

Avar horse-warrior, early 9<sup>th</sup> century, Bavaria. By Osprey Angus McBride, 2019.

**New approaches to Avar social identities in the Balaton Region of the  
Carpathian Basin - AD. 550 to 900: evidence from Keszthely- Fenékpusztá**

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# Table of Content

<b><u>ACKNOWLEDGEMENTS.....</u></b>	<b><u>3</u></b>
<b><u>ABSTRACT .....</u></b>	<b><u>5</u></b>
<b><u>1. CHAPTER I. ....</u></b>	<b><u>6</u></b>
1.1 INTRODUCTION.....	6
1.2 SUMMARY OF AIMS, SCOPE AND STRUCTURE .....	9
1.3 BACKGROUND .....	10
1.4 CASE STUDY: KESZTHELY - FENÉKPUSZTA.....	15
1.5 ANALYTICAL METHODOLOGY.....	26
<b><u>2. CHAPTER II.....</u></b>	<b><u>35</u></b>
<b><u>2.1 FUNERAL CUSTOMS IN THE ‘AVAR’ PERIOD TRANSDANUBIAN/LAKE BALATON REGION: KESZTHELY-FENÉKPUSZTA.....</u></b>	<b><u>35</u></b>
2.2 THE ORIENTATION OF THE GRAVES .....	36
2.3 SIZE AND SHAPE OF THE BURIALS .....	41
2.4 COFFIN USAGE .....	45
2.5 DOUBLE BURIALS AND REUSE .....	47
2.6 HORSE BURIALS.....	50
<b><u>3. CHAPTER III.....</u></b>	<b><u>55</u></b>
3.1 MATERIAL CULTURE AND ITS ROLE IN THE AVAR FUNERARY PRACTICE. EVIDENCE FROM KESZTHELY-FENÉKPUSZTA.....	55
3.2 FEMALE AND MALE BELT SETS, BUCKLES, PENDANTS AND ACCESSORIES .....	56
3.3 EARRINGS AND BRACELETS.....	62
3.4 WEAPONRY AND CAVALRY.....	65
3.5 THE CHRONOLOGICAL PHASES OF THE AVAR -RELATED MATERIAL CULTURE .....	70

3.6 AN OVERVIEW OF THE NETWORK SYSTEM OF THE AVAR MATERIAL CULTURE IN THE CARPATHIAN BASIN .....	74
<b>4. <u>CHAPTER IV. - THEMATIC DISCUSSION.....</u></b>	<b>79</b>
4.1 THE CREATION OF THE ‘AVAR’ IDENTITY (POPULATION MOVEMENT AND ACCULTURATION) – IN REFLECTION OF RECENT RESULTS FROM ANCIENT DNA ANALYSES. ....	80
4.2 THE EXTENT OF POPULATION MOVEMENT IN THE CREATION OF THE AVAR KHAGANATE	86
4.3 CLIMATE CHANGE AND ITS POTENTIAL SOCIAL IMPACT ON THE AVAR – PERIOD COMMUNITIES IN THE CARPATHIAN BASIN.....	95
<b>5. CHAPTER V. - CONCLUSIONS AND POTENTIAL FOR FURTHER RESEARCH.....</b>	<b>101</b>
<b><u>LIST OF FIGURES .....</u></b>	<b><u>111</u></b>
<b><u>APPENDIX: SUPPLEMENTARY FIGURES.....</u></b>	<b><u>114</u></b>
<b><u>BIBLIOGRAPHY .....</u></b>	<b><u>119</u></b>

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The COVID-19 pandemic significantly impacted the initial version of my thesis on Avar social identities. The imposed travel restrictions and lockdown measures hindered my ability to conduct on-site research and access archaeological sites, which is crucial for gathering relevant data and conducting a thorough analysis. Moreover, the closure of

these sites further limited my opportunities to gather primary resources. Unfortunately, the ongoing Ukraine war further hampered my efforts to resubmit the thesis, as my relatives in Hungary live close to the border. The political turmoil and associated challenges, including potential travel limitations and safety concerns, added a layer of complexity to completing my research. Despite these adverse circumstances, I remained determined to present a comprehensive and well-rounded thesis.

**In memory of the victims of the Covid-19 pandemic between 2020-2022 and the Ukrainian and Russian conflict victims in 2022-23.**

## Abstract

'Avar' identities and affiliations were constructed in the Carpathian Basin from a combination of new influences from the western Eurasia Steppe (brought by people through population movements and exchange/trade) and by the existing descendants of the Roman provincial population. They were also influenced by earlier settlers from the Steppes in the era of the Hunnic Confederacy in the later fourth and fifth centuries and by influences and people originally from the Baltic region (Lombards and Gepids) by the sixth century. Although the Avars strongly shaped the other European communities' economic, cultural, and political organisation, their ruling and lifestyle habits are little understood.

This dissertation investigates the significance of socio-political and ethnocultural interactions between the so-called Avar and other communities in the early medieval Carpathian Basin through the integrated analysis of material culture used in burial practices to construct the „Avar” identity following the theoretical approaches developed by Pohl and others. The new perspectives gained from textual sources, current isotopic and genomic techniques, and the potential impact of climate change on Avar movements and ethnogenesis between the late sixth and early ninth centuries will also be explored for a deeper understanding of this mysterious society.

# **1. Chapter I.**

## **1.1 Introduction**

The Avar Khaganate was a powerful political entity that dominated the Carpathian Basin during the late 6th to early 9th centuries AD. Significant regional cultural and social changes, including the emergence of new forms of social identity, marked the period of Avar rule. The archaeological excavations at Keszthely-Fenékpuszta, a significant Avar cemetery site in the Balaton region, excavated over the last few decades, have provided mass evidence for understanding Avar-related social identities and their evolution over time. The evidence from this key site forms the principal case study from which explore 'Avar' social identities in this dissertation.

The Avars were an alliance of various Eurasian steppe nomads and existing descendants of the Roman provincial population who shaped the socio-political geography of Central and South-East Europe. However, their origins and the dynamics of their societies are little understood as their early history was primarily written by their enemies (Curta, 2011, p. 17, 281; Pohl, 2018, p. 5). The Avar ethnocultural relationship with the Byzantines, Huns, various German, Slavic and Italian-related populations and broader European societies regarding material culture, language origin, and social dynamics are also under-investigated (Curta, 2011, p.17; Pohl, 2018, p. 5, 11). The lack of current academic evidence published in English from the Carpathian Basin region makes it challenging to comprehensively understand the early medieval period considering all the geographical and socio-political influences on the area.

Previous research on the Avar Khaganate has focused primarily on the political and military aspects of the period (Curta, 2001, p.120-190; Heather, 2010, p.443). However, more recent archaeological research has highlighted the importance of studying the various society's social and cultural dimensions (Gyucha, 2016, p.1-2). Scholars have argued that the Avar Khaganate was not a homogenous entity and that social identities varied among different groups (Hakenbeck, 2012, p. 9, 145-146). Therefore, new

approaches to studying Avar's social identities are necessary to better understand this complex period of history.

This dissertation will examine new approaches to studying Avar social identities based on the evidence from Keszthely-Fenékpuszta. Specifically, it will explore how different forms of material culture, burial practices, and social organisation can provide insights into 'Avar' social identities and their evolution over time. It will also discuss the implications of these new approaches for understanding the broader social and cultural context of the so-called Avar Khaganate.

One of the key findings of the excavations at Keszthely-Fenékpuszta is the presence of different burial practices among the Avar population. While cremation was the dominant form of burial in the early Avar period, inhumation became more common later (Cenker, 2019, p. 122). This shift in burial practices has been interpreted as evidence of changes in Avar social identities and their relationship with the period's broader cultural and social context. For example, Capuzzo et al. argue that cremation use in the early Avar period focuses on mobility and a desire to maintain ties with ancestral homelands (Capuzzo et al. 2016). However, inhumation became more common later as Avar society became more settled and integrated with local populations. This suggests that social identities were not fixed and evolved over time in response to changing cultural and social contexts. The different groups within the Avar community may have had other funerary practices and beliefs about the afterlife (Amorim et al., 2020). The presence of grave goods such as weapons, jewellery, and pottery also indicates that social status and wealth played a role in determining burial practices (Csáky et al., 2020).

In addition to burial practices, the analysis of skeletal remains from the cemetery has shed light on the health and living conditions of the Avar population in the Balaton Region. Studies have revealed evidence of malnutrition, infectious diseases, and physical trauma, indicating that life was difficult for many individuals. These findings suggest that social



status and access to resources may have played a role in determining health outcomes and indirect reasons for mass migration (Gnecchi-Ruscione et al., 2022).

The study of Avar social identities in the Balaton Region has also benefited from recent advances in scientific techniques such as DNA analysis. Researchers have reconstructed the region's population history by analysing genetic material from skeletal remains and identifying migration and admixture patterns. This has provided valuable insights into the ethnic and cultural makeup of the Avar community in this region and the factors that shaped their social identities (Neparáczki et al., 2019; Csáky et al., 2020).

Finally, social organisation and the structure of Avar society also played a role in shaping social identities. Hakenbeck argues that Avar society was not homogenous but comprised different social groups with distinct identities (Hakenbeck 2012). For example, the presence of female warriors in Avar society suggests that gender plays a role in shaping social identities (Curta, 2001, p. 124). Moreover, using different burial practices, including enslaved people or retainers in some burials, indicates social differentiation within the Avar-style population (Bóna, 1990).

New approaches to studying Avar social identities based on the evidence from Keszthely-Fenekpuszta could provide valuable insights into the complexity of Avar society and the evolution of social identities over time. Scholars can better understand Avar society's diversity and its relationships with the period's broader cultural and social context by examining different forms of material culture, burial practices, and social organisation. This study has drawn on various sources to explore these new approaches, including archaeological data from Keszthely-Fenekpuszta and previous research on the Avar Khaganate and related topics.

## **1.2 Summary of Aims, Scope and Structure**

This study aims to comprehensively analyse the archaeological and historical evidence for creating identities known under the label 'Avar' in the Carpathian Basin, focusing on the Keszthely-Fenékpuszta site. By examining the funerary customs, material culture, and social and environmental context of this large community through the entire period, I hope to contribute to a deeper understanding of the complex processes of identity formation and cultural interaction in the early Middle Ages.

The thesis is divided into four chapters. Chapter I introduces the research topic, outlining the study's background, aims, and scope and presenting the case study. It also discusses the analytical methodology for the analysis. Chapter II will delve into the funerary customs of the 'Avar' period in the Transdanubian/Lake Balaton region, specifically focusing on the Keszthely-Fenékpuszta archaeological site. This chapter will analyse various aspects of funerary practices to gain insights into the beliefs and customs of the people who lived during this period.

The orientation of the graves, size and shape of the burials, coffin usage, double burials and reuse, and horse burials will all be explored in this chapter. Chapter III will investigate the role of material culture in the Avar funerary practice, including male and female belt sets and buckles, pendants and accessories, earrings, bracelets, weaponry and cavalry fittings. These material culture items are not only of aesthetic value but also convey valuable information about the chosen social identities and gender roles of the people who lived during this time.

Chapter III also presents the chronological phases of the material culture, focusing on the changes and developments that occurred over time. An overview of the material culture's network system will also be provided to understand the trade and exchange routes between different regions.

Chapter IV offers a thematic discussion of three topics related to the 'Avar' period in the Transdanubian/Lake Balaton region. First, it will explore the creation of the 'Avar' identity in light of recent results from ancient DNA analyses. In addition, it will examine the extent of population movement in creating the Avar Khaganate. Finally, it will investigate the potential impact of climate change on society during the 'Avar' period.

The final section of Chapter IV will summarise the study's key findings and their implications for our understanding of the Avar period in the Carpathian Basin. It will also discuss the potential for further research in this area, including the need for continued archaeological and genetic investigations to understand better the population movements and cultural interactions that shaped this critical period of European history.

### **1.3 Background**

The Carpathian Basin was an important location during the early Middle Ages, as it was the meeting point of several different cultures and ethnic groups. This research examines the expression of ethnic affiliations and group identities of the people buried in the Keszthely-Fenekpuszta cemetery in the Transdanubian region near Lake Balaton during the so-called Avar period. The study will provide insight into the cultural and social dynamics of the area during this time and contribute to the broader discussion of ethnicity in the early Middle Ages.

While investigating 'Avar-related' case studies, I found written sources of several hundreds of settlements in the Carpathian Basin offering evidence to modern-day scientists to reconstruct historical events between 550 and 900 AD. Numerous projects have occurred around Pannonia, but most material culture data remain unprocessed (Garam, 2021, p.85-90) or under-researched. However, most sites are a continuity of Roman settlements (Heinrich-Tamáska, Müller, Straub, 2012, p. 19-26).

In addition, to gain comprehensive knowledge of the early medieval identities, it is vital to investigate the causes of the population movements and understand the extent and

scope of past societies' commercial and socially embedded exchange activities (Hakenbeck, 2012, p. 413-434 ).

In his 1978 article, 'The Problem of Funeral Archaeology and the Investigation of the Avar Period Cultures,' (Young, 1978, pp. 471-477) Andrew Young outlined the challenges and limitations of studying the Avar period using funeral archaeology, more than forty years. Young noted that funeral archaeology had been the primary method used to study the 'Avar' period until that point, but it had some significant limitations.

According to Young, one of the main problems with funeral archaeology was that it focused on elite burials and grave goods while neglecting the vast majority of the population. This meant that the picture of the 'Avar' society that emerged from funeral archaeology was skewed towards the elite and did not accurately reflect the experiences and practices of the broader population (Young, 1978, pp. 471-477).

Additionally, Young noted that funeral archaeology often relied on outdated assumptions about culture and ethnicity, which could lead to inaccurate interpretations of the archaeological record. He argued that it was essential to approach funeral archaeology with a critical and nuanced perspective considering the complex and diverse cultural and social contexts in which the Avar period occurred (Young, 1978, pp. 471-477).

Recently Curta has added more criteria to Young's list. He stated that Gyula László's slavish application of analyses is "based on dubious ethnographic parallels and does not account for the variety of situations within the Avar Khaganate either in chronological or in geographical terms" (Curta, 2021, p. 2). He also criticised the idea that burials without funerary evidence were automatically interpreted by László as graves of enslaved people (Curta, 2021, p. 3).

Even though ethnicity can be traced by funerary grave goods such as weapons, dress accessories, and food remains based on their symbolic meaning, graves without material culture also can shed light on distinct funerary traditions. What symbols and practices are chosen or not, when and by whom always depends on the current socio-political power, which affects the closest environment of the deceased individual. We also should consider which members of the society represented their mutual selfhood and daily and military activities to connect through certain items (Gal, 2020, p. 31).

Most archaeological interpretations of the Avar period's communities contain outdated and misinterpreted information (Young, 1978, pp. 471-477; Curta, 2021, p. 2). Past scholarly conclusions were mainly based on visual examinations of recovered objects, grave goods and building materials, and the excavations were primarily carried out between 1930 and 1955 (Young, 1978, pp. 471-477). Numerous research projects in the Carpathian Basin were only partly finished because of the lack of financial support. The documentation process shows gaps and inconsistencies in the interpretations because volunteers and amateurs also participated in past excavations with limited archaeological skills and experience (Müller, 1987, p. 105-107). Some data and physical evidence have been lost or forgotten in the massive interval between the excavations and publication (Young, 1978, pp. 471-477).

Western sources focus on interdisciplinary approaches and theoretical frameworks, often drawing on postcolonialism and intersectionality to analyse 'Avar' social identities. For example, Radcliffe, in her 2015 article " Postcolonial Intersectionality and the Colonial Present ", discusses how diverse social facets such as gender, race-ethnicity, location, and class are articulated in postcolonial societies as intersectional hierarchies, which are grounded in colonial difference and exclusionary citizenship forms (Radcliffe, 2015). The study suggests that intersectional hierarchies are inscribed in sociocultural meanings, embodiments, and the production of space across different scales of less developed countries. It outlines the relational, multiscalar dynamics that differentiate postcolonial

societies, arguing that development's will to improve obscures social heterogeneity but implicitly and explicitly endorses colonial imaginaries of social relations (Radcliffe, 2015).

In contrast, Hungarian and German-speaking sources focus more on traditional archaeological and historical methods. For example, in the study from 2010, "Avar Goldsmith's Work from the Perspective of Cultural History", Csanád provides a comprehensive overview of Avar material culture and social organisation, drawing on a range of archaeological and historical sources (Csanád, 2010, p. 146-160). Similarly, in his work "Byzantine Belt Ornaments of the 7th and 8th centuries in Avar Context", Daim provides a detailed account of the Avar period, drawing on various historical sources and funerary evidence (Daim, 2010).

Anglo-American scholarship on the Avars tends to be more limited than scholarship in German, Hungarian, or other languages spoken in the region. However, several essential works still contribute to our understanding of 'Avar' social identities. For example, Bruce Grant's book titled "The Captive and the Gift: Cultural Histories of Sovereignty in Russia and the Caucasus" explores the complex relationship between power, identity, and sovereignty among various ethnic groups in the Caucasus, including the Avars (Bruce, 2009). In this work, Grant examines how Avar social identities have been shaped and negotiated through historical and contemporary interactions with Russian colonialism and state-building processes (Bruce, 2009).

Theoretical understanding of ethnic groups has changed massively in the last thirty years, from the past cultural-historical approach to a more nuanced understanding of ethnogenesis. Pohl coined the term „strategies of distinction“, highlighting that people with different biological heritages often used the same physical and social expression methods to form new social groups and identities (Pohl, 2006; Pohl & Mehofer, 2010, pp. 15-17). Whereas earlier scholars such as Alföldi or Bóna often used general categories/labels to define ethnic groups, such as Lombard, Gepid, Hun, or Avar, in most

cases ignoring the chronological, socio-cultural, and other differences regarding the excavated material culture (Alföldi, 1934; Bóna, 1974). I outlined some of these issues in my undergraduate dissertation, including how rarely Bóna used absolute dating methods (Gal, 2020, pp. 7-10). It is also essential to mention these researchers here because their works have shaped the historical beliefs of academics around Eastern Europe in the mid-late 20th century.

Most of the culture-historical approaches of the mid-to-late 20th century did not consider the possibility of peaceful coexistence and acculturation among the various ethnic groups in the Carpathian Basin during the Early Middle Ages. However, archaeological evidence indicates a strong chance of hybridity among different ethnic groups. According to Hakenbeck's isotopic analysis results from five various sites from modern-day Hungary, including Keszthely-Fenékpuszta, a high level of intra-population acculturation is demonstrated with many individuals who experienced massive changes over their lifetimes (Hakenbeck et al., 2017, p. 17-19).

While there are certainly differences in the methodologies and theoretical frameworks used by Western, Hungarian, and German researchers, there is also a great deal of overlap in the topics covered. For example, all schools of research agree on the importance of Avar horse burials as a marker of social status, and all sources acknowledge the complex and fluid nature of Avar social hierarchies (Csanád, 2010; Pohl & Mehofer, 2010; Curta, 2021).

This research investigates the significance of socio-political and ethnocultural interactions between the so-called Avar and other communities in the Carpathian Basin through the integrated analysis of material culture used in burial practices to construct the 'Avar' identity (if there are any), following the theoretical approaches developed by Pohl and others. The new perspectives gained from textual sources, current isotopic and genomic methods, and the potential impact of climate change on Avar movements and

ethnogenesis between the late sixth and early ninth centuries will also be explored. Intrusive new artefacts into this vital region could outline the nature of the population movements, inter-group exchange, and acculturation/adoption of new social practices by existing populations. The approaches used to follow and adapt the new anglophone theoretical strategies from the last three decades and apply them to reassess the Hungarian excavated data. My thesis also involved translations and analyses from Hungarian and German sources into English.

#### 1.4 Case study: Keszthely - Fenékpusztá

The Lake Balaton region has been inhabited since prehistoric times. However, only archaeological finds have provided some basis for the millennial history, including the Roman era, before the Hungarian/Magyar conquest. In the sixth and seventh centuries AD, some Slavic tribes invaded the Carpathian Basin, but the Avar rule was established and remained stable for much of the period from the later 6th to 9th centuries (Szántó, 1961, p.471-472; Softysiak, 2006, p. 339-364).

Based on archaeological horizons and partly historical data, archaeologists usually distinguish three stages of the Avar period: the early (568-650-(670) AD), middle(650-700-(710) AD), and late (700-830-(850)AD) Avar age (Bálint, 2004, p. 335-36; Daim, 2010, p.67-68; Szücsi, 2019, p. 8-11).

