-disciplinary aspects of psychology and biology, a more holistic perspective is applied. Throughout the development of this focus of study, methods and approaches have changed and improved to yield a more encompassing picture of past populations.

Children in Early Physical Anthropology

During the early 20th century, work by Aleš Hrdlička and Ernest Hooton introduced major influences and set key trajectories within the field of physical anthropology (Gould, 1996). The careers of both scholars were shaped around 19th century ideas of classification through a teleological and orthogenetic perspective, which created the foundation of mainstream science in physical anthropology. Hrdlička and Hooton focused on the study of adult skeletal remains with little to no mention of children: early physical anthropology, as a reflection of western perceptions and bias, has defined “normal” in terms of a specific race, sex, health, and even age. “Normal” was often defined as being white, male, healthy, and a young adult (Hooton, 1930; Hrdlička,

1919). For example, when collecting skeletal samples for study and categorization, so-called white (Euroamerican) populations were the standard and compared to deviations represented by “other” populations. Such deviations from the defined standard also included cultural perceptions of the age at death of an individual. Such thinking remained the binary, typological, and descriptive focus of study during that time. The imbalanced focus and importance that scientists place on certain age groups can be traced through the anthropological literature. Works by Hooton and Hrdlička established the standard as that of the adult skeleton, where the young were often ignored. With an emphasis on only studying the defined standard in skeletal samples, information that could be understood from studying the young was lost.

Hrdlička (1919) used comparative methods and focused on museum collections of skeletal remains from around the world. Hrdlička defines anthropology as “the comparative study of man” with a focus on the so-called Euroamerican man (Hrdlička, 1919: 7). Hrdlička used comparative methods to try and understand variation of “races” by collecting skeletal samples. With the comparative method of Hrdlička to define race, Hooton focused on crania to expand ideas of racial definitions (Gould, 1996). Hooton’s influential work in the U.S southwest involved the study of cultures through osteology, pathology, and anthropometric variation using statistical and quantitative methods (Hooton, 1930). Because the crania of infants were not yet fused and often found disarticulated, infant remains were viewed as useless. Hooton states;

“(i)n the case of infants and immature individuals, the cartilaginous state of epiphyses and the incomplete ossification of sutures, as well as the fragility of the bones themselves usually results in crushing and disarticulation. In any event, the

skeletons of young subjects are of comparatively little anthropological value” (Hooton, 1930: 15).

This widely shared perception and attitude was pervasive throughout mainstream physical anthropology in the decades to follow.

The New Physical Anthropology

Washburn (1951) rejected the typological ideas of morphology and opposed the taxonomic, typological, and categorical thinking espoused by Hrdlička, Hooton, and most of their contemporaries. At the 1950 Cold Spring Harbor Symposium, Washburn called for an entirely new ethos for physical anthropology that rejected descriptive and typological thinking. Washburn redefined the aims of the field as best served by understandings of how functional anatomy relates to considerations of genetics, the environment, culture, and social systems all unified under the processes of natural selection and evolutionary theory. The old physical anthropology’s approach evoked the concept of “essence,” where categories were in a static state of existence with variation explained using the tools of speculation further shaped by inherent cultural bias.

The New Physical Anthropology also called for a fundamental change in the point of view when approaching topics in anthropology, which created a broader range of possibility and understanding. The call for a broader understanding of human variation called for a paradigm shift where studies began to encompass a more holistic and biocultural perspective. Such perspectives set the foundation and broadened the limits and scopes of what can be studied. It started to carve out a niche making it possible to begin biological anthropological studies of children and childhood.

With a move away from descriptive methods, an analytic paradigm arose in the 1960s (Halcrow et al., 2016). The goal of the new mainstream science was to understand the mechanisms and processes of bone growth and development along with its underlying control mechanisms. Johnston (1961, 1962, 1969) helped establish the importance of children in physical anthropology (and later, bioarchaeology) through comparative studies of growth using anthropometric data. Johnston's pioneering work on the importance of children allowed for further developments in patterns of health, disease, and understanding of cultural change (Halcrow et al., 2016).

Johnston (1969) characterized development of linear growth, proportional growth, and rates of maturation in consideration with environmental and genetic factors. Johnston developed self-assigned chronological ages with one-year intervals in order to superimpose biological meanings and standards of age categorizations in the United States. Although Johnston brought to light the importance of studying children in the archaeological context, the methods revolved around inter-racial comparisons between the "standard" Euroamerican sample compared to African American and Native American children (Johnston, 1962, 1969). Growth studies in children bloomed after Johnston's main contributions, however, studies of the fetus and infants were still rarely recognized in mainstream science. Yet, this work helped to eventually open the doors to questions including how infants could contribute to considerations of maternal health, disease, mortality, and social organization (Halcrow et al., 2016).

Children in Cultural Anthropology

It is worth crossing sub-disciplinary boundaries to note that within cultural anthropology, children were rarely the primary focus of study before the 1950s. If children were mentioned, it was in relation to adults, associated with rites of passage, and were considered as elements of so-called familial life studies (Malinowski, 1913; Sofaer, 2013; Thompson, 2004). The emergence of childhood studies occurred during the 1950s where anthropologist expanded their theoretical horizons to include how culture and biology indeed affected a child's life (Goodwin, 1990; Mead, 1955; Wolfenstein and Mead, 1955). Identity of children emerged further during the 1970s with the growth of feminist theory. However, identities of children were associated with adult relations rather than children being active contributors to society with their own identity (Hirschfeld, 2002; Sofaer, 2013).

The study of children took a major step forward with a French philosopher, Philippe Ariès, who recognized the social lives of children in medieval France (Ariès, 1962). Ariès highlighted childhood development as a social construction, rather than a purely biological process. He used paintings to argue that childhood during the medieval era did not exist as we know it. Rather, children experienced adult responsibilities and were perceived as such. Ariès further argued that the childhood stage was not separate from adults until the 15th century where children were detached from adults in western cultures. Ariès' work placed children as a focal point of study, which helped the field of anthropology grow and question the lives of children in the past (Beauchesne and Agarwal, 2018).

Although the growth of childhood studies has indeed taken root in cultural anthropology, interest and interpretations of children are often considered within *post-hoc* explanation in archaeology (Roveland, 2001). Children today are frequently referenced when artifacts are “uninterpretable” and are considered unknowable in archaeology (Baxter, 2000; Thompson et al., 2004). However, the inclusion of childhood studies can open the doors to include deeper understandings of complex societies. Burial treatment, demographic reconstructions, relations to caregivers, childhood transitions through different rites of passage, human cognition, life history, and social behavior are developing into the study of agency to understand cultural complexities (Thompson et al., 2004).

Children in Mortuary Archaeology

Funerary rituals during the 18th and 19th centuries were examined only sporadically in western scholarship. When funerary rituals were considered, the focus concerned studies of “primitive” religion and sometimes social organization and economic relationships (Smith, 1889; Trigger, 1999). Popular studies of so-called ancient culture areas, such as that conducted by Egyptology and Assyriology, were often tethered to questions of biblical validation and focused on adult lives (Smith, 1889). Van Gennep’s (1909) study of the rites of passage was one of the earliest influential studies which shaped contemporary theoretical perspectives. Van Gennep (1909) argued that human rituals could be structurally characterized by three phases that constituted a transformational rite of passage. These were a separation phase, where there is

detachment of individual from group/society, the transition phase, where the person is in a liminal, ambiguous, and dangerous state, and the reincorporation phase, where a new identity and status is established. Van Gennep (1909) used baptism as an example of a rite of passage for children. Children who are not baptized were not considered a part of society in the same consideration if they were baptized. One reflection through the funerary context was a difference of rites noted between baptized and unbaptized children.

Hertz (1907) also developed an in-depth study of agency through burial ritual and was quite ahead of its time. Hertz (1907) argues that burial context gives information from the social aspects of society. Through studying the transformation of body within the context of burial, it is possible to understand grief and bereavement from mourners, and thus displaying continued agency of the dead. Hertz's main focus was upon social status and the special case of secondary burial, and again, the locus of study were adults, as he perceived children to have little social influence. This was inferred from a lack of effort and time invested in child burials.

During the 1960s, a renewed interest in the cultural context of mortuary archaeology developed in the form of processual archaeology (Trigger, 1999). Processual archaeology focused on the material aspects of graves, which focused on a theorized one-to-one relationship between burial complexity and social organization (the representationalist perspective). Processual archaeology often focused on cultural ecology, settlement patterns, and political organization. Tainter (1978) and Saxe (1970) used methods of processual thought to address social identities and status. Saxe (1970)

defines social persona as multiple aspects of identity within a functional social system. The multiple aspects of social persona include the number and quality of grave goods, age, and sex, which were thought to have a linear relationship to rank in society. Children were often included in processual archaeology through interpretations of burial grave goods, but it was not for their own sake. Although the focus of children in processual archaeology was minimal, it arguable was to serve a larger argument.

Binford's (1971) famous processual statement on burial rituals focuses on the social theory of funeral rites, by looking at differences in burials types and location of inhumations. Through looking at burial type and differences in location, Binford noticed differences between adult and child burials. Child burials, especially in egalitarian societies, were often buried in private spaces of the home, whereas adult burials were buried in more public spaces. Although Binford questioned differences between the complexity of burials of children and adults, the only conclusion that he offered was that children were not fully integrated members of society and were not afforded adult burial rites in public spaces. Socially speaking, they were not really "full people." Binford helped move a focus of archaeology to understand social complexities, however, analysis of burials was still representationalist, where only one possible dimension and perception from burials were considered. For example, Binford's focus of rank relied on human social universals inferring that more grave goods or greater quality of grave goods in a burial correlated to a higher status in the individual's life. Moreover, the presence of "rich" child burials was used as a major piece to the argument of inherited rank and status being represented in mortuary variation. Ultimately, study of burial patterns of non-

adults were used as just yet another piece of Binford and other's middle range theory used to support a processual view of human societies and history.

A counterreaction and critique of processual archaeology emerged by the early 1980s when archaeological theorists (mostly in Europe) argued for the primacy of a pluralistic structural-symbolic framework for archaeological thought. This postmodern turn opened the doors to understand developments in gender, ideology of the past, cognition, emotion, and an understanding that mourners are the ones who bury the dead (Hodder, 1982). From the new paradigm grew new questions and theoretical approaches to interpret burials. The emergence of postprocessual archaeology allowed for growth in study in the complexities of society with the incorporation of multiple perspectives. Postprocessualism extensively critiqued processual archaeology, pulling the focus away from systems theory and universals to a more contextual approach. The new approach perceived burial rituals as reflections of the living and used symbolism to explore the roles of agency (Parker-Pearson, 2000). The study of age as a cultural and interpretive domain emerged out of postprocessual archaeology. It was not until the 1990s when age was a serious consideration on the study of mortuary archaeology. The new interest in age allowed for recognition of age as a contingent, contested, and fluid state of cultural and biological being (Scott, 1999; Sofaer, 2000). Persons including children and older individuals are considered in multiple aspects of societies and identity (Parker Pearson, 2000).

Decades of debate within archaeology has tested, rejected, and modified both the processual and postprocessual schools of thought, and both have their contemporary

forms of theory and practice. Postprocessual theory is often critiqued because interpretations can be far too subjective, unclear, and impossible to test (Brown, 1995). Elements of processual archaeology engaged in a thoughtful process of rapprochement and moved away from universal object-based classification and incorporated a more contextual approach (Brown, 1995). Although Saxe's 1970 framework from his dissertation was not an effective model, his Hypothesis 8 persisted and is still applicable today (Saxe, 1970). Hypothesis 8 states:

“To the degree that corporate group rights to use and/or legitimized by means of lineal descent from the dead (i.e. lineal ties to ancestors), such groups will maintain formal disposal areas for exclusive disposal of their dead, and conversely” (Saxe, 1970: 119).

Saxe's 8th hypothesis makes the argument that social collectives are legitimized through maintaining certain locations for burial rituals, thus continuing rights through lineage of ancestors (Goldstein, 1981). With restricted rites over burial grounds, connections to kinship in societal systems are upheld (Saxe, 1970). Location is thus crucial to understanding in burial context and information about group identity. Such information on group identity and location can apply to age and give insight to status of children within a society.

In all, mortuary archaeology today is in a position to be far less dogmatic, and far more pragmatic. That is, we can incorporate appropriate and useful elements of both processual and postprocessual archaeology. Although different theories are applicable in different ways, it is possible to combine them in one's own research depending on the context. But still, many archaeologists today often focus strictly either on material culture of childhood or a narrow-sense biological vision of children, rarely focusing on the

interplay therein (Baxter, 2000; Kamp, 2001). Hertz's theory, as discussed earlier in this chapter, seeps into today's study of children, and especially infants, to relate to the biology and body, restricting further developments of study. Sofaer Derevenski (2000: 8) states "children are primarily located through identification with the body." Further, any cultural connections with children made to society represent a nexus with women (Beauchesne and Agarwal, 2018; Halcrow et al., 2016).

It is often assumed if an adult and infant are buried together, they are related or mother and child (Halcrow et al., 2016). However, familial organization through mortuary practices of multi-person burials should not be assumed and in many cases, multi-person burials are not always related. Mortuary positioning can help understand relation of mother/infant burials and help indicate timing and age of perinate (Halcrow et al., 2016). Perinates who are found buried alongside an adult with the same head orientation could indicate burial of an infant post birth (Lewis, 2007). Location of a perinate within the pelvic cavity could indicate an unborn fetus, in which mother and baby died before birth (Halcrow et al., 2016). Such positioning would assume a mother/infant relation. A common practice for adult/infant burials is for newborns to be placed on the chest of the adult in burial. After decomposition, the remains of perinates may become settled in the torso of the adult and be mistaken for a breech birth (Halcrow et al., 2016).

Theoretical Developments of Children in Anthropology

Beyond their theoretical neglect, infants and children were assumed to be physically underrepresented in archaeological contexts when compared to other demographic categories of people (Lucy, 2005). Although non-adults possess less mass and decompose quicker, their bones have the capability to be well preserved in most settings (Lewis, 2007). Though there has long been a lack of recognition of infant and child remains, it does not mean that children are underrepresented within a sample. Infants and children could have long been misidentified or overlooked during excavation. Remains have historically been mistaken for animal remains, comingled with adult remains, suffered from poor preservation, shallow graves, or had a different funerary treatment than adults (Halcrow et al., 2016; Klaus, 2017). In some past cases going into the 1980s, when very good preservation was encountered, or a high number of infants were documented at a site, it was common for archaeologists to claim evidence of infanticide or high mortality (Gilmore and Halcrow, 2014). However, assumptions that a large proportion of infant burials represent either interpretation are probably wrong in most settings.

In the wake of Johnston's influential body of work, a divide in development of osteological study of children and social development of children was apparent (Lewis, 2007). Biological anthropology continued to develop and refine age estimation methods through dental development to long bone length measurement, and epiphysial fusion (Agarwal and Beauchesne, 2011; Buikstra and Ubelaker, 1994; Relethford, 2013; Scheuer and Black, 2000). The osteological approach focused on understanding

referenced bone feature development, bone development, embryology, anatomy, descriptions, identifications, measurements, and methods (Scheuer and Black, 2000; Fazekas and Kósa, 1978). Although methods were important to both forensic and bioarchaeology, age estimations were by nature confined and limited to defining one classification of age as biological or chronological measure.

Yet, there was a recognition in the inconsistency between the social developments described in age theory and the osteological focus that existed in bioarchaeology.

Lillehammer (1989) called for a more comprehensive study of children in the bioarchaeological record. Lillehammer brought to light the importance of cross-cultural study and the important influences of sociology, psychology, and social anthropology. With a more comprehensive perspective, understanding how biological processes are shaped by both the environment and social pressures can be understood. Broader questions of health, care, dependence, identity, and social class can be explored regarding children and other individuals of all ages in the population.

Today, a growing number of publications in bioarchaeology recognize and develop the wealth of potential information contained within the burials and bones of children. For instance, an early forerunner of today's foci was Scott (1999) who explored many subjects revolving around children in anthropology. As a point of departure, she identifies modern rituals surrounding Western infants including topics such as childbirth, breastfeeding, and gender expectations. Other chapters in the book focus on modern attitudes of infant mortality, including abortion, evolution of parenting and infant

changes, history of pregnancy, childcare, midwifing, diet, and gendering. Scott (1999) also demonstrates the diversity of ideas, attitudes, and concepts with cross-cultural archaeological case studies spanning definitions, examples and histories of infanticide, cultures with infant sacrifice, and case studies of infant burials shaped by particular with belief systems.

The edited volume by Beauchesne and Agawal (2018) was another and more recent key contribution that further develops the knowledge base and theoretical grounding for major works revolving around children. Within the book, Inglis and Halcrow (2018) explored the development of children in bioarchaeology, life history, and life course history of the social lives of children across disciplines. Pearson (2018) addressed broad patterns of breastfeeding, weening, and behavior over the past 10,000 years. Moffat and Prowse (2018) studied connections between childhood diet and population health. Klaus's (2018) work delves into the cultural construction of childhood by addressing patterns of identity and roles of children in pre-Hispanic and Colonial Peru. Toyne (2018) also studied children in prehistoric Peru, but in terms of patterns of violence and attributes patterns to social age and personhood. Gosman and colleagues (2018) traced skeletal development across cultural contexts to understand variation caused by biocultural and behavior influences. Temple (2019) examined the transition between infancy and childhood which was dependent on social and ecological influence environments by studying LEH patterns. Linear enamel hypoplasias form when there is insufficient mineralization of tooth enamel, caused by stressful events during growth and development (Temple, 2019). Miller and colleagues (2018) focused on stable isotopes of

infant diets through the life course and linked habits to social identities. Gowland and Newman (2018) explored territory of where children embodied their society's broader political economies. The final chapter by Wheeler and colleagues (2018) studied shifting ideologies towards children during the transition from Egyptian to Christian beliefs using the perspective of stable isotope variation and children's diets.

Another major theme in the cross-disciplinary study of children and their connection to mothers during critical early life and gestation, is known known as the mother/infant nexus. Halcrow (2020)'s edited volume overviewed major themes surrounding the mother/infant nexus in anthropology. Major themes include infant and maternal health through the study of bioarchaeology, nourishment between the mother and infant, social and cognitive interactions early in life, and identifying biocultural changes involving infants in the archaeological record.

Chapters in Halcrow (2020) involving the mother/infant nexus in bioarchaeology focused on the family, social structure, care, and mortality of infants (Halcrow), growth disruption and population health (Hodson and Gowland, 2020), and the use of LEH to measure socioecological maturation and mortality constraints and consequences (Temple, 2020). Chapters concerning the infant nourishment section involve immunological developments from breastfeeding (Miller, 2020), parenting investment and mortality (Kendall et al., 2020), and human evolution and social lactation strategies across cultures (Palmquist, 2020). Chapters involving social and cognition of infants included the ethnographic study of language in relation to different parenting strategies (Han, 2020),

the study of sleep and cognition comparison of infants (Ball 2020) and understanding developmental trajectories through pelvic morphology and infant care (Nowell and Kurki, 2020). The last section concerned infants in the archaeological record focused on understanding microbial tunneling of putrefactive gut bacteria in perinates to determine if the individual lived through and after birth (Booth, 2020), interpretations of the relationships between infants and adults buried together (Le Roy and Murphy, 2020), hemochorial, immunological, and hormonal relation of the mother and infant to understand identity (Robbins Schug, 2020), and the consideration of the study of epigenetics and microchimeric bodily boundaries between mothers and infants (Gowland, 2020).

Additionally, Halcrow and Ward (2017) serves as a comprehensive bibliography of key books, articles, and edited volumes that propel infant and childhood studies today. These include foci on the historical development of child studies (Lewis, 2006; Halcrow and Tayles, 2008), the definition of childhood bioarchaeology (Halcrow and Tayles, 2008), and readdressing the osteological paradox through the study of children (Dewitte and Stojanowski, 2015; Wright and Yoder, 2003). Other theoretical approaches and methods have been broached to address the biological, cultural, and social aspects of children (Lucy, 2005; Sofaer, 2001; Redfern and Gowland, 2012), stress, health, and plasticity (Agarwal and Beauchesne, 2011; Gowland, 2015; Temple and Goodman, 2014), fertility and infants (Halcrow, et al., 2008; Robbins, 2011; Jackes, 1994), mortuary analysis of infants (Tainter, 1978; Thomas et al., 2011; Gowland, 2001), diet and weaning (Beaumont et al., 2015; Halcrow et al., 2013; Mays, 2016; Richards et al., 2002;

Dupras and Tocheri, 2007), trauma and skeletal pathological conditions (Lewis, 2014; Ortner, 2003; Temple, 2014; Lewis, 2004), growth (Johnston, 1962; Mays, 1999; Cardoso, 2007), skeletal identification, and estimation of age, and sex (Scheuer and Black, 2000; Buikstra and Ubelaker, 1994; Maresh, 1970; Schaefer et al., 2009; Fazekas and Kosa, 1978). Thus, key contributions have emerged in with Lewis (2006), Perry (2006), Halcrow and Tayles (2008), Baxter (2005) and Lally and Moore (2011). From the assessment of this body of literature, it is clear that expanding and very dynamic bioarchaeological foci on children can produce major leaps towards a greater understanding of people in the past.

Life Course and Life History Theory

Children studies have accelerated through the life course and life history approaches. The life course theory approaches anthropology by looking at the life history throughout the human life-span, rather than individual stages (Inglis and Halcrow, 2018). Additionally, the life course approach incorporates methods from multiple disciplines, often connecting biology with culture and children and adults (Agarwal, 2012; Baxter, 2005; Inglis and Halcrow, 2018; Knudson and Stojanowski, 2008).

Life history theory attempts to explain how humans adapt to different environments over the life course (Inglis and Halcrow, 2018). One major aspect of life history theory is the developmental origins of health and disease (DOHaD) hypothesis (Beauchesne and Agarwal, 2018). The DOHaD hypothesis states that an individual's current "health" is a result of factors throughout an individual's life that alter phenotypic

expressions of genes and affects the individual's risk for disease (Barker et al., 1989).

The predictive adaptive response hypothesis is when stress occurs during the fetal or postnatal stages, phenotypic responses are produced in early life to prepare for the same stressors in later life stages. When stressors are adapted to lower nutrition environments in gestation, phenotypes responses anticipate less nutrition in later life stages. If there is a mismatch where there is a different level of nutrition between early and later life stages, health issues could develop later. Furthermore, the idea of trade-off associations must be accounted, where physiological responses from stress involves a balance between adaptive plasticity and physiological constrains (Temple, 2019). Adaptive plasticity allows for the body to pull energy for short term survival, with a trade-off of potential long-term health issues.

Bioarchaeologists have the ability to identify early life stressors through teeth and bones. Through focusing on the life history of individuals, contextualization is key, including engagements with society and culture (Beauchesne and Agarwal, 2018). Temple (2019) specifically looks at linear enamel hypoplasia to identify early life stress events. Temple also delves into how bioarchaeologists can further contextualize life history studies and understanding of health and disease. By accounting for specific environments, physiological responses, and even psycho-social events, bioarchaeologists have the ability to not only study the course of individual developments but can identify lingering stressors passed through generations. The mother/infant nexus shows that trauma experienced by the mother while pregnant, can cause cascading and long-term effects to the baby later in life (Klaus, 2014). Through life history theory, a focus on

children and perinates have grown and open the doors for future directions with childhood life experiences being the center point of study (Temple, 2019).

Conclusion

Children, and especially infants and perinates, have long been either benevolently neglected or actively marginalized in every aspect of anthropology. Perinates and infants are often only studied with associations through adult health outcomes, considered directly through kinship studies, or reproduction within a population (Han et al., 2018). Many see the fetus and infants as a symbol of liminality, transformation, and vulnerability (Han, 2018). Because the fetus is seen as “life at its barest” how the fetus is perceived is highly manipulatable by adults and belief systems (Han, 2018: 61). A fetus or perinate is often seen as bound to gestation with a distinct genetic identity. Such a young individual is not always seen as a person or human. Depending on the cultural setting, the fetus is perceived as different isolated entities, that has the tangible body of a person but only the symbolic construction of a mind and life (Han, 2018).

It is important to address that although movements in understanding children in the bioarchaeological context have improved, problems of understanding the social context of identity and agency needs further research. Such assumptions that are applied to the understanding of identity, personhood, and agency of a child, are complex to understand and reconstruct. The challenge is to approach the study of children and infants, to understand without imposing bias, and integrate social theory into the study of bioarchaeology (Halcrow and Tayles, 2011). Now that we have identified the lack of

study of children throughout anthropology, Chapter Three will begin to develop the specific theoretical grounding used here, including the study of identity in infants through the lens of ethnogenesis.

CHAPTER THREE: BURIAL RITUALS AND THE IDENTITY OF INFANTS

Infants are fundamentally shaped by ideas and perceptions of adults in any given society. Within Western societies, children have long been perceived as having a passive role in social worlds, and as such, they have long been considered non-productive and marginal members of society in much of modern archaeology and bioarchaeology (Agarwal and Glencross, 2011; Lewis, 2007). Western society also sees children as having a freedom from socioeconomic responsibilities and lack autonomy and agency (Lucy, 2005). In the western mindset, adulthood is the standard condition and children share a goal to grow into adults, achieve autonomy, and become acting agents that participant in society (Schlegel, 1995). This chapter examines this notion.

Theorizing Children and Childhood

By encompassing multiple perspectives in reference to mortuary analysis and bioarchaeology, a wider range of anthropological questions can be broached. By thinking about children outside of osteological standards, assumptions of the definitions of age can also be questioned. The understanding of age in the perspective of a linear progression from birth to death would be a static and essential way to define age, however, there are multiple definitions and perspectives to approach age and youth in particular.

Definitions of Age

Bioarchaeology today generally recognizes four “kinds” of age (Sofaer, 2011). The first is the physiological age, or the physical changes associated with growth,

maturity, and deterioration. The second is the chronological age, which is the time elapsed from birth to death (Sofaer, 2011; Gowland, 2006). The third is biological age, which is used in the clinical setting of the life expectancy in comparison with age cohorts of the same chronological age. The fourth is social age, which is the expected roles and behaviors paralleled by physical or chronological age. Social age is often overlooked due to its complex nature and often intangible nature in the archaeological record. Although the bioarchaeological definitions of age can be encompassing, other fields of social science have different definitions of age.

Philosophy defines age as biological, social, and personal (Gowland, 2006; Halcrow and Tayles, 2011; Sofaer, 2011). Personal age is the phase of identity, agency, and self-awareness where consciousness occurs. Psychology defines age as chronological, behavioral, and phenomenological (Sofaer, 2011). Behavioral age is the human development of the brain and phenomenological age is in accordance with the expected biocultural behavioral development. Social anthropology defines age as chronological, social, functional, historical, and age as ontogenetic (Perry, 2006). The functional age is defined as the adaptiveness and functional ability of the body to changes in capability (Sofaer, 2011). The historical age considers the time elapsed since birth in accordance with historical events. Age as an ontogenetic phenomenon involves the biocultural creation of the self. Sociology defines age as chronological, social, functional, and physical. The functional definition of age in sociology is different than the social age of anthropology. In sociology, functional age is the capacity or ability to perform tasks or

roles in comparison with chronological age (Sofaer, 2011). Finally, physical age is the response to personal appearance.

The possibilities involving the dynamic and variable ways age can be approached and defined provides a realization of the complexities of comprehending societies of the past, especially when bioarchaeologists are limited by the nature of artifacts and skeletal remains (Gowland, 2006; Gowland and Thompson, 2013; Kamp, 2005; Lewis, 2007; Sofaer, 2011). An interpretive perspective focused on the complexities of age and a biocultural construct in specific cultural contexts sheds light on the problems of addressing the non-adults by the chronological or biological age alone. Chronological aging forces fixed categorizations based upon standards from specific populations placed on different time periods and cultures (Sofaer, 2011). The study of chronological age alone can lead to faulty assumptions involving the social practice and individual experience of age.

Individual and population-level variation must also be considered, along with implications of a differences in specific trait expression, sex/gender of the individual, economic influences, diet, and social factors when addressing chronological age categories (Sofaer, 2011). Other influences on biological age include differences in the nature of life and social constructs in urban verses rural areas, working practices, wet-nursing, age of the mother, health of the mother, family size, and emotional influence on the child (Lucy, 2005). Problems also arise when addressing chronological age of fetal development. Because development changes vary rapidly, high variation can occur when measuring development on a linear timeline (Halcrow et al., 2016). Furthermore, any

chronological timeline is dependent upon how a population defines the passage of time, therefore, it must be seen as relative (Gowland, 2006).

Biological age can also be very highly dependent upon social aspects and cultural influence. The timing of biological processes, such as menarche, can be highly dependent on external factors such as diet, genetics, body mass, activity levels, and ecology (Lewis et al., 2016). These factors can vary the age of when menarche occurs. Other biological developments such as growth and milestones such as walking and talking are a part of the individual experience and can also be highly variable on the timeline of expected development (Boas, 1930; Gowland, 2006; Bogin, 1999). An understanding of these highly variable biological processes show that chronological age estimation techniques must embrace the potential fluidity of these phenomena. Other populations may vary in biological changes and the social dimensions of age may view the individual differently than definitions placed on non-adults in the western mindset. Chronological aging techniques provide a good baseline of understanding, however, the perspective that age is a constant transforming state with multiple influencers must also be considered (Sofaer, 2011).

With the understanding of the flexibility of age and the importance of definitions and language, broad categories function best when approaching age groups. Language such as neonate, perinate, infant, juvenile, non-adult, non-adult, child, and childhood, could also place meaning depending on category. However, Bogin (1999) argues that a person goes through universal developmental stages tied to human life history spanning birth to death: prenatal/gestation, infancy (0-2 years), childhood (3-7 years), juvenile (7-

10 years), adolescent (10-20 years), adulthood (20-50 years), and senescence (50 years and older). Each stage is dependent on developmental changes. For instance, the change from prenatal to infant is the transition through birth. The end of the infant stage is coincides with the development of the deciduous second molar. During early stages of development, changes in growth of the body and brain are measured to help make stages distinct. Although the environment and social dynamics may change or even manipulate the boundaries of each stage, such as hormones in food accelerating puberty, this guideline of developmental stages provide a basis to begin study.