Keszthely – Fenékpusztá (Figure 1) is widely considered to be the most important archaeological site of the so-called Avar period in Hungary due to its historical significance as a Late Roman fortress settlement or castellum (Figure 2). The estate had a central courtyard with columns and several rooms that served different functions, such as a reception hall, a dining room, and bedrooms. The finds from the villa included pottery, glass vessels, coins, and metal objects, providing insights into the lifestyle and material culture of the Roman inhabitants of Keszthely-Fenékpusztá. The remains of a medieval church and a cemetery indicated that Christianity had become the dominant religion in the region by this time. Excavations also revealed the presence of a hypocaust system,



which was used for underfloor heating, and numerous Roman coins and pottery fragments (Müller, 2020, p.99).

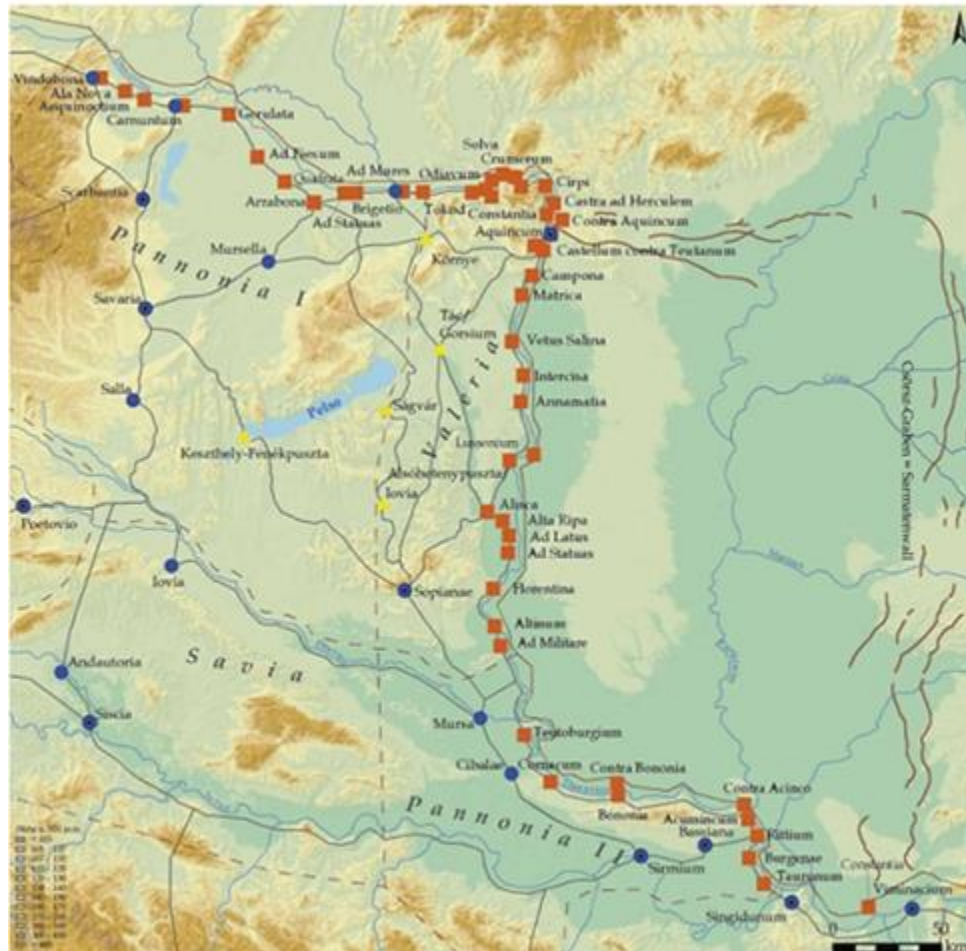


Figure 1. Pannonia with a location of Keszthely-Fenékpuszta between the 4th and 5th century AD. Heinrich-Tamácska, Müller, Straub, 2017, p.7.



Figure 2. Keszthely-Fenekpuszta as a Late Roman settlement or castellum. Plan with building structure reconstruction. Heinrich-Tamácska, Müller, Straub, 2017, p.29.

Many burial mounds and graves were discovered alongside the fortification, including Christian and pagan graves (Figure 3.) The burials were found within and immediately outside the fort, containing the remains of both Late Roman provincial inhabitants and later populations (For additional information on the plan of the site, see Figure A1 in Appendix A). These graves provide valuable insights into Avar funerary practices, including horse burials, cremation, and the inclusion of grave goods (Müller 1987) (For additional information on the diversity of the material culture, see Figure A2 in Appendix A).

Yet, despite offering priceless insights into the Avar period in Europe, it is essential to acknowledge there are certain limitations and constraints inherent to this large dataset. Firstly, one of the primary limitations is related to the storage and preservation of artefacts and human remains. Over time, storage environmental factors and natural decay processes significantly affected the integrity of archaeological materials. Such factors resulted in incomplete or fragmented objects and skeletal remains, making it challenging to obtain comprehensive data on all the graves and assemblages.

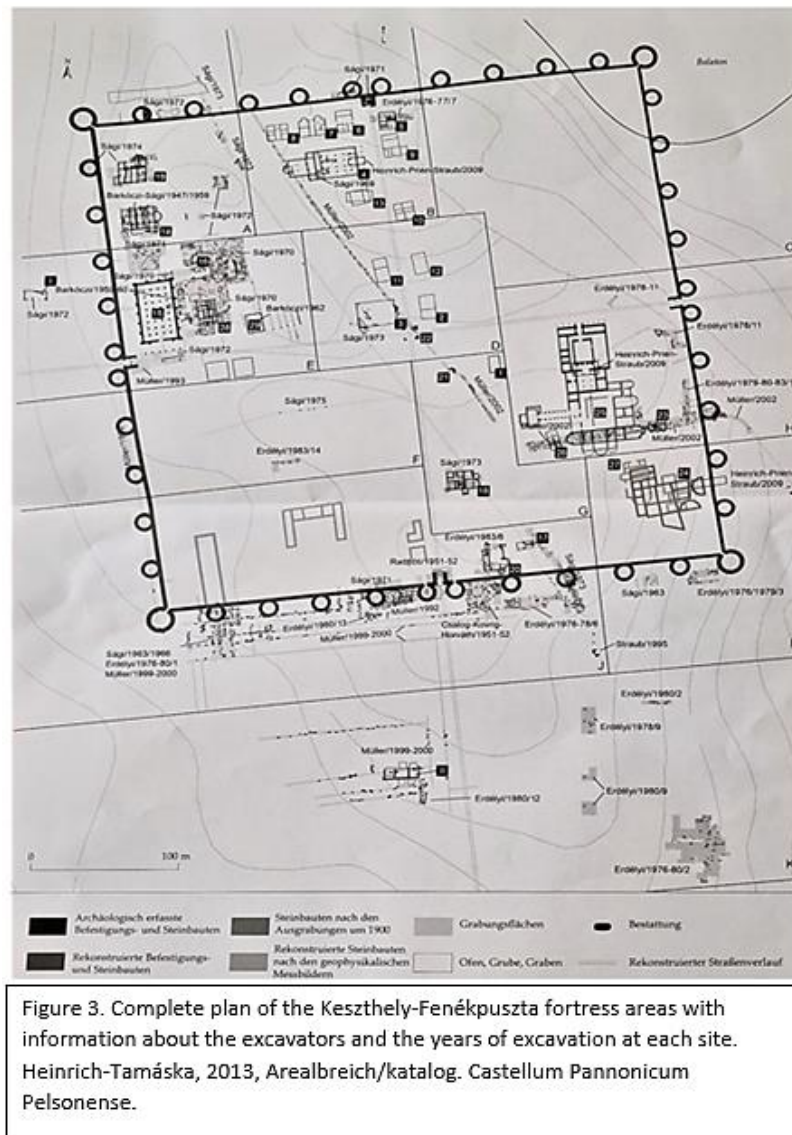
Another constraint is the potential for sampling and recording bias. Archaeological excavations were often conducted in specific areas of the site due to logistical constraints or prior research interests. The selective sampling in the case of Keszthely-Fenékpuszta led to an incomplete representation of the entire cemetery, which initially suggested cultural uniformity and the absence of any variations in burial practices and social identities. For example, Vilmos Lipp's excavations in the late 19th century recorded only a small selection of graves in detail. Later works by Árpád Csák, Károly Sági and others in the 20th century provided more systematic documentation, but many graves still lacked detailed records and quantification. Overall, less than half of the estimated 11,000 graves in the main cemetery areas have been published in detail. This partial and inconsistent dataset presents challenges in obtaining fully systematic quantitative information on grave constructions, body positions, grave goods, and other aspects of the cemeteries. Additional limitations of the dataset with examples are also represented in Figure 4.

Due to the COVID-19 pandemic, many researchers, including myself, have been unable to access physical archives and archaeological sites. As a result, I have had to rely on existing optimum-quality, published cemetery data from the site and from the Balaton region of the Carpathian Basin to conduct my research. I have applied current Western European and American theoretical approaches to the existing data to compensate for this limitation. This approach allows me to make the most of the available resources and draw meaningful conclusions about the 'Avar' period despite the current rules on physical access to archaeological materials.

The research involves a variety of grave sites at Keszthely-Fenékpuszta, more specifically:

- In the southern part of the fortress, there were 300 graves excavated by Lipp in 1883 and 1885. Unfortunately, the nature of these burials (name of the cemetery site: Lipp1883/1885) remains unknown due to the destruction of data and material culture caused by a bomb in 1945.
- Csák excavated 135 graves from the South-East part of the fortress in 1901, characterising them as Late Roman (name of the cemetery site: Csák1901).
- Radnóti excavated 76 burials outside of the southern part of the fortress, which displayed Frankish influences (name of the cemetery site: Radnóti1951/1952).
- Sági's excavations in 1963 and 1967 revealed 100 Avar-style furnished burials (name of the cemetery site: Sági1963/1967)
- Barkóczi found in 1970 another total of 12 graves that are believed to be associated with the Frankish/Carolingian period (including Grave 5 and 8 mentioned in Figure 6 - Barkóczi1970-S5 and S8).
- Horváth and Müller simultaneously excavated 127 Late Roman and Frankish-influenced burials between 1973 and 1975 (name of the cemetery site: Horváth-Müller1973/1975)
- Müller conducted excavations between 1999 and 2000, uncovering 154 graves with a variety of Late Roman and Avar-style characteristics (name of the cemetery site: Müller1999/2000)

Over one thousand graves which are including horse burials from the late 4<sup>th</sup> to the second half of the 9<sup>th</sup> century have been excavated and published from Keszthely-Fenékpuszta. Detailed information about the excavations chronologically is presented in Figure 4.



- Between 1883 and 1885, Vilmos Lipp excavated 300 graves, the majority of which had already been disturbed.
- Following Lipp's early death in 1886, Árpád Csák conducted excavations between 1889 and 1901, uncovering 135 graves and numerous remains of buildings assumed from the Roman period.
- The Csák excavations revealed several inaccuracies in the original plans, partly explained by the fact that some buildings had been rebuilt multiple times.
- In early 1945, the artifacts from Fenékpuszta, kept in Keszthely, were packed into crates for evacuation by train. However, on March 28th, the train was hit by a bomb attack, resulting in the irreplaceable relics collected over half a century being destroyed.
- In 1951 and 1952, excavations uncovered a gate protected by round towers, a blacksmith workshop in the middle of the gate, a road leading through the gate, and on both sides, a cemetery believed to date back to the Carolingian period with 76 graves.
- After the Hungarian Revolution in 1956, László Barkóczi and Károly Sági continued the excavations, and in 1960, the early Christian basilica was restored and its remains can still be visited today (Heinrich-Tamáška, Müller, Straub, 2012).

- In 1963, 36 graves were excavated near the southwest tower outside the fort. These included 29 inhumation graves and 7 cremation graves.
  - In 1966, 48 inhumation graves were excavated along the exterior of the southern fort wall.
  - In 1966, 23 additional late Roman graves were excavated west of the south gate.
  - In 1967, 15 graves were excavated in an area televised by Hungarian state media, numbered TV1-TV14.
- So the total of 99 graves includes 36 from 1963, 48 + 23 from 1966, and 15 from 1967.
- The 1963 report describes the 36 graves excavated that year. Only a few (e.g. graves 4, 39, 75, 81) can be positively dated to the late Roman period. The majority contained 6th-7th century AD grave goods.
  - No documentation exists about the number or dating of graves from the 1966-1967 excavations specifically. But the cemeteries are assessed generally as 6th-7th century AD in date, contemporary with early Avar finds (Müller, 2020).

**Figure 4.** Based on the mentioned data, excavations and research efforts at Keszthely-Fenékpuszta are continually expanding and deepening our understanding of burial areas, the number of graves, their orientations, and material culture. According to the above highlighted limitation of the available data and since there is currently no available unified summary about the number of the burials on the site, their orientation and assumed chronological identification, the data I presented in this thesis, while partial, is crucial for gaining historical and archaeological insights into the region. The details presented here can assist in conducting further research and analyses based on current knowledge, which can contribute to a deeper understanding of the Avar-related period. Gal, 2023. Nottingham.

- Between 1999 and 2000, with the support of the National Cultural Fund, another large-scale excavation took place under the leadership of Róbert Müller.
- This effort resulted in the excavation of 154 graves across 16 research trenches.
- Between 2006 and 2009, under the leadership of Heinrich-Tamáška Orsolya and with the support of the Deutsche Forschungsgemeinschaft and the Hungarian Academy of Sciences, accredited excavations were carried out. Additionally, documentation from previous excavations was digitized, and certain samples underwent strontium and radiocarbon dating analyses.
- The process of digitization, data analysis, and the reconstruction of the site continued in 2011 under the leadership of Péter Straub, Orsolya Heinrich-Tamáška, and Roland Prien.
- The excavation of the 300 Avar period burials took place in front of the southern wall of the fortress. Over 1000 graves from the late 4th to the second half of the 9th century have been excavated (Heinrich-Tamáška, Müller, Straub, 2011)

Due to the various chronological phases, the size of the cemeteries, the high number of graves and the diversity in the socio-cultural identity of their material culture, I chose this area as one of the starting points of my work. The excavations of Fenékpuszta provided evidence through their unique finds that early Christians and Roman-related societies existed continuously on the site between the sixth and seventh centuries. For example, a gold pin with the name Bonosa (Figure 5) proves that some ethnic societies with Roman identity characteristics remained after the so-called 'Hun', 'Gepid' and 'Avar' invasions (Müller, 2020, p. 90).



Figure 5. 1-4 Keszthely – Fenékpusztá material culture. 1-4 early Christian Basilica. 5-11 various scales: Keszthely-Fenékpusztá, horreum cemetery-number. 7: gold pin with the name 'Bonosa'. Müller, 2020, p.74.



The site has yielded numerous examples of Avar style-related jewellery, including gold and silver earrings, necklaces, and bracelets, as shown in Figure 5 above. These items are notable for their intricate designs and use of precious stones and gems (Müller, 2010a, b). Numerous examples of Avar-period weapons, including swords, spears, and arrowheads, have also been recovered. These weapons are significant not only for their impressive craftsmanship but also for what they reveal about Avar period societies and warfare (Müller, 2010a, b). The weapons provide evidence of the Avar military's organisation, tactics, and interactions with neighbouring regions.

Recent excavations also revealed Avar-period style settlement and architectural evidence. The remains of a large building with multiple rooms suggest that the site was a significant centre of Avar power and possibly served as a royal palace or administrative centre inside the former Roman fortress. (Müller, 2020, p.91). Carolingian-related burials have also been found at Keszthely-Fenekpuszta over the years. These burials are associated with the Avar period cemetery and date to the 9th century AD and were first discovered during excavations led by László Barkóczy in the 1960s (Figure 6.). Barkóczy uncovered a total of 12 graves that are believed to be associated with the Frankish/Carolingian period. The Carolingian-related burials at Keszthely-Fenekpuszta are characterised by their distinctive grave goods. These include weapons like spears and swords, jewellery, belts, and other personal items. The tombs are thought to belong to members of the local elite, who may have been of Avar or Slavic origin. The presence of Carolingian-style artefacts suggests that these individuals may have had connections to the Frankish Empire, which controlled much of Central Europe during the 9th century (Barkóczy 1968, p. 275-311).

Burial	Date	Discoverer	Grave Goods	Interpretation
Grave 5	9th century AD	László Barkóczy (1970s)	Weapons (spears, swords), jewelry, belt	Male burial of a local elite with possible connections to the Frankish Empire
Grave 8	9th century AD	László Barkóczy (1970s)	Jewelry, including a necklace with pendants and earrings	Female burial of a local elite with possible connections to the Frankish Empire
Other graves	9th century AD	László Barkóczy (1970s)	Various grave goods, including weapons, jewelry, and personal items	Belonged to members of the local elite with possible connections to the Frankish Empire

Figure 6. Some of the essential Carolingian burials at Keszthely-Fenekpuszta include Grave 5, which contained a richly furnished male burial, and Grave 8, which had a female burial with several high-quality jewellery items. Gal. 2023. Nottingham

Through the investigation of the Fenékpuszta fortress and its surroundings, it has been revealed that seven cemeteries were utilized during the late 6th century and the initial period of the 7th century. These cemeteries potentially coincide with the Szigliget find, and three other large cemeteries established in the latter part of the 6th century and remained in use until the conclusion of the Avar period. Among the Fenékpuszta cemeteries, the one in front of the southern fortress wall presents evidence of a preceding phase, with continuous burials spanning from the middle of the 4th century to the early 7th century. This pattern supports the hypothesis that most of the fortress's early Avar population comprised immigrants (Müller, 2020, p.92-94).

The considerable number of cemeteries, along with the observed variations and shared characteristics such as the presence of diverse objects from Western and Eastern Mediterranean, Early Byzantine, Balkan, and Germanic Merovingian cultures, implies the arrival of settlers, potentially including military groups, from Germanic territories. The material culture associated with these cemeteries contains types absent from early Avar period cemeteries in the Transdanubian region and present but missing styles in this context. Hence, it is appropriate to designate this mixed population, whose cemeteries

lack ethnic Avar presence, as representing the early phase of the Keszthely Culture (Müller, 2020, p.92-94).

During the second half of the 7th century, a gradual transformation in material culture occurred, leading to the emergence of the late phase of the Keszthely Culture by the 8th century. This transformation suggests the presence of diverse communities comprising settlers and immigrants from various locations and at different historical periods. These include individuals fleeing the Slavs in the eastern Alpine and Dalmatian regions and those relocated from the Balkans (Müller, 2020, p.92-94).

## **1.5 Analytical Methodology**

### **Methodology:**

This study will use a multi-faceted methodology incorporating material and non-material evidence to compare traditional and new approaches to understanding Avar social identities in the Balaton Region. The following steps will be taken:

#### **➤ Sources of Evidence:**

Sources of evidence for studying Avar social identities in the Balaton Region have involved various archaeological, historical, and linguistic methods. Archaeological evidence, including settlements, cemeteries, and material culture, has been the primary data source for reconstructing the Avar-style communities' social and economic organisation. For example, excavations at Keszthely-Fenékpuszta have uncovered many archaeological remains, including a large cemetery with hundreds of graves and settlement structures, ceramics, metalwork, and other items (Müller, 1987; Garam, 2021). Analysis of this material has provided insights into the social stratification, gender roles, and economic activities of Avar communities in the Balaton Region.

In addition to archaeological evidence, historical sources such as written documents and inscriptions have been used to supplement and contextualise archaeological data. For

example, the Frankish Annals provide a detailed account of the military campaigns and diplomatic relations between the Avars and the Frankish Empire in the 8th century (Scholz 1972). Similarly, inscriptions on objects such as belt buckles and jewellery provide valuable information about the cultural and religious beliefs of the Avars (Heinrich - Tamáska, Müller, Straub, 2012; Garam, 2020).

Linguistic evidence, particularly the study of toponyms and anthroponyms, has also been used to shed light on the Avar-related communities' social identities and cultural connections. For example, the analysis of place names in the Balaton Region has revealed a significant influence of the Avar language and culture on local toponyms (András Róna-Tas, 1996; Takács, 2019). Similarly, the study of personal names in Avar-period graves has identified naming practices that reflect social status and cultural affiliations (András Róna-Tas, 1996; Pohl, 2018).