Throughout the archaeological literature, it has long been assumed that social age is, for all intents and purposes, defined by chronological age (Gowland, 2006). Although social contexts were considered, implicit assumptions that children had no agency or identity in various cultures were common. Children in archaeological contexts were often associated as randomizing agents similar to that of animals (Lucy, 2005). As with animals, the amount of participation that a child had in society were often unknown, thus, labeling children a randomizing agent (Lucy, 2005; Sofer Derevenski, 1994). Roles and responsibilities were assumed based upon etic biological and chronological categories. For example, the representation of menarche could embody the beginning of adulthood due to the attainment of reproductive capabilities (Mitterauer, 1992; Lewis et al., 2016). However, as with the definition of age, as mentioned in the previous chapter, the social constructs of adulthood are not as simple and vary across time, space, and culture (James, 1998; Stephens, 1995).

Identity and Personhood of Children

Bioarchaeology has long avoided issues surrounding the identities of children, perhaps because we did not yet know how to possibly address the topic. Identity is hard to study and often quite ephemeral in nature, which leaves very little to no archaeological traces. Child identities are not always dependent upon biological categories, are not static, and are not universal (Lucy, 2005). Children can be viewed as having the same autonomy as adults, as small versions of adults, or in a completely separate category of being. For instance, Benedict's (1935) study of the Zuni, Kwakiutl, and the Dobu peoples defined diverse ranges of responsibility and roles of children. Roles ranged from taking on adult-like responsibilities such as food collection to being completely dependent on adults within society. The identity of children is intertwined with not only biological changes of the body, but also gender construct, social status, and ethnicity. Furthermore, the identity of children can change over the course of one's lifetime or throughout history (Gowland, 2006). It is not uncommon to note different rites of passage that mark the process of becoming an adult. For example, becoming an adult can be signified by menarche, marriage, chronological age, or other ritual rites (Lewis, 2007; Gowland and Penny-Mason, 2018). Therefore, the identity enacted or imparted to children is highly variable (Agarwal and Glencross, 2011). Children can play active roles in society and be marked as adult at any biological or arbitrary cultural transition. Identity is therefore dependent, not only upon cultural expectations, but also individual life experience (James, 1998). Age fluidity consequently must be studied within the historical

perspective in a bioarchaeological framework. All of this means that any archaeological or bioarchaeological study of children must be deeply rooted in a contextual understanding of the society under study.

In reference to age, mortuary contexts are crucial to bridge the cultural aspects of age with bioarchaeological methods to develop a more holistic understanding of childhood in the past (Mitterauer, 1992). To understand age, bioarchaeological and mortuary analysis must be synthesized and contextualized in the archaeological understandings of the culture in question (James, 1990). To further contextualize burials, individuals of all ages in a particular setting must be compared (Gowland, 2006). Burial practices can be highly variable. Mortuary practices can range from highly ritualistic, such as Hellenistic examples in Greece, to inhuman of non-adults in “rubbish” pits seen in medieval England (Lewis, 2007). Indicators of identity could be reflected in the place and type of burial, body positioning, and the use of grave goods. For example, shoes, bottles, and toys could identify the individual as being socially separate from “adult,” or could be representations of childhood memories and not toys (Lucy, 2005). Grave goods can also help distinguish the gender of an individual or whether or not an individual’s identity was viewed as ambiguous or yet unformed (Gowland, 2006). Grave goods could signify identity in either the quality or the quantity of expression. However, interpreting the meaning of grave good symbolism is often not straightforward.

Symbolic markers of age are important to consider in the funerary context. The meanings of such symbolic markers can be elucidated from the study of burial location, position, orientation, treatment of the body, grave goods, and many more archaeological

features (Binford, 1971). Age-linked symbolism and patterning involving children can also be useful to help decode broader shared ideas within society's belief system (McHugh, 1999). For example, if an infant was buried with an adult grave good, it might appear that the infant had the ascribed status of an adult (Lucy, 2005). However, the objects buried with the infant may better instead reflect symbolic statements of kinship linkages, religion, age transitions, or an emotional response (McHugh, 1999; Philpott, 1991; also, Justice and Temple, 2019, and see below).

Mortuary context and placement of grave goods are provided via mourners of the dead. Thus, material symbolisms may further not represent the identity of the individual, especially since identities are multi-layered and fluid over a lifetime, along with the fact that practices of the mourners change over time. Once again, mourners determine and structure the burial rights of individuals, often based on belief systems, particularly in the case of children (Halcrow et al., 2016). Additionally, it must be kept in mind that the living (mourners or otherwise) are the ones who are in control of mortuary practices of the dead and are the ones who ultimately create the physical burial rites (Van Gennep, 1909; Parker Pearson, 2000). For example, infants in medieval Geneva were not given burial rights unless the individual was baptized (Spierling, 2005). Contrastingly, in New Kingdom Egypt, children, even within the womb, were considered a part of society and were given full burial rights (Meskell, 2000). Identity is not the only factor attributed to mortuary practices. Variations in the distribution of sociopolitical capital (wealth) is another factor that shapes mortuary contexts of people of all ages in nearly all complex societies (Klaus et al., 2017).

Perspectives on Mortality and Grief

When changes in in mortuary practices are detected, they often reflect broader cultural changes, and sometimes, point to the emergence of new biological realities such as changes in mortality patterns. Mortality rates can reflect the health and fitness of populations. Because children are most sensitive to biological change, their expressions of biological stress and rates of death are sensitive makers of lived experiences (Lewis, 2007). Large numbers of children in a mortuary sample actually reflect high fertility rates (Sattenspiel and Harpending, 1983; Buikstra et al., 1986; McCaa, 2002; Gurven, 2012). However, mortality rates are not necessarily correlated with burial rates. In fact, in times of high mortality, burial rites may change, thus paralleling in telling fashion lower proportions of burials present in the archaeological record.

Death rituals may be differentially impacted during times of high or low mortality. One of the frameworks used to help understand the nature of death rituals under such diverse conditions spanning Western perspectives of death involves attachment theory. Attachment bonds that form early in pregnancy can be reflected in burials of miscarriages, stillborn babies, and early infant death (Robinson, 1999; Cannon and Cook, 2015; Scheper-Hughes and Lock, 1987). Due to the young age of death in infants, such individuals may not have had influence in society and retained a lack of the autonomy in accordance with the culture. However, in certain contexts, it can be up to the individuals and family on how to mourn and conduct burial rights (Cannon and Cook, 2015). Cannon and Cook (2015) argued that in times of high mortality and high

frequency of death, grief responses of individuals may be heightened to more chronic feeling of loss, and therefore, could represent higher loss-oriented expressions in burials. Alternately, Scheper-Hughes (1984; 1993) argued that in times of high mortality of infants, detachment occurs. Furthermore, in central European countries, contact with the dead brought a certain level of fear of disease and further death (Ariès, 1974).

Overall, there are a multitude of factors involved in representation of children's burial rights. For example, socioeconomic complexity, fertility rates, disease patterning, economic means of immediate and extended families, belief systems surrounding the dead, social class and hierarchy, and cultural expectations of how the dead should be treated, can have major impacts on representation and expression (McHugh, 1999).

In one instructive example, Cannon and Cook (2015), analyzed infant burials from 35 rural English villages south of Cambridgeshire. Cannon and Cook took into consideration mortality rates, socioeconomic status, social expectations, and individual grief responses. They aimed to determine if such factors related to differences in infant burials, compared to children and adults. The authors found differences in burials from families who had long community ties to those who only resided in the area for a short period of time. The authors also noted little to no changes in burial practices in relation mortality rates, claiming that families and communities still grieved and gave infants consistent burial rites.

Various non-western cultures may construct and process grief differently, or not at all from our perspectives, resulting in additionally distinct treatments of dead children. For example, in modern Japan, *Mizuko kuyō* is a ritual involving special burial treatment

for an aborted fetus (Klass and Heath, 1997). Many could equate such rituals as to grief, attachment, or status recognition; however, the rituals are as a result fear of revenge from the spirit of the dead.

Attachment theory is an important tool to help interpret child mortuary practices, but its inherently binary approach of attached/unattached to bereavement may limit and skew understandings (McHugh, 1999). Emotion, although hard to perceive through the physical remains present in an archaeological context, is critical to at least consider in studies of non-adult burials. Emotion has a deep influence on and manipulation of funerary rituals (Scheper-Hughes and Lock, 1987). Burial rituals may vary with type of death (illness, injury, or “bad death”) where different emotional responses manifest (fear, pain, or grief) (Scheper-Hughes and Lock, 1987). Although anthropologists try to measure emotion and grief, the misinterpretation of emotion is more likely because interpretations based on material evidence could be nearly endless (McHugh, 1999).

Identities of Children

As with age, the concept of identity is not simple and cannot be placed as a rigid definition. Identity constantly changes, not only throughout time and space, but also throughout an individual lifespan (Sofaer, 2011). Identity is an interplay between self-perceptions and communal perceptions and is intertwined with biological changes of the body, age, sex, gender, social status, social class, ethnicity, and many other aspects influencing biosocial lives (Ariès, 1962; Gowland, 2006; Pollock, 1983; Schildkrout, 1978; Sofaer Derevennski, 1997).

Scheper-Hughes and Lock's (1987) model depicts three different yet interplaying modes of identity formation. The first is the creation of the body-self, the biological aspects of age, sex, gender, kinship, and congenital anomalies, which were the initial focus of study of children among anthropologists. The second is the social body which is dependent on the context of where the body is situated and a large focus of social anthropologists after Lillehammer's (1989) influential publication. The third is the body politic where the body interplays with political institutions whose role and identity plays in with the concept of ethnogenesis (to be discussed later in this chapter).

Knudson and Stojanowski's 2009 definition of identity is

“identities research as not about who people were or where they or their ancestors came from, but who they thought they were, how they advertised this identity to others, how others perceived it, and the resulting repercussions of this matrix of inter-personal and inter-societal relationships” (Knudson and Stojanowski 2009: 5)

Knudson and Stojanowski (2020) later critiqued their definition in their 2009 edited volume. Although the definition is a good start, Knudson and Stojanowski currently emphasize that when studying identity, the researcher must move beyond identity as a positive or negative identification that can be studied through biology or the origins of a person. Furthermore, Knudson and Stojanowski argue that their 2009 book places the study of identity into two groups: individual identity (ensoulment and personhood of self) and group identity (ethnogenesis and community understanding). Dual categorization not only divides the study of identity, but also simplifies and limits its study. Instead, the approach to study identity should not be considered individual or group, but instead as overlapping experiences that are fluid in nature. Factors such as, sex, age, gender,

religion, political influence, and economic influences can have an impact and shape both individual and group identity. Furthermore, Knudson and Stojanowski (2020) search further into understanding identity through studying how individuals presented or projected their identity and how others perceived it, thus including interpersonal and intersocietal exchanges.

Martin et al. (2013) highlight how identity is dependent on application of the three modes of identity formations. Although identity is lived by an individual, larger social and cultural forces influence both the idea of the mind and the body and alter perceptions of both. While many see the body and the mind as dichotomous and may only study one of the three modes of identity formation, the categories are not rigid but create an interplay of complexity. Along with the idea of identity, role theory, as introduced by Goodenough (1965), argued that individuals are actors and conform to defined social roles within society that demarcates certain expectations, access, rights, duties, norms, and accepted behaviors. In addition to role theory, concepts of identity that are either ascribed or achieved can play a major role in perception of how an individual or group of individuals. Some rites of passage are mandatory to achieve status and result in a change of identity. Although it is necessary to understand the many manifestations of identity in a given society, it is equally imperative to recognize the limitations of the purely sociocultural anthropological approach and incorporate the biological aspects of identity and their biological foundations that influence such perceptions (Gowland, 2006).

Personhood

Age group-related identities can further articulate with dimensions of social realities involving the various constructions of personhood itself. Indeed, many aspects of individual identity are born out of and relate to group identity. Identity has many dimensions and plays directly into constructs of personhood and agency. Cross-cultural definitions of personhood vary widely. Personhood is separate from just being biologically human (Bloch, 1992). Personhood is constructed of the mind, spirit, body, and soul and can be altered, constructed, deconstructed, and maintained throughout life or in death (Fowler, 2004; Ingold, 2000; Meskell, 1999). The body can reflect lived experiences where aspects of personhood (Shilling, 1993). Personhood is often connected to morality and the moral community. Some cultures propose that personhood can be lost in sight of a crime (Fowler, 2004). Personhood could be defined as cognitive ability and self-awareness or could be defined as recognition from others in a community or perhaps most broadly as just existing as a sentient being (Bloch, 1992; Fowler, 2004). Therefore, personhood can be highly variable and be the basis of actions such as excluding women in government due to a lack of perceived personhood, or including animals in the human realm, who can be believed to have human-like spirits. The youngest of individuals could have a range of personhood depending on the culture and society.

Personhood can also be partible, permeable, and individual (Fowler, 2004). Personhood can originate outside of the body and soul. The essence that make up a person can include objects, plants, animals, and relationships with others. In Melanesia, a person is constructed through the relationships they have with others. To build such

relationships, gifts are given, which represent a part of that person. Through different ceremonies, such as marriage, a person can either receive or give a gift, thus changing their amount of personhood (Mosko, 1992). Personhood is made partible through material objects and social relationships within a community. In the Solomon Islands in Melanesia, objects that encapsulate a person and people who have social relationships with that person, are gathered and joined together when that person dies. During mortuary rituals, when all aspects of personhood are brought together, the person who dies becomes whole temporarily at death and therefore reaches full personhood (de Coppet, 1981).

Although there are multiple competing definitions of personhood, many cultures espouse a personhood/non-personhood dichotomy, however, such concepts should not be perceived as a hard binary. Personhood, as with many other aspects of one's cultural existence, can emerge, transform, or recede as individuals change through life (Fowler, 2004; Meskell, 1999). Such an idea plays a significant role in the understanding of the identity of children on both an individual level and a group level.

Different rites of passage can change the "amount" or "quality" of personhood as a person reaches different age stages. Rites of passage can help define group identity and bestow personhood upon those who achieve such rites of passage while also serving as a tool for reducing the personhood of others (Bloch, 1992; McIntosh, 2018). Such defined groups are identified as different perceptions of personhood, which allow different levels of eligibility and access to society. For example, rites of passage might include gender, changes of the body, a ritual or ceremony, or chronological age-based rites of passage.

Such rites of passage could span birth, eligibility for education, menarche and puberty, health status marking adulthood, graduation, being a citizen, gender, and age itself (Palmore, 2009). Rites of passage can grant access or limit access to what a society might see as valuable. For example, healthcare, voting rights, adulthood, further education, or getting certain jobs, are all deemed as important in many modern societies today.

In the case of infants, ascribed identity, personhood, and embodiment are large factors that play into how infants are perceived and treated. Thus, often associated more with group identity and less with individual identity. Embodiment was defined in Mauss's classic 19th century definition (1979, 97) as "the ways in which from society to society men know how to use their bodies." Mary Douglas (1966) further explored embodiment in the 20th century and used the body as a metaphor for society. Embodiment was further explored during the bloom of feminist theory (Buikstra and Scott, 2009). Embodiment theory has a mind/body duality where the body shaped by the individual and through society (Joyce, 2000; Meskell, 1999).

Personhood of infants in contemporary society in the United States are highly integrated around biological aspects of the physical body's health and development (Einion and Rinaldi, 2018). For example, the political recognition of a person, according to the United States Supreme Court case, *Roe v. Wade* (1973), begins with medical detection of a heartbeat at 24 weeks post fertilization. Thus, legally speaking, the biological status of fetal age in the contemporary United States creates a manor of personhood through government protection and healthcare. Competing cultural and religious conceptions simultaneously provide alternate definitions, such as personhood

established at the moment of conception. However, although there is a demarcation in becoming a person, it is only the first rite of passage our society recognizes. The state of being a child is often perceived as liminal or in a state of becoming (Gillet, 2006). Therefore, children can express different levels of personhood and are perceived to have a different type of personhood than adults (Sillar, 1994).

Demarcations of personhood and age identity can be depicted through funerary rites (Sofaer Derevenski, 2000). Differential treatment of the dead can mark differences in the community's perception of personhood and can reflect individuals who have reached in different stages in life, according to the associated culture. For example, Christian doctrine mandates that when a child is baptized, they are "born again" and can therefore be seen as a social person and receive burial rites (Baun, 1994).

Personhood is dependent upon culture and can vary through time and space. In the prehistoric American southwest, the Puebloan people had different levels of personhood attributed to children of different ages (Palkovich, 2014). Puebloan cosmology held that the living paralleled the spiritual underworld (Ortiz, 1969; Ellis, 1951; White, 1962). Through different cycles of rituals, a person can mirror and personify deities of the underworld. To become a full person within the society, one must go through transitions to represent the spirit. Children must go through these rites of passage to become earthy persons. The first rite of passage is the naming ceremony, usually four days after birth. The second rite of passage is the water-giving ritual once the individual reaches one year (Ortiz, 1969). This demarcates the survival of surviving many health hazards and moving further from the spiritual world and closer to the earthy world. The final rite of passage

happens between ages 6 to 10. The water pouring ceremony initiates the child's integration into society. They are thus seen as a person within the community and are given identity through social roles and gender roles. Children move from a state of liminality and through acquiring societal roles through ritual. Additionally, if a child were to die before such rituals, they revert back to a spirit form and have a loss of personhood into the afterlife, and this is symbolically communicated in burial ritual. The children who died before the ceremonies were completed were interred together, away from other burials and without ceremony (Palkovich, 2014).

Archaeological Windows on Personhood: Perspectives from Burial Rituals

Personhood is tied into aspects of identity and is possible to study through the bioarchaeological context. As with the study of identity, it took time for the development of personhood to be studied in archaeology (Buikstra and Scott, 2009) and it is still a work in progress. The first major developments included a step away from western concepts and universal assumptions of individual and group personhood by taking a step towards understanding that personhood is situational and has many factors through which it is expressed (Boutin, 2016). Through life course studies, personhood is recognized outside of the biological body, however personhood extends beyond any one individual's life. Thus, bioarchaeologists increasingly leverage different theoretical frameworks to study the multi-faceted nature of personhood. To study the complex nature of personhood, bioarchaeologists can use interdisciplinary evidence, artifacts, the history of

the site, social biographies, and group comparisons to individualize each study (Boutin 2016; Buikstra and Scott, 2009; Fowler, 2004).

Justice and Temple (2019) address questions of personhood and identity of children through the mortuary record of hunter-gatherers. Justice and Temple examined the ecogeographic adaptations of the Ipiutak (1600 – 1100 BP) and how through an interplay of resilience and persistence, the Tigara (800-400BP) people emerged. The authors address the social complexity and associated rites of burial through rituals of grave good number and type, orientation and position of the remains, location within the cemetery, the cemetery location within a site, and funerary architecture.

Through an analysis of individual burials, the authors employed biological age categories to delve into expressions of social age with the impacts of the body politic of past influences of stressors. Findings reveal that there was no difference between the Ipiutak and Tigara people but rather the difference was with age of individual. Justice and Temple (2019) employ resilience theory to delve into deeper understandings of the natural and symbolic world of a population of people. While differentiated by time and socioecological stressors, both peoples possessed a persistence of belief and burial rituals (*sensu* Redman, 2005; Walker et al., 2004). Such belief systems interpret meaning behind biological age through a conceptualization of social age. Burial symbolism encoded different ages which reflect ideas of reincarnation of the soul and provides insight into the identity of non-adults being buried and societal influences (Fienup-Riordan, 1994; Sprott, 2002).

Older Ipiutak and Tigara children (pre-adults) had the same proscribed mortuary treatment as adults, thus giving the same amount of importance and personhood within the community. However, the age groups of infancy to early childhood were given different burial treatment, where different positions, orientation, and grave goods noted a difference in status within the community (Justice and Temple, 2019; Binford, 1971; Carr, 1995; Hodder, 1982; Goldstein, 1981). Iputiak peoples believed that personhood came with the “age of awareness” (Fienup-Riordan, 1994). With the emergence of memory formation through growth, came the emergence of personhood within the community. As one grows, an increase of social awareness occurred and thus translates into a difference in burial treatment. Individuals who were too young to be self-aware were perceived as vulnerable to spiritual contamination, lacked personhood, and were therefore were treated differently in mortuary contexts (Justice and Temple, 2019). Additionally, the difference between ascribed identity and achieved identity were clear (Binford, 1971). Infants and young children had ascribed identity and a lack of personhood whereas one grows with awareness through age, the individual achieves identity and achieves personhood through self-awareness.

Justice and Temple (2019) provide a highly instructive example of how personhood and identity can be studied through burial patterning. The authors demonstrate how resilience theory can be used to understand either a persistence of a culture, culture change, or the emergence of both through ethnogenesis. Although the authors do not distinguish different types of identity formation, other than differences between ascribed identity (placed upon an individual) and achieved identity (earned by an

individual), the authors clearly investigate what it means to biologically be a certain age, the social conceptions of the biological age, and the interplay of how social structures play into the body politic. Identification and acknowledgment of all three axes of identity formations are essential to the understanding. Resilience theory allows for the understanding of the vagaries and variations of perinate burials and provide novel windows and greater understandings of a body politic. Furthermore, bioarchaeological understandings of the body politic can be further explored using frameworks of ethnogenesis.

Ethnogenesis: A Core Approach to Understanding Identity and Personhood

The growing focus upon children in bioarchaeology has helped to directly stimulate new avenues of inquiry. The majority of studies after the 1990s focused primarily on a combination of the biological aspects and social aspects of identity, but rarely incorporated how the identity formed in a particular setting through archaeological means. Furthermore, the identity of infants is even more difficult to study. The active roles an infant has on a society is generally limited, therefore, infant burials are more reflective of the living perceptions of adults and society and provide insight into the greater community at large (Han et al., 2018). Holistic reconstructions of the biological and social aspects of identity require consideration of political structure and political economy is vital (Goodman and Leatherman, 1998; Klaus et al., 2017). Ethnogenesis can indeed be a means by which to uncover the identities of infants, children, and even adults.

Before ethnogenesis can be defined, it is imperative to understand how ethnicity plays into identity and personhood. Identity and personhood incorporate multiple aspects and dimensions of an individual or group and ethnicity is a major concept interplaying with both. Jones (1997) defines ethnicity as a part of a person's self-conceptualization within a larger group's perceived differentiation and common descent. Therefore, ethnicity is a product of social contexts and interactions through shared experiences. Ethnicity can be used as a tool of social expression and solidarity, which may be reflected in burial rituals (Klaus and Tam, 2009). Ethnicity, as with identity and personhood, can change over generations and throughout an individual's lifetime. Therefore, aspects of identity, personhood, and ethnicity are often hard to trace. However, through the application of bioarchaeological methods, the burial context is a snapshot in time where such concepts can be explored.

Defining Ethnogenesis

The definition of ethnogenesis is "the emergence of formation of a new cultural complex...contexts as a process of ethnic emergence reflecting the interconnectedness of human populations, specifically emphasizing the idea that population formation reflects deep, polyethnic interactions" (Temple and Stojanowski, 2019: 256; Sturtevant, 1971). Ethnogenesis allows for a reflection of group identity that is created through deeply rooted polyethnic interactions of cultural practices at a populations scale (Sturtevant, 1971). The theory of ethnogenesis delves into the practice of a people's everyday lives in

conjunction with behaviors, changing economies, changes of belief systems, and a change in sociopolitics (Card, 2013). Hill (1988: 7) states ethnogenesis is an:

“awareness on the part of social actors of their ability to make situational and more lasting adjustment to social orderings . . . and an ability to understand that ordering as it is situated in larger, more encompassing spatiotemporal orders that include others who are socially different.”

The emergence of a culture that is influenced by a discourse of sociopolitical stressors. Such stressors can have a range of effects to the dynamics of a society. During such times, ideologies have the ability to change, remain the same, or transform into a hybrid of both, all of which having different impacts to the level of autonomy and identity.

Hybridity is often connected to the material culture, Card (2013) explains how hybridity can also be a blending, mixing, or incorporation of identities, which can be studies through material context. For example, Card studied ceramics from the hybrid post-contact Pipil-Spanish from the natives of Ciudad Vieja, Panama. Card found a blend of Italian, Spanish, and indigenous features in the ceramics blending styles into a new, hybrid form. Hybridity parallels ethnogenesis and can also be applied in bioarchaeological investigations (e.g., Stojanowski, 2004; Klaus, 2013).

The living choose how to react to such stressors through a range of resilience, persistence, and transformability (Justice and Temple, 2019). A multidimensional set of intertwined biocultural interactions creates the possibility for a change in practice and thinking and creates a new societal outlook. With societies evolving through the mechanisms and processes of change, new social formations and perceptions of

personhood can emerge creating new forms of group identity, especially in cases of culture contact and hybridization (Stojanowski, 2009). The combination of cultural transmissibility and influences of change allows for different cultural expressions of ideology, social change, and political influence (Klaus and Tam, 2009). Such cultural expressions often have strong interplays with burial rites and other rituals (Klaus and Tam, 2009). The dynamic and contingent nature of burial rituals, therefore, can incorporate or even recursively help drive these changes settings of such cultural change and provide a window of study into the lives and surrounding identities of individuals with large underlying population-level processes of ethnogenesis (Klaus, 2013).

Through the integrative study of burial contexts, bioarchaeologists can identify patterns and material culture in conjunction with ethnographic historical evidence to approach changing concepts of identity and personhood as a reflection of an ethnogenetic process (Knudson, 2009). Because social and political influences often have direct impacts on burials and perceptions of identity, the study of children and infants is vital. This may seem counterintuitive, given the often-basic nature of non-adult burial patterns and their ostensible dearth of information. Yet, the crux of this entire line of thinking here is that changes in child (and especially infant) burials may reflect manipulation of ascribed identities or idealized forms of personhood or other cultural values as expressed by mourners and beliefs of the community. If a change in the burial context of children and infants occurs, it can be indexical of a new form of perception of ascribed identities of the individual and group on the child through ethnogenetic transformations within body politic (*sensu* Scheper-Hughes and Lock, 1987). Furthermore, a change in infant

burial treatments may also be linked to much larger ethnogenetic process of the meaningful reformulation involving a society's belief system, socioeconomic structure, the body politic at large and new forms of personhood, especially when hybridization or syncretism occurs when two cultures come into prolonged contact and interaction.

Example of Ethnogenesis

Hybrid societies emerge out of a discourse in sociopolitical stressors. Stressors have a range of effects on ideology (Card, 2013). In multiple publications (Klaus, 2013; Klaus and Tam, 2009; Klaus, 2008; and Klaus, 2018), Klaus addresses such perspectives in the study of identity, children, and ethnogenesis across the north coast region of Peru. Klaus addressed practices and deeply rooted beliefs of Andean peoples through burial patterning following Spanish conquest and Catholic missionization in Mórrope (Klaus and Tam, 2009; Klaus, 2013; Klaus, 2008), Eten (Klaus, 2018; Klaus and Alvarez-Calderon, 2017). For instance, in Mórrope, during their Early to Middle Colonial era, burials were conducted on sacred ground and oriented facing the altar. Bodies were placed in a shroud or coffin, and without pre-Hispanic-style grave goods such as ceramic vessels, metal objects, or llama remains (Klaus, 2013). However, burials were mainly oriented north to south, and many of the burials had red-dye textiles over the faces of many individuals, thus not representative of Colonial Christian burials. Klaus suggests that the red textiles over the faces of 60 individuals could be an attempt to produce a pre-Hispanic tradition of cinnabar, hematite, or ochre-based painting of the faces of the deceased (Klaus, 2013). Additionally, empty fly pupae were found with many child burials. Such evidence indicate that the burials may not have been buried directly after

death. Klaus finds direct pre-Hispanic physical and iconographic parallels involving soul-transfer in local Muchik burial and sacrificial rituals.

Further, over some 2,000 years before the imposition of Christianity and throughout the Cupisnique, Moche, Middle Sicán, Chimú, and Inka periods, Andean child burials were often buried different from adult burials. Differential treatment of child burials when compared to adult burials, reflects a lower status of children within the community before the influence of colonialism (Klaus, 2018). Where higher status individuals were marked by high amounts of grave goods or other forms of elaboration, burials of children had considerably less or none at all. Additionally, child burials were often missing or notably underrepresented in community cemeteries across the north coast of Peru before colonization. Differential treatment of children eluded to the idea that children may have had a different type of personhood when compared to adults (Klaus, 2018). Where children are missing in pre-Hispanic cemeteries, they were very present and demographically represented in colonial cemeteries. Klaus suspects that the inclusion of children could be a result of the Catholic praxis or the perception of personhood of children changed. The presence of child burials within cemeteries and churches, yet presence of some pre-Hispanic traditional Muchik rituals of children may reflect hybridization with Euro-Andean frameworks. Thus, changing treatment and identities of children could well be one dimension of larger, underlying population-level processes of ethnogenesis (Klaus, 2013).

Conclusion

The historical lack of interest in the children within bioarchaeology and mortuary archaeology largely reflects our own past attitudes and approaches that often assumed that children hold little to no relevance in the shaping of a society and that they communicate little social information through burial contexts. However, such perceptions have come to be critiqued as biased and unrealistic. Today, an emerging approach finds it important to integrate multiple lines of evidence to the study of children in the past in order to reconstruct a more accurate picture of these once overlooked and important members of society. By challenging Western definitions of children and childhood with a contexty-driven approach using multiple lines of evidence, significant insights can emerge. This leads to entirely new avenues of research particularistically focused and contextually driven as a form of bioarchaeological problem solving.

Additionally, examination of concepts such as identity, personhood, and age as fluid and not a binary category (non-adult/adult), opens doors to a range of perceptions in the study of mortuary rituals. Further, burial contexts are ideal to accompany traditional bioarchaeological approaches that seek to measure such variability over time involving both the emergence of personhood among infants and children, but also as reflections of larger community perceptions, belief systems, and processes of ethnogenesis.

With this theoretical background established, this discussion leads into the point of how macro-cultural study of ethnogenesis be used to identify and interpret infant life and death from archaeological contexts. The next chapter integrates the study of ethnogenesis, identity, and personhood of infants, to understand how the Papdomb site

relates to larger religious mandates and political influences over the village and the broader worlds in which the people of Papdomb lived and died.

CHAPTER FOUR: ARCHAEOLOGICAL CONTEXT OF THE PAPDOMB SITE

The Papdomb archaeological site is located on a hill southeast of Văleni (Hungarian: Patakfalva), Romania and with the historic region of Transylvania. The current inhabitants of Văleni are known as the Székler and speak a dialect of Hungarian. The Văleni village is located in an area called the Székelyfold, which is situated within the Transylvania basin (Zejdlik et al., 2021; Gáll, 2010; Molnar et al., 2015). The Transylvania basin is southeast of the Carpathian Mountains in the northwest region of Romania.