➤ **Typological Analysis of Deposition of Categories of grave-goods**

The first step in the methodology is a typological analysis of certain forms of material culture evidence from graves. The study will focus on social, political, and economic identities being displayed and negotiated through the selected forms of artefacts used as grave goods. This analysis will provide a basis for comparing the two approaches.

Typological analyses of metalwork and jewellery from Avar-period sites have been used previously to identify distinct styles and motifs that reflect cultural and religious beliefs, social status and gender roles among Avar societies (Csiky, 2015). For example, belt buckles decorated with animal motifs have been interpreted as symbols of Avar's identity and power. At the same time, women's jewellery, such as necklaces and earrings, often feature intricate designs and precious materials that reflect their high social status (Müller, 1987; 2010a).

Let me represent this with a table (Figure 7), which summarises some of the types of material culture found at Keszthely-Fenékpuszta, which supports a native population in the region between AD 550 and 900. An essential and innovative part of my analysis was the selection of types of grave goods for research that have not been viewed as 'Avar' but rather indicators of social expression of an existing provincial Roman population that continued to live in the Balaton region throughout the early Middle Ages. Figure 7 summarises my analysis of these artefact groups.

Typological analyses have also been used to compare the material culture of Avar communities in the Balaton Region with those in other regions of the Carpathian Basin and beyond. For example, the analysis of pottery from Keszthely-Fenékpuszta has revealed similarities with pottery from other Avar-period sites in Hungary and Slovakia and connections with pottery traditions from the Byzantine Empire and the Balkans (Herold, 2014). This suggests that Avar communities in the Balaton Region were part of a wider cultural network that extended beyond the Carpathian Basin. I created another table to generally represent this aspect of that methodology (Figure 8).

Material Culture	Evidence	Gender of Burials
Glass beads	Glass beads found at Keszthely-Fenekpuszta are similar to beads found in other regions of Europe, suggesting that there was a trade network in place that extended beyond the Carpathian Basin. The presence of these beads indicates that the native population at Keszthely-Fenekpuszta had access to the goods from outside the region, and suggests that they were involved in long-distance trading.	72 males, 63 females
Brooches and buckles	A variety of brooches and buckles have been found at Keszthely-Fenekpuszta, many of which are similar to those found in other regions of Europe. The similarity in design suggests that there was a cultural exchange taking place between Avar communities in the Balaton Region and other communities in Europe.	62 males, 73 females
Iron tools and weapons	The iron tools and weapons found at Keszthely-Fenekpuszta were similar in design to those found in the other regions of Europe, and were likely produced using similar techniques. This suggests that there was a cultural exchange taking place between Avar communities in the Balaton Region and other communities in Europe, and that the Balaton Region was not isolated from wider cultural developments.	69 males, 66 females
Decorated bone and antler objects	The decorated bone and antler objects found at Keszthely-Fenekpuszta have parallels in other regions of Europe, suggesting that there was a shared cultural tradition in the production of these objects. The similarity in style and design suggests that Avar communities in the Balaton Region were part of a wider cultural network that extended beyond the Carpathian Basin.	65 males, 70 females
Coins	Coins from the Byzantine Empire and the Arab Caliphate have been found at Keszthely-Fenekpuszta, suggesting that there was a trade network in place that extended beyond the Carpathian Basin. The presence of these coins indicates that the native population at Keszthely-Fenekpuszta had access to goods and currency from outside the region.	71 males, 64 females

Figure 7. Typological analyses have often been used to compare the material culture of Avar communities in the Balaton region with those in other areas of the Carpathian Basin and beyond. Gal,2023. Nottingham.

Material Culture	Evidence
Ceramic vessels	<p>Numerous ceramic vessels have been found at Keszthely-Fenékpuszta, including bowls, cups, jars, and pitchers. These vessels were often decorated with simple geometric designs, and some were adorned with incised or stamped patterns. The presence of pottery suggests that the native population had a developed skill in ceramics production, which was an important aspect of their culture.</p>
Bone and antler tools	<p>A variety of bone and antler tools have been recovered from Keszthely-Fenékpuszta, including awls, needles, scrapers, and combs. These tools were likely used for a range of tasks, such as sewing, leatherworking, and woodworking. The use of these materials demonstrates the ingenuity and resourcefulness of the native population.</p>
Jewellery and personal adornment	<p>Several pieces of jewellery and personal adornment have been found at Keszthely-Fenékpuszta, including necklaces, bracelets, and earrings made of bone, shell, and glass beads. These items suggest that the native population had a sophisticated sense of style and may have placed a high value on personal adornment.</p>
Agricultural tools	<p>The presence of ploughshares, sickles, and other agricultural tools at Keszthely-Fenékpuszta suggests that the native population engaged in farming and animal husbandry. The development of agriculture was a major milestone in human history, and the presence of these tools suggests that the native population had a significant level of technological sophistication.</p>
Burial practices	<p>The native population at Keszthely-Fenékpuszta had distinct burial practices, which included placing the deceased in a flexed position and covering the body with a layer of charcoal or ash. Grave goods, such as pottery vessels, jewellery, and weapons, were also often included in the burials. These burial practices provide insight into the religious and cultural beliefs of the native population.</p>

Figure 8. Summarises some of the types of material culture found at Keszthely-Fenékpuszta, which supports the existence of a native population in the region between AD 550-900 to represent typological analyses. Gal, 2023. Nottingham.

➤ **Contextual Analysis:**

The third step in the methodology will be a contextual analysis of the evidence. This will involve considering the social, political, and economic context in which the evidence was created. The research will consider trade networks, settlement patterns, and political alliances. This analysis will provide a basis for comparing the two approaches. For example, the study of settlement patterns, architecture, and material culture at Keszthely-Fenékpuszta has revealed a complex system of land use, with different areas of the settlement being used for farming, animal husbandry, craft production, and trade (Hakenbeck, 2012). The study suggests a diversified economy and high social and economic organisation within Avar society.

Contextual analyses have also been used to reconstruct the environmental conditions in which Avar communities lived, including climate, vegetation, and natural resources. For example, the analysis of pollen and plant remains from Keszthely-Fenékpuszta and other sites in the Balaton Region has revealed changes in vegetation and land use over time, including the expansion of agricultural land and the intensification of animal husbandry (Hakenbeck et al., 2017). This suggests that Avar communities in the Balaton Region were able to adapt to changing environmental conditions and develop new strategies for subsistence and resource management. I made a table of summary with a few Avar-related sites from around the Carpathian basin (Figure 9.) as an example:



Environmental Condition	Description	Related Archaeological Sites
Climate	The climate in the Balaton Region during the Avar period was generally mild and humid, with warm summers and cool winters. The region received a moderate amount of precipitation throughout the year, with snowfall occurring in the winter months.	Avar period settlements in the Carpathian Basin, including Szeged-Óthalom, Vác-Széchenyi Hill, Debrecen-Hajdúsámson, and Keszthely-Fenekpuszta
Vegetation	The Balaton Region was covered by a mix of forests, meadows, and wetlands during the Avar period. The forests consisted primarily of oak, beech, and pine trees, while the meadows were home to a variety of grasses and wildflowers. The wetlands included marshes, bogs, and fens, and were important sources of water, fuel, and building materials for Avar communities.	Avar period settlements in the Carpathian Basin, including Zalavár, Szeged-Óthalom, and Keszthely-Fenekpuszta
Natural Resources	The Balaton Region was rich in natural resources that were important to Avar communities. These resources included timber, which was used for building homes, boats, and tools; iron, which was used to produce weapons, tools, and other metal goods; fish and game, which were important sources of food; and medicinal plants, which were used to treat various ailments. Additionally, the Balaton Region was located on important trade routes, which allowed Avar communities to exchange goods and ideas with other communities in Europe and the Middle East.	Avar period settlements in the Carpathian Basin, including Szeged-Óthalom, Vác-Széchenyi Hill, Debrecen-Hajdúsámson, and Keszthely-Fenekpuszta

Figure 9. Table of summary with a few Avar-related sites from around the Carpathian basin to reconstruct the environmental conditions in which Avar communities lived, including climate, vegetation, and natural resources as a representation of contextual analyses. Gal, 2023. Nottingham.

The table includes Keszthely-Fenékpuszta as a comparison site alongside other Avar period settlements in the Carpathian Basin. By comparing the environmental conditions and resources of different Avar settlements, we can better understand their similarities and differences and how these factors influenced Avar culture and society in the region. Moreover, contextual analyses have been used to compare the social and economic contexts of Avar communities in the Balaton Region with those in other regions of the Carpathian Basin and beyond.

For example, analysing settlement patterns and material culture has revealed similarities and differences between Avar communities in the Balaton Region and those in other parts of Hungary and connections with nearby regions, such as Austria and Slovakia (Vida, 2018; Gyucha, 2019). This suggests that Avar communities were part of a more comprehensive social and economic network that extended beyond the Carpathian Basin.

➤ **Comparative Analysis:**

The fourth step in the methodology will be a comparative analysis of the evidence. This will involve comparing the results of the typological and contextual studies using traditional and new approaches presented by various scholars. That type of analysis will compare the key arguments of the scholars over the last three decades. The research will consider the strengths and weaknesses just as the evolution of each system and will aim to identify areas of agreement and disagreement until the present day.

Comparative analyses of material culture, such as pottery, jewellery, and weapons, have revealed similarities and differences between Avar communities in the Balaton Region and those in other parts of Hungary and connections with neighbouring regions, such as Austria and Slovakia (Szeverényi, 1992; Szücsi, 2019). This suggests that Avar communities were part of a broader cultural network and that a complex set of cultural interactions shaped social identities.

Genetic analyses have also been used to compare Avar communities in the Balaton Region with those in other parts of the Carpathian Basin and beyond. For example, recent studies of Avar-period DNA have revealed genetic continuity between Avar-period populations and modern-day Hungarians, suggesting a significant contribution of the Avars to the genetic makeup of the Hungarian people (Csáky et al., 2018; Neparáczki et al., 2019). This supports the idea that Avar social identities were not static but were shaped by a complex set of cultural and biological interactions.

Furthermore, comparative analyses of climate data have been used to compare the environmental conditions in which Avar communities in the Balaton Region lived with those in other regions of the Carpathian Basin and beyond. For example, pollen and plant remain analyses have revealed similarities and differences in vegetation and land use patterns between Avar communities in the Balaton Region and other parts of the Carpathian Basin (Sümegei et al., 2009; Büntgen et al., 2016; Preiser-Kapeller, 2018). This suggests that environmental conditions played an important role in shaping Avar social identities and that Avar communities in different regions of the Carpathian Basin developed unique adaptations to local ecological conditions.

In conclusion, the evidence from Keszthely-Fenékpuszta and comparative analyses of Avar social identities in the Balaton Region of the Carpathian Basin AD. 550 to 900 suggests that a multidisciplinary approach is crucial for understanding Avar social identities' complex and dynamic nature. This approach should incorporate traditional archaeological methods with new techniques, such as genetic and climate analyses, to provide a more comprehensive understanding of past communities.

## **2. Chapter II.**

### **2.1 Funeral customs in the 'Avar' period Transdanubian/Lake Balaton region: Keszthely-Fenékpuszta**

The archaeological evidence from the Keszthely-Fenékpuszta site provides a rich source of information on the funeral customs of the Avars (Müller, 2010a, b). The cemeteries of the site contain over 300 Avar-period graves, which have been excavated and analysed by archaeologists. The graves are characterised by various burial practices, reflecting the region's diverse cultural influences.

One of the most significant features of the Avar period funeral customs was the use of burial mounds (László, 2017). These mounds were constructed over the grave and could vary from small, low banks to large, elaborate structures. According to Müller, the mound's size and complexity often indicated the deceased's social status. The mounds were usually circular and constructed using earth, stone, and timber (Müller, 2010, p. 158).

According to Bóna, the burial practices of the Avars were also characterised by the use of grave goods (Bóna, 1990). These goods were placed in the grave to accompany the deceased into the afterlife. Based on a traditional explanation, the type and quantity of burial place goods varied depending on the social status of the dead. Wealthier individuals were buried with more goods, including weapons, jewellery, and clothing. Poorer individuals were buried with fewer goods, often just simple pottery vessels (Bóna, 1990). The Avars also practised cremation, although this was less common than inhumation. Cremated remains were often placed in urns and then buried in the ground. These urns were often decorated with elaborate designs, including images of animals and mythical creatures (Bóna, 1990).

Animal sacrifices were another exciting aspect of the Avar period funeral customs (Kovrig, 1958). It is believed that animals, such as horses, were sacrificed during the funeral ceremony to accompany the deceased into the afterlife. The remains of horses have been

found in some of the graves at Keszthely-Fenékpuszta, indicating that this practice was indeed common (Kovrig, 1958).

Their religious beliefs also influenced the Avars' burial practices (Bóna, 1974). The Avars practised a form of shamanism, which involved communication with the spirit world. The funeral ceremony facilitated communication between the living and the dead. This is reflected in the use of grave goods and animal sacrifices, which were seen as a means of providing the deceased with the necessary items and companions for their journey into the afterlife.

Overall, the funeral customs of the Avar period in the Transdanubian/Lake Balaton region were characterised by the use of burial mounds, grave goods, cremation, animal sacrifices, and shamanistic beliefs. Examining burial customs of the Avar period in the Transdanubien/Lake Balaton region could provide insights into this period's broader cultural, social, and economic contexts. For example, analysis of the grave goods could shed light on the trade networks and material culture of the Avars. Similarly, examining the animal remains could provide information on the husbandry practices and use of animals in the Avar period.

## **2.2 The orientation of the graves**

According to Müller, Keszthely- Fenékpuszta, in general, it can be noted that all graves in the grave fields in front of the south wall have a primary east-west orientation (Müller, 2010, p. 156). It is also applied to all grave areas from the late Roman period. Lipp reported that the graves he excavated were north-south facing rows to the east-west oriented. Previously it was assumed that the graves of Csák had a west-east orientation. Müller emphasised that, in Csák's excavation diary, there is no direct mention of general direction, but all of the search trenches were oriented north-south, which points to graves oriented to the west-east since graves 41, 43 and 86, latest represented in Figure 10.

It was emphasised that the skull was on the east side. Grave 85 was behind and turned north on the left, so it was oriented west-east. The description of graves 63 and 64 is accompanied by a sketch showing the two rectangular grave pits showing an angle of 60 °. Thus, mainly east-west orientation can be expected for the Lipp and Csák grave fields, subject to certain deviations from the geographical west-east direction and some „wrongly” buried individuals (Müller, 2010, p. 157).



Figure 10. Grave 2000/86, with the wrongly marked west-east orientation by Csák during and after development. Müller, 2010a, p. 132.

Bóna's view was that the east-west orientation was predominant in Christian cemeteries. However, different orientations were not forbidden, and graves of different directions did not necessarily represent different ethnicities (Bóna, 1974, p. 76). There is no other information on Lipp's cemetery. However, the other three late Roman cemeteries are also oriented east-west and north-south, except for the cemetery excavated by Csák, which was oriented south-north (Müller, 2010, p. 157).

On the other hand, Straub suggested that foreign communities could be seen in several areas in Transdanubia at the beginning of the 7th century, in the case of the Keszthely countryside. Researchers, he believed, must assume provincial Roman/Byzantine elements and Lombards reflected in the Baranya county finds. The gradual impoverishment of the Roman population of the Balaton Uplands also cannot be ruled out in the Avar period (Straub, 1999, p. 206). The excavated graves show a varied picture based on the orientation data, but this alone does not provide a basis for far-reaching conclusions. The West-East orientation and the slight deviation from it dominate, but this is also characteristic of the late Roman period, the Pannonian Lombards, and the Keszthely culture. Thus burials cannot be separated chronologically and ethnically with certainty (Straub, 1999, p. 198).

Today, it is widely accepted in the academic environment, like Pohl and others, that Christianity began to spread in the Pannonian region (modern-day Hungary and its surrounding areas) during the Roman era and continued to gain followers throughout the Late Roman period, 3<sup>rd</sup> to 4<sup>th</sup> century. By the so-called Avar period approximately two centuries later, the Carpathian Basin was already exposed to Christian influences from neighbouring regions, and Christian graves were traditionally oriented east-west. The Byzantine Empire, which was predominantly Christian, exerted its influence in the Balkans, and there were trade and cultural interactions between the Byzantines and the Avars. Some individuals or small groups from the neighbouring places might influence the native population in Keszthely-Fenékpuszta.

I believe it is more likely that the local groups adhering to Christian principles could pass on their religious convictions to the newly arrived Avar-style cultural groups, which were already heterogeneous in many aspects, including religious beliefs. This could also explain Christian elements in the material culture related to the Avars. Pohl discusses the Avars' traditional religion, which is commonly believed to be Tengriism. Tengriism is a Central Asian religion focused on the sky deity Tengri. However, he suggests that the Avars, given their position at the crossroads of many different cultures, would likely have come into contact with various religious beliefs, including Christianity. This religious diversity might have influenced their practices, adopting or integrating Christian elements (Pohl, 2018, p. 254-262).

Artefacts such as burial items, building layouts, and especially items featuring Christian symbols like crosses found at Keszthely-Fenékpuszta suggest the presence of Christian influence. However, Pohl emphasizes that these findings should not be taken as definitive proof of an entirely Christian community among the Avars. Christian symbols might have been symbolic or ritualistic rather than indicative of religious conversion. They may also represent a small Christian community within a predominantly Tengriist society (Pohl, 2018, p. 262-280).

Not all graves at Keszthely-Fenékpuszta follow the same pattern regarding their orientation. This variation may reflect differences in social status or family relationships among the deceased. Additionally, changes in burial practices over time may have also influenced the orientation of graves.

The association of the sun with the Avar ruler, the khagan, as the son of heaven suggests the significance of celestial symbolism in Avar-style religious beliefs (Pohl, 2018, p. 257). The traditional idea about the east-west orientation of graves, symbolizing the journey of the deceased into the afterlife following the path of the sun, aligns with this divine connection (Pohl, 2018, p. 257).



However, graves oriented in different directions, such as north-south orientations, might indicate a potential shift or diversity in burial practices over time. Changes in religious beliefs, cultural influences, or societal factors could have shaped these variations in grave orientations outlined above. One possibility is that different groups or individuals within the Avar society had differing beliefs or cultural affiliations, leading to variations in burial practices and orientations. Social status or family relationships among the deceased could also have played a role, as suggested by the proximity of graves.

As societies evolve, their beliefs and rituals can transform, leading to shifts in burial customs and directions. The location of graves near one another may have also indicated family or community ties.

Overall, while the traditional view of the eastward orientation of Avar graves at Keszthely-Fenekpuszta still holds some validity, new research and ideas suggest that the orientation of the graves may have been influenced by a variety of factors, including cultural beliefs, landscape features, social status and the beliefs of the existed native population of the region.

### 2.3 Size and shape of the burials

From a traditional perspective, the burial practices during the Avar period followed a common pattern of regular rectangular, straight-walled pit burials. These pits were typically deepened at both ends or occasionally only at one end, spanning the entire width of the grave (For additional information on the characteristics of a pit grave, see Figure A3 in Appendix A). This widespread practice likely held cultural significance within the Avar society (Szücsi, 2019, p. 29).

In Keszthely-Fenékpuszta, the grave pits varied in size and depth, primarily based on age and social status. However, the accuracy and reliability of recorded grave descriptions vary, making it difficult to ascertain precise details. Generally, the pits had a rectangular shape with rounded corners, although smaller or narrower pits had partially rounded sides in a semicircular or semi-oval shape. Some larger pits exhibited sharp corners. The exact ground level at the time is unknown, but the deepest graves reached a maximum depth of about two meters. The shallowest graves, including children's, were discovered just below the disturbed soil, approximately 50 cm deep, suggesting the possibility of even shallower graves. (Müller, 2010, p. 158).

During the late Roman period, the notable shaft graves at Fenékpuszta were constructed using bricks. According to Lipp's information, the largest brick burial chamber discovered thus far in a grave field I was Grave IV. The chamber had a length of 2.50 meters and a width of almost 2 meters, with the roof being found at a depth of two meters. Based on these measurements, the estimated volume of the chamber is approximately 12 cubic meters. Regarding the double grave, 2000/77, featuring a brick burial chamber, shown in Figure 11, about 6.2 cubic meters of earth were excavated (depth: 187 cm, dimensions: 215 x 155 cm) (Müller, 2010, p. 160).

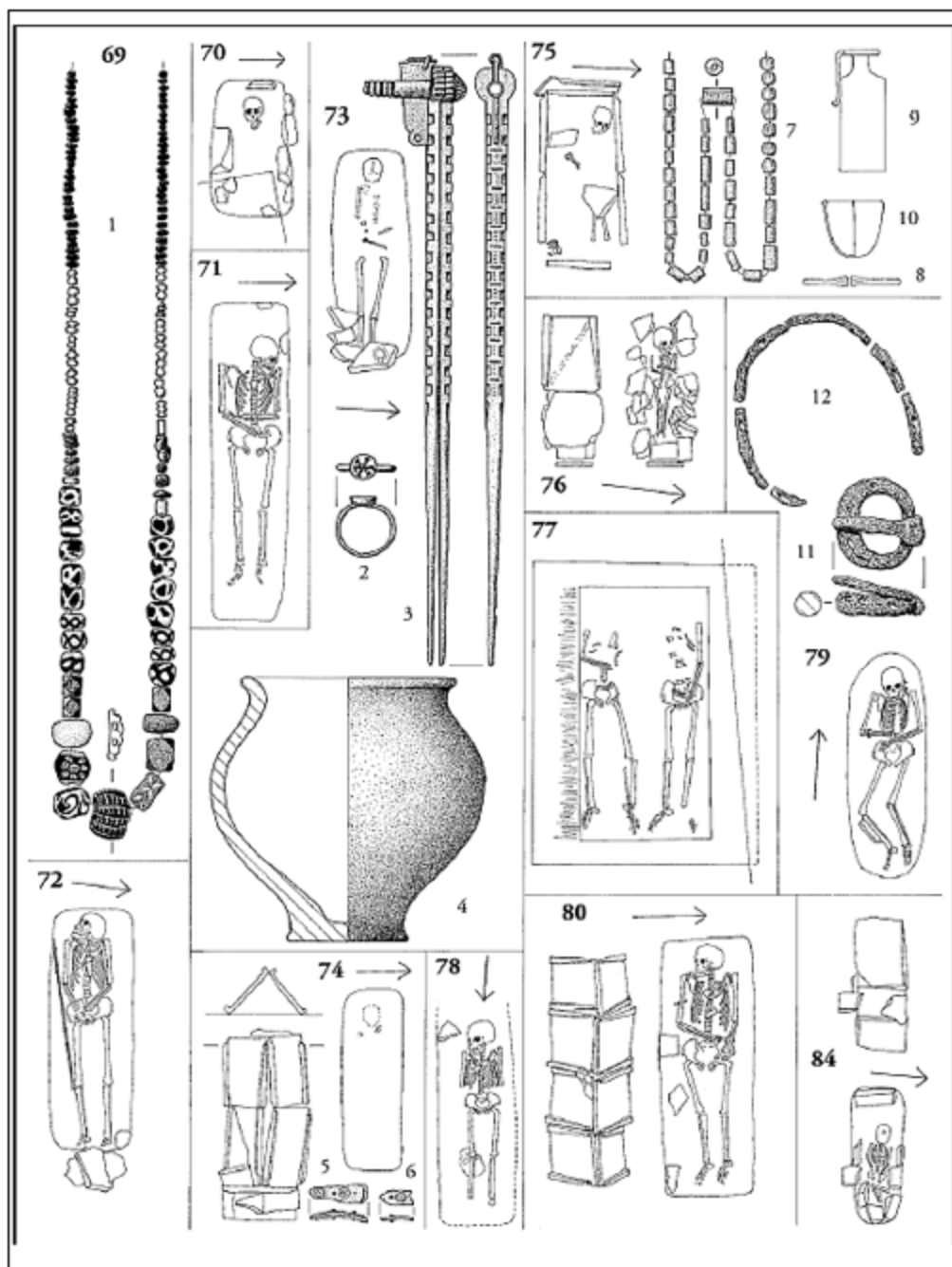


Figure 11. Grave 2000/69; 2-4: Grave 2000/73; 5-6: Grave. 2000/74; 7-10: Grave. 2000/75; 11-12: Grave 2000/76-77-79. 1-7, 11-12: 1:2; 8-10: without scale; Grave drawings: 1:40. Müller, 2010a, p. 336.

Among the burials, a woman interred in the brick grave in 2000/100 was discovered wearing gold earrings, suggesting her adornment with valuable jewellery, represented in Figure 12. The grave pit for this burial had a depth of 193 cm, a length of 230 cm, and a width ranging from 95 to 90 cm, resulting in a cubic volume of approximately 4.1 cubic meters. In the earth grave with steps, designated as 2000/131, the only female burial in cemetery III was laid to rest with a box. Excavation of this grave required removing approximately five cubic meters of earth. It is worth noting that the bottom of the grave pits generally displayed straight contours, lacking indentations at the ends or any evidence of beam constructions. (Müller, 2010, p. 160).

From my interpretation, based on the data from Müller above, the prevalence of regular rectangular pit burials suggests a standardized and widely accepted form of interment within the 'Avar' period. The deepening of grave ends may indicate a symbolic or practical purpose, perhaps related to ritual beliefs or the accommodation of specific burial items. The variations in grave pit sizes and shapes based on age and social status demonstrate social differentiation within the Avar society. One of the possibilities is that more extensive and deeper graves might reflect higher social standing or prestige, while smaller graves could indicate individuals of lower status.

These distinctions highlight social hierarchies and different roles and hierarchical levels within the community. Using bricks to construct burial chambers during the late Roman period represents technological advancement and access to resources, possible cultural interaction between the local and newly arrived societies. The presence of valuable jewellery, such as the gold earrings found in the burial, suggests an association with wealth and personal adornment.

The absence of architectural features or structural elements at the bottom of the grave pits indicates a preference for simplicity and straightforwardness, changes and evolution in burial customs.

I think it is also plausible to consider that one possible motive behind the deepening of graves for specific deceased individuals or groups within Avar-related societies could have been a belief in preventing the spread of sickness. This practice may have been driven by the notion that burying individuals at greater depths would contain and immobilize any harmful elements associated with the deceased, thereby protecting the living population from potential infection. Such a cultural belief highlights the significance of health preservation and the perceived threat of disease transmission within the community.

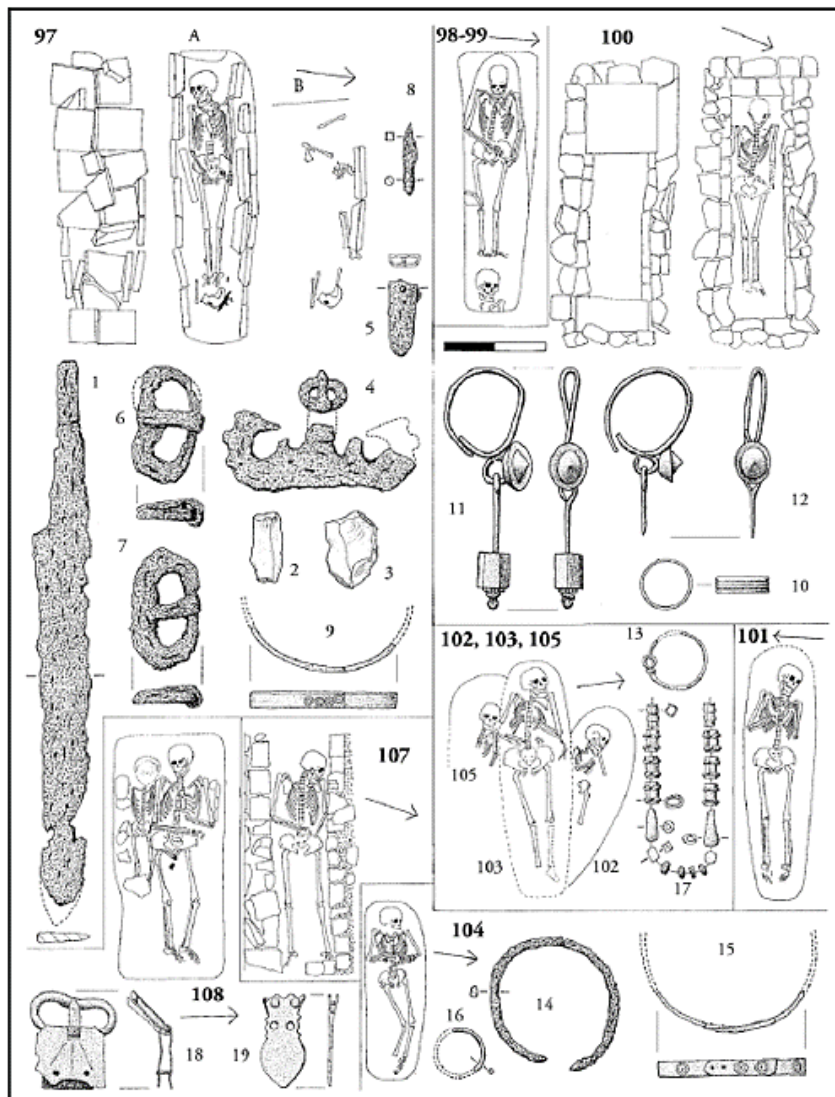


Figure 12. 1-8: Grave 2000/97A; 8: Grave 2000/97B; 10-12: Grave 2000/100; 13: Grave 2000/102; 14-16: Grave 2000/104; 17: Grave 2000/105; 18-19: Grave 2000/108. 11-12: 1:1; 1-10, 13-19: 1:2; Grave drawings: 1:40. Müller, 2010a, p. 340.

## 2.4 Coffin usage

Traditionally, the coffin usage in Avar graves at Keszthely Fenékpuszta has been viewed as evidence of Christian influence and integration of the Avars into the Christian world.

The idea that the use of coffins in Avar graves at Keszthely Fenékpuszta is evidence of Christian influence and integration is based on the assumption that Christians primarily used coffins for burial. This assumption is rooted in the fact that in Western Europe, the use of coffins became more widespread after the spread of Christianity. However, in Western Europe, in many cases, especially in earlier periods, Christian burials were often conducted in simple earth-cut graves without coffins. Cultural and regional variations and the availability and affordability of coffins at different times and places influenced this practice.

For example, in his article, Czene argues that the use of coffins in Avar graves at Keszthely Fenékpuszta reflects the Christianization of the Avars. Czene suggests that the Avars may have adopted the use of coffins as part of their conversion to Christianity (Czene, 2004, p. 35-66).

According to Pohl, the burial practice of interment was predominantly used by the Avars of Europe. Conversely, Slavs in the surrounding areas usually chose to cremate their dead, and not all communities from the Central Asian steppes practised inhumation. As per Chinese historical accounts, the Turks of the sixth century practised cremation, although archaeological evidence does not entirely confirm this. The positioning of Avar graves shows variation across different periods and within the same era. Often, the bodies were placed in caskets constructed from wooden planks or carved out from tree trunks. In some instances, the burial sites are considered carefully prepared living spaces, serving as the final resting place (Pohl, 2018, p. 259-260).

Pohl also emphasises that minimal information is available about Christianity among the Avars or Avars who converted to Christianity. Turkish Khagans adopted Buddhism, the Khazars converted to Judaism, Uyghurs followed Manichaeism, and the Bulgars and Hungarians chose different versions of Christianity. Furthermore, many Turkic and

Mongol groups became followers of Islam. However, it should be noted that these religious shifts generally began in the eighth century or afterwards and were typically gradual processes (Pohl, 2018, p. 259-260).

In her article, Maříková-Kubková argues that the use of coffins in Avar graves at Keszthely Fenépuszta may have been a result of cultural interaction between the Avars and the neighbouring Lombard and Bavarian communities. Maříková-Kubková suggests that the Avars may have adopted the use of coffins from these neighbouring communities as part of a broader cultural exchange (Maříková-Kubková, 2019, p. 107-127).

However, Maříková-Kubková also notes that the use of coffins in Avar graves at Keszthely Fenépuszta may have had different meanings for different individuals. While coffin usage may have displayed social status for some individuals, it may have also been linked to religious beliefs or personal preferences for others (Maříková-Kubková, 2019).

Overall, the traditional view is that the coffin usage in Avar graves at Keszthely Fenépuszta is evidence of Christian influence and integration of the Avars into the Christian world, as Christians primarily used coffins for burial. However, recent research has challenged this view, suggesting that coffin usage may have been related to social status and wealth rather than religion. Scholars suggest that coffin usage may have allowed individuals to display their social status and wealth. Maříková-Kubková also indicates that coffin usage may have been a result of cultural exchange between the Avars and neighbouring Lombard and Bavarian communities. Additionally, Maříková-Kubková notes that coffin usage may have had different meanings for different individuals, such as being linked to religious beliefs or personal preferences.

## 2.5 Double burials and reuse

Double burials and the reuse of graves were common practices in many cultures throughout history. In the case of the Avar-related societies, such practices were also evident. Traditionally, the double burials in Avar cemeteries have been interpreted as representing the burial of a married couple or a family (For additional information on the visual example of a double burial, see Figure A4 in Appendix A). The graves were typically rectangular, with the male buried on the left side and the female on the right. This arrangement has been interpreted as reflecting the gender roles and social hierarchy of the Avar society.

In addition to the above, Daim argues that the double burials likely represent the burial of a married couple or a family, as the male and female are always buried together. He suggests that this reflects the importance of kinship ties in Avar society and the belief that the dead continue to play a role in the lives of their living descendants (Daim, 1984, p.33-39).

According to my research regarding this matter, most scholarly interpretation does not explicitly address whether the male and female individuals buried together in double graves died simultaneously or if they were added to the grave at different times. The interpretation of whether they died simultaneously or at other times could be assessed through various archaeological indicators, such as the state of preservation of the skeletal remains, evidence of trauma or disease, or any temporal markers associated with the burial context.

It is pertinent to note that it can be challenging in archaeological studies to determine the exact circumstances and timing of individual deaths without additional contextual evidence. Interpretations regarding the simultaneous or separate deaths of individuals in double burials would require a thorough analysis of the available archaeological data, such as skeletal remains, grave goods, and associated features.



Müller, for example, describes the findings from Keszthely-Fenékpuszta, which was moderately preserved. The burial pit, seen at a depth of 94 cm, had vertical walls and rounded corners and was noticeably large. A double burial was intended initially; hence the deceased was placed in the southern half. However, the northern half remained empty. There were no traces of a coffin observed. The skeleton was lying on its back with both forearms bent towards the pelvis. A heavily corroded dagger was found behind the skull, pointing north. The hilt spike was completed with a rounded, hexagonal iron plate. The blade back is curved, and the edge is straight. The tip is missing. Original length: 22.6 cm, of which handle length: 9.2 cm. A fragment of a heavily corroded iron finger ring in front of the pelvis was originally on the left hand. The head was round. Diameter: approx. 2.2-2.4 cm (Müller, 2010a, p.133).

In the given description above, the burial pit had a double burial intended, but only one individual was present. The absence of a second individual and the lack of a coffin raise questions about the burial's circumstances. Without additional information, it becomes challenging to ascertain the reasons behind these anomalies. The presence of artefacts, such as the heavily corroded dagger and iron finger ring, provides valuable clues but may not offer a complete picture. While the position and condition of the dagger and the finger ring can give some insights, they may not definitively establish the cause or timing of death.

Pohl discusses that the gendered nature of Avar double burials may have reflected the roles men and women played in Avar society. He mentions that Avar society was likely interpreted in the past as hierarchical and patriarchal, with men more likely to have held positions of power and authority (Pohl, 2018, p. 200). Pohl notes that many Avar graves contain items such as weapons, horse harnesses, and other luxury goods, which suggest that the individual buried there held a high status in society. He means these items have been buried with the individual to signal their status and power. In addition, Pohl notes

that the gendered nature of Avar double burials may have reflected the traditional roles of men and women in Avar society. He suggests that the male on the left and the female on the right arrangement may have symbolized the conventional division of labour in Avar society, with men as hunters and warriors and women as caretakers of the home and family (Pohl, 2018, p. 259).

Avar-style cemeteries often contain multiple double burials, which may indicate the importance of extended family units in Avar society. The reuse of graves may have been linked to this emphasis on kinship ties, as it allowed multiple generations of a family to be buried together in a single location. Archaeologists have also noted the reuse of Avar graves at Keszthely-Fenékpuszta. This practice involved opening up an existing grave, removing the previous occupant's remains, and placing a new individual or individuals inside. It was likely done due to practical considerations, such as the limited availability of land for burial sites and cultural beliefs about the importance of burying the dead in specific locations.

The reuse of graves at Keszthely-Fenékpuszta cemetery was likely due to a shortage of available burial space. Some graves at the cemetery may show evidence of reopening and reusing, with earlier skeletal remains being removed and replaced with new burials. The chronology of the graves at the Keszthely-Fenékpuszta cemetery shows that many of the graves containing reused remains appear to date to the later phases of the Avar period, which may indicate a shift in burial customs during this time, with graves reusing more common due to changing cultural beliefs or practical considerations.

In conclusion, double burials were a common practice in Avar cemeteries, with the male typically buried on the left side and the female on the right, reflecting the gender roles and social hierarchy of Avar society. This arrangement may have also symbolized the conventional division of labour in Avar society, with men as hunters and warriors and women as caretakers of the home and family. Avar graves also contain items such as

weapons and luxury goods, suggesting the individual buried there held a high status in society. Reusing graves at Keszthely-Fenékpuszta was likely due to practical considerations such as a shortage of available burial space. It may have been a way of expressing continuity and connection between the living and the dead. This practice was likely connected to beliefs about the power of ancestors to protect and watch over their descendants. Overall, the burial practices of the Avar society reflect the importance of kinship ties, social hierarchy, and the power of memory and honouring the dead in their culture.

## **2.6 Horse burials**

The horse has always been assumed to have played a decisive role in the life of the Avars. István Vörös described this relationship in detail (Vörös, 2017). The horse is the first animal in the hierarchy of ritually expendable animals, followed by the bull, sheep, and goat. The Avars led the horses to the tomb with an axe, and they were cut into the head, as the many torn, crushed skulls may prove in the excavated horse burials. The stunned, collapsed horse was killed (Vörös, 2017, p. 99).

The spears did not appear to belong to the execution of the horse sacrifice. The entire horse was placed “buried” in the grave pit during the funeral ceremony. The toolless horse could be guided on a simple harness to the grave. During the “partial” horse burial, the horse was killed and skinned before the ritual started. The part of the limbs that remained in the skin was not dismantled at the joints by the Avars as the conquering Hungarians did, but at the joints, the forearm and the tibia were cut in two. A strict religious tradition determined the species composition of the animals in funeral ceremonies. It can be assumed that the type/breed of the animal sacrificed is dual information content. Firstly the breed indicated which god the animal was sacrificed to; secondly, the species designated the status of the deceased within the community (Vörös, 2017, p. 99).

Kovrig, in her publication from 1999, describes three horse burials from Keszthely-Fenekpuszta and notices that their characteristics go against traditional beliefs (Kovrig, 1999).

The position of the skeletons in the graves of horses buried with dogs indicates that the bodies of the animals were carefully placed in the burial pits, shown in Figure 13 (For additional information for a visual example of a dog pit grave, see Figure A5 in Appendix A). The burial of a horse lying on its side is unusual in Avar-period cemeteries. The absence of horse equipment and other accessories is also generally uncommon in Avar equestrian burials. The placement of the three horse graves in the cemetery suggests they are unique graves and were not associated with any buried individuals. The graves of the first and second horse-dog burials had shallow child graves with modest or no accompanying objects, surrounded by graves with meagre accompanying items (Kovrig, 1999, p.104-105). Kovrig also notes that Lipp, in his publication on the Keszthely city cemetery, discusses equestrian burials and horse funerals about male and female skeletons, presenting horse equipment such as saddles, stirrups, and bridles. Outside the Avar settlement area, however, there is evidence of numerous similar burial customs (Kovrig, 1999, p.104-105).



Figure 13. The position of the skeletons in the graves of horses buried with dogs indicates that the bodies of the animals were carefully placed in the burial pits. Kovrig 1999, p. 116.

As László outlined, the study of early Avar period equestrian burials has been undertaken by Mária Némethi and László Klima (Némethi and Klima, 1992 in László, 2017, p.180-181). According to their compilation, independent horse graves are primarily characteristic of the Transdanubian region. They have documented separate horse graves from twenty sites, mainly from the Transdanubian area. Independent horse graves are not only known in the Carpathian Basin. However, they are also widespread in sequential cemeteries from the Merovingian period in Europe, from the mid-5th century to around 700, except for the Mediterranean and other early Christianized areas. However, independent horse graves have also been found in Inner Asia during the Turkic period, but they are not known from Eastern European sites of the same period (László, 2017, p.180-181).