The Papdomb village has had several changes politically, geographically, and culturally (Zejdlik et al., 2020). For example, the Papdomb village is politically Romanian, mostly speak Hungarian, yet is culturally Székler throughout. Multiple changes throughout the area occurred over the last 1,000 years, thus making the history of the Székler people complex if not somewhat convoluted (Zejdlik, 2019). Additionally, changes in political leadership drove many religious and cultural transformations before and during the use of the church and cemetery at the Papdomb site. However, the constant presence of the Székler people on the landscape makes the cemetery at Văleni an unusual example of long-term, diachronic use in a region of highly fluctuating political and religious contexts. There are many holes in the region's history where understanding of belief systems is vague or unclear as the area has been unstable. Through the larger Lost Churches projects in Transylvania, a deeper understanding of social changes can be

explored through the bioarchaeological research of the Papdomb church to give insight of the history of the Székler peoples.

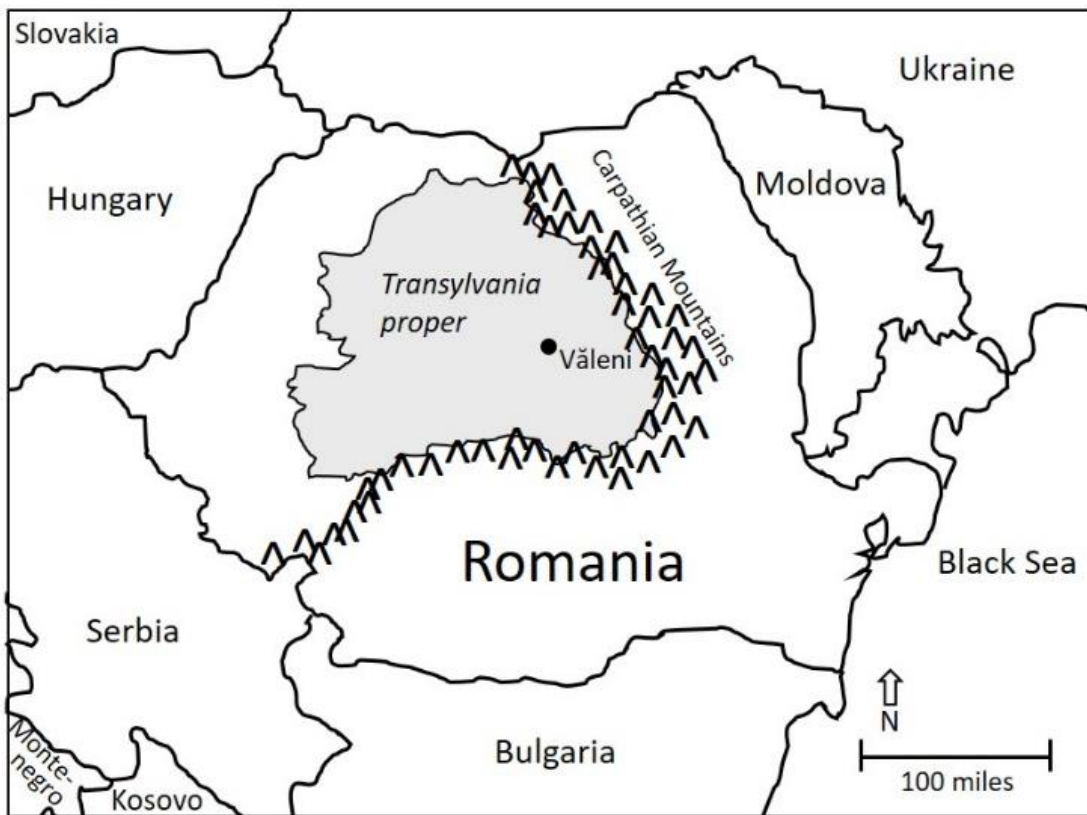


Figure 4.1 Map of Romania highlighting Transylvania proper, the village of Văleni, and the Carpathian Mountains. Map by Zejdlik et al., 2020.

History and Political Influences of Transylvania

The Transylvanian region has been at the crossroads of regional geopolitical forces and conflicts for hundreds of years. To help establish the context in which to

explore the question of ethnogenesis at the site, it is important to understand the religious, political, and economic history of the region. Through the 1st and 2nd centuries C.E. the area was ruled by the Dacian Kingdom (Tiplic, 2006). Later, after the Dacian Kingdom declined, the Roman Dacia took over during the 2nd and 3rd centuries C.E. (Pop, 2013). During the 3rd century C.E., an influx of Asian-affiliated populations took over the Transylvania area including the Roxolans, a Sarmatian group, Goths, Gepids, Huns and Avars, Slavs, Hungarians and Türk populations (Tiplic, 2006). Power changed hands between these groups from the 4th century C.E. to the 9th century C.E. with the sequential rise and fall of the Hunnic empire, the Kingdom of Gepids, and the Avar Khaganate, as well as later influences of the Bulgarian Empire (Szilagyi, 2014). During this time, the region was still unstable. No ruling power had total political, religious, and economic influence over the Transylvania region (Szilagyi, 2014). Over time the region adapted its own culture and language from past multiple influences (Pop, 2013).

During the late 9th century C.E., the seminomadic Magyar people conquered the Transylvanian plateau and Carpathian basin. The Székler people who reside in Transylvania often claim Magyar decent and cultural identity to this day (Zejdlik, 2019). Also, during the 9th century C.E., Transylvania felt its first influences from Western Europe through the expansion of the Carolingian Empire (Nyárádi and Gáll, 2010). The Carolingian Empire, under the rule of Charles the Great, imposed itself upon the Transylvanian Basin through religious, economic, and political means. Although the Carolingian Empire did not take hold in the long term, Carolingian culture and Christian religion, along with influences from the Holy Roman Emperor and the Pope, were

established and influenced the formation of the Hungarian Kingdom (Nyárádi and Gáll, 2010). The influence of the Hungarian Kingdom brought leaders from the Hungarian Principality into the Transylvania region who forced the acculturation of Christianity (Zsolt, 2015)

The most significant political influence over the area during this era was exerted by King Stephen I (first King of Hungary -1000 or 1001 to 1038) who earlier converted to Christianity and wanted to continue spreading the religion and other Western European influences (Szilagyi, 2014). Although the conversion to Christianity was enforced, the region under the Hungarian kingdom became a mixed ethnic population, including new migrations from the west during the 10th and 11th centuries C.E. and even into the 12th century C.E. (Gáll, 2010; Zsolt, 2014; Szilagyi, 2014). It was not uncommon to have mixed pagan and Christian cemeteries in the Transylvanian area during the 10th and 11th century C.E. (Gáll, 2010) as a large non-Christian and local influence resided in the area during the 10th and 11th century C.E., presenting evidence that the Christian mandates were not strict during that time (Gáll, 2010). Under the pagans, it was uncommon to see social patterns other than ascribed identity of kings and warriors within cemeteries (Gáll, 2010). A change in rank and social status in cemeteries emerged out of the 11th century C.E. with a greater Christian influence (Gáll, 2010). However, during this time, Saint Ladislaus I and King Coloman “the Learned” wrote mandates requiring Christian burial rituals, which manifested into the 12th century C.E. (Makk, 2011). Because of these new mandates, the Church was placed into a central role for being responsible for funerals during the Middle Ages. The mandates created a shift in burial status and political

hierarchy, thus providing indications on patterns for possible identity markers beginning in from the 12th and into the 13th century C.E.

In the 13th century C.E. the Mongolian empire overtook the Transylvanian principality (Szilagyi, 2014). The Mongols were unsuccessful and after they withdrew, three semi-independent principality states formed: Transylvania, Moldavia, and Wallachia (Szilagyi, 2014). During this time, Transylvania was populated by Hungarians, Széklers, Romanians, and Saxons. In the 14th century C.E., the Ottoman empire took over the region. Many wars were fought over the region from the 14th-18th century C.E. with many complex and intertwined influences coming from Ottoman, Austrian, and Russian peoples and cultures. With Saxon towns growing in number throughout the Transylvanian region during the 14th century C.E., the Széklers experienced even higher religious reforms (Marcu et al., 2015).

During the 15th century C.E., a revolt resulted in the installation of an elected prince, István Bocskai. Prince Bocskai pulled the church away from Protestant Catholicism and into the orbit of Calvinism. Schools and churches began to reinforce ideas of Calvinism (Marcu et al., 2015). During the 16th century C.E., Transylvania was then reunified with Hungary after the infamous “expelling of the Turks” when Hungary took back control of the Transylvania region (Szilagyi, 2014). The 17th century’s Austro-Hungarian monarchy established 13 nations but ended in the 18th century C.E. Transylvania belonged to the Kingdom of Hungary until after World War I in 1920 when the Treaty of Trianon gave Transylvania to Romania, where it remains within its borders today.

Although the region experienced many changes, the Székler people have maintained their presence on the landscape. However, it is also believed that the Székler people could have been descendance of an allied group from the southern Russian steppe (Kálnoky, 2019). Transylvania evolved to be considered the “melting pot” of the southern Russian steppe (Lendvai, 2003). The Széklers were also believed to have a cultural identity connected to the Bulgarian-Turkish tribe, Kavars, Attila and the Huns, the Scythians, and the Mongols (Zejdlik et al., 2021; Kálnoky, 2019; Kordé, 2009). Molnar (2015), among other scholars, refer to the Széklers as a Hungarian ethnic group, however, the Széklers were always identified as a separate cultural group who resided in the Transylvanian area from at least the 9th century C.E. (Kálnoky, 2019; Kordé, 2009). When they were a part of the Hungarian kingdom, the Széklers were acknowledged as nobles due to their contributions in military aid (Zejdlik et al., 2021). The Széklers were for the most part self governed (Molnar, 2015). The Székler people were skilled in archery and cavalry and guarded the eastern Hungarian border for the Hungarian Kingdom. During the medieval time period, social organization of the Széklers featured three classes: the upper nobles, the lower or noble peasants, and the farming serfs (Molnar, 2015). The upper nobles were distinguished via of land ownership and made up about three percent of the Székler population. The lower nobles did not own land, however, like the upper nobles, they did not have to pay taxes and made up 50-60 percent of the population. Lower nobles had the rights to elect leaders and often served as contributors to the king’s military.

Greater Christian Influence of Europe

Christianity spread through Western Europe beginning around the 2nd century C.E with especially rapid growth around the 10th century C.E It generated transformative impacts across many societies including influences on death rites and burial rituals. (Gáll, 2013). Before the spread of Christian burial practices, it was not uncommon to find evidence of cremation urns for the dead, unorganized cemeteries, and burials with large amounts of grave goods (Gáll 2013). Burials rites were influenced by families, communities, and non-Christian religion, often referred to as pagan burials. Beginning in the 2nd century C.E., Christian burials were observed as a separate identity group with separate burial rituals and practices. During this time, an increase of memorials were built atop graves of martyrs. This act of combining memorials and burial location created a place of worship which changed the burial practices of Christianity. For example, the bishop of Milan, Saint Ambrose, was buried under the alter of the Basilica Martyrum to be closer to Christ (Dassmann, 2004). The practice of *ad sanctos* grew as more and more saints and martyrs were buried within churches and often near other saints (Wiśniewski, 2018). *Ad sanctos* is the practice of burying the dead near the memorials or tombs of saints or worship centers (Johnson, 2012).

During the Middle Ages, the Christian faith believed that after death, the soul is separated from the body until the second coming or doomsday, where the soul reunites with mortal, earthly remains (Genesis 1, 26-27; Gáll, 2013). Therefore, it was incredibly important for both the body and soul of loved ones to be saved. Burial rituals incorporated this belief. *Ad sanctos* grew for a few reasons during the 5th century C.E.

The first was the belief that the closer the body was to the church, the more secure it was for resurrection (Wiśniewski, 2018). This comforted mourners that their loved ones were saved. The location of burials near worship sites also allowed for mourners to see the burials, and to remind them to pray for the dead and their souls (Wiśniewski, 2018). *Ad sanctos* burials created a need for people to be buried closest to the church and alter as possible. Many were even buried near the gate and atrium, so the living could pass them and remember to pray for them (Wiśniewski, 2018). The Church's ability to regulate burial rituals, allowed for the Church to exert control and maintain power over the living and the dead (Althusser, 2012).

With the pious desire of laymen promoting burial within churches, but with finite physical space to bury them in, social hierarchy came to be a factor expressed in relation to burial locations (Johnson, 2012). As a result, the closer a burial was to the altar, the greater the importance, wealth, and social status of the individual was in life (Wiśniewski, 2018). Location of burial placement created symbolic competition for power and prestige in the afterlife (Rush, 1941) and among living descendants. Location of burials was a symbol which helped downplay or substitute the pagan symbols embodied in the use of grave goods (Gáll, 2013). As the location of burials became increasingly important during the Middle Ages, hierarchy and social status of individuals was reflected in burial location through vertically differentiated social organization with the most powerful social actors found among the spiritual and the wealthy (Gáll, 2013). During the Middle Ages, males held unequal power and status. Therefore, there was a

strong bias towards males being buried within the churches. Females and children were interred more commonly in the exterior courtyards of churches.

The change in mortuary behavior resulting from *ad sanctos* manifested during the 6th to the 7th century C.E., related to increased crowding of burials near churches. During this time, churches were built in west-east directions and burials were interred in rows in the same west-east orientation (Gáll, 2013; 1 Corinthians, 15:43). During the 8th century C.E., Pope Saint Gregorius the Great, prohibited churches to be built on pagan cemeteries (Markus, 1977). Gregorius wanted the separation of burials, so the burials of “heathens” would not join the “legitimate dead” through inadvertent consecration. With overcrowding within churches, cemeteries around churchyards grew during the 9th century C.E. and double burials became more common (Gáll, 2013). During the Carolingian Era (9th century C.E.) and the rise of the New Testament of the Bible, baptism in the Church was a prerequisite for all *ad sanctos* burials (Gáll, 2013). During the 12th and 13th centuries C.E., the Church became responsible for funeral rituals and had the right to establish church cemeteries near churches (Szuromi, 2005). These practices continued to grow as values changed, schools started teaching the bible, and institutionalized jurisdiction grew (Gáll, 2013).

Christian Influence on the Burials of Children

A major player shaping the identity of children to the Christian faith grew through different rites of passage, creating an attained identity in order to “earn” proper burial rites. The first rite of passage is the birthing process itself followed by the act of baptism

(Lewis, 2007). Because of the importance of belief systems surrounding baptism, the birthing process of children during the Middle Ages were modified. During the medieval era, the birthing process was dangerous and difficult and mortality rates were generally high, sometimes resulting in the death of the child, the mother, or both (Newman, 2007). The birthing process often relied upon midwives, family, friends, and perceived divine influences (Szilagyi, 2014). It was rare to have trained medical physicians assist in the birth and midwives did not require any formal training and often relied heavily upon the church's belief systems.

Early Christian dogma held that babies were born with the original sin of Adam and Eve. Baptism could only be effective in removing original sin when entered into by a willing knowledgeable participant who acknowledges and understands the sin and chooses to be baptized (Newman, 2007). If an individual died before baptism, the original sin remained, and the soul would be damned to Hell. Such a mandate caused problems because infants who died and could not be baptized beforehand, were damned by default. Modifications of the baptism mandate changed during the 16th century C.E., where babies could be baptized, and if the infant passed before the ceremony could be completed, a new belief, though which varied in detail by the region, generally held that the soul was held in limbo, neither damned nor saved in the realm of Purgatory. To save infants souls, emergency baptisms of sick or dying newborns were conducted by midwives until a priest could be called to finish the ceremony. Emergency baptisms were often seen as ambiguous and had the potential for practices of illicit baptism to emerge (Crow et al., 2020). Baptism must be performed on the living to be validated in the eyes of God,

therefore, baptism of babies that were already dead (stillbirths or died after birth but before baptism) were heretical. The burials of the non-baptized or illicitly baptized were feared because infant corpses were thought to be vulnerable to demonic attacks and could contaminate an entire cemetery (Gilcrest, 2012; Cootes et al., 2020). The clergy would ultimately decide if an emergency baptism was valid, yet questions of the validity of emergency baptism remained (Gillet, 2006).

Burial treatments were unsurprisingly shaped rather intensely by these elements of the Christian belief systems. Through the mandate of the church, individuals (including infants) who were not baptized were forbidden to be buried on consecrated ground and must be buried apart from the community of believers (Newman, 2007). The spatial relationships and mortuary treatment of the young have shown similar patterns through clusters of burials where infants were buried separately throughout medieval Europe, especially related to the Anglo-Saxon period (Craig-Atkins, 2014). Other indicators of age-related identity such as teething, speech development, walking, or weening can also play a role in the treatment of burial rites of younger individuals. Some of these ideas can be traced to influences of a Roman mandate described in Pliny's *Naturalis Historia* (A.D. 77-79) which called for an exclusion of burial rites to infants who died before teething and instead to be buried separately. Centuries later, the Carthaginian bishop Fulgentius enforced practices of separate burials of all individuals who did not live past 40 days (Watts, 1989).

Exploring Ethnogenesis and the Christian influence on Europe

One way to approach ethnogenesis during the Middle Ages in Europe is indeed through the study of children. With Christian mandates imposing belief systems upon communities throughout Europe, such activities often produced a range of cultural and ideological hybridization that would vary widely across cultures and client populations (Scott and Betsinger, 2018). Each community with its own history would interact differently with these imposed changes in different, particularistic, and local ways, leaving the door wide open for many diverse forms of ethnogenesis to occur as these different social systems, forms of practice, and belief came into contact. With a focus on bioarchaeological methods and the study focused on children, a deeper reflection of society can be understood. Because the identity of infants is ascribed and relies on the body politic, any encoded elements of identity in the burials of children should be a sharp reflection on the belief of mourners and the community (Scheper-Hughes and Lock, 1987).

Within burial contexts, changes depicting identity and degree or configuration of personhood, may be intentionally represented. If a society adopts new cultural practices, yet maintains already existing beliefs, a new form of culture and attendant dimensions of identity (both as seen and practices from within and without) can emerge through ethnogenesis (Sturtevant, 1971). Such a process can be reflected through the burials of children where personhood can be given through full burial rites as adults. The precepts of resilience theory and ethnogenesis can understand the study of identity and allow

researchers to explore, even if in only preliminary fashion, many previously inaccessible questions.

With such a vast number of differing cultures throughout medieval Europe, many different expressions of culture and manipulations of the Church's mandates are possible with elements of older cultural practices either persisting or morphing into a hybrid culture and admixture of beliefs. Past work has now brought to light multiple displays of a range of hybridity through the burial context of children in medieval Europe (e.g., Newman, 2007). The mandate that children possessed no form of personhood until they were baptized and were not permitted to receive burial rites on sacred ground, were often not as strictly followed as one might be led to believe. Such modifications to doctrine and practice gave rise the importance of infants who were not baptized and an emergence of personhood and a new transformed identity. Such modifications were dependent upon the historical trajectories of each culture.

The next two sections provide two different examples where the study of young children reflect a larger cultural belief system through different burials rituals. The first is an assessment of cluster burials of infants across Christian medieval cemeteries. The second is a case study of child burials in medieval Poland. Both examples provide evidence of possible ethnogenesis within a culture through the study of identity in children.

Example One: Eaves Dripping Burials. Funerary rites of individuals under the ages of two are commonly found in clusters within early Christian cemeteries (Craig-Atkins, 2014). Additionally, it was not uncommon to find clustered burials of perinates in

close proximity to standing structures. The “eaves dripping” concept proposes a link between perinates who were not baptized in relation to burial space near the church. The eaves-dripping model argues that placement of perinates allowed for running rainwater to fall from the eaves of church buildings to provide a posthumous baptism. Such placement of perinates assumes the significance of mortuary treatment is dependent upon whether a perinate was baptized or not before death. Such practices were not official doctrines of the Church, yet practices grew out of concern for the souls of the unbaptized young.

In addition to the eaves-dripping model as a form of posthumous baptism, it is not uncommon to find exceptions to the Christian mandate of separate burial for unbaptized infants (Craig-Atkins, 2014). Modifications of the mandate of separate burials were often ignored or changed depending on region. Some practices show that mothers and infants were often buried together and perinates or fetal remains were included in the church on consecrated ground. Additionally, there is evidence of secret burials of infants either on sacred ground or along the eaves of the church, thus suggesting the individual relationship between mourners and even local mandates (Newman, 2007). Mother-infant relationships in eaves-drip zones could provide near-term or newborn babies burial rites afforded to adult mothers (Craig-Atkins, 2014). Such a model assumes relationship between mothers and infants but also demonstrates a link of identities between mother and infant in mortuary contexts.

The “eaves dripping” burials bestowed at least basic personhood to infants by performing a modified baptism after the infant’s death (Craig-Atkins, 2014). Because of the modified baptism, a community provided burial rites to infants by placing the infants

on sacred grounds, thus imbuing importance and personhood. Such a disregard for placing infants in separate cemeteries by giving infants full burial rights reflects how a society creates its own rituals apart from mandates of the Church. Yet the belief in the value of a consecrated burial depicts a hybrid expression of culture that is dependent upon individual cultures. Through the study of ethnogenesis and an understanding of how such practices are presented in burial ritual, the importance of young individuals can be shown and may shed light to the identity and reverence toward the very young.

Example Two: Perinate Identity in Medieval Poland. Scott and Betsinger (2018) present one of the few medieval-influenced case studies that focus solely on the identity of perinates. The authors define perinate as 28 gestational weeks to seven postnatal days, post-neonate individuals as seven days to one year, and young children up to three years of age. Scott and Betsinger identifies perinatal individuals as a separate category whose autonomy and identity are through ascribed status from individuals within the society. The site is located in the Noteć River Valley in west-central Poland in a town called Drawsko during the 10th to 17th centuries C.E. The site location and history were crosscut by many different political and religious influences. Through examining the mortuary context of the Drawsko cemetery, ritual patterns were seen to be reflective of changing belief systems and the nature and identity (ies) of society at large. A clear demarcation in the burial rituals reflect a more pagan influence during the 10th century C.E. and a more Christian influence during the 17th century C.E. The cemetery was a centralized location of the town where locals would bury the general population. The cemetery held a large importance and meaning on the location and position of the individuals buried.

Over 300 burials have been excavated from Drawsko as of 2013. Many of the burials were wrapped in shrouds, had coffin remains, contained coins and other artifacts such as pins, and were oriented with the head to the west and feet to the east. Out of the ~300 individuals excavated, there were 15 perinates, 15 post-neonates, and 17 young children under the age of three. Although grave goods were frequently lacking, the orientation and positioning of all three categories of age groups were inconsistent with known Christian beliefs of child burials. Instead of being buried separately due to age and possible lack of baptism for such early ages, the orientation of their heads to the west and feet to the east were consistent with adult burials, as well as locations within and around adult burials throughout the cemetery.

The authors observe that individuals in all age groups shared in the same burial treatments and full burial rites at the time of death. Such interment of individuals reflects broader community beliefs that differ from those inferred in other nearby cemetery sites. Other sites have separate burial areas for individuals of the perinatal age group and the post-neonate age group. The authors' interpretations draw strongly from Lillehammer's (2000) concept involving the "potentiality of children." This potentiality refers to the interruption of a child's life by death and disruption of the formation of identity. The community and mourners then look at the potential of the deceased child and through a process of reconciliation, and where identity was ascribed to the child in the process of burial.

In a community such as Drawsko, burial rituals were not completely adherent to Christian mandates and clearly differed when it came to the burial of perinates and post-

neonatal children. Scott and Betsinger (2018) infer the difference to an inclusive aspect of the cemetery, simply stating that parts of the political and religious mandate were willfully ignored where others were maintained. The authors also considered that these individuals were buried with the same burial rites and were given identity, personhood and some autonomy to perinates, and placed post-neonates with importance within the community. The authors conclude that perinate and post-neonatal individuals must have held some sort of reverence within the community and were presented with the same or similar burial rites as adult individuals instead of being excluded by place and space as the church expected.

Scott and Betsinger (2018) also attempted to tackle the often-ignored and difficult question of identity of perinate and newborn individuals within the community. However, the idea, exploration, and incorporation of the ethnogenetic process could broaden the understanding of not only how individuals were buried differently within a community, but also the idea that the community represent a hybrid space resulting from a combination of local cultural beliefs and larger Christian mandates. An external influence of new belief systems and forms of social order, along with the importance placed on perinates, could have developed in deeply rooted beliefs derived from past pagan burials which persisted throughout a change in religious power to Christianity.

Perinates are at an age where identity is ascribed by both the individual mourners and the community's belief systems. Perinates are thus highly susceptible to the body politic and embodiment, where different forms of personhood could be applied. Ethnogenesis, therefore, is likely expressed in the burial rituals of perinates.

Burial Practices Across Transylvania

Returning to the archaeology of Papdomb, it is important to recognize that the funerary record of the Transylvanian region has been significantly understudied. Further, the excavations that have occurred within the region are published in Hungarian and generally inaccessible to non-Hungarian scholars. However, Gáll (2013) compiled a survey of 54 medieval Christian church cemeteries across the Carpathian basin. The cemeteries before the Christian influence were distinguished by diverse and large quantities of grave goods. The most common grave goods included horse burials, weapons, coins from the first Hungarian kings, jewelry, tools, pottery, and animal bones (Gáll, 2004). Many of the cemeteries still reflected these pagan burials during the 10th century (Gáll, 2013; Kalnoky, 2020).

During the 11th century, a transition to Christian-style burials occurred. During this “proto-Christian” transition, cemeteries, often without churches, began to be populated by burials with fewer grave goods, and generally included mostly in knives and s-shaped hair rings, especially with child graves. This conspicuous shift in ritual behavior occurred after King Ladislaus and King Coloman of Hungary enacted laws that moved to Christian religious influence. Toward the end of the 11th century, “proto-Christian” cemeteries were more common in rural areas and grave goods were prominent in Székler burials. During the 12th and 13th centuries, churches were being built with cemeteries and near towns (Szuromi, 2005).

As the Christian faith grew in the Transylvanian region, churches and cemeteries grew in parallel fashion as seen in converted territories and populations across Europe

(Gáll, 2013). Churches were often oriented in the west-east directions. Burials were also oriented in the west-east direction, close together, and in rows. Double burials were common. Signs of social hierarchy and inequality was also prevalent within church burials. Nobles and men of the church were often buried closest to the altar. Additionally, burials were supine and occasionally surrounded by stones or brick. Burials of non-adults were found within the cemeteries, along with women.

Findings from only two cemeteries included mentions of infant burials. In the Dealul Viilor cemetery in Sighișoara, two double burials were found. One had two infants buried together and the other contained an adult and infant (Gáll, 2013). The other cemetery that mentioned infants was in the Dăbâca Castle in Cluj where two infants were recorded with glass beads buried with them. It is possible, that infant burials were buried separately (Gáll, 2013).

Another example, and far more dramatic, was documented in Teleac (Telekfalva in Hungarian). The church was dated to the 17th century C. E. (Bethard et al., 2019). Seventy individuals were recovered from the inside of the church. Only one of the individuals was an adult. The adult individual was estimated to be older than 60 and a female. There were eight individuals between the ages of one to nine years, four individuals between birth to ten months, 14 individuals that were less than 36 gestational weeks, and the remaining individuals were ages between 34-40 gestational weeks. The majority of the individuals were estimated to have possible periosteal reactions. This cemetery was unique as to the demographic variation reflected in who was buried there. Little more is known about this cemetery other than the unusual burials of infants who

were interred within the church with only one adult. Christian children during the Middle Ages were to be buried separately, especially if unbaptized. It is possible that this church cemetery enforced the separation of unbaptized individuals yet wanted the burials to be sanctioned through consecration within a church. Additionally, the Teleac church, as explained earlier in this chapter is located only 3 km from the Papdomb site in Văleni.

Conclusion

This chapter provided an overview of the history of the Transylvanian region which had endured many political and cultural transformations over the last millennium. For instance, the region had long been under Hungarian political control, is today a part of Romania, and its people are ethnically Székler. Such changes in political leadership were also accompanied by many religious and cultural changes before and during the use of the church and cemetery at the Papdomb site. The region experienced major influences from the Carolingian Empire, the Holy Roman Empire, the Mongolian empire, and the Ottoman empire. Ideologically, the area was impacted by the Lutheran church, Catholicism, and eventually, Calvinism. However, the constant Székler presence on the landscape makes the cemetery at Văleni an unusual example of consistency, and perhaps even resilience, during periods of extreme political and religious dynamism.

Christian traditions and burial rites took hold across Transylvania and the Carpathian Basin. Cemeteries and churches abided by the larger mandates of the church (Gáll, 2013). The mandate that unbaptized children must be buried separately seemed to

be widely reflected in Transylvanian cemeteries. The Székler cemeteries that were previously excavated were labeled as “proto-Christian” by Gáll (2013) because of continued use of grave goods, and children buried in church’s at Teleac. The next chapter will explore the background of the Văleni site. Additionally, the next chapter will review the methods used to excavate, collect, and analyze burials at the Papdomb site and take a closer look at the children and infants buried within and around the church. The next chapter will also review the statistical methods used to test the hypothesis stated in the introduction.

CHAPTER FIVE: MATERIALS AND METHODS

This chapter describes the Papdomb archaeological site, the skeletal sample, the methods used for excavation, data collection, and an explanation of the statistical methods used in this thesis. Site context and data collection methods are imperative to the understanding of cultural context of the finds included during the medieval time period which is examined here.

The Papdomb Archaeological site

The Papdomb archaeological site is identified as part of the investigations of the abandoned church project which have aimed to inform both scholars and interested local Széklers about Székler history and lifeways during the medieval era. The work represents a collaborative project between the Haáz Rezső Múzeum, located in Odorheiu, ArchaeoTek Canada LLC, and the Székler descendant community. Since the start of the excavation in 2014, 664 individuals have been exhumed from the Papdomb site.

Burial patterns at Papdomb, broadly speaking, are consistent with Christian burials across Europe during this time. The expectation is for this broad mode of burial ritual were bodies were interred in a supine, extended position with their heads to the west and feet to the east. Adult males and nobles are expected to be buried closer to the altar and within the church, while women and children are expected to be buried outside the church and potentially in the church yard. Children who were not yet baptized are expected to be buried in a separate location entirely.

The Văleni Church and Cemetery

The Văleni church was built in the mid-12th century C.E. on a hill southeast of the village and is today the Papdomb archaeological site. The Papdomb site is located roughly 7.5km from the village of Văleni and is located in Harghita County (Zeidlik et al., 2019). Before the Calvinist reformation, the church was used by three surrounding villages: Văleni, Alexandria, and Teleac. The Văleni church had gone through several construction phases into 18th century C.E. (Zejdlik et al., 2021). The original site of the church was built on a pre-Christian (or so-called pagan) cemetery which dates to the 10th century C.E. where two burials have been recovered and radiocarbon dated. One was the burial of an adult, and the other was the burial of a horse (Zejdlik et al., 2021).