Determining the selection of graves associated with independent horse graves presents difficulties. László primarily considered the distance between these graves; based on Orondpuszta-Csákberény's evidence, the horse graves were not assigned different numbers. However, they received the number of the corresponding equestrian grave. The horse graves were marked with "B". If the determination of the association between human and horse graves was correct, then one child and one adolescent (12-15 years old) were associated with graves 108 and 76, respectively. In other cases, the horses may have belonged to adult males (László, 2017, p.180-181).

Examples of equestrian graves can also be found in the cemetery, with two burials (141 and 150) considered equestrian graves because the human and horse skeletons were interred in a common grave pit. Several types of horse harness fittings are known from the cemetery, such as pressed silver disks with hemispherical shapes and lead inlays, pressed rosette-patterned horseshoe-shaped fittings and pressed rosette (László, 2017, p.180-181).

Horse burials as sacrificial in nature in the Avar period may be oversimplified and may have reflected changing attitudes towards horses in early medieval Europe and became more valuable and beneficial to human societies. They began to be treated as companions rather than simply as sacrificial animals. The archaeological evidence, such as horse gear and stable remains, supports this argument that horses played a multifaceted role in early medieval society. Furthermore, the burial of horses with their owners may have served practical purposes, such as providing transportation in the afterlife.

When interpreting their meaning, the context and circumstances surrounding the horse burials must be considered, as in the Avar period, their placement, orientation, or association with human graves were not uniform. Some horse burials may have been sacrificial, while others may have been more symbolic or had other practical purposes. The archaeological evidence, such as finds and context, historical texts and iconography, and anthropological and ethological studies of horse-human relationships from the Avar period horse burials, also could shed light on the development of their importance among the various societies over time.

Not all Avar period horse burials are associated with human graves; some may have been used to mark the boundaries of settlements or as part of other ritual practices. The orientation of the horse burials varies widely, with some burials placed in a specific direction while others are not, which may indicate a variety of meanings associated with the burials. The gear and equipment found in some horse burials are consistent with use in everyday life rather than for sacrificial purposes.

In conclusion, the horse burials in Avar graves at Keszthely-Fenekpuszta challenge traditional beliefs of sacrificial rituals and reveal a more complex significance. The presence of independent horse graves in the Transdanubian region and their widespread

occurrence in Europe and Inner Asia suggests their cultural importance. Further research is needed to understand the multifaceted roles of horses in Avar society and the diverse meanings associated with these burials.

### **3. Chapter III**

#### **3.1 Material culture and its role in the Avar funerary practice. Evidence from Keszthely-Fenékpuszta**

As discussed earlier, past ideas about material culture and its role in the Avar graves at Keszthely-Fenékpuszta emphasize the importance of the grave goods found within the burial sites. According to these traditional views, the Avars were nomadic people who migrated to the Carpathian Basin in the late 6th century and established a powerful state in the region. The Avar graves at Keszthely-Fenékpuszta are known for their rich and varied material culture, which includes jewellery, weapons, clothing, and other items that were thought to have been buried with the deceased as symbols of their status and power.

According to recent research, the grave goods may have functioned as part of a complex social signalling system and communication among the Avar elite. For example, specific jewellery or weapons may have signalled the deceased's status, gender, or other vital aspects of their identity. Another new idea is that various cultural and political factors may have influenced the material culture in the Avar graves at Keszthely-Fenékpuszta. For example, some new ideas have suggested that the Avar elites may have incorporated elements of Roman, Byzantine, Frankish and other cultural traditions into their own material culture to demonstrate their power and authority. The following paragraphs will analyse the essential types of material culture from Keszthely-Fenékpuszta to better understand their purpose based on scholarly arguments and analysis results.



### **3.2 Female and Male belt sets, buckles, pendants and accessories**

Traditional views of the male belt sets and buckles in Avar graves at Keszthely-Fenékpuszta have focused on their symbolic and functional significance. According to one prominent theory, the belt sets and buckles were not just utilitarian objects but also served as important status symbols. These precious metals were often used to create prestige objects and were associated with wealth and high social status. Belt buckles at Keszthely-Fenékpuszta made of gold or silver would have been considered luxurious and reflected the wealth and elevated status of the individuals who owned them. I created a table in Figure 14 of burials where belt sets and buckles were found, with gender assumption and the object's main characteristics. The presence of belt sets and buckles in both male and female graves suggests that these objects were not exclusively masculine status symbols but functional objects used by people of both genders. In addition to the above, based on their various characteristics and exceptional evidence of broad-scale trading activities. It does still not exclude the possibility that the elite members of Avar society wore their variations of gold and silver to display their wealth and power and distinguish themselves from lower-status individuals.

A characteristic feature of women's wear is belt pendants that hang down to or around the knee. Scholars differentiate between belt pendants for suspending devices (e.g. iron knife) and amulets (e.g. capsule, bronze chain, key, bell) worn on the right or left and decorative pendants with ornate fittings worn in the middle. Germanic-related women wore belt pendants adorned with fittings attached to the leather or textile strap hanging from the belt to the knee in the Avar era.

Vida Tivadar formulated it because of his research that a belt pendant can be associated with a population with a Frankish culture, Germanic wearing, and cultural traditions at the beginning of the early Avar era. Later, however, it became fashionable, and as a result of acculturation, it was adopted by other communities, such as nomads of Eastern descent or populations bearing Roman-style features (Vida, 2017, p. 149).

Gender	Belt Buckle Characteristics	Other Burial Items
Male	Rectangular bronze buckle with stamped decoration of geometric shapes	Iron axe, iron knife, stirrup, whip, spurs
Female	Rectangular bronze buckle with openwork and stamped decoration of animals and birds	Beads, spindle whorl, fibula, bracelet, glass bottle
Male	Rectangular bronze buckle with stamped decoration of animals and birds	Iron spear, iron axe, iron sickle, iron knife, belt pouch with coins
Male	Rectangular bronze buckle with openwork and stamped decoration of birds	Iron axe, iron knife, spurs, whip, belt pouch with coins
Female	Rectangular bronze buckle with stamped decoration of geometric shapes	Beads, spindle whorl, fibula, bracelet, glass bottle
Male	Rectangular bronze buckle with stamped decoration of animals and birds	Iron spear, iron axe, iron sickle, iron knife, stirrup, whip
Male	Rectangular bronze buckle with openwork and stamped decoration of animals and birds	Iron axe, iron knife, stirrup, whip, spurs
Male	Rectangular bronze buckle with openwork and stamped decoration of animals and birds	Iron axe, iron knife, stirrup, whip, spurs
Female	Rectangular bronze buckle with openwork and stamped decoration of animals and birds	Beads, spindle whorl, fibula, glass bottle

Figure 14. The designs on the belt sets and buckles were often influenced by the cultures with which the Avar-style societies came into contact, including the Byzantines, the Sasanians, and the Germanic people. For example, some belt sets and buckles feature Christian iconography, indicating that the wearer was either a Christian or had a close tie with a Christian community. The table includes only a few examples as even some grave IDs are still under debate. Gal, 2023. Nottingham.

The appearance of bronze chains in Avar cemeteries was initially defined as hanging smaller accessories, mainly in women's graves. Éva Garam pointed out that these chains were weighty, and neither a small bronze hoop nor a leather band supports this assumption (Garam, 2021, p.81-100). Early Byzantine Christianity often used this type to suspend candles and incense (Vida, 2017, p. 149). The general view is that these chains came to Transdanubia as booty of campaigns or as gifts (Szücsi, 2019, p. 62). Since these everyday devices did not change much over time, their periodic definition is questionable. They can be originated from the late Roman era, just as from the beginning of the seventh century. Tóth pointed out that, in Keszthely-Fenékpuszta and Zamárdi (only 66 km away from Keszthely-Fenékpuszta), several chains of this type were often found together with fibulae/brooch (shown in Figure 15, in Grave 2000/83), proving the chain existence from the early Christian period (Tóth, 2013, p. 218-219).

The effect of the imperial custom of figural or ornamental representation is on the obverse of the disc brooches. The circular image - usually a portrait, formerly in profile, later depicted more in front, has been present in Roman costumes since the 1st century (Tóth, 2013, p. 206). The earliest are framed 1st-century glass medallions depicting members of the imperial family. Round and flat plate brooches with figural or ornamental medium decoration were used in second and third-century Roman costumes. According to the depictions, men wore these, and the brooches in military attire held the cloak on the right shoulder (Tóth, 2013, p. 206). The surviving Roman-style pieces are flat, have no volume, and, with a few exceptions, are the same thickness as the base plate. In the 4th century, men's brooches were separated according to the social status of their wearers. According to the consensus of the depictions, the use of round-shaped dress brooches was worn by the male members of the emperor, the imperial family, and possibly the allied barbarian rulers, on whose right shoulders it held the chlamys (Tóth, 2013, p. 206). For everyone else, whether elite or not, the chlamys were never connected by a round but always onion-headed fibula. On the other hand, the round brooches of the Keszthely culture were worn by women and children (Tóth, 2013, p. 206).

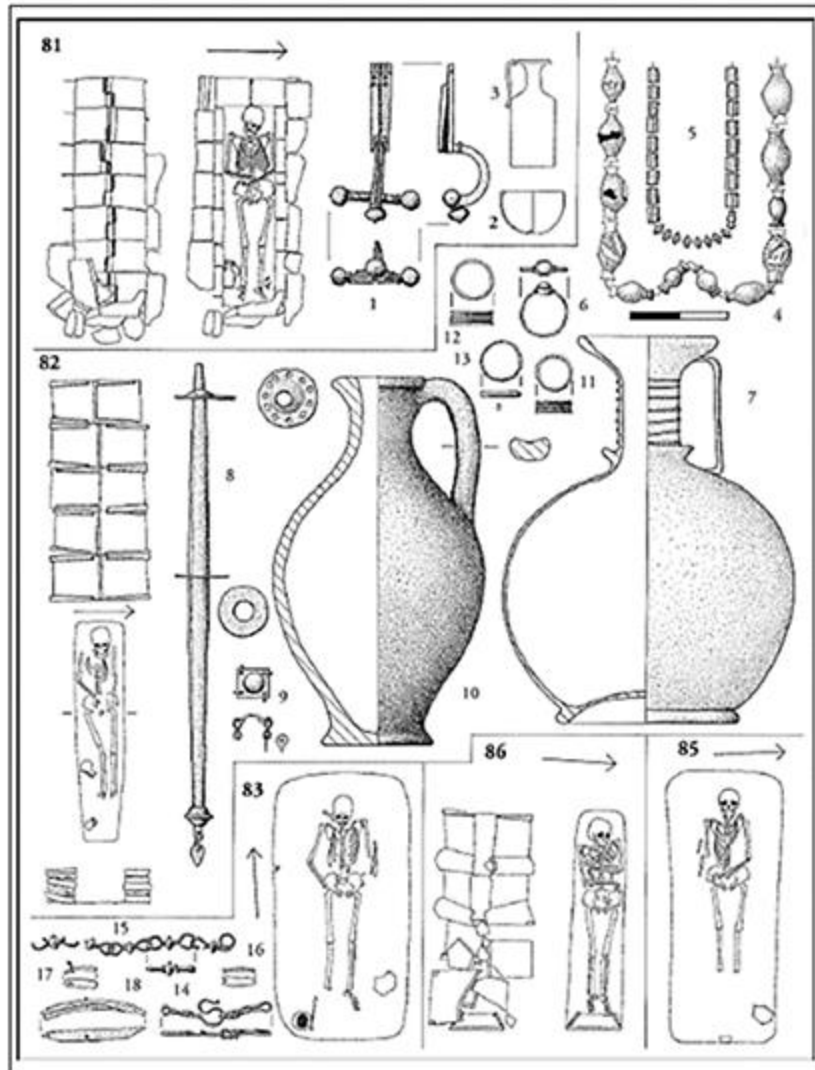


Figure 15. 2000/81; 4-13: Grave 2000/82; 14-18: Grave 2000/83 with chain. 4: 1:1; 1, 5-13: 1:2; 2-3: without scale; Grave drawings: 1:40. Müller, 2010a, p.337.

Tóth outlines that, according to Daim's research, the so-called boxed shapes of the pieces found in women's burials around the Transdanubian region differ from round brooches and may have been pilgrim badges because they contained beeswax inside used in religious ceremonies. Although this interpretation strengthens the early Christian continuity of the Transdanubian population, according to Tóth, further research is needed to prove it (Daim, 2010 in Tóth, 2013, p. 207).

Moving along with Zamárdi as a parallel, men's belt ornaments, to a lesser extent women's belt ends, disc strap fittings, and possibly their jewellery made of bronze sheet, rarely pressed. Their tinned surface is decorated with braids, chains, and basket patterns running in three, four, or six strands. The inner fields of the braids are partially empty, mostly filled with dotted lines (Garam, 2020, p. 177). In the metal workshops of the early Avar period, notably those active in Transdanubia, the interlace patterns designed in the spirit of the Animal Style II and their many variants acquired an entirely individual character. Zahnschnitt designs are primarily found in Transdanubia's early Avar cemeteries and are distinguished by their complex and attractive compositions. According to Garam, the Zahnschnitt interlace motifs support the theory that the interlaced design and use of some metals, particularly in female belts with ornate straps, originated from the Frankish/Carolingian Empire (Garam, 2020, p. 187).

It was common knowledge of the Huns and the Avars that they never destroyed any geographical area's local population entirely during their conquests. As a result of the so-called blood oath, most of them lived together, married them and exchanged cultural customs. Representatives of modern archaeology in the Carpathian Basin see this well and question the conclusions drawn based on material culture. In addition to the continuous power shift that characterised this period and the vivid trading activities, it is also vital that outflows and immigration were multi-directional. Even if parts of the smaller groups have left areas, leaving relatives and friends behind, they may return years later, reusing specific burial sites, or if not, they buried their loved ones nearby. As a result

of emigration, returning groups have already placed a fundamentally mixed material culture in the graves, which, in addition to the often occurring grave robberies, makes it even more challenging to define them from a periodic or ethnic perspective.

On the other hand, studying material culture has undoubtedly proved one thing, which I have seldom seen only mentioned in the research of hundreds of sources from Hungary. Namely, the fact that any ethnic groups migrated or settled in the Carpathian Basin for a longer or shorter period in the early Middle Ages can in no way be called a unified culture that meets political or any other identical definition. As a result, their ethnic classification will always be problematic as far as artefacts are concerned.

In conclusion, the Avar graves at Keszthely-Fenékpuszta and its parallel sites reveal a complex interplay of status, fashion, and cultural exchange in the early medieval Carpathian Basin. Belt sets, buckles, and pendants served as status symbols, with designs reflecting Frankish, Germanic, and Roman-style influences. Bronze chains and disc brooches hint at early Byzantine Christian rituals and Roman-related cultural influences. The mixed material culture in these graves challenges the simplistic ethnic or period-based classification, reflecting this period's diverse cultural interactions and fluid identities.

### 3.3 Earrings and bracelets

Earrings and bracelets are among the most common jewellery items in the Avar graves at Keszthely-Fenékpuszta. Traditional views about the earrings and bracelets found in Avar graves suggest that women primarily wore them as symbols of their femininity and social status. These items were believed to have been made of precious metals, such as gold, silver, and bronze, and adorned with colourful gemstones and glass beads. Some scholars suggest that earrings and bracelets were used as currency or dowry items (Vida, 2018, p. 41).

Based on an analysis of closed basket-style earrings, it is clear today that late 4th-century Roman basket earrings were made in 5th-century Italy, the Eastern Alps, Dalmatia, Macedonia, Bosnia, and Pannonia (Pohl, 2018, p. 109, 110, 350) Nowadays, the former gap has been filled with relatively well-dated finds. By defining the transitional types of closed basket earrings in form and chronology, scholars have found links to similar earrings of various shapes and technologies that also appeared to the north (Vida, 2018, p. 41). The instant production of basket earrings in the study area from the late Roman period to the early Middle Ages is a sign of the survival of the local Roman-style material culture (Pohl, 2018, p.109; Vida, 2018, p. 41).

Connection with the smooth-sided, conical-type basket earrings can occur in 1963/26, 1963/29, and 1966/73 graves of the cemetery next to the southern fortress wall of Keszthely-Fenékpuszta. Based on the pearls found next to them, the possibility of dating can be traced back to the beginning of the Avar period. Another piece of Avar-era closed basket earrings draws attention to the case of a wider Pannonian occurrence of material related to the Keszthely culture in TÁC / Gorsium 296. However, this type of earring was found in the Carpathian Basin in the late sixth and early seventh centuries and the Eastern Alps and north of the Alps, where the influence of Roman-style culture can be seen (Pásztor, 2017; Vida, 2018, p. 41).

Contemporary research investigating Avar burial sites at Keszthely-Fenékpuszta has critically reevaluated the conventional understanding that women exclusively adorned bracelets and earrings. The earrings and bracelets found in the Avar graves were not limited to women but were worn by men and children. Moreover, the jewellery items were not always made of precious metals but sometimes of cheaper materials like copper or iron.

The typical bracelet form of the Keszthely culture: the snake-headed bracelet is unknown from the Fenékpuszta-Horreum cemetery. According to Müller, this object perhaps spread in the later phase of Keszthely culture, although Lipp found such in the cemetery he excavated. Bracelets made of bronze wire with an open end, a circular or semicircular cross-section or decorated with notches at the ends cannot be accurately dated. The bronze bracelets found in Burial 68 and 94 are unique. Their backs are flattened and decorated with tapped semicircles and circles. It is a relatively rare type in the cemeteries of the Pannonia Avar period. Rings were not often discovered in women's graves. They were usually found in wealthier burials (45, 59, 94), but this was the only find in burial 7. (Müller, 2010, pp. 212-16).

The pattern of the articulated silver bracelets excavated in Grave 517 of the Zamárdi burial is almost identical to that seen at the strap end of Grave 621. However, the composition is unique (Garam, 2020, p. 174). The four-band zoomorphic pattern on the bracelet encloses the diamond-shaped centre field in a mirror image. The only parallel of the bracelet so far is known from the Keszthely site, with a much simpler, repeating hourglass and warp pattern than the bracelet found in Zamárdi (Garam, 2020, p. 174).

In terms of their functional roles, Avar bracelets could have had a variety of purposes. Some bracelets may have served practical functions, such as keeping sleeves or gloves in place or protecting the wrists from the elements or injuries. Others may have been used as currency, dowry items, or even as a tribute or taxation.



In conclusion, studying earrings and bracelets in Avar graves at Keszthely-Fenékpuszta challenges traditional assumptions about gender-specific use and symbolic meaning. Various earring and bracelet types, including those made from less valuable materials, suggest a broader range of wearers beyond women. Additionally, analysis of closed basket-style earrings indicates their production across different regions during the late Roman period to the early Middle Ages, highlighting the continuation of local Roman-style material culture.

The absence of specific bracelet forms, such as the snake-headed bracelet, in the Fenékpuszta-Horreum cemetery contrasts with their occurrence in other regions associated with the later phase of the Keszthely culture. Notably, rare finds of bronze bracelets with flattened backs adorned with semicircles and circles add to the uniqueness of Avar-period Pannonian cemeteries. Rings, although less commonly found in women's graves and predominantly associated with wealthier burials, signify a distinction in social status. Further research is necessary to explore the broader context of Avar jewellery, including production techniques, distribution patterns, symbolic meanings, and cultural significance, through comparative studies involving other Avar sites and regional variations.

### 3.4 Weaponry and cavalry

Traditional views of the weaponry found in the Avar graves at Keszthely-Fenékpuszta generally suggest that the Avars were warlike people who emphasised military power and used their weapons for offensive and defensive purposes. According to this view, the Avars were skilled metalworkers who produced a range of weapons, including swords, spears, axes, and arrows (Figure 16). These weapons were often buried alongside the deceased in graves, indicating their importance in Avar society.

In his research, Csiky discusses the weaponry found in the graves of the Avar period (Csiky, 2009). Csiky points out that some researchers say the weapon combinations clearly show the social status of the dead. More modern conceptions suggest that these objects, in addition to social hierarchy or fighting habits, shed light on the fact that burying any device is always a deliberate act with some symbolic meaning (Csiky, 2009, p. 59).

The quality, composition, and quantity of weapons placed in the grave directly function of burial customs. Weapons could have been treated in many ways, regarding how they were buried in the grave. Due to the weapon's weight and length, it is not excluded that it was already intentionally deformed by the relatives who put the objects next to the buried person. Other weapons were placed as amulets in the Avar graves, so they could not be considered weaponry. Thus, the weapons could indicate power and social status the most, showing the buried's economic strength and legal status (Csiky, 2009, p. 59).