The church went through several building phases from the 12th-18th century C.E. The first church building was made of wood which had straight corners and held a 4.5x5m nave (Zeidlik et al., 2021). Burials from this phase of the church yielded large quantities of pottery fragments and hairpins with s-shaped endings. In 1661, the church was looted and burned to the ground by Turkish and Tatar troops during a retaliatory campaign. The church was then rebuilt with stone during the 13th century C.E. with Roman features. The first stone church was 16.5m long and included a nave and sanctuary. The walls were covered in white plaster made from lime, sand, and pebbles. The first stone church was later pillaged in 1690 by Imre Thököly's troops. Again, the church was rebuilt by stone and gothic features were added, including a large tower. Small fresco paintings of biblical characters were added to the walls during this phase. Additionally, a temporary sanctuary

was added, which was destroyed during the 15th century C.E. During the later end of this phase, a stone ossuary was built on the western side of the church (Figure 5.1). The ossuary was likely built to store remains of earlier burials that were disturbed by newer burials during that time. Later, a stone wall was built around the church and burials were closer concentrated on the south side of the church. The church was demolished in 1804 when it was deemed irreparable after an earthquake in 1802 (Nyárádi, 2015). The church construction phases, including the burnt wood church, can be seen in Figure 5.2.

The town's church was then reestablished in 1804, and it was moved closer to the village and rebuilt. This latest church is still in use today. Through the multiple phases of the church and up to the 18th century C.E., the church ended up having an east-west orientation and gothic style with an uncommonly large tower on the west end of the church. The church itself was fortified with an oval wall and ditch. Figure 5.3 depicts the excavated northwest side of the church which includes the church walls, where the altar was, part of the oval wall, and church yard.

The Papdomb site, beginning with the original construction of the wood church, saw its first internments in the 12th century C.E. However, the majority of individuals were buried between the 14th and 15th centuries C.E. (Zejdlik et al., 2021). The burials within the church continued into the 17th century C.E. Individuals buried at the Papdomb church are ancestors of the modern Székler people, who have resided in the area for over 1,000 years (Kapitány, 2015). The medieval period in that area lasted from A.D. 200 – 1687 (Kapitány, 2015). Although the church was not rebuilt, the land and Văleni cemetery was continually used for 800 years and is still in use today. Reuse of the cemetery created

grave-fill composed of sediment, construction debris, and isolated human remains that had been produced when space was excavated to create room for a new grave (Zejdlik, 2017). Additionally, the desire to be buried within the church walls as close to the front of the church as possible, also known as *ad sanctos*, meant that individuals were tightly spaced throughout the site (Naji, 2005). Figure 5.4 depicts a map of the church and church yard with individual burials that have been excavated.



Figure 5.1 A photo of the 2017 first layer excavation of the ossuary. Photo by Nyárádi Zsolt 2017 field report.



Figure 5.2 A photo of the side profile of the western section of the Papdomb church wall. The profile demarcates the phases of previous church destruction including the burnt wood church. Photo by Nyárádi Zsolt 2014 field report.



Figure 5.3 Aerial photo of the 2014 excavation showing the northwest end of the church. Photo by Nyárádi Zsolt, 2014 field report.

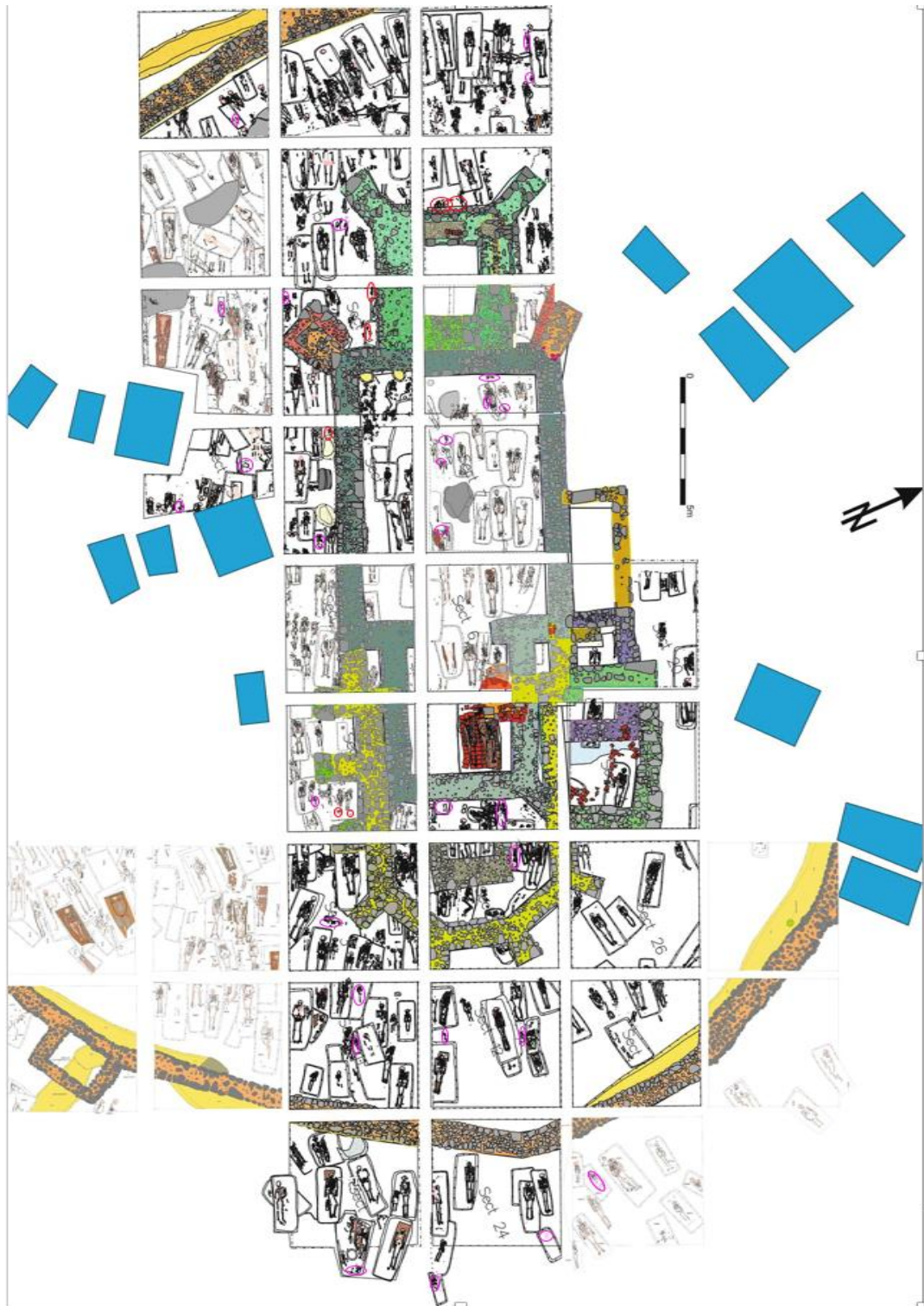


Figure 5.4. Map of the **Văleni** church and cemetery at the Papdomb site in Transylvania. The pink circles represent perinate burials and the red circles represent perinate burials associated near a wall. Map drawn by Nyárádi Zsolt (2020).

Methods

Excavation of the Papdomb archaeological site has been directed by Dr. Nyárádi Zsolt of the Museul Haáz Rezső in collaboration with Dr. Andre Gociar ArchaeoTek Canada and the, archaeological field school he organizes. Dr. Katie Zejdlik is the Scientific Director for the project and supervises excavation and removal of the remains. Dr. Jonathan Bethard is the lab project director and supervises lab study of the remains with detailed documentation. Additionally, since the discovery of an ossuary, Dr. Frankie West has overseen the excavation and analysis of human remains found in the ossuary. Drs. Zejdlik, Bethard, and. West are in charge of training and guiding ArchaeoTek students, and other staff of ArchaeoTek, to insure the documentation and preservation of materials and remains from the Papdomb archaeological site are accurate. The remains, when not being studied, are stored in the local Haáz Rezső Múzeum in Odorheiu Secuiesc, Romania.

Excavation

Excavation of the Papdomb archaeological site started in 2014 due to continued use of the land as a cemetery, which destroyed previous burials. By 2014, approximately 30% of the cemetery had already been destroyed so the community requested disinterment of the remains to preserve their ancestors. There have been 664 grave numbers assigned thus far. A grave number was issued when two or more bones remains were found *in-situ* in

articulation. Use and reuse of the cemetery for 800 years meant that some burials, primarily those within the church proper, had been disturbed many times. Disturbance of those burials resulted in commingling as they became grave-fill for newer burials. Isolated remains were logged as “unassociated,” given a general provenience, and bagged separately.

Each year, the excavation begins with Dr. Nyárádi and his crew hand excavating and documenting an average of five 5m x 5m trenches down to the burial layers. ArchaeoTek students were then brought in to excavate the remains. Remains were carefully excavated, documented through field notes, photographed, mapped, and removed before transported to the lab. Burial pit edges were first defined with trowels, then excavators moved to non-metal hand tools to uncover and pedestal the remains. The field notes included the trench number, grave number, soil description (including color and texture compared to the Munsell soil test), body orientation, hand and face position, overall body position, the location, grave cut size, length of remains, depth of burial, unassociated remains found, associated artifacts, skeletal inventory, preservation type, to scale drawing of burial, descriptions, and a rough age estimate. Due to the hard clay matrix, preservation of remains are generally good and sifting of the soil is unnecessary. Excavation of the church was completed in 2017. The 2018 and 2019 excavations focused on both inside and outside the church yard. By the end of the 2019 excavations, 33 trenches had been excavated. The 2020 excavation was cancelled due to the COVID-19 pandemic. Further excavation of the site will possibly continue during the summer of 2021.

Skeletal Data Collection

There is a variety of age ranges across the site. Out of the 664 grave numbers assigned, approximately 36 perinates have been recovered. The term perinate is used to encompass individuals from an unborn fetus to an infant of one year. This nomenclature allows for the understanding that individuals may not have been born yet, could have been still-born, or lived only shortly after birth. A biological profile was conducted by Dr. Bethard on nine of the perinates from the 2014-2015 excavations. The remaining perinates from 2016, 2017, 2018 and 2019 were later studied by the author in 2019. I was not able to access the remains that were analyzed from 2014 and 2015 due to location of remains and logistics (stored in museum away from the lab, only accessible by lead archaeologist). To minimize interobserver error, Dr. Bethard analyzed the remains from 2014 and 2015. The same techniques and equipment were used for all analysis of burials. Dr. Bethard checked and assessed remains from 2016, 2017, 2018, and 2019. Dr. Bethard was the constant bioarchaeologist in every analysis of the remains.

When I arrived on June 25, 2019, I received the excavation spreadsheet and pulled all remains that were labeled perinate from storage. To make sure every individual was collected, every box for 2016, 2017, and 2018 was double-checked and verified. Each box was labeled with a number and the specific grave numbers of the individuals within. Every burial within the boxes were either stored in a plastic zip lock bag or a brown paper bag. Every burial within the boxes was checked and recorded on a Microsoft Excel spreadsheet. The individuals from 2019 were not checked due to different location of storage. The different storage was due to the incoming burials being excavated. If a

younger individual was found during the 2019 excavation, it was brought straight to the lab for analysis. No burials were found that were not listed as either infant or perinate on the field excel spreadsheet.

Before analysis, every burial had to be cleaned. Each bone was washed with water and either a toothbrush or paint brush, depending on the condition of remains. The remains were then placed on a labeled tray to dry. Remains from each burial had its own drying and washing tray to keep them from getting comingled. Additionally, the remains were washed in an enclosed tent to keep the weather and wind from disturbing the remains. After remains dried, they were placed back into plastic bags with their label. In addition to labels, there is a chart with the burial number, the individual who washed the remains, and the drying location. Every time remains were moved, it was cataloged and initialed. The remains of individuals for this study were stored separately in the bone storage area while each of the remains were washed and dried.

Data collection rates from perinate remains averaged one to two burials a day. Each burial was laid out and each bone and fragment were identified and sided. Each of the remains were inventoried, measured if possible, and observed for trauma, taphonomy, growth, development, biological age, pathological conditions, and any other observations. Each form and layout were double checked by Dr. Bethard to account for intra-observer error. Pictures of each burial were taken and if there was possible pathological condition, close up pictures were taken. Notes were recorded along the way, even if there were just slight forms of possible pathology that could just be normal growth and development.

Copies of each form were made so that both the lab and I would have access to hard copies.

The perinate data collection sheets include the Arizona State Museum Skeletal Inventory Recording form (1), Age assessment Juvenile Recording Form (2b), Skeletal Measurement Juvenile Recording form (5b) (Maresh, 1970; Black and Scheuer, 1996; Fazekas and Kosa, 1978), Dental Inventory and Pathology Permanent Recording Form (3a), Dental Inventory and Pathology Deciduous Recording Form (3b), Perinatal Skeletal Recording Form for a homunculus made by Dr. Bethard, and USF in Romania/Archaeotek 2019 Skeletal Inventory/General notes. The inventory note section includes any descriptions of the remains, overall completeness, overall age estimate, and detention age assessment for both the London Atlas (AlQahtani, 2010) and the standards in Buikstra and Ubelaker (1994).

The biological sex of perinates are unable to be estimated due to age and lack of skeletal dimorphism. Sex estimates of associated adult burials was estimated through morphology of the pelvis and cranium (Buikstra and Ubelaker, 1994). Additionally, individuals with an intact pubic bone was scored following Phenice (1969) and Kiales et al. (2012). In cases where sex-specific skeletal elements are unavailable, or morphology is ambiguous, sex was scored as indeterminate.

Age estimation on perinate individuals was estimated through multiple lines of evidence including: dental eruption and formation, cranial and post cranial measurements, fusion of sutures, epiphyseal union, and presence or absence of primary ossification centers. Dental development was scored using Buikstra and Ubelaker's

(1994) standards and the London Atlas of Human Tooth Development and Eruption (AlQhatani et al., 2010). Data were then compared to known fetal samples along with fusion of skeletal elements (Scheuer and Black, 2000). Limitations on long bone length can vary in gestational age and are dependent upon the height, weight, and nutritional status of the mother (Cardoso, 2007).

In addition to dentition for age estimation, the measurements of portions of the skull was assessed. The most reliable portions of the cranium to measure was the sagittal length and maximum width of the pars basilaris and pars lateralis of the occipital bone, the length of the temporal ring of the temporal bone, and the maximum length of the petrous portion of the temporal bone (Nagaoka and Kawakubo, 2015). In addition, the maximum length and maximum width of the lesser wing and greater wing of the sphenoid bone, the body of the sphenoid bone, the petrous portion of the temporal bone, the basilar portion of the occipital bone, the zygomatic bone was measured. The maximum length, maximum width and maximum height of the mandible and the maxilla was also measured for comparison. Additionally, epiphysial fusion status and measurement of postcranial bones were taken. Postcranial measurements for age estimation include: the maximum length of the clavicle, the maximum height, width, and spine length of the scapula, the maximum length and width of the ilium and ischium, and the maximum length of the pubic bone. The maximum length of the humerus, ulna, radius, femur, tibia, and fibula were measured (Fazekas and Kósa, 1978). All measurements were compared to the Black and scheduler (2009) and Maresh (1940) skeletal collections.

Age estimation of associated adults focused on the pubic symphysis, auricular surface, dental wear and attrition, and skeletal degeneration. Morphology of the pelvis and cranium was scored following methods described in Buikstra and Ubelaker (1994). Any possible pathological condition or stress was recorded through macroscopic observations. Possible skeletal abnormalities were closely observed and compared to normal bone development that could resemble pathology in infants (Lewis, 2014, 2017). In addition to burial forms, data was recorded in the larger database on Dropbox where all burial information was curated. Each grave number had an associated field photo, trench number, field description, field map and drawing, lab analysis, and lab photos.

After all information was gathered, it was imputed into the SAS 4.9 version statistical program to test for relationships between different characteristics of burials. To address difference in burials and compare them to age, categorical data must be defined. The categories include sex (for adult individuals), body position, location, grave goods, orientation of burial, if the burial was near a wall, multi-person burials, and century it is believed to be from based on burial depth and radiocarbon reference of other burials. Instead of computing the 36 perinates as originally planned, it was necessary to include every burial exhumed and analyzed from the site. Therefore, the 36 perinate individuals were compared to the 664 individuals of all ages. Furthermore, 128 burials were excluded from the analysis due to a lack of complete data collection. The total number of individuals included in the statistical analysis was 536 burials, 36 of which corresponded to perinates. The following statistical procedure was chosen to answer the hypothesis in Chapter One. Through analysis of death ritual patterns surrounding children, an

understanding of ascribed identity and personhood emerges which reflect one aspect of ethnogenesis through hybrid beliefs of religious thought.

Statistical Procedures

A correspondence analysis statistical test was selected because it is very effective in display different characteristics of burial patterns (Greenacre, 1993). To quantify categorical data, correspondence analysis assigns numerical vales to categorial scaled variables. Correspondence analysis computes coordinates between multiple categorical data of rows and columns and displays the information graphically. The method applies to scaled data measure abundance, which can be displayed as a two-way cross tabulation (Manly, 2005). Ordination or scale values are equal to p and abundance of what is being measured is equal to n . Abundance or row values are labeled as a_1, a_2, \dots, a_n and column values are labeled as b_1, b_2, \dots, b_p . To gauge differences in observed abundance and maximize correlations between bivariate distributions, the following equations can be used:

Equation 5.1

$$a_1 = \{(x_{11}/R_1) b_1 + (x_{12}/R_1) b_2 + \dots + (x_{1p}/R_1) b_p\} / r$$

Equation 5.2

$$a_2 = \{(x_{21}/R_2) b_1 + (x_{22}/R_2) b_2 + \dots + (x_{2p}/R_2) b_p\} / r$$

Equation 5.3

$$a_n = \{(x_{n1}/R_n) b_1 + (x_{n2}/R_n) b_2 + \dots + (x_{np}/R_n) b_p\} / r$$

Equation 5.4

$$b_1 = \{(x_{11}/C_1) a_1 + (x_{12}/C_1) a_2 + \dots + (x_{n1}/C_1) a_n\} / r$$

Equation 5.5

$$b_2 = \{ (x_{12}/C_2) a_1 + (x_{22}/C_2) a_2 + \dots + (x_{n2}/C_2) a_n \} / r$$

Equation 5.6

$$b_p = \{ (x_{1p}/C_p) a_1 + (x_{2p}/C_p) a_2 + \dots + (x_{np}/C_p) a_n \} / r$$

Each value is defined in a contingency where values x_{12} = row 2 and column 1, x_{22} = row 2 and column 2, x_{np} = p and n value, x_{n2} = column 2 and n value, x_{n1} = column 1 and n value, x_{21} = column 1 and row 2, x_{1p} = p value and row 1, x_{2p} = p value and row 2, R_1 = row 1 sum, R_2 = row 2 sum, R_n = row sum and n value, b_1 = site value and column 1, b_2 = column 2 value, b_p = row p value, C_1 = column 1 sum, C_2 = column 2 sum, C_p = P value and column sum, and r = maximum correlation number being sought.

Correspondence analysis accounts for multidimensions of space, weight assigned to each point, computes distance function between the points, and reduces dimensionality of the points and (Greenacre, 1993). If i represents the age of an individual found in a burial, and j represents the location of a burial, then R_i signifies the total abundance of artifact i , and C_j signifies the total abundance at location j , and r is the maximum correlation (Manly, 2005). This is called reciprocal averaging and produces i values to be a function of j values, and *vice versa* (Manly, 2005). To plot both row and column values on the same axis, the row value must average the same as the column value.

After each row and column are defined, the rows are then weighted to make the row mass equal to 1. To measure the distance between the row points, chi-square is used to test independence of coordinates analogue to factors (Greenacre, 1993). The formula to

measure physical distance between two row totals, known as vectors or profiles (row/row sum), is $X = [x_1 \ x_2 \ ...x_n]$ and $y = [y_1 \ y_2 \ ...y_n]$. For multiple categorical values to be weighted to 1, the following formulas were used (Manly, 2005):

Equation 5.7

$$a = R^{-1} X' b / r$$

Equation 5.8

$$b = C^{-1} X' a / r$$

The values output was categorized by positive or negative values, thus displayed as binary presence/absence or positive/negative (Manly, 2005). Once the values are weighted, the two values closest to that are less than one but closest to one are identified and used as plot values CORR1 and CORR2.

To compute a multivariate correlation analysis, a contingency table with multiple variables must be defined (Kroonberg and Greenacre, 2004). For this thesis, age groups are split by perinate (gestation- 1 year), infants (1-3 years), child (3-10), adolescent (10-20), adult (20- 50), and old adult (50 years and older). The age categories are then compared to sex (female, male, and indeterminate), location (in church, under wall, in yard, outside yard, and unknown location), number in burial (single burial, multi-burial), orientation (west to east, not west to east), artifacts (present, absent), and pathology (present, absent).

Conclusion

The Papdomb site contains the ruins of a church build over a pre-Christian cemetery. Use of the site extended from the Arpadian Age to the Baroque period with most of the burials interred during the medieval period. Several political and religious influences impacted Transylvania during this period and are represented in changing church architecture and burial location. Excavation of the site started in 2014 and is on-going. As of Spring 2021, 664 individuals have been excavated from the site. Of those 664 individuals, 536 individuals were included in this analysis, and 36 of the individuals were perinates. The 36 perinates were analyzed per methods standard to the field and further analyzed with correlation statistical analysis. Results of the analysis are discussed in the following chapter.

CHAPTER SIX: RESULTS

This chapter provides the results of the observations and analysis of the age variations found at the Papdomb archaeological site. It reviews initial observations during excavation and lab analysis and adds depth and refinement to age with location of burials, sex of individuals buried, whether the burial was a single inhumation or multiple, orientation of the individual, any artifacts associated with a burial, and any pathological conditions present.

Papdomb Mortuary Patterns – An Overview

Since the 2014, excavation of the Papdomb archaeological site, 664 burials have been documented, 536 of which have at least a general description and 345 of which have received an in-depth visual examination. As stated in chapter five, 536 burials with a general description of age, sex, location, artifacts recorded, and pathological conditions observed were used,

Individuals of all ages ranges have been recovered from the site: 36 perinates (gestation- 1 year), 19 infants (1-3 years), 130 children (3-10 years), 76 adolescents (10-20 years), 261 adults (20- 50 years), and 14 old age individuals (50 years and older). Sex estimation was attempted only on adult and some adolescent individuals. The sex of perinate, infant, children, and remaining adolescence were labeled as unknown. There were a total number of 115 male or possible male individuals, 85 female or possible female individuals, and 336 individuals of unknown sex.

Most of the individuals were interred with the head to the west and feet to the east. There were 520 burials buried in a west to east direction and 16 that deviated from the pattern. Most of the individuals were in a supine position through variations were present (semi-flexed, flexed, and indeterminate). The categories of burials located across the site were broken down into the following: 98 burials within the church; 35 burials under or near a wall, 375 burials in the yard, 20 burials outside of the yard, and eight burials of unknown location.

It was not uncommon to find evidence of a coffin (wood and/or nails) or shroud associated with the skeletons. Artifacts found associated with graves included animal remains, ceramics, name pins, textile headbands, beads, clasps, coins, hair pins, headdress, and a book-motif decoration. For this analysis, coffin wood and coffin nails were not considered grave goods. There were 43 burials with grave goods and 493 burials without grave goods.

A “typical” or representative burial found at the Papdomb archaeological site would be an adult skeletal age, interred supine with the head to the west and feet to the east, with no grave goods or observable pathological conditions. Table 6.1 presents summary site demographics and burial location. Figures 6.1 - 6.6 illustrate examples of previously mentioned burials.

Table 6.1. Contingency Table from the Papdomb site. Frequency count by Lauren Reinman.

	Perinate (per)	Infant (inf)	Child (chi)	Adolescence (ado)	Adult (adu)	Old Adult (old)
male/possible male (mpm)	0	0	0	9	102	4
female/possible female (fpf)	0	0	0	11	64	10
unknown sex (uks)	36	19	130	56	95	0
in church (inch)	7	6	16	13	52	4
under wall (wall)	7	2	7	2	16	1
in yard (inya)	18	9	102	58	181	7
outside yard (outy)	4	2	4	0	9	1
unknown location (uklo)	0	0	1	3	3	1
single burial (sing)	32	18	123	72	252	13
multiple burial (muti)	4	1	7	4	9	1
w-e (we)	36	19	125	74	252	14
not w-e (nwe)	0	0	5	2	9	0
grave goods absent (gga)	33	17	124	65	244	10
grave goods present (ggp)	3	2	6	11	17	4



Figure 6.1. G10 and G72 were burials of nobles located near the altar and within the Papdomb archaeological site. Photo: Nyárádi Zsolt (2014).



Figure 6.2. G8 was an individual interred next to the church wall at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2014).



Figure 6.3. G252 and G246 are an example of a multiple burial containing two child burials who are holding hands at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2016).



Figure 6.4. G436, G437, G438, G439, G440, G441, G442, G443, G415, and G444 serve as an example of a multiple burials located in the yard from Trench 17. The majority of the individuals are indicative of multiple interments. Photo: Nyárádi Zsolt (2017).



Figure 6.5. G456 illustrate of a burial within a coffin at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2014).

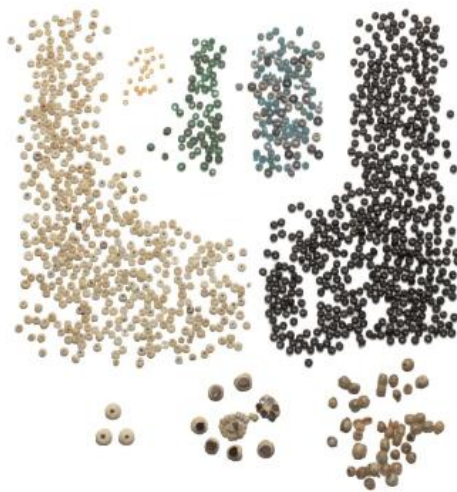


Figure 6.6. Glass and bone beads found within burials across the Papdomb site. Photo: Nyárádi Zsolt (2017).

Perinate Burial Descriptions

This section describes the 36 burials analyzed for this thesis. The 36 burials were designated as perinates and were either analyzed by Dr. Bethard and students (Burials from 2014 and 2015), or Dr. Bethard and the author (Burials from 2016, 2017, 2018, and 2019). Dr. Bethard was the constant in every burial analysis to avoid inter observer error. Table 6.2 represents all 36 perinate burials. Each burial is associated with a grave number, location, orientation, any grave goods, and age estimation. In addition to the table, the Appendix contains a more detailed description for each perinate individual with a photo from the *in situ* position in the field and anatomical position within the lab.

Table 6. 2. Table describing the 36 perinates found at the **Văleni** site since 2019. Spaces left empty are unknown. Table by Lauren Reinman.

Grave Number	Trench	Location	Orientation	Artifacts	Associated Graves	Age	Time Period
3	3	Yard	W-E			33w- Birth	17 th Cent. CE
16	5	Outside	W-E			38w- Birth	17 th Cent. CE
47	11	Yard	W-E			4.5m- 7.5m	14 th -15 th Cent. CE
58	1	Church	W-E	2 Coins	G57	34w- 38w	
64	2	Church	W-E			6m-1y	15 th Cent. CE
79	1	Church	W-E			3m-6m	
113	8	Church	W-E		G112	6m-1y	13 th Cent. CE
126	9	Wall	W-E			4.5m- 10.5m	16 th -17 th Cent. CE
171	9	Wall	W-E			3m- 7.5m	16 th -17 th Cent. CE

177	7	Church	W-E			6m- 18m	14 th -15 th Cent. CE
178	7	Wall	W-E			32w- Birth	14 th -15 th Cent. CE
179	7	Church				Birth- 1y	14 th -15 th Cent. CE
186	9	Yard	W-E	Headdress		7.5m- 13.5m	
202	8	Church	W-E		G210/G197	38w- Birth	15 th Cent. CE
204	8	Church	W-E			6m-1y	14 th -15 th Cent. CE
234	12	Church	W-E			34w- Birth	12 th Cent. CE
244	14	Wall				40w- 1.5m	14 th Cent. CE
245	14	Wall	W-E			29w- 38w	14 th Cent. CE
250	12	Yard	W-E			40w- 1.5m	12 th Cent. CE

269	13	Wall	W-E	Pottery		3m-9m	14 th -15 th Cent. CE
283	15	Yard	W-E			38w- Birth	15 th -16 th Cent. CE
299	11	Yard	W-E			38w- Birth	17 th Cent. CE
320	13	Yard	W-E			40w- 1.5m	16 th Cent. CE
335	14	Yard	W-E			38w- Birth	16 th Cent. CE
363	18	Yard	W-E			28w- 32w	16 th -17 th Cent. CE
377	18	Yard	W-E			7m- 10m	15 th -16 th Cent. CE
387	16	Yard	W-E			6m-8m	17 th Cent. CE
396	19	Outside	W-E			38w- 42w	13 th -14 th Cent. CE
467	23	Yard	W-E			1.5m- 4.5m	

496	23	Yard	W-E			38w- Birth	
497	19	Church	W-E		G505	36w- 38w	
505	19	Church	W-E		G497	36w- 38w	
511	22	Yard	W-E			38w- 42w	
571	24	Yard	W-E			9m- 10m	
573	24	Outside	W-E			38w- 42w	
602	27	Yard	W-E			6m-1y	

Correspondence Analysis Test Results

The chi-square data in figure 6.41 measures observed distribution and how the data from table 6.1 fits with the distributions. *Chi*-square is simple, but effective. Also known as goodness of fit test, it is compared observed distribution of variables to their statically expected values. The distance represents chi-square values of each row and column to the average profile, also known as the centroid. Table 6.2 represents the two dimensions measurements of the row categories. Table 6.3 represent the two dimensions

measurements of the column categories. The two dimensions encapsulate a total of 88% of the variation within the dataset. The dimensions represent coordinate distance from the centroid. These data were then used to build the correspondence analysis. Figure 6.42 illustrates the graphical output of the correspondence analysis and displays the relationships of column and row variables. The points in blue represent the rows and the points in red represent the columns. The variables that are graphically displayed on the plot show what points have similar occurring frequencies. Therefore, the closer together the values are on the plot, the closer relationship that exists. The related points on the correspondence analysis can reflect patterns of burials between age, orientation of burial, location, artifacts, and multi-person interments. Such relations and patterns give insight into burial rituals of different age groups and have the ability to reflect religious beliefs of the Székler people.