According to Müller's research, the first sword, excavated by Lipp at Keszthely-Fenékpuszta, is believed to belong to the steppe type and is considered a rare find in grave 1885/I. Its crossguard is described as an egg-shaped solid plate. The sword was initially misclassified but is now recognized as similar to Germanic swords with similar handle plates. The second sword, found in a Frankish/Carolingian-era grave 1951/9, has a narrow, short crossguard and lacks a pommel. Its dating is challenging but reminiscent of the 'Avar' period's double-edged swords (Müller, 2010a, p. 227).

Weapon Type	Interpretation
Swords	Important symbol of warrior status and wealth, used for both offensive and defensive purposes. Often highly decorated and inscribed with the owner's name.
Spears	Versatile weapon used both in battle and for hunting. Could be used for thrusting or throwing. Often found in large numbers in Avar graves.
Axes	Heavy, single-bladed axes used primarily for chopping and hacking in close combat. Often found in pairs in Avar graves.
Arrows	Used for long-range attacks in battle and for hunting. Avar arrows were often made of iron or bone and were sometimes decorated with feathers or other materials.

Figure 16. The Avars were skilled metalworkers who produced a range of weapons, including swords, spears, axes, and arrows. Gal, 2023. Nottingham.

Fenekpuszta has only granted Frankish/Carolingian-era lance tips. Winged lances of the so-called Type "A" were discovered in graves 1951/22, in Figure 17 and 1976/6/11. These specimens are smaller than the defined Type "A" and lack damascening on the blade. Their weights, however, align with the type. Scholars have dated these winged lances to the second half of the 8th century and around 800 AD, assuming they remained in Pannonia and Croatia until the early 9th century. Another lance tip found in the grave in 1951/38 features a willow leaf-shaped blade and suggests the continued presence of such weapons in or after the middle of the 9th century, challenging previous assumptions (Müller, 2010a, p. 228).

Late Roman graves rarely contained weapons as burial items. The classification of iron knives with broad blades and oval end plates on long tangs is unclear. Some argue that longer specimens over 20 cm should be considered weapons, while shorter ones may not be (Müller, 2010a, p. 228-229). These knives/daggers are found in male and female graves, often associated with onion button fibulas and military belts. Examples are known from Intercisa, Győr, Somogyszil, and Keszthely-Fenekpuszta. The type was widespread in the 4th century based on accompanying coins. Other daggers are mentioned in late Roman, 5th-century, and Carolingian-era graves, with varying blade shapes, pommels, and sheaths. Some graves also contained arrowheads alongside the daggers (Müller, 2010a, p. 228-229).

In grave 1963/22, a deformed late Roman-style spur was discovered in the filler soil. Sági believed that the spur was originally an accompaniment and that the grave was an old, looted late Roman grave. The unusual position of the left arm was likely due to animal activity. The grave, which showed partial stone packing and preserved skeletal remains, belongs to the early Keszthely culture. In the vicinity of Zalavár/Mosaburg, spurs began appearing in graves around the middle of the 9th century. However, they are notably absent from servant graveyards like Zalasabar-Dezsőinsel or Esztergályhorváti-Alsóbárándpuszta. While there are weapon graves in the Frankish/Carolingian-era

graveyard in Fenékpusztá, no spurs have been found in any graves thus far (Müller, 2010a, p. 228-229).

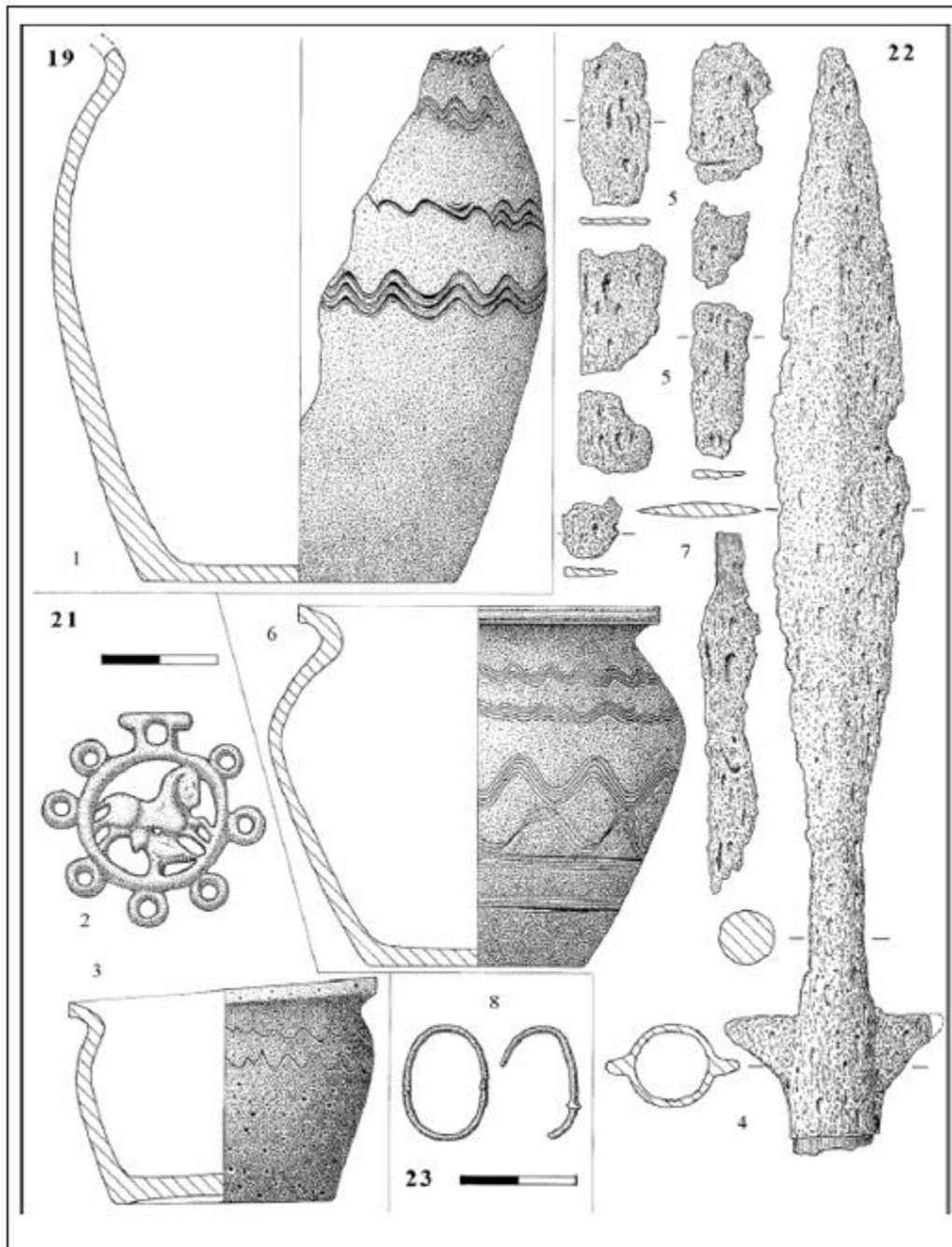


Figure 17. Grave 1951/19; 2-3: Grave 1951/21; 4-7: Grave 1951/22; 8: Grave 1951/23. 8: 1:1; 1, 3-7: 1:2. Müller, 2010a, p.270.

The presence of weaponry in graves reflects the significance of warfare and martial status in these societies, highlighting the diversity in combat techniques and social roles. Including weapons in male and female graves suggests gender equality or recognition of women's involvement in warfare or defence. The similarities between excavated and Germanic swords indicate possible trade and cultural exchanges. The absence of certain items, such as spurs, in specific graveyards might mean distinct social or occupational roles within these societies.

Avar cavalymen also carried bows, arrows, lances, swords, and maces. Bows and arrows were the most common weapons used by Avar cavalymen. They were used to harass the enemy and disrupt their formations. Lances were used for shock attacks and charging enemy lines. Swords were used for close-quarters combat. Maces were used to crush the enemy's bones.

The article by Tolkein, Gulzhan and Raikhan discusses that the Avar Khaganate's presence in Europe had a lasting impact on the region's history in terms of both culture and military strategies. Culturally, the Avars brought their Asian-style traditions and influences from Central Asia to Europe throughout centuries (Tolkein, Gulzhan, Raikhan, 2014). They interacted with local populations and contributed to synthesising material and spiritual wealth. The Avars served as a medium for exchanging cultural practices, ideas, and technologies between the East and the West (Tolkein, Gulzhan, Raikhan, 2014, p.19).

Regarding military strategies, the Avars introduced innovative tactics and weaponry that influenced the development of European military practices. The Avars' cavalry troop, skilled horsemen, and archers were highly influential on the battlefield. Their military strength and strategies influenced large empires, including the Byzantine Empire (Tolkein, Gulzhan, Raikhan, 2014, p. 22-23).

Tolkein and her colleagues stated that their example of a well-equipped cavalry troop with armour was a model for forming Frankish/Carolingian knights in medieval society (Tolkein,

Gulzhan, Raikhan, 2014, p.23). The Avars' impact on the military system extended to the development of chivalry in medieval Europe (Tolkyn, Gulzhan, Raikhan, 2014, p. 22).

In conclusion, the Avar graves at Keszthely-Fenékpuszta reveal the presence of weaponry, emphasizing the importance of martial status and warfare in Avar society. The range of weapons found, including swords, spears, axes, and arrows, suggests diversity in combat techniques and social roles. The burial of weapons in graves indicates their significance and possibly symbolic meaning. Similarities between the excavated swords imply trade or cultural exchanges with Germanic societies. The absence of spurs in certain graveyards suggests different social or occupational roles within Avar society. The Avars' military strategies and weaponry had a lasting impact on Europe, influencing medieval knights and the development of chivalry.

### **3.5 The Chronological phases of the Avar-related material culture**

In the last three decades, the material culture found in Avar-related cemeteries in the Carpathian Basin, generally speaking, has been divided into three chronological phases based on the grave goods found within them:

1. The Early Avar period (ca. 568-670 AD) was characterized by simple grave structures and limited grave goods, including weapons, jewellery, and occasionally horse equipment.
2. The Middle Avar period (ca. 670-720 AD) was characterized by more significant and elaborate grave structures and a wider range of grave goods, including weapons, jewellery, horse equipment, and other items such as belts, fittings, mirrors, and combs.
3. The Late Avar period (ca. 720-805 AD) was characterized by a shift towards simpler grave structures and fewer grave goods, particularly regarding weapons and horse equipment.

However, some scholars have recently challenged this traditional view, arguing that it is overly simplistic and does not account for regional variations within the Avar world. For example, Szücsi states that the conventional three-phase model of Avar material culture is inadequate because it does not consider how the Avars adapted to and integrated with local populations (Szücsi, 2019, p. 8). Instead, they propose a more complex and nuanced approach that emphasizes the role of regional influences and the importance of studying individual graves in detail (Müller, 2012, p.49-57).

Interestingly, none of the belt sets typical of the late Roman high-ranking military with propeller-shaped or notched-cut fittings has been found in the Keszthely-Fenekpuszta grave fields. Three belt sets are known from the Lipp excavation. Sets and similar finds are known in the Avar material of the 7th century, and according to Müller, Fettich also published the fittings several times as finds from the Avar period (Müller, 2010a, p. 221). One essential belt set group concerning Keszthely-Culture is the bronze cast belts decorated with gryphons, animal battle depictions and tendrils. According to Szántó, Alföldi defined these as the Asian-style legacy of the Avars. He considered the finds of the pressed belt sets, dated with seventh-century Byzantine coins, to be the legacy of the Cutrigur. Even though the Gryphon-style artefacts are not delimited in this way, he considered both groups the same age (Alföldi 1934 in Szántó, 1961, p. 475). In his view, Byzantine belt buckles once travelled from Byzantium to the Avar Empire as trade fair goods (Alföldi 1934 in Szántó, 1961, p. 475).

However, recent research suggests that a group of wearers of pressed plate belt sets have survived the emergence of a new, gryphon-belt style ethnicity, as evidenced by its co-occurrence. In connection with the same findings, Lipp also noticed that they did not occur in all parts of the Keszthely cemeteries but only in smaller areas (Szántó, 1961; Staub, 1999, p. 181; Müller, 2020, p. 69). As early as 1958, Ilona Kovrig pointed out a population living within a unified cultural framework at the southwestern end of Lake



Balaton whose Roman-style representatives existed in the same areas even in the eighth century (Kovrig, 1958).

One of the main arguments put forward by Szücsi is that the Avars adapted to and integrated with local populations in different ways, which is reflected in their burial practices. They point to several examples of graves that display features characteristic of local people rather than the Avars from various cemeteries from present-day Hungary, such as burial orientation or non-Avar-style grave goods. The author suggests that these graves may represent individuals not of Avar origin but who were incorporated into Avar society through marriage, trade, or other means (Szücsi, 2019, p.10).

In addition, Szücsi argues that the traditional three-phase model does not adequately account for the chronological overlap between different types of grave goods. For example, he points out that some graves typically associated with the Early Avar period (such as those with simple grave structures and limited grave goods) also contain objects typically associated with the Middle or Late Avar period. The author suggests that this overlap may reflect a more complex cultural change and continuity over time rather than a simple shift from one phase to another (Szücsi, 2009, p.10).

Müller, between 1999 and 2000, opened 16 new trenches at Keszthely-Fenekpuszta (Müller, 2010a). Attached to grave 43, a man's grave has been excavated. The grave pit with rounded corners became visible at 96 cm. The walls of the pit were vertical. The northeast corner of the pit intersected the older and shallower horse grave in 1999/43, in Figure 18. The contour of the coffin could be observed at a depth of 111 cm. The 199 × 56–51 cm large coffin narrowed slightly toward the feet (Müller, 2010, p. 120). Stones and broken bricks lay between the coffin and the pit's edge at 88–105 cm depth. The skeleton was stretched out on its back. The jaw dropped, and both forearms were angled towards the pelvis. The hands touched without accessories (Müller, 2010, p. 120). Müller stated that the dating of the grave is problematic because it could be due to the

superposition and the state of preservation of the skeleton, also late antiquity, but because of the stone packing, it may have been from the early Avar period (Müller, 2010, p. 120).



Figure 18. Attached to grave 43, a man's grave has been excavated. The grave pit with rounded corners became visible at 96 cm. The walls of the pit were vertical. The northeast corner of the pit intersected the older and shallower horse grave in 1999/43 Müller, 2010a, p.120.

In conclusion, recent scholarship challenges the traditional division of Avar material culture into three chronological phases, advocating for a more nuanced view that considers regional variations and integration with local populations. The evidence suggests that the Avars were a military power and a culturally influential society, bringing Asian-style traditions from Central Asia to Europe and impacting European military practices. The above representation of the chronological interpretation of the Avar-period-related material culture highlights the need for a more complex understanding of the Avars' cultural and societal evolution.

### **3.6 An overview of the network system of the Avar material culture in the Carpathian Basin**

According to the study of Müller, from 2020, Lipp Vilmos excavated 5067 graves in four cemeteries in and around Keszthely between 1879 and 1886, including Keszthely-Fenekpuszta. The accompanying artefacts were hardly known in the Carpathian Basin at that time. In several of his early works, he strongly suspected that this material could be dated to the Avar period. However, influenced by József Hampel, he identified the buried individuals as barbarians from the 4th to 5th centuries based on worn Late Roman coins found in the graves (Müller, 2020, p.69).

The material was initially named the Keszthely culture by Ludwig Lindenschmit. Although the research community accepted the term, there were variations in dating and ethnic determination among individual researchers, ranging from the 4th century to the Carolingian period, from Sarmatians to Huns, and various Germanic tribes to Avars (Müller, 2020, p.69).

Müller outlined that Rhé Gyula, based on discoveries in Veszprém County, concluded that the gryphon-adorned belt sets found in the urban cemetery of Keszthely, as well as in Dobogó and Páhok (Hévíz) cemeteries, are attributed to the Avars. András Alföldi's contribution lies in his determination that the basket-shaped pendants, disc brooches, style pins, and snake-headed bracelets found in the Fenékpusztá cemetery in Keszthely are mainly unique to the Keszthely region. These artefacts are part of the cultural heritage left behind by the local late Roman population who inhabited the area during the Avar period (Rhé, 1924 and Alföldi, 1926 in Müller, 2020, p.69).

In 1959, Barkóczy László excavated a cemetery comprising 31 intact graves near the western gate of the fort on the west side of the horreum (Müller, 2020, p.75). Among these graves, some stood out due to their remarkable collection of accompanying artefacts, while nine graves were devoid of any accompanying items. In 1970, Horváth László discovered an additional eight graves located slightly further away from the cemetery, with at least three belonging to the same burial site. Most graves were oriented north-south, with only five exceptions where stones lined the burial sites (Müller, 2020, p.75). Within the female graves, various clothing items were unearthed, including delicate gold tubes used as decorations for hairnets (found in graves 8, 9, 14, and 17), as for pins, an ornate gold square-shaped pin with embedded gemstones and the inscription "BONOSA" (grave 5), (Figure 5) was discovered (discovered in grave 5). Additionally, golden basket-shaped pendants were among the findings, including four pierced baskets (found in graves 6, 9, 17, and 29) (Müller, 2020, p.75).

Germanic fibulae with stone inlays, gilded eagle and S-shaped fibulae (graves 4, 11, 17, and 32), a gold disc fibula decorated with rock crystal, garnet, and pearls (grave 8). A gold box fibula adorned with filigree (grave 9); three-frame box fibulae with silver plates and gilded, incised fields depicting Early Christian scenes (graves 5, 12, and 14). Noteworthy is the hinged bulla made of bent gold sheet found in grave 8. The bracelets were of simple forms made of bronze and iron. The necklaces, most of which included amber, varied and had Late Antique, early Byzantine, and Rhineland parallels (Müller, 2020, p.76).

The wide range of artefacts found in the graves from different periods and origins indicates a vibrant cultural exchange and extensive trade networks. These artefacts showcase multiple styles and materials, including gold hair decorations, ornate pins, pendants, fibulae with stone inlays, and various other items. The material culture suggests that acquiring such a collection of objects would have required extensive trading networks. Furthermore, influences from multiple ethnicities and periods, such as Roman, Germanic, and Byzantine-related features, indicate that the region was a cultural crossroads. This blending of cultural elements implies the facilitation of trade and migration, allowing for the exchange of ideas and goods between different communities.

The variation in burial goods, ranging from elaborate to simpler forms, as well as the absence of accompanying items in some graves, suggests the existence of different social statuses or wealth levels within the society. This variation in wealth and status could reflect a community engaged in trade, cultural interactions and economic activities. Additionally, necklaces with parallels in late Antique, early Byzantine, and Rhineland styles indicate connections or exchanges between these regions, further supporting trade or cultural contact between different areas.

1951-1952, 76 Frankish/Carolingian-era graves were excavated before the southern gateway. Through subsequent research, the number of these graves has now reached 135. Some of the deceased were heavily covered with shapeless stones on their coffins, and animal bones were found in several tombs, indicating the presence of meat offerings. Based on Müller's research, there are various theories regarding the ethnicity of the deceased. According to one viewpoint, it could be a military force consisting of descendants of the Late Avars and Franks. Another theory suggests a population mixed with Late Antique inhabitants, Avars, Franks, and Western Slavs as their successors (Müller, 2012, p.58).

In my article "A Karoling Európa gazdasági dinamikája i.sz. 700 és 950 között" published in Kelet Kapuja historical and archaeological magazine, I explored the expansion of the Carolingian Empire and the economic systems that supported its growth. The article includes the development of new forms of land tenure, the emergence of new centres of trade and commerce, and the impact of technological innovation on agricultural production (Gal, 2021). My argument is that the Carolingian Empire was more complex and extensive than previously thought and that the expansion of the empire was, among other factors, driven in part by various climate change events. I did cite evidence from historical texts and previously published sources describing droughts, floods, and other disasters that impacted the region and various archaeological sites around Europe, including Germany, Austria, Netherlands and England (Gal, 2021).

The movement of the Frankish/Carolingian elite away from areas affected by political turmoil, pandemics, and various disasters, along with other elements, might have played a role in developing new settlement patterns and reusing existing sites. Following that thought, Keszthely-Fenekpuszta may have been used, reused, or cohabited by the representatives of the Frankish elite and their military and personal accompaniment. The proof of a possible relation was previously outlined in this dissertation from archaeological excavations at the site from a trading point of view.

However, I think the revealed Frankish/Carolingian-style belt buckles, jewellery, weaponry and other everyday objects could be proof of trade, a possible cohabitation, and use or reuse of some Avar-period burials in Western Hungary by the Frankish/Carolingian elite and their escorts.

In conclusion, the material culture in the Avar graves at Keszthely-Fenékpuszta and other Avar cemeteries in the Carpathian Basin suggests a robust network system. The Avars were likely involved in long-distance trade, intermarriage, plunder, and local craftsmanship, indicating their connections with other cultures and military activities.

Evidence from Keszthely-Fenékpuszta suggests that the movement of the Frankish/Carolingian elite away from areas affected by pandemics and various disasters, in conjunction with other factors, may have played a role in developing new settlement patterns and reusing existing sites. The evidence also suggests that the Avars actively participated in trade and cultural exchange networks that characterized the early medieval world. Further research may continue to shed light on the extent of their connections and interactions with other cultures in the Carpathian Basin and beyond.

#### **4. Chapter IV. - Thematic discussion**

This chapter brings together the different influences that worked on the creation of 'Avar-period' identities around Lake Balaton via discussions of three pivotal and interconnected themes: population movements and cultural influences, DNA analysis, and climate change. These themes are convergent, weaving together to offer a nuanced understanding of the evolution of ethnic identities within this region.

Firstly, DNA analysis can be considered as a genetic time machine, which allows the scientists to trace the migratory paths of the Avars who are believed to have originated in modern-day Mongolia and embarked on a westward journey into Central Asia and Eastern Europe. Through genetic indicators and population genetics, we can decipher the genetic affinities and admixtures that occurred during this migration, shedding light on the complex web of human movement (or not) and interaction.

Secondly, the theme of mobility and cultural influences unfurls the intricate dynamics that shaped Avar society from material culture. As the Avars traversed vast landscapes, they encountered diverse societies, leaving indelible imprints on their own identity. Through artefact examination, linguistic shifts, and material culture in regions like Keszthely-Fenékpuszta, an attempt is made to unravel the layers of influence from different geographical regions that created the social groups and their material expression around Lake Balaton.

Lastly, climate change emerges as a silent yet potent player in the drama of identity evolution. The environmental fluctuations experienced during the Avar period could have had profound effects on resource availability, settlement patterns, and social structures. By integrating climate data with archaeological findings, we can discern how climatic shifts contributed to the Avars' adaptation strategies and influenced their cultural identity.



Ultimately, this chapter seeks to illustrate how these three interlocking themes converge to offer a holistic interpretation of ethnic identities in the Avar Khaganate. By intertwining DNA analysis, mobility and cultural influences, and climate change, this chapter will unravel the complex narrative of a people whose origins in Mongolia resonate through the corridors of time, shaping the diverse and evolving identity of the Avars in their journey westward.

#### **4.1 The creation of the ‘Avar’ identity (population movement and acculturation) – in reflection of recent results from ancient DNA analyses.**

The so-called ‘Avars’ are thought to have originated from the region that is now modern-day Mongolia, and they migrated westward into Central Asia and Eastern Europe.

Veronika Csáky and her team focus on the Avars who settled in the Carpathian Basin after 568 AD and established the Avar Khaganate (Csáky et al. 2018). The mitochondrial DNA analysis revealed various haplogroups, indicating different maternal lineages among the ‘Avar’ elite. These lineages originated from Western Eurasia, East Eurasia, and South Siberia, suggesting a complex social organization within the ‘Avar’ period. The study also found evidence of potential kinship connections within the ‘Avar’ elite, particularly in the cemetery at Kunszállás. Identical mtDNA and Y-chromosomal haplotypes were identified in specific individuals, suggesting maternal and paternal kinship (Csáky et al., 2018).

Comparisons with other populations revealed that the genetic makeup of the ‘Avar’ elite differed significantly from the smaller ‘Avar’ population in southeast Hungary, which had a predominantly Eastern European maternal genetic composition (Csáky et al. 2018). Furthermore, the ‘Avar’ elite group was genetically distinct from the Lombard period community in Transdanubia during the 6th century, which showed a closer genetic affinity with other ancient European populations. When examining the continuity of the ‘Avar’

population, the researchers observed only limited connections between the early 'Avar' elite group and later people in the Carpathian Basin. The mtDNA composition of the 'Avar' elite group differed significantly from the 9th-12th century populations in the region. However, specific paternal lineages carrying the N-Tat haplotypes indicated potential continuity between the 'Avars' and early Hungarians (Csáky et al. 2018).

In their study, Narasimhan et al. analysed genomic data from 523 ancient individuals from South and Central Asia, including individuals from the Avar culture from 71 archaeological sites, spanning the Neolithic to the medieval period. They used statistical methods, including principal component analysis (PCA) and model-based clustering, to analyse the genetic relationships between these individuals and other populations worldwide (Narasimhan et al. 2019).

According to Narasimhan et al., the Avars were genetically similar to other regional populations, such as the Huns and the Bulgars. They suggest this genetic similarity indicates a shared ancestry or migration history between these populations. Narasimhan also found that the Avars had genetic ancestry from East Asian and West Eurasian populations. Specifically, they found that the Avars had "significant" genetic contributions from East Asian populations, which they traced back to the Altai Mountains region of modern-day Mongolia. They also found that the Avars had genetic contributions from West Eurasian populations, including the Caucasus and the Near East (Narasimhan et al. 2019, p. 12).

In their discussion, Narasimhan et al. suggest that the genetic makeup of the Avars is consistent with a scenario in which they originated in the Altai Mountains region of Mongolia and then migrated westward into Central Asia and Eastern Europe. They note that the Avars likely mixed with various other populations along the way, which would explain their genetic diversity (Narasimhan et al. 2019, p. 9-10).

In addition to these above, a Hungarian scholar and his team, Neparáczki et al., analysed Y-chromosome haplogroups from 49 ancient individuals from the Carpathian Basin (Neparáczki et al. 2019).

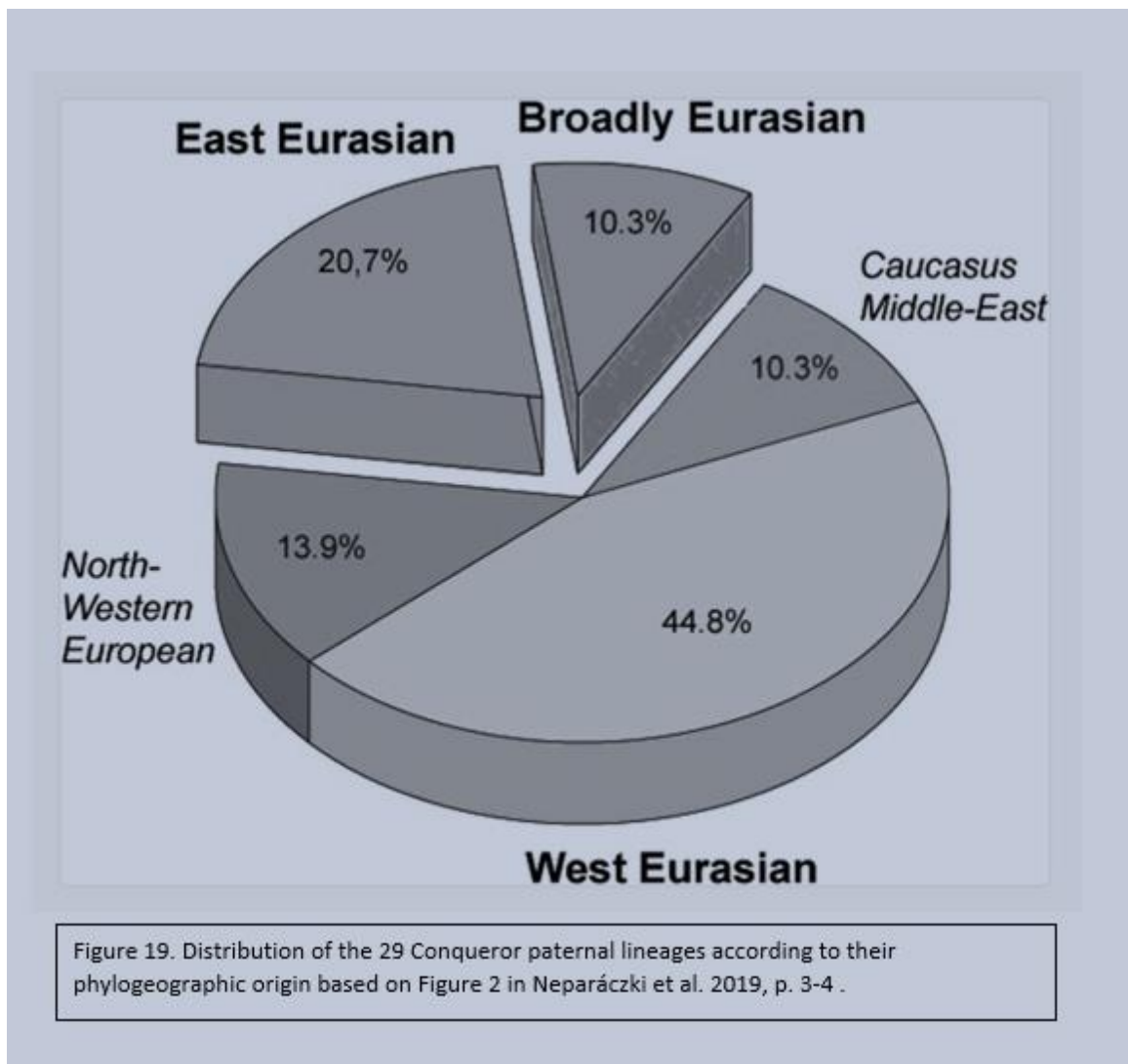
- Hun period: Szolnok-Szanda, Tiszaékcske-Öregszőlő, Zalavár-Dobogókő, Nagyfüged-Toporin, Mende-Csőszhalom, and Miskolc-Lipótváros.
- Avar period: Szolnok-Szanda, Kunszentmárton-Temetői-dűlő, Szeged-Üllés, and BÉlme gy er-Csárdamajor.
- Conquering Hungarian period: Szeged-Újszentiván, Szolnok-Szanda, and Vác-Alsórákos.

Neparáczki used a combination of DNA extraction, PCR amplification, and Sanger sequencing to analyse Y-chromosome haplogroups in ancient human remains from the Carpathian Basin. Specifically, they targeted the following Y-chromosome SNPs: M9, M42, M45, M78, M89, M96, M122, M130, M170, M173, M207, M242, M269, P25, P312, and R1a1a (Neparáczki et al. 2019, p. 1-10).

They also performed statistical analyses, such as principal component analysis (PCA) and  $f_3$ -statistics, to investigate the genetic relationships between the ancient populations and modern-day populations from various regions. Additionally, the authors utilised a Bayesian method called "chronological modelling" to estimate the periods when specific Y-chromosome haplogroups were introduced into the Carpathian Basin and the frequency of those haplogroups over time (Neparáczki et al. 2019, p. 2).

The scholars found that the majority of the Hun and Avar period individuals belonged to haplogroup N, specifically subclades N1a1a1a1a1a1a1a1 (also known as N1a1a1a1a3 in some nomenclatures) and N1a1a1a1a3. These subclades are thought to have originated in Northeast Asia. They are found at high frequencies in populations of the Uralic language family, which includes the Finno-Ugric and Samoyedic peoples (Neparáczki et al. 2019, p. 3-4).

The predominance of haplogroup N in the Hun and Avar period samples suggests that these populations had a significant East Asian genetic component in Figure 19. In contrast, the conquering Hungarian period samples showed a predominance of haplogroup R1a, specifically the subclade R1a1a1b1a1a. This subclade is commonly found in Central and Eastern Europe, suggesting that the population's genetic makeup shifted, perhaps due to migration or other demographic changes (Neparáczki et al. 2019, p. 3-4).



The authors note that the genetic diversity of the conquering Hungarian period samples was higher than that of the Hun and Avar period samples, indicating that the population was more diverse during this period. This may be due to the influx of new groups during the conquering Hungarian period, which would have increased genetic diversity (Neparáczki et al. 2019, p. 1-10).

Overall the studies, the Avars are believed to have migrated from Mongolia into Central Asia and Eastern Europe during the 6th century AD. Genetic studies have shed light on the origins and impact of the Avars on the populations they encountered. The studies found that the Avars exhibited high genetic diversity, indicating a heterogeneous group with genetic affinities with people from the Eurasian steppe, mainly present-day Kazakhstan and Mongolia, and populations from the Near East and the Caucasus. The Avars had a significant genetic contribution from East Asian people, traced back to the Altai Mountains region of modern-day Mongolia. They also showed evidence of genetic mixing with other regional populations, such as the Slavs.

The scholars suggest that the Avars originated in the Altai Mountains region and migrated westward into Central Asia and Eastern Europe around the 6th century AD, establishing a powerful empire that lasted for several centuries. However, the study did not find any clear evidence for a specific ethnic affiliation of the Avars, indicating that their identity may have been more fluid and complex than previously thought.

The Avar-related groups were cosmopolitan people open to cultural and genetic mixing. Not all genetic studies only sampled graves that looked the most 'Avar' based on grave goods. For example, the Neparáczki et al. study tested graves from various archaeological sites, including some that did not contain Avar-style grave goods. It means that the researchers were not trying to select a specific group of individuals for analysis but rather to get a more representative sample of the Avar population.

However, it is difficult to say whether the sampling strategies used in the genetic studies represented cemetery populations as a whole. This is mainly because we do not have complete information about the composition of all Avar cemeteries. However, the studies that did sample various archaeological sites suggest that the researchers were at least trying to get a representative sample.

My research on Keszthely-Fenékpuszta also suggests that the 'Avars' were a diverse group with various genetic ancestry. The cemetery at Keszthely-Fenékpuszta contains graves of individuals with material culture from multiple regions, including Central Asia, the Near East, and the Caucasus. The genetic studies above support my theories about the Avar-style societies from Keszthely-Fenékpuszta regarding their heterogeneous genealogical characteristics. However, it is also essential to note that the genetic studies are still in their early stages, and more research is needed to understand the genetic diversity of the Avars fully.

For example, a future wide-scale DNA test from Keszthely-Fenékpuszta which includes not only twenty-plus but hundreds of samples, would help us to understand the ethnic affiliation of the Avar era in several ways. First, it would allow us to compare the genetic makeup of the so-called Avars to that of other populations from the same period. It would help us to determine whether the Avars were a distinct ethnic group or whether they were more closely related to other populations. Second, a wide-scale DNA test would allow us to identify any genetic markers specific to the 'Avars' if there are any. In addition, it would help us trace the Avars' ancestry and determine their origins. Third, a wide-scale DNA test would allow us to study the Avar-style population's genetic diversity and help us understand how the Avars interacted with other people and how their genetic makeup changed. Moreover, it would allow us to understand the 'Avar population's health, identify any common genetic diseases at the time, and help us study the Avar-related diet and lifestyle. The information mentioned above would be essential for understanding the 'Avars' role in history and their impact on the populations they encountered.

## **4.2 The extent of population movement in the creation of the Avar Khaganate**

Gyula Pauler was a Hungarian historian who wrote extensively about the Avars in the 19th century. His book "A magyar nemzet története Szent Istvánig" is one of his most notable works. In his book, Pauler described the Avars as purely Mongolian people who migrated into Europe in the 6th century. He argued that the Avars were a homogenous group and that their language and culture were closely related to those of the Mongolian peoples of Central Asia. Pauler's views on the Avars reflected the limited information available at the time and the prevalent racial theories of the period (Pauler, 1900, p.1-8).

During the 19th century, European scholars were heavily influenced by racial theories that greatly emphasised ethnic and national identity. This led many scholars, including Pauler, to view the Avars and other historical peoples through the lens of race and ethnicity. Pauler's view of the Avars as a homogenous Mongolian people was typical of the period. Gyula László was a prominent Hungarian historian specialising in the Avars' history. His book "The Avars" is considered a seminal work on the topic and has influenced the scholarly understanding of the Avar Khaganate (László, 1999).

In his book, László characterises the Avars as a Turanian people of uncertain origin who spoke a language related to the Mongolic languages (László, 1999). He argues that just like Pauler, the Avars were a unified people who migrated into Europe as a cohesive group rather than a confederation of different peoples. László recognises that other groups were present within the Avar Khaganate but did not emphasise the multi-ethnic character of the association (László, 1999, p. 126, 447).

László's view of the Avars as a homogenous, Turanian people influenced the early scholarly understanding of the Avar Khaganate. The Romanian-American historian, Curta, specialises in the early medieval history of Eastern Europe. He has written extensively on the Avars and their interactions with other regional groups. Curta has criticised Gyula László's characterisation of the Avars as a "Turanian" people of uncertain origin (Curta, 2001, p. 120-190). Curta argues that the Avars were a complex confederation of ethnic and linguistic groups, including Turkic, Iranian, and Germanic peoples. He emphasises the heterogeneity of the Avar Khaganate and the importance of considering the cultural and political interactions between the Avars and their neighbours (Curta, 2001, p. 120-190).

Walter Pohl is a contemporary Austrian historian who studied the Avar Khaganate extensively—in his 1988 book "Die Awaren: Ein Steppenvolk in Mitteleuropa 567-822 n.Chr.", Pohl initially suggested that the Avars were a homogeneous group of nomads who migrated from the Asian steppes (Pohl, 1988). However, almost thirty years later, he revised his views to recognise the multi-ethnic composition of the Avar Khaganate. In his recent work, including "The Avars: A Steppe Empire in Central Europe, 567-822 AD", Pohl emphasises the heterogeneity of the Avar confederation and acknowledges the presence of various ethnic and linguistic groups within the Avar Khaganate. Pohl's research draws on various archaeological and historical sources to examine the Avars' political, social, and cultural organisation and interactions with other Central European groups (Pohl, 2018). Similarly, in his earlier works, Bóna characterised the Avars as a homogeneous group of Central Asian nomads who migrated into Europe in the 6th century. He emphasised the Avars' military prowess and their impact on the history of Central and Eastern Europe (Bóna, 1974).

However, in his later works, almost twenty years later, such as "The Avar Period", Bóna recognised the Avar Khaganate's multi-ethnic composition and various ethnic and linguistic groups within the confederation (Bóna, 1993, p.29). There is ongoing scholarly debate about the extent of the population movement that led to the creation of the Avar



Khaganate. Some scholars argue that the Avars were a relatively small group of elite warriors who came to power by conquering and assimilating local populations. In contrast, others suggest that the Avars were a large confederation of Central Asian tribes who migrated en masse into Europe.

One estimate by Walter Pohl suggests that the Avars may have numbered around 150,000 people at their peak, with only a small core group of elite warriors of Central Asian origin. Other scholars suggest that the Avars may have been a more heterogeneous group with a more significant proportion of non-Central Asian peoples. However, due to limited historical sources and ongoing archaeological research, it is difficult to determine the exact extent of the population movement that led to the creation of the Avar Khaganate. Let me represent the main theories and their arguments in a summary table in Figure 20.

Peter Heather, a British historian, who specialised in studying the late Roman Empire and the early medieval period in Europe, has argued that the Avars were a confederation of various Central Asian tribes who migrated into Europe and assimilated local populations through conquest and intermarriage (Heather, 2010, p. 572, 611, 613). He also suggested that the Avars played a crucial role in the downfall of the Western Roman Empire by attacking the Balkans and disrupting Roman trade routes, which contributed to the economic and political instability of the region. Overall, Heather's views on the Avars emphasise their nomadic and militaristic nature and their impact on the historical developments of the time (Heather, 2010, p. 378, 422, 578).

Theory	Key Arguments
Elite Warrior Theory	The Avars were a relatively small group of elite warriors who came to power through conquest and assimilation of local populations. They may have originated from the Central Asian steppes, but their exact origins are unclear. This theory emphasizes the role of the Avar Khaganate as a political and military entity, with the Avars as a ruling elite rather than a homogenous ethnic group.
Large Confederation Theory	The Avars were a large confederation of Central Asian tribes who migrated en masse into Europe. They may have been pushed westward by the expansion of the Turkic Khaganate, or drawn by the economic and political opportunities of the Byzantine Empire. This theory emphasizes the multi-ethnic character of the Avar Khaganate and the importance of the Avar confederation as a cultural and economic force.
Steppe Nomad Theory	The Avars were typical steppe nomads who engaged in pastoralism and raiding. They may have originated from the Central Asian steppes, and were likely skilled horsemen and archers. This theory emphasizes the nomadic lifestyle and military capabilities of the Avars, with less emphasis on their political or cultural achievements.
Hybrid Theory	The Avars were a combination of the above theories. They may have started as a relatively small group of elite warriors, but grew into a larger confederation through the assimilation of other groups. This theory acknowledges the multi-ethnic character of the Avar Khaganate, while still emphasizing the importance of the Avars as a ruling elite.