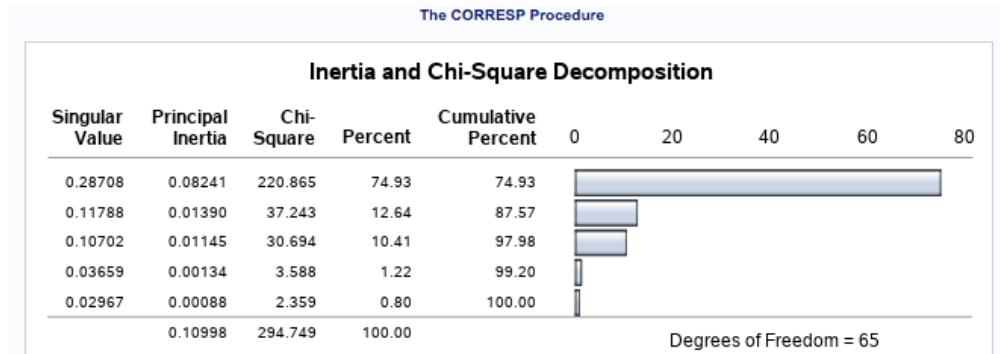


Figure 6.7. Chi-Square results from the contingency table at the Papdomb site, demonstrating statistically significant differences at the 0.001 level.

Table 6.3 (a) represents the two dimensions of row coordinates **(b)** represents the two dimensions of column coordinates.

Row Coordinates		
	Dim1	Dim2
mpm	-0.7975	-0.2207
fpf	-0.8494	0.2606
uks	0.4879	0.0096
inch	-0.1321	0.1216
wall	0.1406	0.2228
inya	0.0212	-0.0833
outy	0.1343	0.3507
uklo	-0.3251	0.5615
sing	-0.0124	-0.0129
mult	0.2431	0.2523
we	0.0017	0.0108
nwe	-0.0547	-0.3495
gga	0.0126	-0.0429
ggp	-0.1446	0.4919

Column Coordinates		
	Dim1	Dim2
per	0.3708	0.1746
inf	0.3371	0.1598
chi	0.3509	-0.0570
ado	0.0819	0.0692
adu	-0.2410	-0.0570
old	-0.6201	0.5498

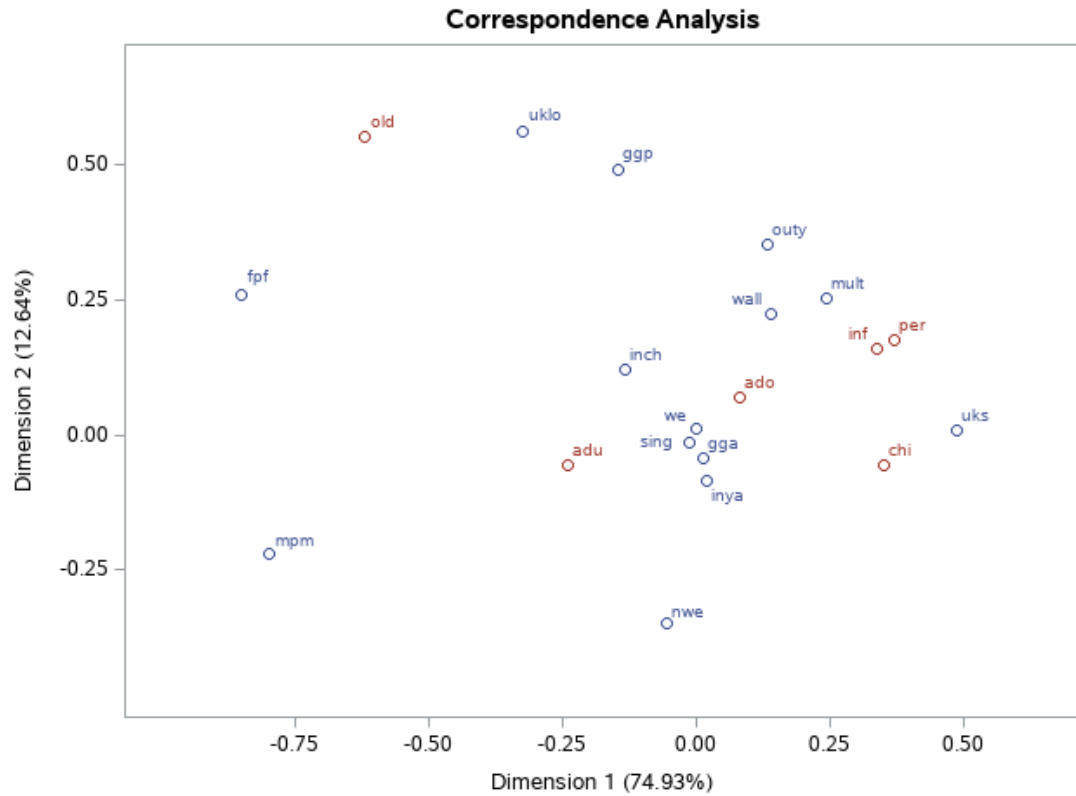


Figure 6.8 Correspondence Analysis results from the Papdomb site.

Correspondence Analysis Description

Results from the correspondence analysis depict how age is related to different categories of burials. This relation is shown graphically in figure 6.42. Aspects of burials include location, orientation, possible pathology, presence or absence of artifacts, and sex of an individual. Clustered towards the centroid and close together are burials in a west to

east direction, individuals without pathology, burials within the yard, and artifacts absent. This cluster depicts what is expected and most common burial traits found throughout the Papdomb archaeological site. Outliers furthest from the centroid are unknown location, grave goods present, old age individuals, female and male individuals, individuals not in a west to east orientation, and pathology present. Burial ages in order from closer to the centroid, to farther away from the centroid are adolescence, adult, child, infant, perinate, and old age. All age groups, apart from old age, were depicted close to the centroid on the plot. Children, Infants, and perinates are especially close together.

Points closest to old age individuals were female, possible female, grave goods present, multi-person burials, unknown location, within the church, and outside the church yard. Points that were farthest away from old age individuals were pathology present, known sex, and not oriented in a west east direction. Point closest to adults are locations within the church, within the church yard, and outside of the church yard. Additionally, close related points to adults were male/possible male, single burial, pathology absent (although the one pathological individual was an adult male/possible male), grave goods absent, and a west to east orientation. However, adult and child ages were closest to the not west east direction.

Adolescents were closest to the variables of outside the yard, within the church, west east orientation, in the yard, single burial, within the wall, and grave goods absent. Child burials corresponded closely to the variables unknown sex, in the yard, grave goods absent, pathology absent, west to east direction (and not west to east direction), and in-between single and multi-person burial. Infants and perinates were very close together.

Both were close to the variables of multi-person burials, within the wall, outside the church yard, within the church, west east orientation, pathology absent, within the yard, grave goods absent and unknown sex.

The centroid points that are clustered tell us that the majority of individuals were buried in a west to east orientation, with grave goods absent, single burial, and most burials residing within the yard of the church. If a multi-person burial occurred, it was most likely an adolescent, infant, or perinate. If a burial was not facing west to east, it was most likely an adult or child. If grave goods were present, it was most likely with an old age individual or adolescent. Outliers within the plot include are old age individuals, unknown location of individuals, pathology present, sexed individuals, and grave goods present.

Most individuals throughout the Papdomb site were buried in a west east orientation with only 16 out of 536 burials (3%) differing from the west to east direction. Artifacts were found in 43 burials (8%) and were present in all age categories, all locations, and both female and male burials. Artifacts within the Papdomb church were consistent with common “proto-Christian” churches throughout Transylvania (Gáll, 2013). Artifacts found included jewelry, hair pins, coins, beads, pottery, and animal bones, are expected. Only about eight percent of burials with grave goods and less extravagant grave goods present, depict that the transition of not having grave goods within burials was active within the Papdomb archaeological site. There was only one burial that was mentioned to have a pathological condition. The burial was an adult male.

Burials of men, women, unknown sex, and individuals of all ages were recovered from internments across the Papdomb site. A total of 115 out of 536 burials (21.5%) were male/possible male, 85 out of 536 burials (15.9%) were female/possible female, and 336 out of 536 (62.7%) were an unknown sex. The 336 who did not receive a sex estimation were either adults or adolescents, unable to be sexed or were classified indeterminate. Additionally, sex estimation remained unknown for the perinates, infants, children, and many adolescents due to a lack of sexual dimorphism because of their age.

Individuals from all ages were also found either within the church or under a wall. 5 out of 14 (35.7%) old age individuals, 68 out of 261 (26%) of adults, 15 of 76 (19.7%) of adolescents 23 of 130 (17.7%) of children, 8 out of the 19 (42.1%) of infants 14 out of 36 (38.9%) of perinates were buried either within the church or under a wall.

Conclusion

This chapter reviewed general burial descriptions, data used for the correspondence analysis, and the results of the correspondence analysis. Additionally, this chapter provided examples of burials found throughout the Papdomb archaeological site. The correspondence analysis graphically displayed categories relatedness to age groups and found the majority of remains were buried in single burials, in a west to east orientation, grave goods absent, within the yard, and pathological conditions being absent. Adults, adolescence, and children were the age groups most associated with “typical” burial characteristics. Old age individuals were most likely to have an unknown location, grave goods present, and female/possible female. Infants and perinates were

most likely to be in a multi-person burial and within the wall. Furthermore, the presence of perinate burials within the church is unusual. It is possible that many of these perinates either died before birth, during birth, or shortly after. Yet, perinate burials were buried similar to other age categories. Such similarities will be discussed in the following chapter. Additionally, the next chapter will interpret the results from the correspondence analysis given in this chapter and discuss the significance of the findings and how it relates perceptions of children within the community and how such perceptions reflected the beliefs of the Székler people and their broader world in the Middle Ages.

CHAPTER SEVEN: DISCUSSION

The hypothesis proposed by this research tests the notion that social change, religious transformation, and ethnogenesis map onto patterns of ascribed identity and personhood of perinates within mortuary contexts at the Papdomb site. Patterns of medieval Christian burials throughout Europe and Transylvania reflect a strict social organization with burial location (Gáll, 2013).

This chapter will review the results and offer preliminary interpretations of the meaning of the results in a test of the hypothesis stated in Chapter 1. As stated in chapter 1, I hypothesized that the adoption and practice of Christianity in Székler culture produced a complex, hybrid cultural formation through politics and religion. Death rituals surrounding children involved one locus of the resulting process of ethnogenesis where new kinds of ascribed identity and personhood of perinates within mortuary contexts were created as part of a larger hybrid form between previous Székler beliefs and imposing Christian beliefs. The findings are unable to reject the hypothesis. This chapter compares perinate burials to other age group burials and what it specifically means to perinate identity and personhood. Finally, this chapter explores how burial practices reflect the beliefs systems of the Székler people through the study of the social change and ethnogenesis.

Papdomb Burial Patterns

Many aspects of the observed burial practices throughout the Papdomb archaeological site reflect greater mandates imposed and controlled by the Christian

church (Gáll, 2013). Symbolic markers of age are important to consider in the funerary context and can reflect paganism or influences from Christian dogma before or after reformation. Generally, the meanings of such symbolic markers can be elucidated from the study of burial location, position, orientation, treatment of the body, grave goods, and many more archaeological features (Binford, 1971).

Spacing of burials

The practice of *ad sanctos*, established that it was important to be buried within the church and closest to the altar as possible (Wiśniewski, 2018). *Ad sanctos* treatment was special and excluded individuals or the powerless and poor (Paxton, 1990).

Adherence to this dictum appeared to be present within the Văleni church. Evidence to support *ad sanctos* were the presence of burials within the church itself, as well as burials within the yard, which were still considered sacred. The tightly spaced rows of individuals and the disturbances of previous burials to make way for new burials within the church shows the importance to be buried within or near the church (Gáll 2013).

There was a noble family (G10 and G72, depicted in figure 6.1) who were buried within a brick crypt, close to the altar, supporting the interpretation of linkages between status and location (Zejdlik et al., 2020). Another dimension of spatial positioning of burials involving location and age will be discussed later in this chapter.

Orientation of Burials

Churches were often built in west to east directions and burials were interred in rows in the same west-east orientation (Gáll, 2013). Christian burials were often oriented

with the head to the west and feet to the east as an important burial rite (Pearson, 1999). The importance behind orientation is so an individual's body would rise to be resurrected and face the returning Christ appearing in the east on Judgment day. The west east direction of burials is similar to burial changes enacted from the 7th century C.E. on and is seen in similar settings throughout medieval Europe and Transylvania (Gáll, 2013).

The majority of burials were buried in the west to east orientation with only three percent of burials differing from the west to east orientation. Differential placement could have been by mistake or due to constrained burial spacing. Individuals most often not buried in a west to east direction were adults and children, possibly because they were the largest age groups recovered from the site. Additionally, burials that were not interred in a west to east orientation were more often within the yard where adherence to formal burial rules may not have been as strict as within the church.

Single or Multi-person burials

Multi-person burials are commonly found throughout medieval Europe and Transylvania (Gáll, 2013). As space for burials became limited within and around churches, multi-person internments became more common over time to save space (Wiśniewski, 2018). Multi-person burials occurred in 26 funerary contexts within the Papdomb site. Such burials often occurred outside of the yard or within or near the outside walls of the church. Multi-person burials were most common with perinates, infants, and adolescents. There were four (possible five but not counted due to uncertainty) multi-person burials that included a perinate, one that involved an infant,

five that included a child, two that included an adolescent, five included an adult, and one that included an old adult.

Mother/Infant Nexus

It is often assumed that if individuals are buried together, that there is some sort of relationship between the individuals, especially in the case of child/adult burials (Halcrow et al., 2016). However, that is not always the case. Mortuary positioning can help understand relation of mother/infant burials and help indicate timing and age of perinate (Halcrow et al., 2016). The positioning from five perinate multi-person burials from the Papdomb site are often buried alongside of the other individual with the same orientation. None of the perinate remains appear associated with be in the pelvic cavity or that could have ruptured forth from a decomposing adult body. If this were the case, it is possible that the mother had died before giving birth and a mother/infant relationship could be reasonably assumed (Halcrow et al., 2016). Due to the positioning of perinate and adult individuals buried together, perinate individuals do not appear to have been coffin birthed.

The mother/infant nexus involves a connection between the mother and child, beginning during gestation. The mother's health directly effects health and nourishment of the infant as well as influencing cognitive and social interactions (Halcrow, 2020). When burials of a child and adult occur, the focus is usually on the adult and children are often perceived as objects and not bodies with agency (Crawford, 2007). Therefore, it could be assumed that children are buried with the adults because of the relationship or

connection they have with the adult. The child is then assumed to have a tightly-tethered link to the identity of the adult and there because of the adult status. However, this may not always be the case. Gilchrist (2012) theorizes that baptized infants were desirable to be buried with the dead. A baptized infant under the age of two represents “holy innocence” and are the first souls to be saved during resurrection (Gilchrist, 2012). Many assumptions believe that infants that are buried with adults take on the social persona from adults, however, some practices were born were it was desired to be buried with the baptized “holy innocents” because they can help adult individuals navigate through purgatory, however, such practices were not necessarily sanctioned through the church (Gilchrist, 2012; Baun, 1994). There is no evidence of the “holy innocent” burials across Transylvania in the literature, however, it does not mean that there is no archaeological evidence to be uncovered. Furthermore, the identities surrounding the individuals interred together may have reflected that of the adult, or the of the possible “holy innocent”. It is unclear the relationship of the four multi-person burials with perinates from the Papdomb site. Further investigation of “holy innocent” burials is discussed in the future directions section of the conclusion chapter.

Mother/Infant relationships in Transylvania

To understand infant burials, especially when buried with an adult, often assumed that the adult was the mother, but that can oversimplify who are considered members of the broader community through and social collective. Records recovered from the Transylvanian medieval period were written by men and about men (Fehér, 2011). Women were not considered important and often resided in subservient roles within the

household in private spaces. Women who became pregnant, however, would receive a special diet to ensure the health of both the mother and unborn baby. The diet recommended pregnant women to stay away from harsher foods, such as beef, rabbit, rice, milk, walnuts, cabbage and dry wines, and incorporate foods such as chicken and fruits (Dumănescu, 2009; Fehér 2011). A woman's status would change and importance of the health of both the mother and the child increased. Children were considered "God's gift" and were cherished, however, children did not begin to have social roles until about seven years of age (Dumănescu, 2009). If a baby was miscarried, blame would be placed on the mother, and the mother would be stigmatized in society (Dumănescu, 2009). Children who survived were often raised by mothers within the private space of the home. Identities of mothers and children were linked until the roles of children changed as they grew and received other defining roles within society. If the mother and infant died during childbirth, they would often be buried together because of their link of identity.

There were four occurrences of a multi-person burial at the Papdomb site which included a perinate. G497 and G505 were two perinates individuals, thought to be twins. G58 and G57 were a perinate and an adult male that were buried together. G112 and G113 were a perinate and an old adult female buried together. G197, G201, and G202 included a female adolescent, an infant, and a perinate individual interred together. It is possible that some sort of personhood could be reflected from multi-person interments. If the identities of individuals were linked through the perception of people within a society, they could also be linked through multi-person interments. If one individual is seen to

have fuller personhood within society to be buried with full burial rites, it is possible that through multi-person burials, the other individual (the perinate) would be buried with them through a linked identity, and therefore extended personhood and burial rites. However, it is unclear the relationships between individuals interred together.

Associated Artifacts

There were 43 burials that contained grave goods in the current Papdomb sample. Artifacts found within graves included, animal remains, ceramics, stained glass, pottery, name pins, textile headbands, beads, clasps, coins, hair pins, headdress, and a book-motif decoration. Artifacts within the Papdomb church were consistent with common “proto-Christian” churches throughout Transylvania (Gáll, 2013). The presence of such artifacts are expected and consistent with other rural church burial patterns (Gáll, 2004). Only about eight percent of burials had grave goods and there were less extravagant grave goods present. The lack of grave goods in the remaining 493 burials depict that the transition of not having grave goods within burials was active within the Papdomb archaeological site. Although grave goods were present across all age groups, they were most associated with older, female individuals. Relationships between older individuals and grave goods could derive from past Pagan beliefs. Common Pagan burials throughout Europe depict high amounts of grave goods within burials (Gáll, 2013). Grave goods were used as a symbol to reflect status of an individual (Gáll, 2013). Such beliefs where grave goods were important symbolic markers of status may have still resonated and persisted through over other markers of status, such as location of burial. These burials

represent a mixture of two types of status markers. The first is the pagan status of grave goods and the second is the Christian status of burial placement on sacred ground. The presence of both may represent a hybrid of both pagan and Christian beliefs represented in burials of older female individuals.

Sex of Individuals

Patterns of medieval Christian burials throughout Europe and Transylvania reflect a strict social organization with burial location (Gáll, 2013). There was a strong bias towards having adult men within the church and women outside of the church (that is, within the church yard). Out of the 115 male/possible male individuals, 42 (36.5%) were found within the church or under the wall and out of the 85 female/possible female individuals, 25 (29.4%) were found within the church or under the wall. Sex was attempted only on adult and some adolescent individuals. The sex of perinates, infants, children, and remaining adolescents were labeled as unknown. The percentage of sex differing between female and male burials within the wall was only 7.1 percent. It was clear that female/possible female were buried similarly to male/possible male within the church and under the wall.

Location and Age Associations

As with the sex of an individual, there was often a strong influence of social organization and age on burial patterns throughout medieval Christian church cemeteries (Gáll, 2013). Adult individuals were expected to be buried within the church. Additionally, older-age individuals were also given the same rite. Individuals in the

adolescent age group could have been perceived as having similar importance as adults, therefore, it is not unusual to have such individuals buried within the church. Individuals placed in the category of children, infants, and perinates are not expected to be buried within the church (Baun, 1994). Children, infants, and perinates are notionally destined to be buried in the outer limits of the church site or in a completely different location. Individuals who are unbaptized are expected to be buried separately and away from consecrated ground (Newman, 2007). Individuals from all ages have been recovered from across the site. This is indeed unusual.

Burials recovered from the church or in proximity to a wall are most telling the importance of individuals buried. Individuals from all ages were also found either within the church or under a wall. Five out of 14 (35.7%) of old age individuals, 68 out of 261 (26%) of adults, 15 of 76 (19.7%) of adolescents, 23 of 130 (17.7%) of children, 8 out of the 19 (42.1%) of infants, and 14 out of 36 (38.9%) were located either within a wall or within the church. Although adult individuals had the highest number of burials within the church or under a wall, infants, and perinates held the highest percentage when compared to other placements of individuals in infant and perinate age categories. The presence of infants, and especially perinate burials, within the church alone is surprising. Burials of perinates and infants are given similar burial rites as adults, however, some distinctions are being made with such a high number of perinate and infant burials within the church and church walls.

The common practice throughout medieval Europe where unbaptized individuals were often buried separately often involved an acknowledgement as people (community

members or otherwise) not deserving of burial rites afforded to the broader community of faith (Stoodley, 2011). Unbaptized individuals who were buried on separate ground were often recorded to be casual deposits with little symbolic significance, fanfare, or formality associated with church burials (Crawford, 2008). Unbaptized children were often found the north aisle outside the church yard (Coster, 2000). After birth, baptism was a crucial rite of passage where the individual can be “born again” and be reintroduced into a society and then receive proper burial rites (Hadley and Hemer, 2014).

The burials from the Papdomb archaeological site depict a much different pattern of mortuary behavior. Almost half of perinate and infant burials were found either within the church or under the church wall. Many of these perinate burials are unlikely to have been baptized due to their young age or could have been emergency baptized instead of formally baptized, thus creating a “grey area” involving the validity of the saved soul. Therefore, perinate burials, even those that were emergency baptized, were more likely to be buried on completely separate grounds or disposed of in an entirely different mode, much less within the church where individuals of higher social status and full personhood were buried (Watts, 1989). Infant and perinate burials seems to be given similar burial rites as higher status adult individuals, yet, perinates had a higher percentage within the walls of the church than adult individuals.

Perinate Burial Significance

The Church's ability to regulate burial rituals allowed for the Church, especially after reformation, to exert critical forms of control and authority, manage forms of religious practice to reinforce belief, and maintain cosmological, social, and even economic power over the living and the dead (Wiśniewski, 2018). However, it is hard to know what role the church officials had in such burials. Unbaptized individuals buried on sacred ground goes against greater church mandates. It is possible that the Székley people buried such individuals without explicit oversight or permission of the church. It is also possible that church officials knew and could not do anything about it or it is also possible that church officials knew and also accepted the burials of unbaptized perinates. Regardless, perinates that were given the same or similar basic burial rites of adults, and other age groups render the idea that perinates must have held some sort of reverence within the community, which allowed for the ignored greater mandates. The mortuary context of perinate burials give insight into the identity, personhood, and possible unfolding's of ethnogenesis within the Văleni village and among the Székler people who reside there.

Perinate Identity and Personhood

As stated in previous chapters, identity is often shaped through cultural expectations and individual experience (James, 1998) however, the active roles an infant has on a society is generally limited. Therefore, infant burials are more reflective of the

living perceptions of adults and society and provide insight into the greater community at large (Han et al., 2018).

The beliefs surrounding the very youngest individuals (baptized or not) often reflect an ambiguous status of personhood (Finlay, 2013). A range of allotted kinds of personhood may reflect a range of responses, which could be studied through the material world, including burial patterning. If burial rites are given that may reflect adults to an infant, a marker of personhood is given to the infant. Additionally, identity of the infant may change. Different rites of passage can change the “amount” or “quality” of personhood as a person reaches different age stages (Fowler, 2004).

Baptism as a Rite of Passage

Death itself was the way to salvation and the bodies of the dead and how individuals were treated were sacred (Paxton, 1990). As stated previously, the importance of baptism as the first rite of passage is crucial (Coster, 2000). The baptismal rite of passage is a process of transformation. This rite of passage allows for a child to move from a state of limbo to saved when they pass away. Formal baptisms of infants would ideally take place 40 days after birth and be completed by a priest (Baun, 1994). Because baptism was such a sacred rite, modifications of baptism rituals were made to accommodate the sick and dying who would not make it to formal baptisms (Paxton, 1990). Fear grew out of concern for the young who would die during or soon after birth (Coster, 2000). Modifications allowed for individuals, such as midwives, to preform emergency baptisms soon after birth in case of infant death, so their souls would be saved (Baun, 1994).

Emergency baptism was advocated by the Church, especially after the 13th century C.E. (Gillet, 2006). Midwives or laypeople had the right to perform emergency baptisms if they feared the baby may die before formal baptism by a priest. Such an extension of the sacred rite of baptism allowed for an array of modifications of baptism (Crow et al., 2020). Canon law restricted the rite of baptism on stillborn infants (Gillet, 2006). “Proof of life” methods applied to of unresponsive perinates were not an uncommon practice, in the hopes that an infant lived long enough to be baptized (Crow, 2020). Such life testing could include using water to trigger a response, but consequently through the same actions, could baptize a stillborn baby. The importance of baptism led people to pray for and incite miracles, where stillborns would be brought back to life by saints long enough to be baptized before they died again. Such manipulations of emergency baptism left many to question if emergency baptism was valid (Gillet, 2006). Ultimately, the clergy was responsible for deciding the legitimacy of an emergency baptism (Hausmair, 2017). However, a consequence of an illicit burial of an unbaptized infant could be seen as contaminating the cemetery and fear grew surrounding such illicit burials (Gilcrest, 2012; Cootes et al., 2020). The result of emergency baptism left infants in an ambiguous, liminal state between formal baptism and the unbaptized (Gillet, 2006).

Crow and authors (2020) address different burials throughout Italy that could reflect the unbaptized, the emergency baptized, and the formal baptized. Where the formally baptized individuals could be buried on sacred ground, yet usually placed in different spaces than that of adults, the unbaptized or cases of ambiguous or unclear emergency baptized had differential placement of burials. For the emergency baptisms,

locations could represent areas of ambiguous spaces. Such spaces could include the outer limits of sacred grounds, clusters of burials within sacred grounds, burials along the external walls of churches, or within the walls of family crypts outside of sacred grounds. Burials of the unbaptized were recorded beneath the floors of houses, in unmarked graves with separate locations but still associated with the churches, or remote locations away from settlements. There were also documented cases of the unbaptized within the sacred spaces of the church. Such cases included mothers who died with an unborn baby, or older practices where assumingly unbaptized individuals were buried within roof tiles within formal cemeteries.

The rite of baptism also changes how an individual's identity is perceived and can reflect personhood (Coster, 2000). To receive or "earn" proper burial rites, the act of baptism must be performed. As stated previously, those who are baptized have the ability to be buried on sacred ground. Their souls are saved, and therefore, they are viewed as having basic personhood not only in the eyes of God, but also within society (Baun, 1994). What happens to unbaptized babies who are considered innocent, yet, who have original sin? Catholicism believed infants who died before baptism were in a state of limbo because they were worthy of neither punishment nor reward (Baun, 1994). Calvinism held that formal baptism is absolutely necessary for salvation and Greek Orthodox believed that infants would still go through purgatory because of original sin (Baun, 1994; Coster, 2000).

Theological doctrines beginning with those of St. Augustine claimed that unbaptized babies lacked a moral, personal, or spiritual identity (Baun, 1994). Greek

Orthodox teaching took the idea a step further and stated that the souls of infants who were not baptized did not even exist. Furthermore, as part of the formal baptism in the Greek Orthodox tradition, a naming ceremony was involved. By these standards, the act of baptism transforms the infant into a basic person with identity of a name and recognition within society. The lack of identity and personhood before baptism gave perinates who were unbaptized little importance. Unbaptized perinates who had no identity or importance in society were therefore discarded in casual burials. Because they did not yet have souls, there was no resistance by the community who had the same beliefs and perceptions. However, Crow and authors (2020) argue that stillborns were ensouled humans that need saving.

If the perinate individuals at the Papdomb site were not baptized, such individuals consequently were either unable complete a very important rite of passage. According to larger mandates of baptism (Newman, 2007), these perinates did not “earn” the rite of burial on consecrated ground, especially within the church walls. Furthermore, they should not have the recognition of personhood or spiritual identity to be considered for full burial rites. If the perinates had undergone an emergency baptism, they could be considered as obtaining a certain amount of personhood, however, due to the uncertainty of the validity of emergency baptism, the liminal personhood status is often not enough to be included within the confines of the sanctioned church. The inferred lack of “proper” baptism coupled with presence of “proper” burial rites indicates that even the very young perinates held reverence of personhood and some sort of identity at the Papdomb site. Careful and intentional burial of the notionally unbaptized or emergency baptized proves

that these young individuals were important to the medieval Székler people. Perinate burials within the Christian church could have developed through deeply rooted beliefs derived from past burial practices which persisted throughout a change in religious power to Christianity. Perinates therefore must have held some sort of value within the community, which allowed for local peoples to modify, override, or simply ignore such important greater mandates.

Eaves Dripping Burials?

One possible explanation for some of the perinate inhumations at Papdomb returns to Craig-Atkins's (2014) proposal of the "eaves dripping" concept. This argues that in early Christian cemeteries, clusters of infants would often be placed under or in the walls of the church to provide a posthumous baptism. Such a practice could grow out of fear for the loved one's souls after passing. At the Papdomb archaeological site, there were 14 perinates and 8 infants buried within the church, near a wall, or under a wall (see figure 6.1). Out of these burials, there were 7 perinates and 2 infants that were recorded as under a wall. Furthermore, there were 7 children, 2 adolescence, 16 adults, and one old age individual that were buried under a wall. About 20 percent of the perinate burials were found in proximity to a wall. Compared to the other age groups, perinates held the highest percentage of burials associated near or in a wall. Although the eaves-dripping model may not explain the presence of all the perinate burials throughout the site, it is possible that for the 7 perinate individuals recovered thus far, an effort for posthumous baptism was put in motion. Furthermore, through the several phases of the church, it is

possible that these burials were in place before new constructions of the church were built. It is also possible that more perinate burials were intentionally placed and disturbed by later building phases of the church. However, unlike many patterns of eaves dripping found throughout medieval Europe, the perinate individuals recovered from the Papdomb site were not found in clusters.

Ethnogenesis

As stated previously, theories of ethnogenesis seek to elucidate into the practice of a people's everyday lives in conjunction with behaviors, changing economies, belief systems, and sociopolitical relationships brought on by a discourse of sociopolitical stressors when cultures come in contact (Card, 2013; Hill, 1988). This section considers past examples where it has been argued that processes of ethnogenesis can be reflected in burial patterns of children and also highlight resilience or persistence of cultural identities. This section will then address possible reflections of ethnogenesis occurring at the Papdomb archaeological site. By addressing different burial patterns before Christian influence of the area occurred and identifying the changes of burials patterns after the reformation, it is possible to understand changes of belief systems in a dynamic medieval world.

Examples of Ethnogenesis in Europe

Historic Ireland provides an example of differential placement of perinates and infants who were called the Cillini (Finlay, 2000). The Cillini were unbaptized individuals, often found on landscapes of deserted churches or megalithic tombs. The Cillini burials were either covered with pebbles, had small rough stone markers, or had no markers at all. Such older sacred areas represent a period of liminality where the spaces were protected landscapes but otherwise abandoned. Interments of the Cillini often lacked formal burial rites, were quick and discreet, and were often oriented in a north to south direction. Such areas were often visible yet concealed in the presence of the landscape. Such burials of the unbaptized infants were manipulated to represent a liminal burial through ambiguous and intentional locations. The Cillini burials represent the ambiguous spiritual nature of infants where some rites were afforded through the burials in previous sacred ground.

In contrast, Gillett (2006) compared interments of perinates and infants from three cemeteries during the medieval 12th to 16th centuries C.E. The Kirchlindach and Bleienbach cemeteries are located in Switzerland and the St. Georg/Göttweig cemetery is located in Austria. Eighty-two burials were exhumed from the Kirchlindach cemetery. Of these, 15 infants were interred throughout the cemetery, however, there were no perinates documented at the site. The burials were in a supine position, a west to east orientation, and did not contain any grave goods. The Bleienbach church cemetery is located 30km northeast of the Kirchlindach church cemetery. Thirty-one individuals have been excavated from the Bleienbach cemetery. Among them, 20 perinates were identified,

mostly clustered in the northwest corner of the nave. These burials were also supine and had no grave goods. However, the orientation of burials varied. The St. Georg church cemetery sample contained 37 burials, with 33 perinates (the oldest 1-2 months), three young children, and one adult. Burials were in a supine position, oriented in a west east direction, and contained no grave goods. Almost half of the perinates were found in a ditch on the southern side of the chancel.

The differential treatment of perinates allows the author to address spatial patterns and age distributions regarding baptism, personhood, and ranges of possible hybrid cultural forms. The special placement of individuals is crucial because the physical locations at death are perceived to have a relation of structure in the afterlife. The missing representation of perinate individuals could be indicative of a community's practice of not burying unbaptized babies on sacred ground. Such exclusions of unbaptized perinates are what is expected from reformed Christian cemeteries across medieval Europe.

Burials of perinates just 30km away depict a different pattern. Perinates from the Bleienbach cemetery have differential treatment than other age groups yet are included within the cemetery. The northwest corner of the nave and near the western entrance, may symbolically represent the liminal state of unbaptized perinates in the afterlife because they were buried in liminal zones. The placement could also represent the physical distance which was close to where they would have been baptized. Additionally, the burials were in arbitrary orientations. Gillett (2006) proposes that such unorganized interments and the age of individuals may be result of no supervision from the priest.

The St. Georg cemetery presents a completely different burial pattern of perinates. Because of the age of infants, Gillett infers that the perinates at the St. Georg cemetery were not baptized. Furthermore, Gillett suggests that if the perinates were baptized, they would have been buried within one of the four surrounding parish cemeteries. The placement of this cemetery complies with the idea of a separate space. However, the placement of burials was within a church, oriented in a west to east orientation, and they contained no grave goods. The placement of the cemetery was also unique. The cemetery was located on top of a mountain. With the villages located in the valleys below, 16 settlements had a direct view of the church. The location of the cemetery is placed separate from the village, however, the placement on top of a mountain creates the perception that the church is located within the sky. Such a placement is believed to be a connection between the heaven and earth and could possibly create a spiritual landscape which dominates over the villages. Placement close to the sky was not only closer to heaven in distance, but could symbolize a place of limbo, in hopes that the soul would help be guided to heaven in the afterlife.

Differential placement of perinates could reflect different perceptions towards the personhood and identity(ies) of perinates. The absence of unbaptized burials at the Kirchlindach site could be reflective of perinates having no or limited personhood and may reflect true belief and adherence of the Christian mandates. Absence of perinate burials could alternatively represent a stricter clergy who may have monitored burial interments, regardless of people's attitudes and beliefs of perinates. Patterns from the Bleienbach and St. Georg cemeteries represent two different yet interesting treatments of

perinates. The presence of unbaptized perinates within the church yet aspects that reflect church mandates reflect acceptance of some church mandates and practices and ignored other aspects of church mandates.

Perceptions of perinates in the Bleienbach and St. Georg cemetery may not necessarily represent perinates as full members in society, however, the placement of these individuals may represent some sort of personhood where manipulation of church mandates were necessary for the souls of such individuals. Political agendas involving previously rooted beliefs of perinate individuals are perceived as important, which allowed for a discourse of belief systems. Such established belief systems allowed for a flexible and new interpretation of church mandates resulting in a compromise between two sets of ideas where perinate burials were manipulated through redefined belief systems. Such presence of perinate burials through the placement of individuals ultimately pushed strict mandates which redefined boundaries of the sacred rite of baptism and changed power structures that were instilled across Europe.

The examples mentioned above presents ways of thinking about different dimensions of how larger, overarching population-level changes can occur throughout processes of ethnogenesis, and specifically, processes of ethnogenesis related to local cultures coming in contact with mid-second millennium Christianity. A multidimensional set of intertwined biocultural interactions created the possibility for a range of changes and responses embedded within the practice and thinking of local peoples. Each example provides different cultural contexts and their responses to Christianization. The exclusion of unbaptized, yet carefully manipulated of burials infants in Ireland may represent the

liminal and ambiguous identity of the unbaptized represent one aspect of ethnogenesis and which was different than potential syncretic or ethnogenetic responses that were entwined with the burial of perinates in the north corner of the Bleienbach cemetery in Switzerland, or on top of a mountain in the St. Georg cemetery in Austria. Each place experienced a discourse in which community members reacted to changes. Aspects from previous belief systems allowed for Christian mandates to be altered in different ways. The range of possible changes creates different cultural expressions which reflect differently on each society's ideology and political thinking. The spread of Christianity did not overlook the Transylvanian region. Throughout the region, different responses to Christian doctrinal mandates had the ability to vary. Indeed, the Văleni village, during the medieval era, and where the Székler people reside, is understudied. However, through understanding how the Székler people responded to such mandates through burial ritual can provide a window of study into the lives and surrounding identities of individuals through the process of ethnogenesis and the formation of new kinds of ritual and new kinds of culture.

Christian Influence Over Transylvania

The Transylvanian region experienced major influences from the Carolingian Empire, the Holy Roman Empire, the Mongolian empire, and the Ottoman empire. Ideologically, the area was also impacted by the Lutheran church, Catholicism, and eventually, reformed to Calvinism (Nyárádi and Gáll, 2015; Pop, 2013; Szilagyi, 2014). Some burial practices changed, however, the biggest influence over burial practices were

from the first Saint of Hungary, Saint Ladislaus I, who wrote mandates requiring changes to Christian burial rituals, which manifested into the 12th century C.E. (Makk, 2011). Practices eventually changed to reflect similar burial rituals, which were reflective of the belief systems across Transylvania.

During the 16th century C.E., 250,000 Széklers, half a million Hungarians, 280,000 Romanians, 90,000 Saxons, and 86,000 other cultural groups (Serbs and Ukrainians) resided in Transylvania (Lendvai, 2003). Such an array of groups had the ability to have many different influences over politics and religion.

Previous to the reformation in the 16th century C.E., the Byzantine and Roman Catholic church had some influence over the area in the 11th century C.E. (Kalnoky, 2020). The area saw other religious influences from Judaism, under Prince Gabril Bethlen, and Muslim beliefs from the Turks. Furthermore, Orthodox parishes and Armenian confessions resided in some areas. Pockets of various religions persisted and were tolerated throughout Transylvania during the medieval time period, however, only the Catholics, Lutherans, and Calvinists were the recognized religions of the area (Kalnoky, 2020).

Although conversions occurred, aspects of previous pagan symbols persisted was present in the beliefs of the Székler people. One notable example is the Székler coat of arms and flag where the pagan sun and moon are depicted and is still used today (see figure 7.1). Additionally, Székler runic writing can be found as decorations of Christian churches and on funerary steles to commemorate the dead through pre-Christian codes (Kalnoky, 2020).

The Văleni church and cemetery reflects many aspects of Christian burial practices found throughout the Transylvanian region and Europe. The presence of previous pagan rituals was for the most part, absent. As mentioned previously in this chapter, the orientation of burials, tightly spaced individuals, burials within a church, less extravagant artifacts associated with grave goods, individuals from all ages, and the presence of some multi-person burials are all consistent with other Christian burial patterns. Prolonged influence of Christian colonialism, most significantly through King Stephen I who began to enforce Christian beliefs upon the area, and forced reformation of Calvinism from Prince Bocskai, made sure that Christian beliefs took hold.



Figure 7.1. The Székler sun and moon represented on a crest. Similar depictions are found on the armor of Székler armor and flag. Photo by Lauren Reinman taken from a map purchased in the Székelyfold.

Ethnogenesis at the Papdomb Archaeological Site

Thus far, this work has demonstrated the importance of baptism and demonstrated the importance of placement and location of individuals throughout Christian cemeteries. The literature also highlights how burial rites can, in many different ways, reflect the identity(ies) of individuals. Furthermore, the presence of Christian burial patterns from the Văleni church display that the Christian faith took hold and was present in the system of ritual practice of the Székley people. However, there is a discrepancy in burial patterns of infants and perinates within the Văleni church, which may tell us something more.

Through the multiple influences and changes of the Transylvanian region, the Széklers were always identified as a separate cultural group within different political boundaries (Kálnoky, 2019; Kordé, 2009). The distinctions involving greater Székley autonomy and the rural location of which they reside allow for such social adaptations to occur more frequently. The Văleni village has separate geographic and social boundaries which are farther from stricter influence of imposed Christian mandates. The persistence of the cultural Székler people and separation of land, allows such local populations of people to deviate from strict mandates that may have been enforced in larger population centers with greater Church presence. Such separations allow for less of a strict shared social boundary and allow for different and new interpretations of mandates to occur. During transformations of change, it is possible for opposing or modified beliefs to form. Throughout such times of discourse between social adaptations can occur. For example, the placement of individuals under the eaves of a wall is one solution to combine the importance of baptism yet maintain the importance and personhood of perinates who are

buried there. Furthermore, the “eaves dripping” model is a solution to an obvious spiritual problem: to save the souls of infants.

The spread of Christianity to the Transylvanian area, and more specifically the Văleni village, created biosocial changes within the community. Instilment of aspects of Christian influence created many changes throughout the region and are reflected in the practices of burial internments at the Văleni cemetery. However, a discourse of beliefs surrounding the unbaptized or emergency baptized perinates likely created a dialogue of belief systems between imposing Christian beliefs and previous Pagan beliefs. In times and settings of culture contact, it is not uncommon to maintain semblances of beliefs from the past, at least in from (Stojanowski, 2009). Thus, the findings here propose resilience of past pagan beliefs of social importance of perinates persisted through Christian reformation. Resilience theory, where the living choose how to react to discrepancies of belief systems through a range of resilience, persistence, and transformability, allows for the understanding of the vagaries and variations of perinate burials and provide novel windows and greater understandings perinate identity within the Papdomb site (Justice and Temple, 2019).

Previous burial practices did not discriminate perinate burials from having full burial rites. There was also no discrepancy of location for perinates (Gáll, 2010). Perinates individuals were given the same burial rights as other members within society. It was not uncommon to have multi-person burials, family plots, or grave goods within burials of perinates (Gáll, 2013). Such rites reflect that perinate individuals were members within the community and were given personhood. Personhood and

identity(ies) are reflected in burial patterns at the Văleni church. The importance of perinates in previous belief systems have persisted through and maintained within society. Evidence of the importance of perinates as members of society, maintaining identity(ies) and personhood, are reflected in the non-exclusion of burials.

Perinates are at an age where identity is ascribed by both the individual mourners and a community's belief systems. Perinates, being at such a young age, are potentially susceptible to changes to or statements within the body politic. Greater mandates of the Church declare that to receive burial rites, the act of baptism must be performed (Baun, 1994). In the eyes of Christian doctrine, the act of burial rite thus reinforces or expresses identity and personhood to individual. The problem is when individuals who cannot be baptized because they die before birth are damned. According to greater mandates, these individuals are not recognized as a person within society. Their spiritual identity is nonexistent (Baun, 1994). Yet, past pagan practices held that perinates have always had souls and maintained ascribed identity within the community (Gáll 2013).

With societies experiencing the mechanisms and processes of major transformation change, new social formations, and political influence, new perceptions of personhood can emerge creating new forms of group identity. Such extreme, yet strong beliefs of baptism created a discourse in beliefs surrounding perinate burials at Văleni. A divergence of beliefs regarding the identity and personhood of perinates became a problem for locals mourning the death of perinates. The presence of perinates within the church tell us that local populations struggled with new religious doctrines which stated that the souls of such individuals did not exist before baptism. The young unbaptized or

emergency baptized Székler individuals were perceived as highly important as reflected by the placement of perinates within the church. Either out of fear for the unbaptized or emergency baptized soul, or refusal reject the vital and undeniable personhood of the very youngest, identity of such of individuals remained.

Although perinate burials were buried on consecrated ground were often oriented in a west to east direction, and did not have many grave goods, perinate individuals did have discrepancies from other age groups, as shown in the correspondence analysis. Perinate and infant individuals were most often involved in a multi-person burial and within the walls of the church. The discrepancy of infant burial treatments may also be linked to much larger ethnogenetic process of the meaningful reformulation involving a society's belief system. Through placement of perinate burials, practices of previously rooted beliefs emerge. Through a discourse in belief systems, theological beliefs of the Székler people remodeled Christian mandates put onto unbaptized or emergency baptized individuals. Although it was likely unintentional for the Székler people to change political agendas, burial rituals of perinate individuals created a change in medieval power structures of the church where the ideas of the afterlife were flexible to change and be remolded through a hybrid of pagan and Christian beliefs of perinates.

During times of change and transformation, as with the reformation to Calvinism, different social interpretations of greater mandates can occur. Such processes of transformation are embodied especially in rituals. Because perinate burials are uniquely subject to changing belief systems, their ascribed identity through the body politic depicts an emergence of a new personhood, which reflect previous belief systems persisted

through the cultural importance of the young. The integration of society and religious practice through rituals can tell how reformation permeated in a society (Coster, 2000). The presents of perinate individuals displays a unique degree of importance and significance within the Székler community. The rejection of doctrine that held placing infants in separate cemeteries took the form of giving infants adult-like burial rights reflects how this community appeared to independently exercise its agency and separate at least this form of burial from mandates of the Church, yet still believed in the value of a consecrated burial, reflected in a kind of hybrid ritual expression.

Limitations

The Papdomb archaeological site is still undergoing excavation. Therefore, not all burials have been recovered from the site. Areas around the archeological site have modern burials. Consequently, trenches are placed around the modern interments. Burials from the medieval church and cemetery under or close to modern burials will not be excavated. The north side of the church and the outer church yard has not been fully excavated and may provide more information to the placement of burials. Craig-Atkins (2014) noted that clusters of perinate burials for the eaves dripping model were often found on the north sides of churches. Additionally, not all burials have been examined in the lab to compare to perinate burials. The recovery of perinate burials could be skewed. It is possible that there is differential decomposition, recovery bias, or that they were buried in shallow graves.

Another challenge is to approach the study of children and infants, to understand without imposing bias, and integrate social theory into the study of bioarchaeology

(Halcrow and Tayles, 2011). Understanding the social lives of individuals and communities of the past can be difficult to understand. There are multiple factors that could influence burials and there could be a number of reasons influencing hybrid expressions of culture. Where a community places importance could be a result through multiple influences. Influences over burial patterns could result from socioeconomic changes, changes in disease patterning, economic means and social class, belief systems, cultural expectations, and individual perceptions (McHugh, 1999). Burial treatment could be in place out of fear, symbolic statements to kinship linkages, religious practices, age transitions, family groupings, or emotional responses (Justice and Temple, 2019; McHugh, 1999). Perinate burial practices at the Papdomb site could be out of fear for the perinate's soul in the afterlife. Social definitions of age within the community may also be different than church age-related rites of passage. The family or mourners could have had higher socioeconomic means and therefore, their status within the community could have been more important than age delineations. Additionally, the burial of perinates could be an emotional response of mourning from the family or community. Regardless, it is clear that the Papdomb site presents the very youngest as important beings within the community, not pre-destined, automatically damned infants whose mortal remains deserved differential treatment. Thus, as stated previously, the hypothesis is not rejected.

Conclusion

Remains of the very young have been overlooked throughout the history of anthropology. The study of such remains plays an important role in the understanding of

the individual and the community and the belief and political systems that surround them. The study of such remains is meaningful and should be included in the focus of researchers because children are involved in the process of change within a community. This chapter discussed how considerations of ethnogenesis and an understanding of how such practices can be reflected in burial ritual. This chapter also shows how the importance of how young individuals can be shown and may shed light to the identity and reverence toward the very young and how it could reflect onto the society of which they live. The next chapter concludes this thesis and discusses possible avenues for future research.

CHAPTER EIGHT: CONCLUSION

The first half of this thesis established for the reader an overview of the history of the study of children in anthropology and bioarchaeology and theoretical perspectives applicable to the study of children in the archaeological record. The first half of this thesis delved into the theoretical definitions and approaches of personhood, identity, and ethnogenesis. Each theoretical approach describes how the study of perinates can be studied through bioarchaeology. The remainder of this thesis provides important contextual grounding to the history of the site, specific site information, the methods used in this thesis, and data gathered for the results. The last chapter examined the findings from the results and provides interpretations of the research.

Summary of the Findings

The hypothesis in Chapter 1 postulated that cultural and religious interplays between local culture and the introduction and growth and spread of Christianity generated an ethnogenetic event that included reflections of that process onto the ascribed identity and personhood of perinates within mortuary contexts at the Papdomb site. Analysis of the quantitative data (e.g., correspondence analysis), it is clear that there is no statistical significance between ages of individuals, and placement of burials. However, contextual analysis of burials patterns at the Papdomb archaeological site, as compared to expected patterns of Christian burials across Europe and other cemeteries in

Transylvania, reveals a discrepancy among perinate burials. After analysis of the correspondence analysis, the hypothesis stated in chapter one is failed to be rejected.

An explanation these differences among perinate burials are argued as possibly reflecting a broader process ethnogenesis within the Văleni village where the Székler people reside. Fluctuations in political and religious changes from the 1st through the 18th centuries C.E. had the potential to influence many aspects of Székler culture and belief systems. Through the expression of the forms of perinate burials, it appears that one dimension of ethnogenesis can be observed. Many aspects of burial practices were consistent with broader Christian church mandates, however, the perinate burials were not. The difference in perinate burials likely derive from earlier belief systems derived from earlier beliefs. The importance of perinates documented at the Papdomb site express a hybrid of both Christian burial practices and other pervious practices, thus reflected some kind of a sustained personhood and identity that was conferred without the rite of passage of baptism.

Future Directions

Future studies regarding perinates from the Papdomb archaeological site include additional analysis compared to other age groups within the site. It would also be useful to revisit this study when the excavation of the site is complete, and all burials can be compared. A deeper comparison of this site with other church excavations from the region would give perspective on the question if dimensions of ethnogenesis, as reflected through perinate burials at the Văleni site, transpired in similar ways throughout the Transylvanian region.

DNA analysis examining kinship patterns would broaden understandings and delineate elements of the mother/infant nexus (Beauchesne and Agarwal, 2018). Stable isotope analysis would also provide additional perspectives on the mother/infant nexus but could also tell if an infant lived after birth (Fuller et al., 2006). Stable isotopes could also give insight to nursing and weening practices (Katzenberg, 1991).

With a deeper understanding of practices between possible mother and child relationships, deeper insight into burial patterns can emerge. DNA analysis and analysis of stable isotopes would give insight to possible relationships between the four multi-person burials with perinates. Such analysis would give more understanding of the identity imparted to perinates and adults who were buried together. As stated in the previous chapter, the idea that infants are buried with adults to be linked with the identity of adults is one theory. However, as presented by Gilcrest (2012), the identity of the “holy innocence” could help adults in their salvation. To apply such a theory to the four multi-person burials at the Văleni church, it would be necessary to identify if the perinate had lived long enough to be baptized, either through isotopes or the neonatal line. Furthermore, deeper insight into the relationship between individuals interred together would be useful through DNA analysis.

Additionally, histological identifications of the neonatal line could determine if a perinate lived through birth and would specify if they had even a chance to be baptized. This thesis does not delineate difference between perinates who might have lived after birth or died before birth, and it is possible that there are differences in burial location from individuals who lived after birth and those who did not. Examination of the neonatal

line would provide evidence that an individual did not live through birth, could not have been baptized as a living infant, yet still had full burial rites at the Văleni church. Thus, the placement of perinate burials who did not live past birth would provide further evidence of the occurrence of ethnogenesis within the Văleni church.

Further directions could also include identification of sex in perinate burials. Parker et al. (2019), examines sex estimation through sexually dimorphic amelogenin peptides (AMELX). The amelogenin peptide have been detected over a 7300-year time frame and are minimally invasive to the enamel of teeth. Furthermore, sex estimation through identification of peptide are time and cost effective, according to the Parker et al. 2019 study. The ability to differentiate between sex of perinate burials at the Papdomb site could give insight into further patterns of burials. With some burials placed in different locations, single or multi-person interments, and individuals with or without grave goods, the identification of sex could help identify any discrepancies between male and female identity of the very youngest at the Văleni church.

Conclusion

This thesis provided a new window into the scope, methods, questions, and issues that surround the study of perinates from the Papdomb archaeological site. Multiple lines of mortuary data and bioarchaeological evidence provided a more holistic and complete view of how young children are perceived in within the medieval Székler village of Văleni. Through a focus of study on the youngest individuals, bioarchaeological perspectives shed light and insight upon the belief systems and religious practices within

the village. Perinates, who are so often overlooked, provide novel opportunities through which to reconstruct medieval Székler society, demonstrating that some ideas were important enough to defy and reshape Christian mandates imposed upon the Székler people.

APPENDIX

G3 was located in Trench 3 at the southeast end of the church and within the church yard. Remains were potentially semi-flexed and in a west to east orientation. Red/brown staining indicated the potential presence of a deteriorated coffin (Figure 6.7a). Measurement of the maximum length of the left pars basilar of the occipital bone (15.4mm), left clavicle (44.2mm), and left femur (79.1mm) give an age estimate of 40 weeks. The London atlas provides an age estimate of 38 gestation weeks to birth. Lab analysis give the final age estimate is 33 gestational weeks to birth (figure 6.7b).

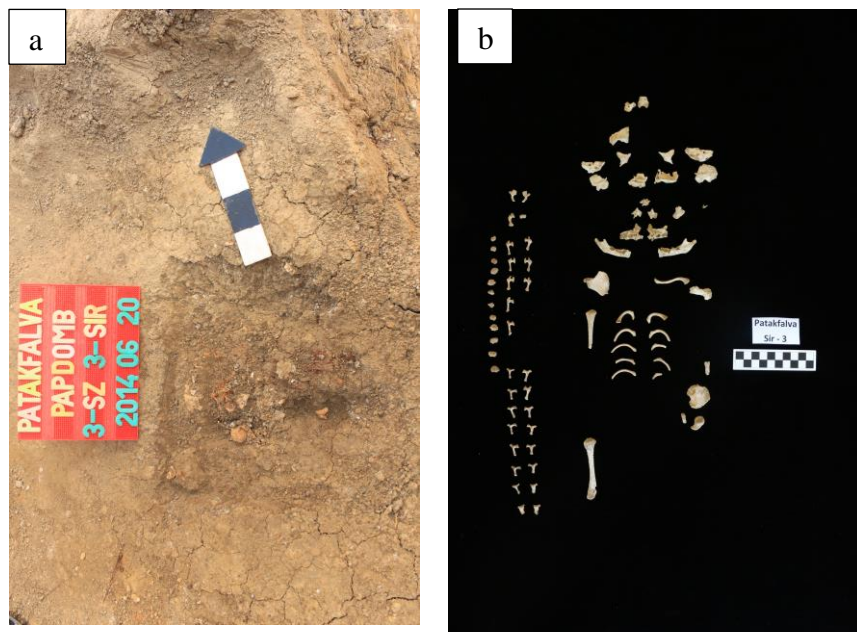


Figure A. 1. (a) G3 from Trench 3 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2014). (b) Visual Inventory of G3 from the Papdomb archaeological site. Photo: Jon Bethard (2015).

G16 was located in Trench 5 to the east end of the church and outside the church yard. Remains were in a west-east orientation and interred supine with remnants of associated coffin wood (Figure 6.8a). Measurement of the maximum length of the left scapula (35.9mm), the right scapula (36.1mm) give an age estimate of 40 weeks. The London atlas provide an age estimate of 38 gestation weeks to birth. Lab analysis give the final age estimate is 38 gestational weeks to birth (Figure 6.8b).



Figure A. 2. (a) G16 from Trench 5 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2014). (b) Visual Inventory of G16 from the Papdomb archaeological site. Photo: Jon Bethard (2015).

G47 was located in Trench 11 to the east end of the church and within the church yard. The remains were in a west-east orientation and interred in a supine position (Figure 6.9a). The London atlas provide an age estimate of 4.5 to 7.5 months. Less than 25% of the remains were recovered and suffered poor preservation due to water damage. The final age estimate is 4.5 to 7.5 months old (Figure 6.9b).



Figure A. 3. (a) G47 from Trench 1 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2014). (b) Visual Inventory of G47 from the Papdomb archaeological site. Photo: Jon Bethard (2015).

G58 was located in Trench 1 to the east, within the church and near the altar. Remains are in a west-east orientation and interred supine. The remains were associated with two coins, one between the upper right limb and ribs, and one lateral to the right ilium and femoral head. The burial was also associated with an adult male, G57 (Figure 6.10a and 6.10b). Measurement of the maximum length of the left pars basilar of the occipital bone (15mm), the right humerus (62mm), the left femur (69.3mm), the right femur (69.13mm) give an age estimate of 38 gestational weeks. The London atlas provide an age estimate of 34 gestation weeks to 38 gestational weeks. Lab analysis give the final age estimate is 34 to 38 gestational weeks (Figure 6.10c).

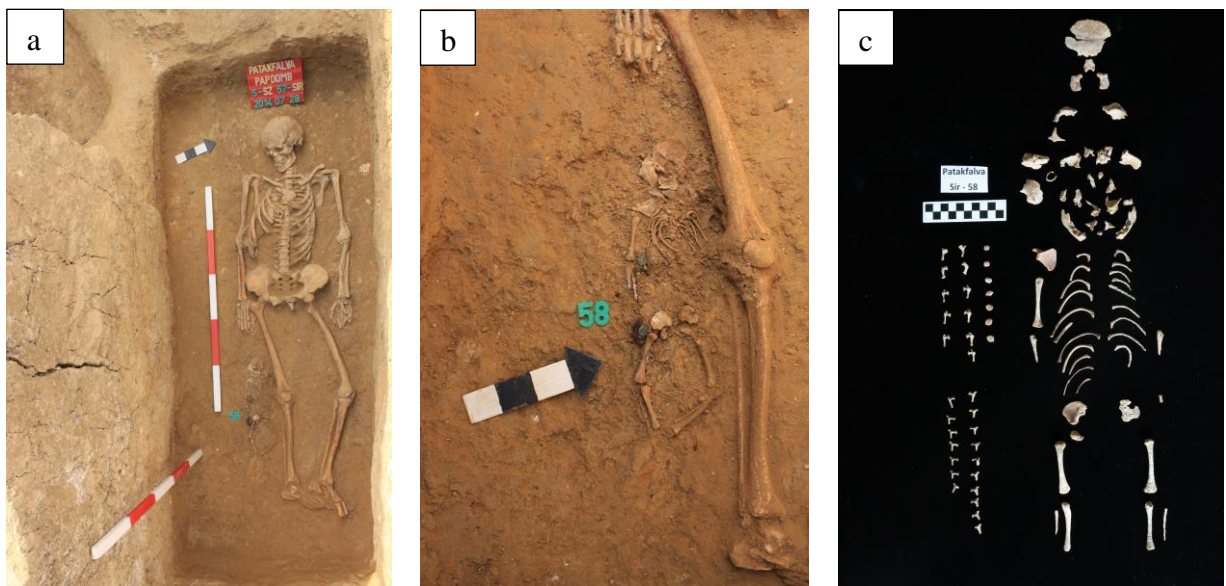


Figure A. 4. (a) G58 from Trench 5 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2014). (b) A close up of G58. Photo: Nyárádi Zsolt (2014). (c) Visual Inventory of G58 from the Papdomb archaeological site. Photo: Jon Bethard (2015).

G64 was located in Trench 2 to the east, the within the church and near the alter. Remains were in a west-east orientation and interred supine (Figure 6.11a). The London atlas provide an age estimate of 7.5 months. The mandibular symphysis was partly fused, indicating the individual to be around one year of age. Non-fusion of the neural arches of the vertebrae to the centrum of the vertebrae indicate that the individual was less than one year old. Less than 25% of the remains were recovered and the final age estimate is 6 months to 1 year old (Figure 6.11b).

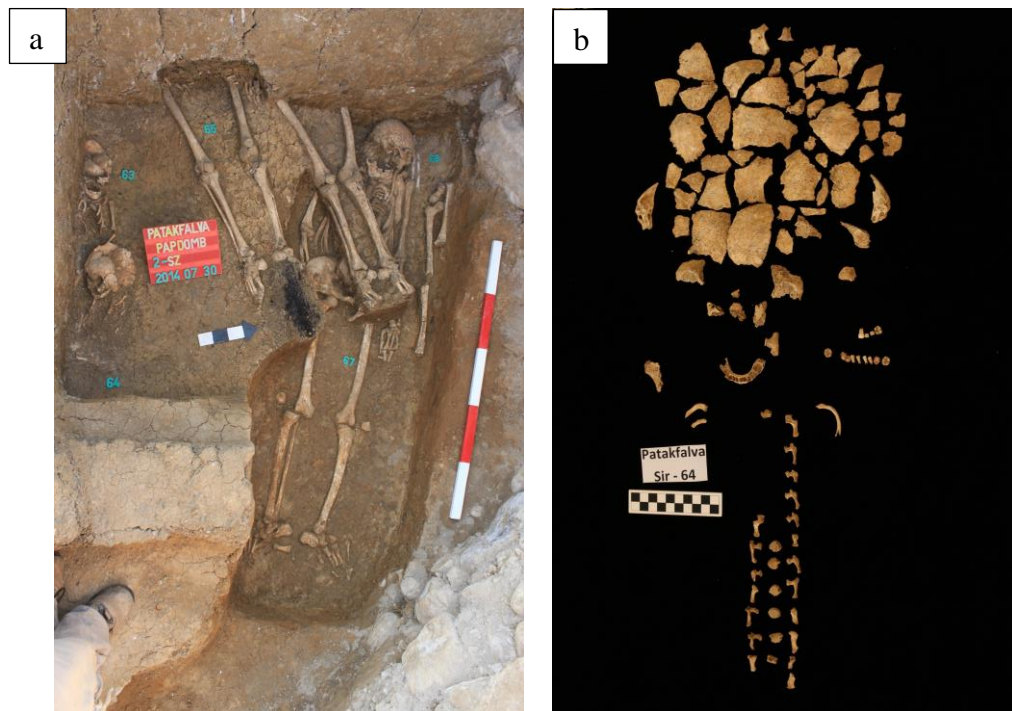


Figure A. 5. (a) G64 from Trench 2 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2014). (b) Visual Inventory of G64 from the Papdomb archaeological site. Photo: Jon Bethard (2015).

G79 was located in Trench 1 to the east end of the church. However, the were recovered from under a wall and may predate this modification to the church. Remains are in a west-east orientation and interred in a supine position (Figure 6.12a). The maximum length of the left femur (115mm) and the left radius (69.62) give an age estimate of three to six months. Partial fusion of the mandible and the open metopic suture of the frontal bone indicate that that individual is under one year old (Buikstra and Ubelaker, 1994). Lab analysis give Less than 25% of the remains were recovered and the final age estimate is 3 to 6 months old (Figure 6.12b).



Figure A. 6. (a) G79 from Trench 1 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2014). **(b)** Visual Inventory of G79 from the Papdomb archaeological site. Photo: Jon Bethard (2015).

G113 was located in Trench 8 at the west end of the church. The skeleton was found in a west-east orientation and interred in a supine posture (Figure 6.13a). The remains of 113 appear to be interred with G112 and is located to the left scapula of G112. G112 was estimated as an old female adult. A coffin nail was also associated with the remains. The lower extremities of G113 were disturbed in antiquity along the same clear, straight line as G112 suggesting that these individuals were probably disturbed at the same time. The maximum length of the left radius (69.62mm) give an age estimate of three months to one year old. The London atlas provide an age estimate of 7.5 months. 25-75% of the remains were recovered and the age estimate of G113 was 6 months to 1 year (Figure 6.13b).

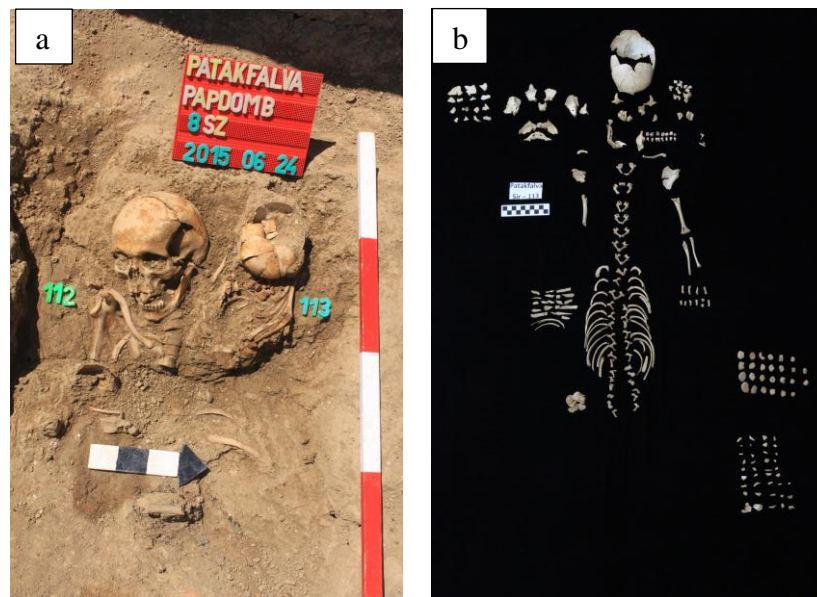


Figure A. 7. (a) G113 from Trench 8 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2015). **(b)** Visual Inventory of G113 from the Papdomb archaeological site. Photo: Jon Bethard (2016).

G126 was located in Trench 9 to the south of the church and in the outside of the wall. Skeletal preservation was poor, however based on location and the grave cut, it is believed to be oriented west to east. Coffin remains, and nails were associated with the burial (Figure 6.14a). Additionally, a coin was found near the burial, however, it is unclear if the artifact is associated (for this study, it is not). The London atlas provide an age estimate of 7.5 months. Less than 25% of the remains were recovered and the final age estimate is 4.5 months to 10.5 months old (Figure 6.14b).

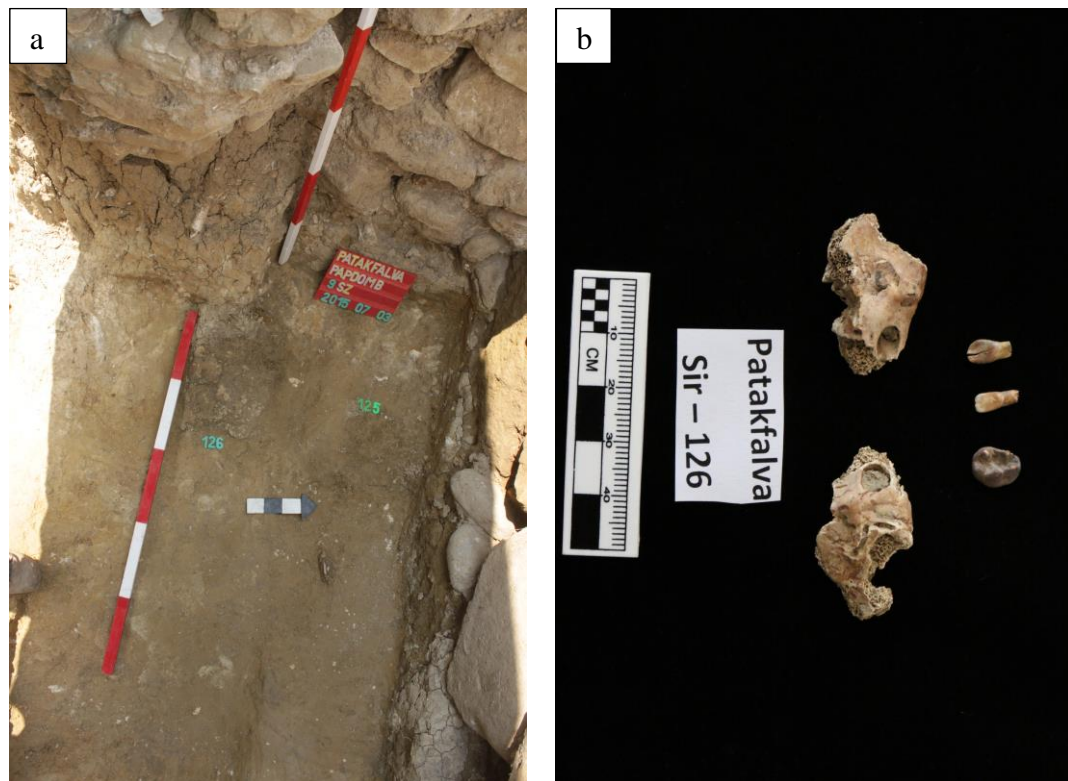


Figure A. 8. (a) G126 from Trench 9 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2015). **(b)** Visual Inventory of G126 from the Papdomb archaeological site. Photo: Jon Bethard (2016).

G171 was located in Trench 9 to the south of the church and within the church yard by a wall. Skeletal preservation was poor from post-depositional damage. Remains were interred supine and in a west to east orientation (Figure 6.15a). Additionally, four coffin nails were found associated with the burial. The pars lateralis of the occipital bone was not fused indicating that the individual was less than one year old (Buikstra and Ubelaker, 1994). The maximum length of the right femur (92.9mm) indicate that the individual is three months. The London atlas provide an age estimate of 7.5 months. 25-75% of remains were recovered and the age estimate is three months to 7.5 months (Figure 6.15b).



Figure A. 9. (a) G171 from Trench 9 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2015). **(b)** Visual Inventory of G171 from the Papdomb archaeological site. Photo: Jon Bethard (2016).

G177 was located in Trench 7 to the west end of the church, within the church. The remains were mostly in anatomical position, but some disturbance was documented. Remains were interred in a supine and extended position in a west to east orientation (Figure 6.16a). The maximum length of the left clavicle (71mm) estimate that the individual was two to four years. The maximum length of the left humerus (112mm), right humerus (113mm), left femur (144mm), and the left tibia (118mm) estimate that the individual is one year old to one year and six months old (Maresh). The maximum length of the left ulna (92mm), the right ulna (94mm), the left radius (83mm), and the right radius (84mm) estimate that the individual is six to 18 months. 25-75% of remains were recovered and the age estimate is 6 months to 18 months (Figure 6.16b).

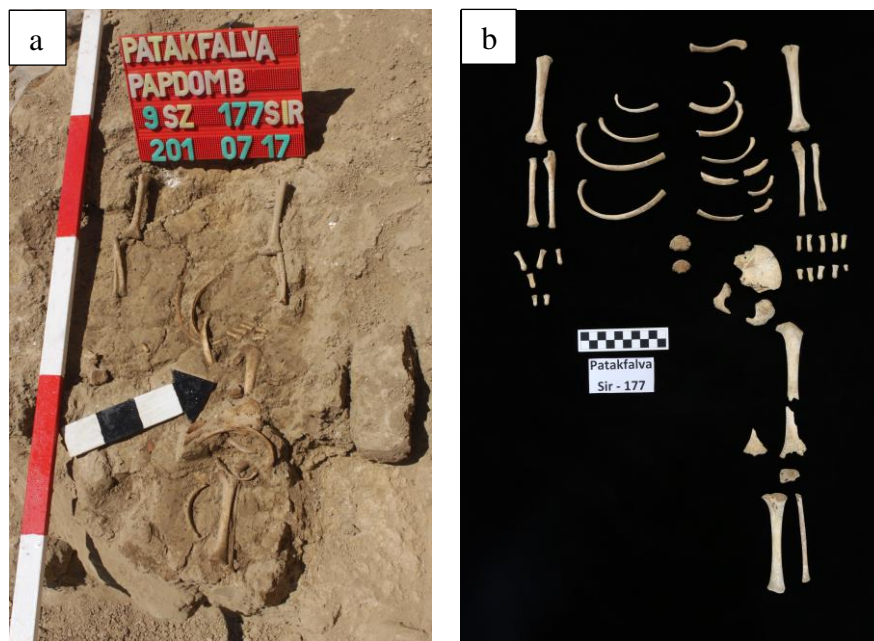


Figure A. 10. (a) G177 from Trench 9 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2015). **(b)** Visual Inventory of G177 from the Papdomb archaeological site. Photo: Jon Bethard (2016).

G178 was located in Trench 7 and located closer to the center of the church. The individual's body was buried in a supine position a west to east orientation (Figure 6.17a). The maximum length of the ilium (23.7mm) indicate that that individual was 32 gestational weeks. The maximum length of the left humerus (56.98mm), the right humerus (56.89mm), the left femur (62.24mm), and the left tibia (53.82mm) indicate that the individual was 34 to 36 gestation weeks. The maximum length of the of the left radius (62.24mm), and the left ulna (53.81mm) and the maximum width of the scapula (23.70mm) estimate that the individual was 36 to 38 gestational weeks. 25-75% of remains were recovered and the age estimate is 32 gestational weeks to birth (Figure 6.17b).

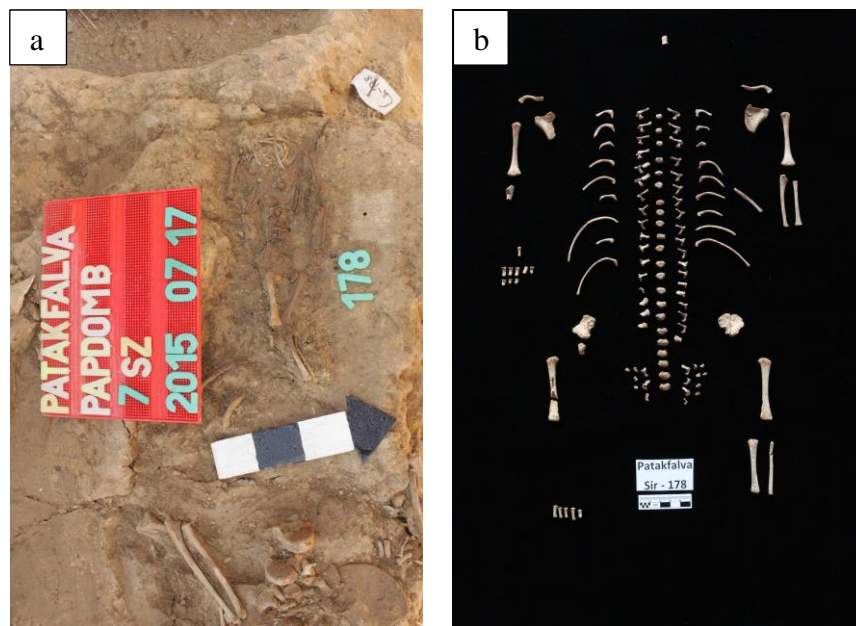


Figure A. 11. (a) G178 from Trench 7 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2015). **(b)** Visual Inventory of G178 from the Papdomb archaeological site. Photo: Jon Bethard (2016).

G179 was located in Trench 7 to the west and within the church. The remains were extensively disturbed in antiquity with only a few unfused vertebral elements present (Figure 6.18a). The maximum length of the left pars lateralis of the occipital bone (39mm) and the maximum width (26mm) indicate that individual is under one year of age. The lack of fusion of the neural arches of the vertebrae to the centrum of the vertebrae depict that the individual is less than one year old. Less than 25% of remains were recovered and the age estimate is birth to one year of age (Figure 6.18b).

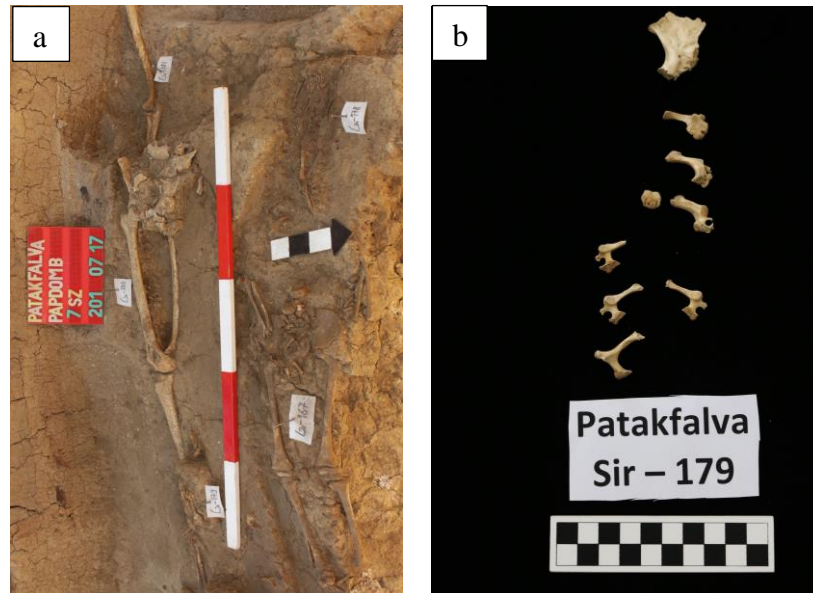


Figure A. 12. (a) G179 from Trench 7 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2015). **(b)** Visual Inventory of G179 from the Papdomb archaeological site. Photo: Jon Bethard (2016).

G186 was located in Trench 9 to the south east end of the church and within the church yard. The remains were associated with a head dress artifact. The body was placed in an extended and supine position and in a west east orientation. The maximum length of the

right clavicle (59.2mm), the left ischium (27.25mm), the left humerus (86.61mm), the right humerus (87.53mm), the right radius (67.14mm), and the right ulna (74.06mm) give an age estimate of 6 months. The London atlas provide an age estimate of 10.5 months plus or minus three months. More than 75% of remains were recovered and the age estimate is 7.5 to 13.5 months old (Figure 6.19).

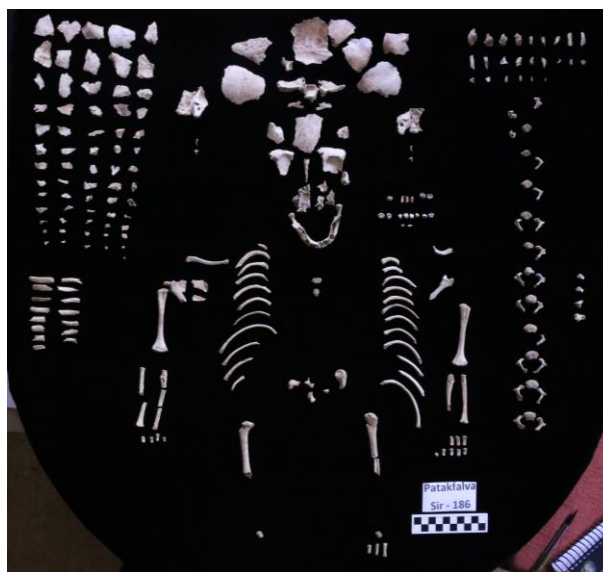


Figure A. 13. Visual Inventory of G186 from the Papdomb archaeological site. Photo: Jon Bethard (2016).

G202 was located in Trench 8 to the west and within the church. The remains were associated with two other individuals, G197 and G202 (Figure 6.20a). G197 is an infant with an age estimation of 1 to 2 years (Figure 6.20b). G201 is a female adolescent between the ages of 16 to 21. All burials were interred in a supine position and a west to east orientation. G197's head was in the pelvic region of G201. G202 was located between the right arm and right body of G201. G197 and G201 were in an extended

position and G202 was in a flexed position. All three burials were well preserved with 75-100% of remains recovered. The maximum length of the left clavicle (41.9mm), the left scapula (35.4mm), the left and right ilium (34mm), the left and right ischium (18mm), the right pubis (12.2mm), the left humerus (64.8mm), the right humerus (63.5mm), the left ulna (60.8mm), the left radius (51.9mm), the left tibia (62.6mm), the left fibula (60.7mm), the left femur (72.4mm), and the right femur all indicate that the individual is 38 to 40 gestational weeks old. The age estimation of G202 is 38 gestational weeks to birth (Figure 6.20c).

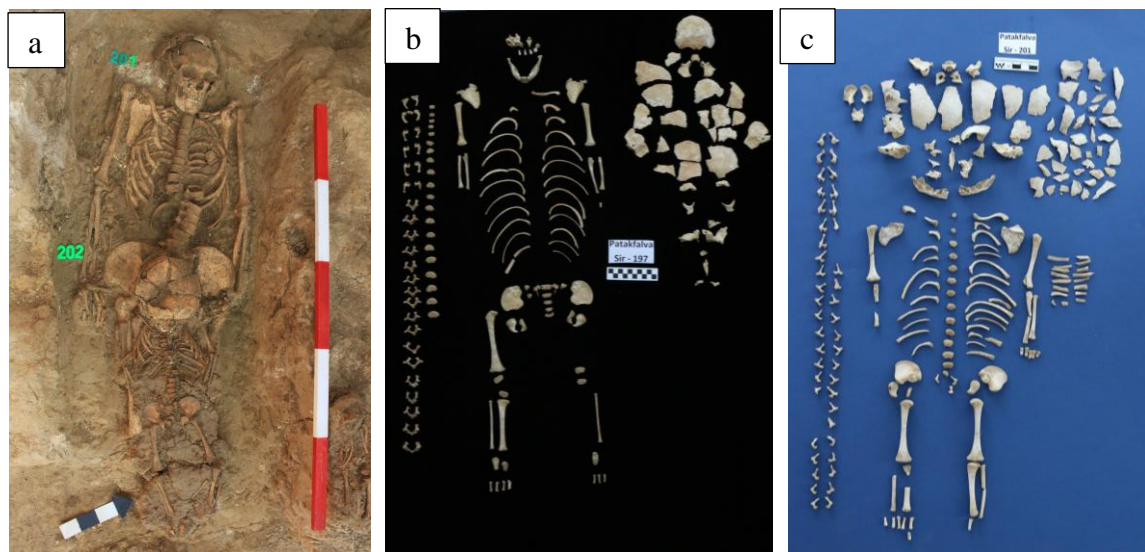


Figure A. 14. (a) G202, G201, and G197 from Trench 8 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2015). (b) Visual Inventory of G197 from the Papdomb archaeological site. Photo: Jon Bethard (2016). (c) Lab analysis of G201 from the Papdomb archaeological site. Photo: Jon Bethard (2016).

G204 was located in Trench 8, towards the west end of the church and within the church. The individual was found extended and supine, and oriented west to east. The

skull was not present. The skeleton was semi-articulated due to post-depositional disturbance, but all elements were in anatomical relative positions (Figure 6.21a). The maximum length of the left ilium (53.07mm) indicate an individual of 13 to 24 months old. The maximum length of the left humerus (91.77mm) and the left radius (68.31mm), indicate that the individual is six months old. The maximum length of the left ulna (75.78mm) indicate that the individual is three to six months old. The maximum length of the right tibia indicated that the individual is three to six months old. The age estimation is 6 months to one year old (Figure 6.21b).

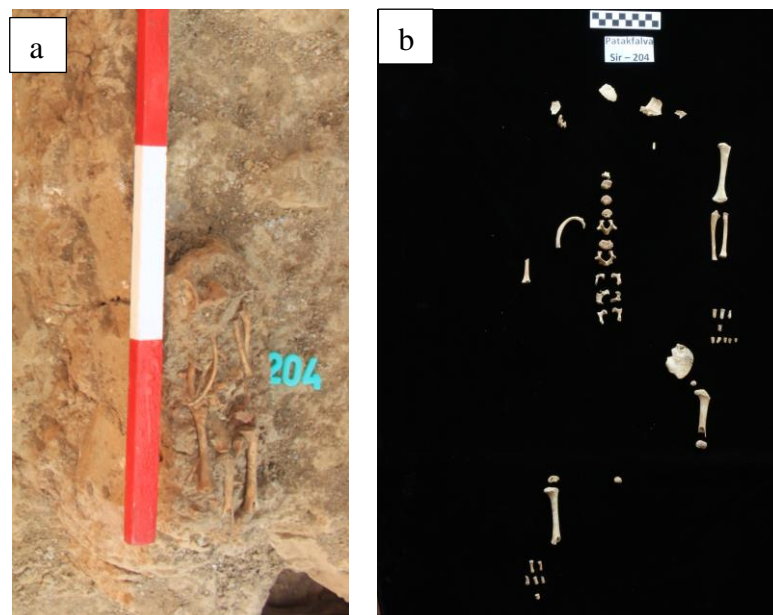


Figure A. 15. (a) G204 from Trench 8 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2015). **(b)** Visual Inventory of G204 from the Papdomb archaeological site. Photo: Jon Bethard (2016).

G 234 was located in Trench 12, towards the east end of the church, within the church yard and on the south end of the Trench. The individual was extended and supine, and

oriented west to east. (Figure 6.22a). The maximum length of the left clavicle (42.13mm), the left ilium (28.71mm), the right ilium (29.5mm), the left pubis (13.34mm), the right pubis (13.95mm), and the left femur (72.33mm) suggest that the individual is 38 to 40 gestational weeks. The maximum length of the left humerus (63.56mm), the left ulna (59.41mm), the left radius (52.17mm), the left tibia (64.82mm), and the unsided fibula (62.71mm), all indicate that the individual was 40 gestational weeks. The London atlas dentition provide an age estimate of 34 months to birth. The final age estimation is 34 gestational weeks to birth (Figure 6.22b).



Figure A. 16. (a) G234 from Trench 6 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2016). **(b)** Visual Inventory of G234 from the Papdomb archaeological site. Photo: Jon Bethard (2017).

G 244 was located in Trench 14, towards the south west end of the church and in the outside of the wall. The individual was extended and supine, and oriented west to east (Figure 6.23a). The maximum length of the right humerus (67.59mm), the left ulna (61.96mm), the left radius (54.96mm), and the right radius (55.24mm) indicate an individual of 40 weeks. 25-75% of remains were recovered and the age estimation is 40 weeks (birth) to 1.5 months (Figure 6.23b).

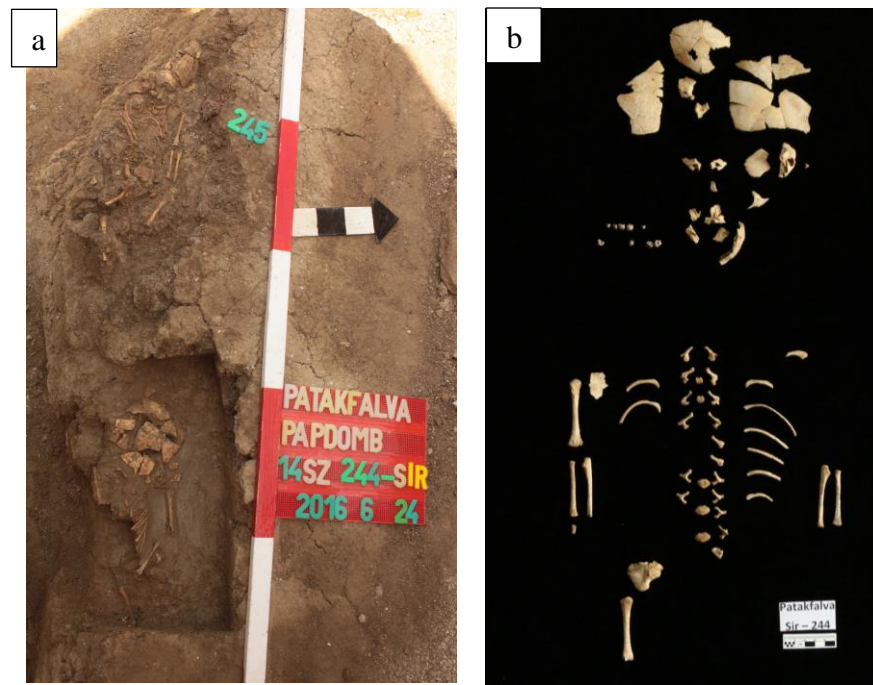


Figure A. 17. (a) G244 from Trench 14 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2016). **(b)** Visual Inventory of G244 from the Papdomb archaeological site. Photo: Jon Bethard (2017).

G 245 was located in Trench 14, towards the south west end of the church and in the outside of the wall. The individual was semi-flexed, supine, and oriented west to east (Figure 6.24a). The maximum length of the clavicle (37.64mm) and the right clavicle

(36.96mm) estimates that the individual is 29 to 36 gestational weeks. The maximum length of the left ilium (27.34mm), the right ilium (27.86mm), the left radius (45.47mm), the right radius (44.74mm), the left femur (60.64mm), and the right tibia (54.68mm) indicate an individual of 34 to 36 gestational weeks. The maximum length of the left ischium (14.95mm), the right ischium (14.82mm), and the right pubis (13.11mm) were consistent with an individual of 36 gestational weeks. The London atlas scored the dentition as an individual between 29 to 38 gestational weeks. The final age estimation is 29 to 38 gestational weeks (Figure 6.24b).



Figure A. 18. (a) G145 from Trench 14 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2016). **(b)** Visual Inventory of G245 from the Papdomb archaeological site. Photo: Jon Bethard (2017).

G 250 was located in Trench 12, towards the east end of the church and within the church yard. The individual was extended and supine, and oriented west to east (Figure 6.25a). The preservation was fair to poor, and there was plant root etching present. There was coffin wood associated with the remains. The maximum length of the left femur (79.21mm), the right femur (78.3mm), left tibia (68.07mm), and right tibia (68.53mm) are consistent with an individual of 40 weeks to one month. The London atlas scored the detention to be consistent with an individual of birth to 1.5 months. The final the age estimation is 40 weeks (birth) to 1.5 months (Figure 6.25b).

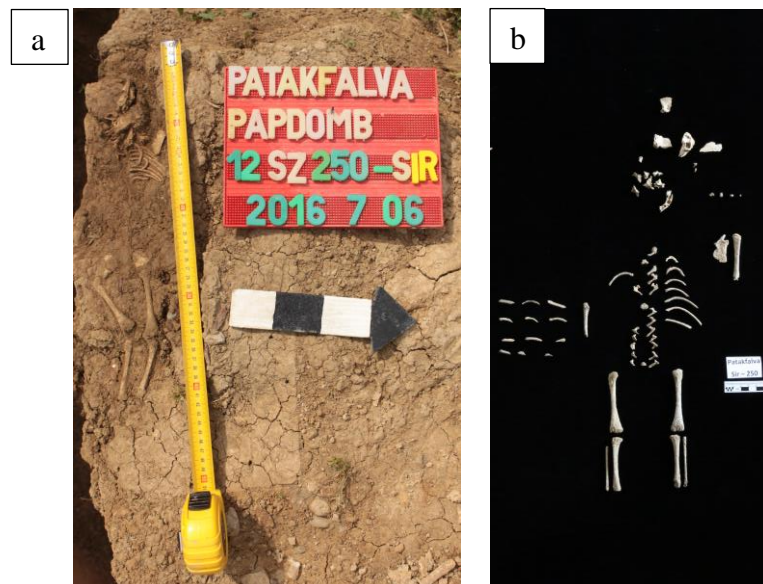


Figure A. 19. (a) G250 from Trench 7 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2016). **(b)** Visual Inventory of G250 from the Papdomb archaeological site. Photo: Jon Bethard (2017).

G 283 was located in Trench 13, towards the south west end of the church yard and near the outside of the wall. There were pottery fragments associated with this burial. 25-75% of the remains were recovered and the final age estimate is 3 to 9 months old.

G 283 was located in Trench 15, towards the south west end of the church and within the church yard. The burial was disturbed in antiquity. There was some disarticulation present, but all bones were still in relative anatomic position. The individual was extended and supine, and oriented west to east (Figure 6.26a). The maximum length of the left ilium (31.45mm), the left ischium (17.13mm), left humerus (63.47mm), and left radius (50.4mm) are consistent with an individual of 40 weeks. The maximum length of the right femur (68.86mm) and right tibia (62.88mm) are consistent with an individual aged 38 gestational weeks. 25-75% of the remains were recovered and the age estimate is 38 gestational weeks to birth (Figure 6.26b).



Figure A. 20. (a) G283 from Trench 15 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2016). (b) Visual Inventory of G283 from the Papdomb archaeological site. Photo: Lauren Reinman (2019).

G 299 was documented in Trench 11, towards the south east end of the church and within the church yard. There was some disarticulation present, but all bones were still in general anatomic position. The individual was extended, supine, and oriented west to east (Figure 6.27a). The maximum length of the left humerus (67.2mm), right humerus (65.4mm), right ulna (61.61mm), left radius (53.63mm), left femur (82.58mm), right femur (82.2mm), left tibia (70.21mm), right tibia (70.09mm), left fibula (65.14mm), and right fibula (66.33mm) are indicative of an individual of 40 weeks old. The London atlas gave an age estimate of 40 weeks. The remains were over 75% complete and the age estimate 38 gestational weeks to two weeks after birth (Figure 6.27b).

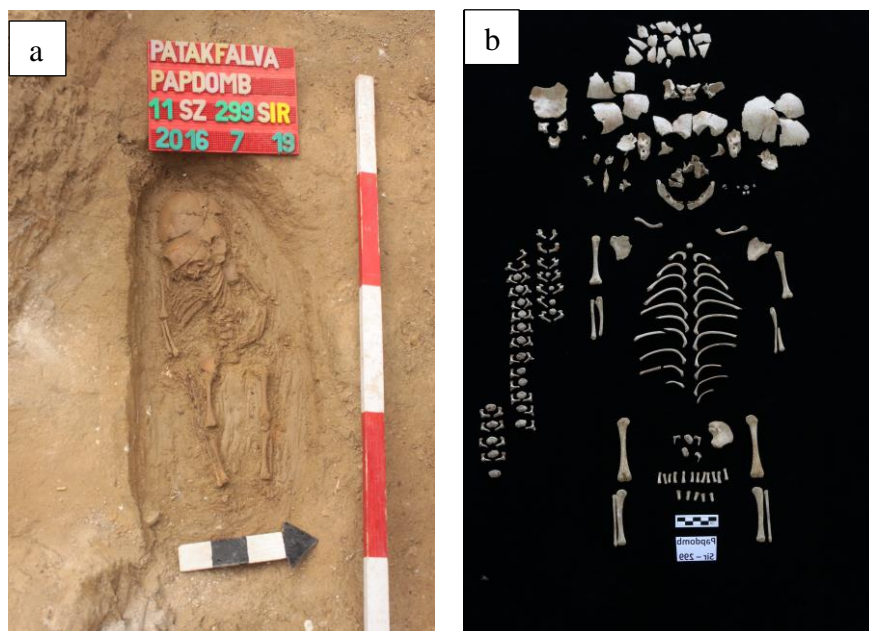


Figure A. 21. (a) G299 from Trench 11 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2016). (b) Visual Inventory of G299 from the Papdomb archaeological site. Photo: Lauren Reinman (2019).

G 320 was located in Trench 13, towards the south end of the church and within the church yard. The individual was semi-flexed, supine, and oriented west to east (Figure 6.28a). Disturbance likely occurred during excavation. The maximum length of the left clavicle (44.35mm), right ilium (36.18mm), left humerus (66.21mm), left radius (54.01mm), right femur (78.54mm) and an un-sided fibula (63.63mm) and all consistent with an individual of 40 weeks. There remains were characterized by a good level preservation. The remains were 25- 75% complete and the age estimate 40 weeks (birth) to 1.5 months old (Figure 6.28b).

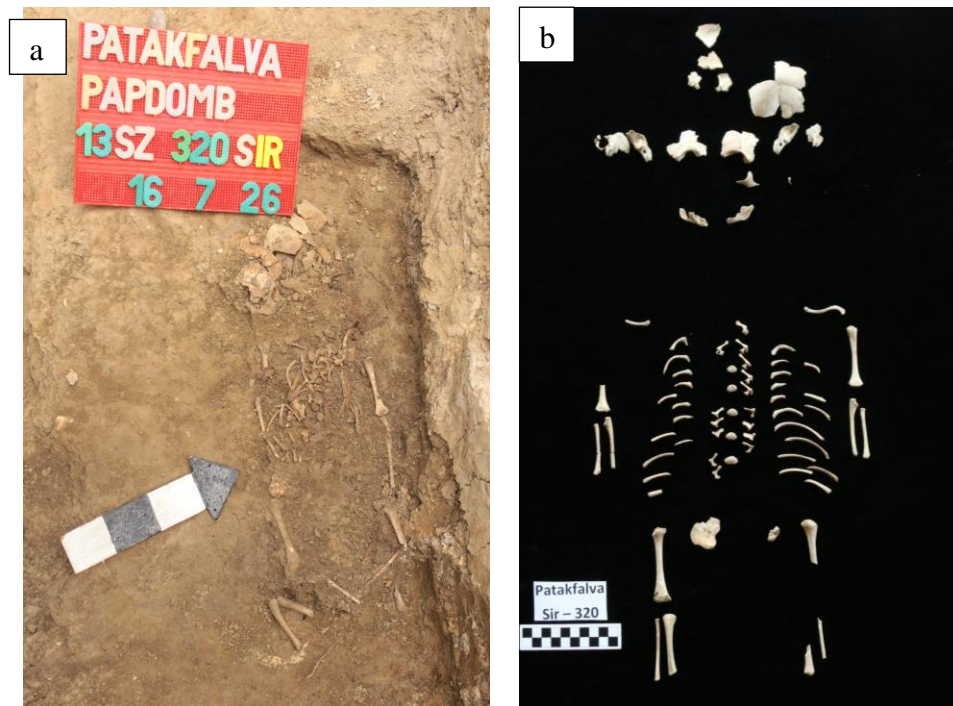


Figure A. 22. (a) G320 from Trench 13 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2016). (b) Visual Inventory of G320 from the Papdomb archaeological site. Photo: Lauren Reinman (2019).

G 335 was located in Trench 14, towards the south west end of the church and within the church yard. The individual was extended, supine, and oriented west to east (Figure 6.29a). The maximum length of the right ilium (35.09mm) and the right femur (81.31mm) have an age estimate of 38 to 40 gestational weeks. The remains were 25-75% complete yielding an age estimate of 38 gestational weeks to birth (Figure 6.29b).

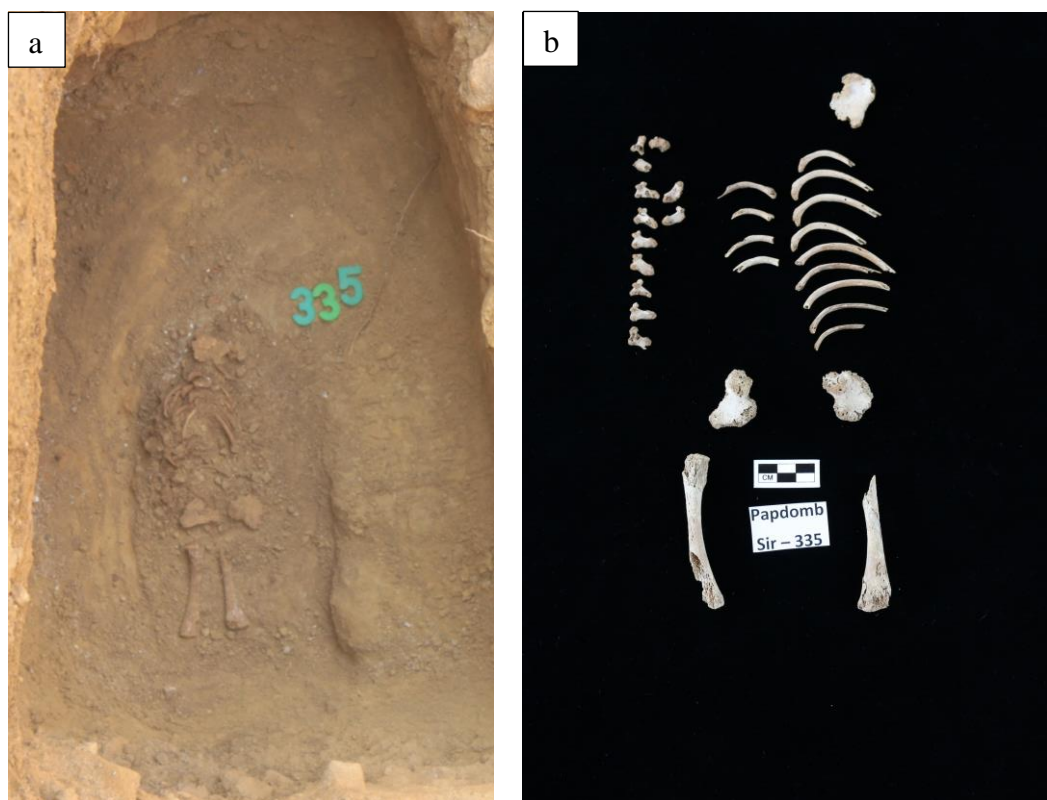


Figure A. 23. (a) G335 from Trench 14 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2016). **(b)** Visual Inventory of G335 from the Papdomb archaeological site. Photo: Lauren Reinman (2019).

G- 363 was located in Trench 18, towards the west end of the church and within the church yard. Coffin nails were associated with the burial. The individual was extended,

supine, and oriented west to east (Figure 6.30a). The maximum length of the left pars lateralis of the occipital bone (17.96mm) is consistent with an individual of 32 gestational weeks. The maximum width of the pars lateralis of the occipital bone (12.87mm) is consistent with an individual of 38 weeks. The London atlas is consistent with an individual who is around 30 weeks. The remains were 25- 75% complete and yielded an age estimate of 28 to 32 gestational weeks (Figure 6.30b). This burial was the youngest found so far from the Papdomb archaeological site.



Figure A. 24. (a) G363 from Trench 18 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2017). (b) Visual Inventory of G363 from the Papdomb archaeological site. Photo: Lauren Reinman (2019).

G377 was located in Trench 18, towards the west end of the church and within the church yard. The individual was extended, supine, and oriented west to east (Figure 6.31a). G377 had poor preservation, plant root etching present and could possibly be a double burial

with G360. The mandibular symphysis is fused, not obliterated, which is indicative of an individual who is older than three months. The London age estimates the individual to be around 4.5 to 10.5 months. The remains were 25-75% complete and the age estimate is 7 to 10 months (Figure 6.31b).



Figure A. 25. (a) G377 from Trench 18 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2017). (b) Visual Inventory of G377 from the Papdomb archaeological site. Photo: Lauren Reinman (2019).

G-387 was located in Trench 16, towards the south west end of the church and within the church yard. The individual was extended, supine, and oriented west to east (Figure 6.32a). Three coffin nails were found associated with the burial. There was a dental caries present on the buccal aspect of the left maxillary first molar (Figure 6.32c). The maximum length of the left femur measured 108.67mm, which is consistent with individuals who are six months of age. The London atlas provide an age range of 6.5 to 8.5 months. The remains were 25- 75% complete and the age estimate is 6 to 8 months old (Figure 6.32b).



Figure A. 26. (a) G387 from Trench 16 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2017). (b) Visual Inventory of G387 from the Papdomb archaeological site. Photo: Lauren Reinman (2019). (c) A close-up view of the left upper first molar exhibiting a dental caries, G387. Photo: Lauren Reinman (2019).

G-396 was located in Trench 19, towards the west end of the church and in the outside of the wall. The individual was extended, supine, and oriented west to east (Figure 6.33a). Coffin wood was found associated with the burial. The tympanic ring to the temporal squamous is not fused, indicating the individual is less than one month. The London atlas provide an estimate of 38 gestational weeks. The cranial measurements are also consistent with an individual of 38 weeks. The remains were 25- 75% complete and the age estimate is 38 gestational weeks to 42 weeks post-birth (Figure 6.33b).

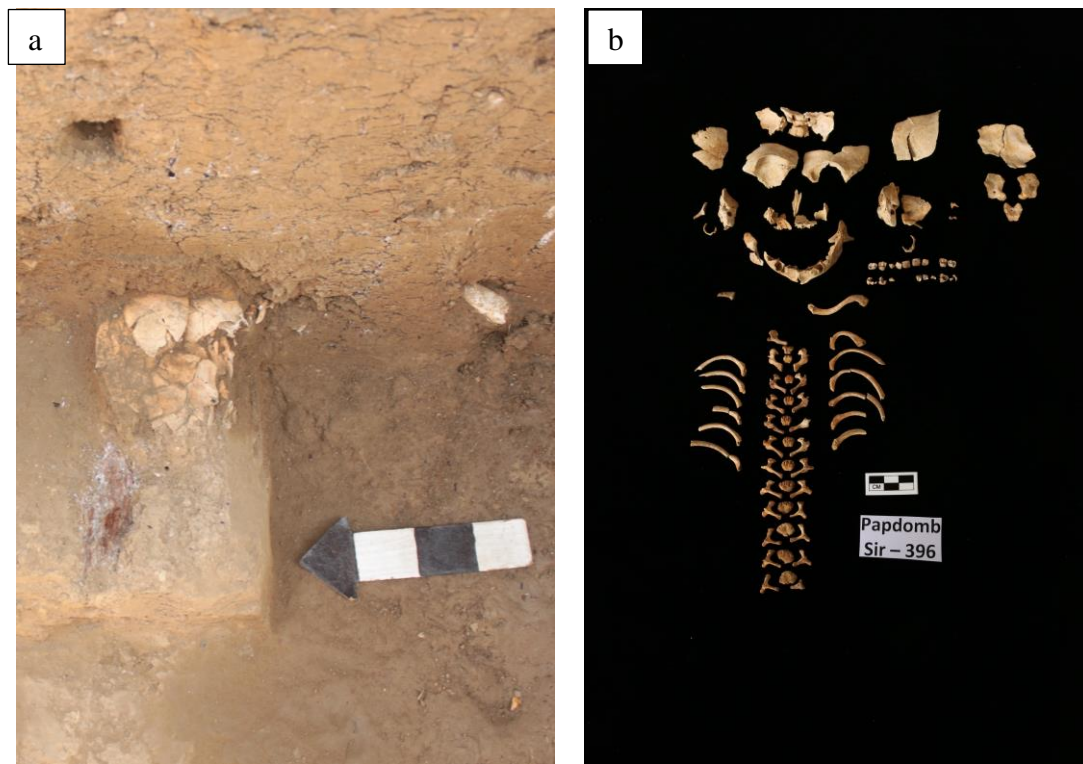


Figure A. 27. (a) G396 from Trench 19 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2017). (b) Visual Inventory of G396 from the Papdomb archaeological site. Photo: Lauren Reinman (2019).

G467 was located in Trench 23, towards the south of the church and within the church yard. The individual was extended, supine, and oriented west to east (Figure 6.34a). Coffin wood and coffin nails were found associated with the burial. The maximum length of the left clavicle (49.25mm), the right clavicle (48.75mm), and the left scapula (30.35mm) were consistent with an individual of birth to 6 months of age. The maximum length of the left humerus (70.19mm), the right ulna (63.62mm), the left radius (55.88mm), the left femur (81.37mm), the left tibia (70.49mm), and the right tibia (70.17mm) were all consistent with an individual of 1.5 to three months old (Maresh, 1970). Dental analysis estimates the age to be 1.5 to 4.5 months old. The remains were 25-75% complete and the age estimate is 1.5 to 4.5 months old (Figure 6.34b).

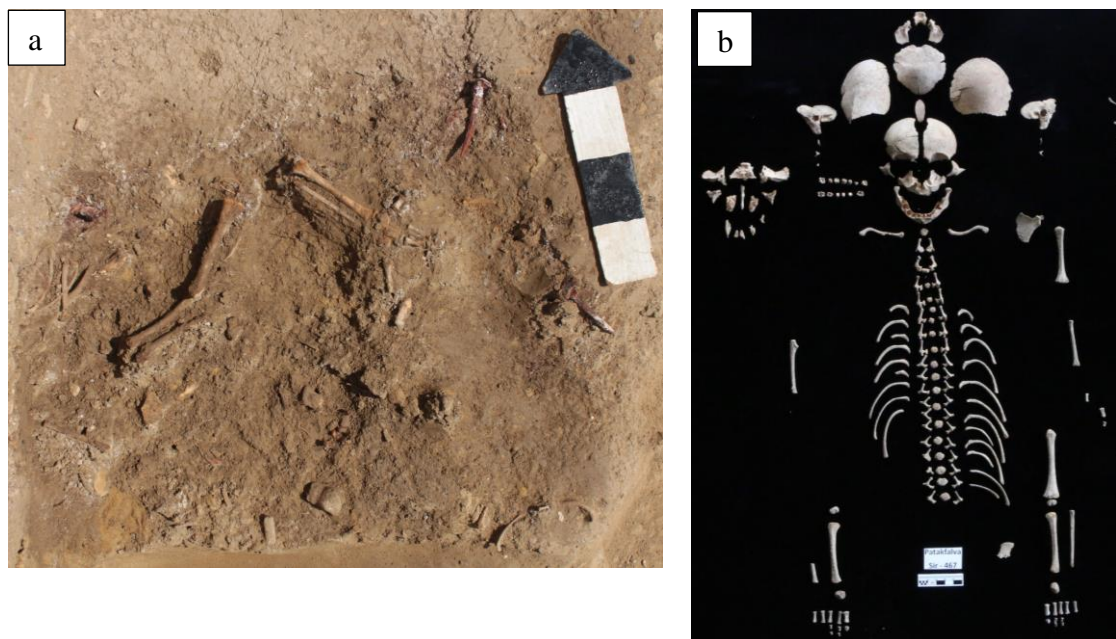


Figure A. 28. (a) G467 from Trench 23 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2018). **(b)** Visual Inventory of G467 from the Papdomb archaeological site. Photo: Lauren Reinman (2019).

G496 was located in Trench 23, towards the south of the church and within the church yard. The individual was extended, supine, and oriented west to east (Figure 6.35a). The London atlas provide an estimate of 38 gestational weeks. The cranial measurements are also consistent with an individual of 38 weeks. The remains were 25-75% complete and the age estimate is 38 gestational weeks to birth (Figure 6.35b).

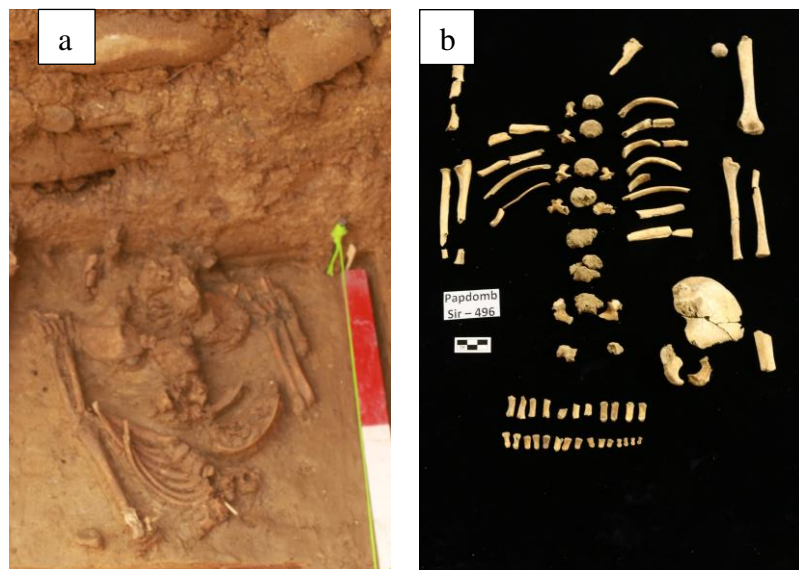


Figure A. 29. (a) G496 from Trench 23 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2018). (b) Visual Inventory of G496 from the Papdomb archaeological site. Photo: Lauren Reinman (2019).

G497 and G505 interments were located in Trench 19, towards the west end of the church and within the church wall. G497 was interred in a single coffin with G505. Both individuals were in an extended, supine position, and oriented west to east. Some of the remains were comingled. Comingled dentition all consistent with \geq the age of 32 to 38 gestational weeks. The maximum length from G497 of the left clavicle (39.34mm), left

ischium (14.81mm), left humerus (53.68mm), right humerus (53.02mm), left tibia (54.35mm), and right tibia (53.60mm) are consistent with an individual of 36 gestational weeks. The maximum length of the left ilium (27.65mm), right ilium (27.39mm), left ulna (49.92mm), left radius (44.18mm) right radius (43.84mm) left femur 62.27mm) and right femur (61.87mm) were consistent with an individual of 34 to 36 weeks. The maximum length from G505 of the left clavicle (38.05mm), right clavicle (37.58mm), left ischium (14.63mm), left humerus (53.67mm), right humerus (53.73mm), and left tibia (54.63mm) are consistent with an individual of 36 gestational weeks. The maximum length of the), left ilium (27.61mm), right ilium (27.48mm), left ulna (50.39mm), right ulna (49.96mm) left radius (43.64mm) right radius (43.53mm) left femur (61.89mm) and right femur (61.81mm) were consistent with an individual of 34 to 36 gestational weeks. Both remains were over 75% complete and both age estimates are 36 to 38 gestational weeks (Figure 6.36).



Figure A. 30. Visual Inventory of G505 and G497 from the Papdomb archaeological site. Photo: Jon Bethard (2018).

G511 was located in Trench 22, towards the south of the church and within the church yard. The individual was extended, supine, and oriented west to east (Figure 6.37a). The maximum length of the left tibia (62.67mm) and right tibia (62.87mm) are indicative of an individual of 38 to 40 weeks. According to the London atlas, the individual is estimated from birth plus or minus two months. The remains were 25- 75% complete and the age estimate is 38 gestational weeks to 42 weeks old (Figure 6.37b).

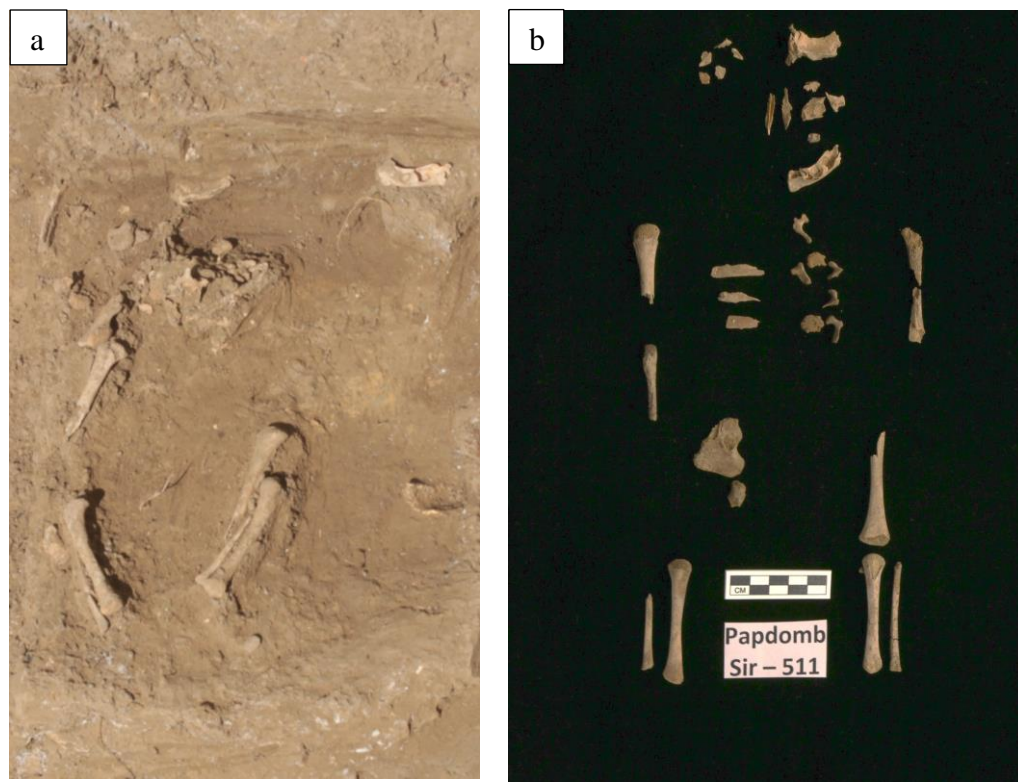


Figure A. 31. (a) G511 from Trench 22 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2018). (b) Visual Inventory of G511 from the Papdomb archaeological site. Photo: Lauren Reinman (2019).

G571 was located in Trench 24, towards the north east end of the church and outside the church yard. The individual was extended, supine, and oriented west to east (Figure

6.38a). The maximum length of the left humerus (79.26mm), the left femur (95.51mm), the right femur (95.95mm), and the left tibia (77.88mm) are all consistent with an individual of 3 months. The London atlas age estimate is consistent with an individual of 10.5 months. There was an age discrepancy between the long limb bone measurements (3 months) and tooth measurements (9 to 10 months). Because dental data is a more accurate than long bone measurements for age estimation, the final age estimate was concluded to be 9 to 10 months (Cardoso, 2007) (Figure 6.38b).



Figure A. 32. (a) G571 from Trench 24 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2018). **(b)** Visual Inventory of G571 from the Papdomb archaeological site. Photo: Lauren Reinman (2019).

G573 was located in Trench 24, towards the north east end of the church and outside of the church yard. The individual was extended, supine, and oriented west to east (Figure 6.39a). Dentition places the individual estimate from 38 gestational weeks to 42 weeks. Maximum lengths and maximum width of cranial measurements are consistent with an individual of 38 weeks. (Nagaoka and Kawakubo, 2015; Schaefer et al., 2009). The remains were in very poor condition and less than 25% was recovered. Age estimation is 38 gestational weeks to 42 weeks (Figure 6.39b).

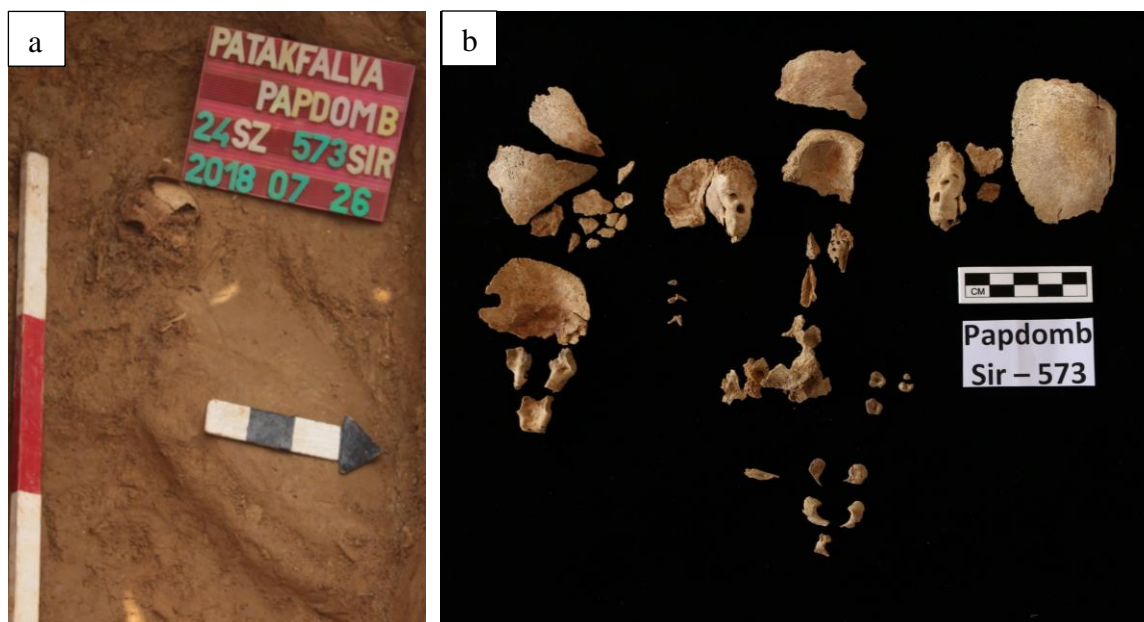


Figure A. 33. (a) G573 from Trench 24 at the Papdomb archaeological site. Photo: Nyárádi Zsolt (2018). **(b)** Visual Inventory of G573 from the Papdomb archaeological site. Photo: Lauren Reinman (2019).

G-602 was located in Trench 27, towards the south end of the church and within the church yard. The individual was extended, supine, and oriented west to east (Figure 6.61). The maximum length of the left clavicle (62.63mm) and right clavicle (60.03mm), the right ilium (47.78mm), right ilium (48.62mm), left ischium (31.42mm), right ischium (30.74mm), left pubis (26.81mm) and right pubis (26.81mm) are indicative of an individual if one year of age. The maximum length of the left scapula (52.78mm), right scapula (56.36mm), right humerus (98.18mm), left radius (74.73mm), right radius (75.61mm), right femur (119.87mm), and right tibia (96.57mm) are all indicative of an individual of six months to one year old. The London atlas is indicative of an individual of one year of age. The Age estimation is 6 months to one year old.

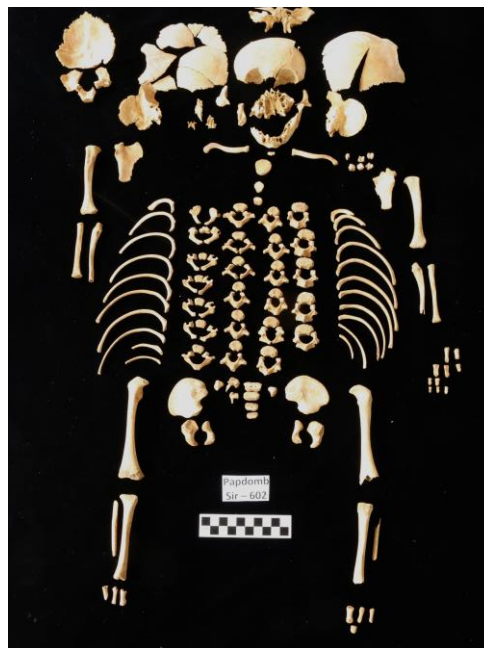


Figure A. 34. Visual Inventory of G602 from the Papdomb archaeological site. Photo: Lauren Reinman (2019).

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