Figure 20. Representation of the ongoing scholarly theories and their arguments regarding the movements of the Avar-related societies in a summary. Gal, 2023. Nottingham.

One of the critical pieces of evidence from Keszthely Fenékpuszta that challenges the notion of the Avars as a small group of elite warriors is the sheer number of burials found at the site. The graves at Keszthely Fenékpuszta include high-ranked individuals, such as warriors and nobles, as well as commoners, women and children. It is suggested that Avar society in its developed form (with possible Central Asian descent groups and local populations) comprised a diverse population with a broad social structure.

These graves contain high-status artefacts, such as luxury items, weapons, and gold and silver jewellery, indicating that the individuals buried were likely members of the Avar elite or representatives of merchandisers or a refiner of gold and silver. The presence of male and female graves with such artefacts also suggests that the Avar Khaganate was not solely a male-dominated warrior society.

One of the weaknesses of the large confederation theory is the lack of direct written evidence from the Avars themselves. While there are contemporary accounts from neighbouring societies, such as the Byzantines, Slavs, and Franks, there are no surviving written records in the Avar language. This makes it difficult to ascertain the nature and composition of the confederation with certainty. Additionally, the archaeological evidence from the Avar period is not always conclusive in identifying ethnic or linguistic identity, as various factors beyond ethnicity, such as trade or cultural exchange, can influence material culture.

The archaeological evidence from Keszthely Fenékpuszta contradicts the idea of the Avars as a large, homogenous confederation of Central Asian tribes. The grave goods found in the burials at this site, dating to the late 6th and early 7th centuries, suggest that the Avars were a heterogeneous group composed of various ethnic and cultural elements (Heinrich-Tamáška, Müller, Straub, 2012., p.12)

For example, some burials contained artefacts characteristic of the Eurasian steppes, such as horse harnesses, weapons, and stirrups, which are associated with the nomadic warrior lifestyle (Bugarski, 2015, p.129-146). However, other graves contained items typical of the Byzantine or Germanic cultures, such as silver vessels, glass goblets, and Roman-style buckles (Csanád, 2010, p.146-160). Moreover, some of the graves at Keszthely Fenékpuszta contained individuals with East Asian physical features, such as epicanthic folds and shovel-shaped incisors, while others had European physical features. The diversity of the burial practices and grave goods at Keszthely Fenékpuszta suggests that the Avars were not a homogeneous group but a confederation of various ethnic and cultural groups who may have migrated or settled in the Carpathian Basin over time (Müller, 2010).

The steppe nomad theory shows a lack of direct evidence to support it. The Avars left behind no written records of their own, and the accounts of them written by contemporary chroniclers are often biased and incomplete. In addition to the archaeological evidence from the Avar period, recent genetic studies in this chapter have shown that the Avars were not closely related to modern Central Asian populations, further undermining the steppe nomad theory.

Many scholars consider the hybrid theory (Curta, 2001, p.326; Vida, 2018, p. 29-47) as the most plausible theory for the origins of the Avars because it considers the complexity and diversity of the historical and archaeological evidence. It acknowledges that the Avar Khaganate was a multi-ethnic confederation that included various groups from Central Asia and local populations from the Carpathian Basin and surrounding regions. This theory also recognizes the role of elite warrior bands in forming the Avar state and the importance of local power structures and cultural influences in shaping Avar society and identity.

Furthermore, numerous archaeological discoveries have supported the hybrid theory, such as the grave goods found at the Keszthely-Fenekpuszta cemetery, which reflect a mix of Central Asian, Frankish and local Carpathian Basin styles. One example at Keszthely-Fenekpuszta that supports the hybrid theory is the grave complex, which László Horváth and Róbert Müller excavated between 1973 and 1975 (Heinrich-Tamáska, Müller, Straub, 2012., p.24-25). This grave complex with 127 graves contained a mix of Avar and Germanic-style artefacts, including a Frankish sword and a pair of stirrups with bird motifs typical of Avar art. The cemetery also included women, indicating they had a high status within the Avar society. This combination of artefacts suggests cultural exchange and intermarriage between the Avars and local Germanic-style populations and relation or intercultural activities with Frankish/Carolingian-related communities (Heinrich-Tamáska, Müller, Straub, 2012., p.24-25).

Another example from Keszthely-Fenekpuszta is grave labelled as 1999/56. In this grave, a necklace was discovered, consisting of 51 beads in Figure 21. The chain had two rows of beads, with 18 beads in the upper row and 33 in the lower row (Müller, 2010b, p. 360-361). Researchers identified 31 different variations of bead types among these beads. The necklace had a visually striking effect due to its vibrant colours. However, it also contained twelve opaque, single-piece or twin beads decorated with overlays on a dark background (black or grey) (Müller, 2010b, p. 360-361). The necklace had only a few accompanying beads, most of which were variants commonly found during the early Avar period. These variants had bead and river overlays and were primarily associated with the Merovingian Germanic cultures, including the Frankish, Alemannic, and Bavarian regions (Müller, 2010b, p. 360-361).

Not many bead types in the necklace had precursors in the Late Antique period. The only examples that could be assigned to this category were a three-part turquoise-blue rod bead and variants decorated with yellow bead overlays on a black background. None of the previously studied Late Roman bead types was found among the beads in this necklace. By examining other items in the grave, a cast bronze-gilded basket earring pointed to the Frankish regions, indicating a potential connection. On the other hand, a silver-gilded bow fibula with niello decoration suggested a link to the Merovingian cultural sphere (Müller, 2010b, p. 360-361).

In conclusion, the scholarly understanding of the Avar Khaganate has evolved from the earlier view of the Avars as a homogeneous Mongolian or Turanian people to recognising the confederation's heterogeneity with various ethnic and linguistic groups. The Avars' impact on the history of Central and Eastern Europe is undisputed, and ongoing research and archaeological findings are helping to shed more light on their origins and the population movement that led to the creation of the Avar Khaganate. However, due to limited historical sources and the complexity of the confederation, it is challenging to determine the exact extent of the Avars' impact and the nature of their population movement.

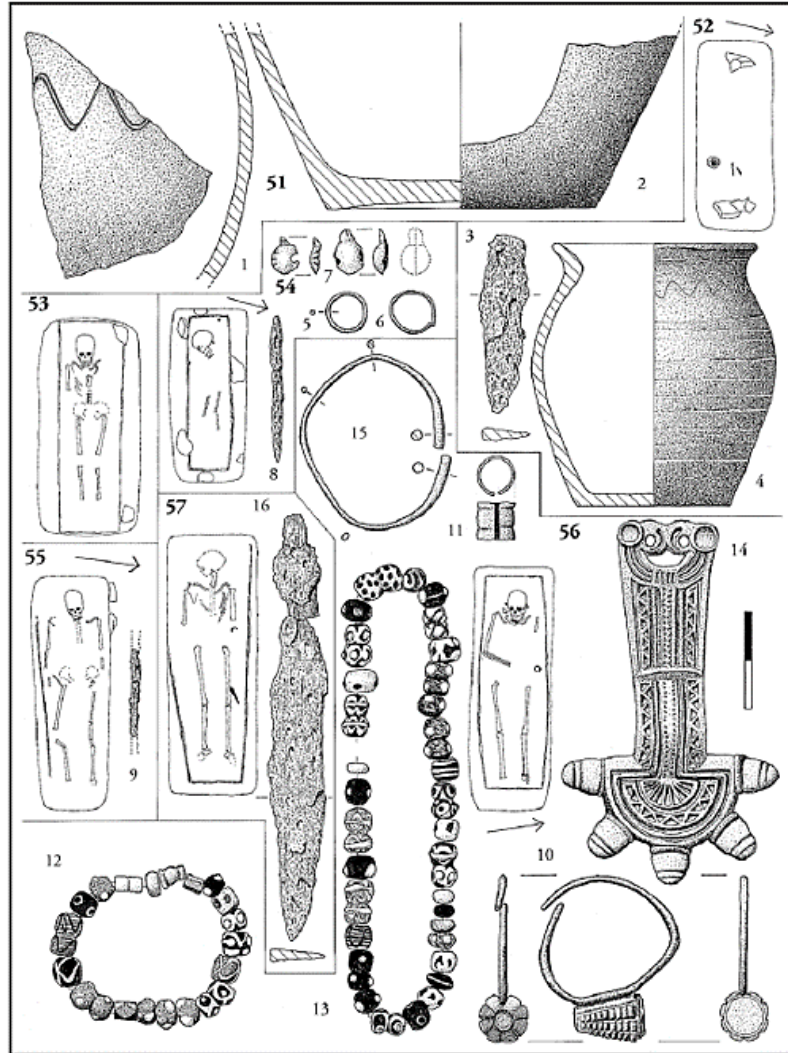


Figure 21. Grave 1999/51; 3-4: Grave 1999/52; 5-8: Grave 1999/54; 9: Grave 1999/55; 10-15: Grave 1999/56; 16: Grave 1999/57. 10, 14: 1:1; 1-9, 11-13, 15-16: 1:2; Grave drawings: 1:40. Müller, 2010a, p. 334.

### **4.3 Climate Change and its potential social impact on the Avar – period Communities in the Carpathian Basin**

The Avar-period societies flourished over the Caspian Sea region through the Carpathian Basin. Recent studies suggest that climate change may have significantly impacted their community. Climate change is a pressing global challenge that affects human societies and ecosystems in various ways. The potential social impacts of climate change on past organisations like the Avar-period communities are of great interest to scholars. This section of the dissertation will explore the possible social effects of climate change, specifically on the Avar-period societies. It will draw on academic research to examine how weather patterns and other environmental factors may have affected their way of life, culture, and social organization.

The temperature drop in central Asia and Europe between 536-660 AD is known as the Late Antique Little Ice Age (LALIA). The LALIA was a period of global cooling that occurred during the Medieval Warm Period. The LALIA is thought to have been caused by a combination of factors, including volcanic eruptions, solar activity, and changes in ocean circulation (Büntgen U. et al., 2016).

According to Preiser-Kapeller's study, in 558/559, an extreme winter was recorded in Byzantine texts, which led to the frozen Danube River, allowing "Barbarian" groups to cross (Preiser-Kapeller, 2018). Specific data from the Carpathian Basin and neighbouring regions, such as the Upper Dniester Valley, indicate a transition to increased floods before the last quarter of the 6th century (Preiser-Kapeller, 2018). Analysis of pollen, macrofossils, and sediments from Lake Nádas in northern Hungary revealed a significant temperature drop in the 6th century and a rapid shift from shallow water levels in the 5th century to high levels in the 6th and 7th centuries. It was accompanied by increased annual precipitation. However, different regional patterns of climate change can be observed (Preiser-Kapeller, 2018, p. 4). The Tăul Muced bog in the Eastern Carpathian



Mountains shows a shift towards drier conditions in the 6th century. Rising water levels have been reconstructed for Lake Balaton from the 5th to the 7th century (Preiser-Kapeller, 2018, p. 4).

The LALIA, more likely, had a significant impact on the Carpathian Basin as it was ever thought before. The Avars, like the Huns and various Germanic-related societies, were nomadic people who depended on livestock for their livelihood. The LALIA caused a decline in livestock productivity, which led to food shortages and famine. The food shortages and famine, in turn, led to increased social unrest and violence.

The research conducted by Alt, K.W. et al. between 2005-2007 provides an in-depth analysis of 45 skeletons from adults and subadults excavated from Szólád, Hungary, dating back to the 6th century AD., which coincides with the events of LALIA. The site is only 58.7 km from our case study and offers a relevant comparative dataset (Alt, K. W. et al., 2014).

The researchers investigated comprehensively using anthropological, molecular genetic, and isotopic analyses. They discovered that skeletal stress markers and evidence of interpersonal violence were prevalent among the studied population (Alt, K. W. et al., 2014). These findings potentially indicate that climate change-induced environmental stress could have influenced aggression and conflict. The rise in violence might be attributed to the scarcity of essential resources like water and land, which were becoming increasingly limited due to the effects of climate change.

According to enamel strontium isotope ratios, at least 31% of the individuals died at a location other than their birthplace and/or had moved during childhood. The researchers proposed a three-phase model of group movement based on the peculiar  $^{87}\text{Sr}/^{86}\text{Sr}$  ratio distribution between females, males, and subadults compared to local vegetation and soil samples. The initial group that settled at Szólád was patrilocal, with a narrower male but wider female Sr isotope distribution. Most subadults in the cemetery yielded a distinct Sr isotope signature (Alt, K. W. et al., 2014).

It is important to note that the enamel strontium isotope ratios and group movement patterns provide insights into mobility and potential migration. However, they do not provide explicit evidence of climate change as the driving factor. While climate change can contribute to human migration in specific contexts, other economic, social, political, and cultural factors can also play significant roles.

These findings highlight the importance of considering local conditions and social organization when studying the impacts of climate change on past societies. They also have important implications for understanding the potential social effects of climate change in modern-day communities, where local conditions and social organization may play a key role in determining vulnerability and resilience to environmental stress.

The study by Hakenbeck et al. conducted a multi-isotope analysis of five fifth- (to 9<sup>th</sup>) century-related AD cemeteries in modern-day Hungary, including Keszthely-Fenekpuszta, which continued to be used in some form into and through the Avar era (Hakenbeck et al. 2017, p. 4). The objective was to explore the relationships between the nomadic-pastoralist newcomers, including the historically documented Huns and other nomadic groups, and the sedentary agricultural population of the late Roman province of Pannonia.

The isotopic analysis provided information about the types of food the individuals consumed during their lifetime (Hakenbeck et al. 2017, p. 4). Contrary to the popular narrative of these interactions (like in the study of Alt, K.W. et al. discussed above) being mainly violent and destructive, the study found evidence of significant hybridity between the different groups. The isotope analysis of bone collagen, dentine, and tooth enamel demonstrated medium to high animal protein consumption across all sites, with minimal evidence of aquatic resources contributing significantly to the diet. The populations seemed to rely heavily on C4 plants, likely millet (Hakenbeck et al. 2017, p. 16-19).

It is more probable that this dietary shift likely responded to climate change-induced crop failures and decreased availability of animal-based food sources. This shift towards a more plant-based diet is particularly noteworthy as the Early Medieval societies in present-day Hungary generally were traditionally dependent on animal husbandry and pastoralism, shifting a more plant-based diet significantly from their cultural practices. The studies highlight the importance of considering the role of environmental stressors in shaping human societies and the need for flexible and adaptive strategies in the face of environmental change.

Moving alongside Preiser-Kapeller's work, between the years 568 and 582, the establishment of Avar power in the Carpathian Basin took place, coinciding with shorter temperature fluctuations following the first period of extreme cold (Preiser-Kapeller, 2018, p. 5). Another prolonged cold occurred between 595 and 615, with drier conditions from 604 to 614 and between 617 and 625. These years were characterized by frequent warfare between the Avars and the Byzantine Empire (Preiser-Kapeller, 2018, p. 5). Written sources highlight the impacts of extreme weather on the Byzantines and their troops. For example, in 599, a cold winter resulted in the death of draft animals, and a famine in Constantinople in 602 contributed to the fall of Emperor Maurice. In 610, a drought year was recorded when Heraclius replaced Emperor Phokas, and another famine

occurred in Constantinople in 618 due to the loss of Egypt to the Sasanians (Preiser-Kapeller, 2018, p. 5).

It is important to note here that the success of the 'Avars' in these wars was crucial for their empire, as they relied on annual payments from Constantinople and loot from raids on the Balkans to stabilize their power. The Byzantine campaigns in the 590s brought about the first crisis of the Khaganate, which was temporarily saved by the violent end of Maurice and subsequent internal turmoil in Byzantium (Preiser-Kapeller, 2018, p. 5). The second crisis emerged after the Avar siege of Constantinople failed in 626, coinciding with another cold period. This period saw a minimum of 626/627. A civil war followed it in the Khaganate, the rise of the realm of Samo in Bohemia, and the formation of "Great Bulgaria" under Kuvrat in the Ukrainian steppes (Preiser-Kapeller, 2018, p. 5).

Around 630 AD, climatic perturbations and other factors caused a decline in the significant settlement of Keszthely-Fenékpuszta. Our case study, a former Roman fortress near Lake Balaton, had sustained a unique agricultural system known as "sub-Mediterranean" agriculture. This agricultural practice involved the cultivation of wine, wheat, and walnuts. It persisted in the region until the 7th century, as indicated by recent paleo-environmental studies conducted by Sümegi et al. (Sümegi. et al., 2011; Preiser-Kapeller, 2018, p. 5-6).

Following the crisis of 626, the Avar Empire underwent reorganization between the 630s and 670s. During this period, there was a renewed inflow of Byzantine coins and objects, likely through trade and diplomatic exchanges rather than looting and tribute. The Avar Empire gradually regained its strength, with settlement extending into various regions such as the Vojvodina and along the Danube to the west and in the core region of Avar power between the Danube and Tisza rivers (Preiser-Kapeller, 2018, p. 7).

Archaeological evidence from Lake Baláta supports these observations, showing increased livestock breeding and cereal cultivation from the mid-7th century onward. Although the grain pollen trajectories from the three sites in Hungary are less reliable, they also suggest an upward trend in agricultural output during the 7th century. Scholars such as Curta and Herold propose that population growth and socio-economic changes contributed to and benefited from these developments. Herold explicitly highlights the emergence of "slow-wheel-turned pottery" as an indicator of changes in pottery production and related economic transformations within the Avar Khaganate (Curta, 2006, p. 92-93; Herold, 2014, p. 225-227; in Preiser-Kapeller, 2018, p. 7).

Climatic conditions during this period likely supported consolidation and growth. Reconstructions by Büntgen et al. indicate fluctuating temperature and precipitation conditions but without long periods of extreme cold and drought-like in the preceding era. Some notably dry years (647, 662, and 671) and a cold year (648) clustered around the middle of the 7th century, with reports of heavy storms in Constantinople during 647/648. Data from Lake Nádas in the Carpathian Basin suggests increased temperatures from the mid-7th century onward (Büntgen et al., 2016; in Preiser-Kapeller, 2018, p. 6).

The study "The environmental history of Fenékpuszta with special attention to the climate and precipitation of the last 2000 years" by Sümegi and co-authors is a multidisciplinary paleoecological and geoarchaeological research (Sümegi et al., 2009). It focuses on sedimentary sequences, including two undisturbed cores of the Little Balaton situated in the western part of Lake Balaton in Central Europe. The researchers used Quaternary paleoecological analysis on peat and lacustrine deposits to identify long-term environmental changes in aquatic and terrestrial ecosystems (Sümegi et al., 2009). The study's primary goals were to understand how former human societies and cultures shaped and altered their natural environment and to reconstruct the environmental conditions before the period of written historical records. This reconstruction is achieved through various analytical methods and approaches, including sedimentological,

geochemical, isotope geochemical, palynological, macro botanical, malacological, and microfaunal analyses (Sümegei et al., 2009, p.5-10).

The analysis of fluvial sands indicates their formation at the end of the Pleistocene, approximately 11,000 years ago, suggesting the presence of a fringed pine woodland with birch and reed stands of the Keszthely-Fenékpuszta area in Kis-Balaton. Overlying the fluvial deposits is a lacustrine layer characterized by varying carbonate content and volcanic ash spots, indicating the evolution of a more extensive lake system within the catchment basin. This lake, which existed from the early Holocene until the end of the early Bronze Age, was mesotrophic, deep, and calcareous. The presence of stonewort algae, floating reed grass, and specific shells further support the presence of a well-lit, calcareous lake during this period. The pollen record indicates a transition from coniferous woodland to deciduous woodland dominated by oak, elm, and hazel (Sümegei et al., 2009, p.5-10).

From the early Bronze Age to the Middle Ages, there is evidence of a general decrease in water levels compared to the previous lake stage. However, three distinct periods or cycles of marshland and lacustrine sedimentation can be identified during this time. These cycles indicate fluctuations in water levels and the deposition of organic materials, suggesting the transition between wetland and eutrophic lake conditions. During the Migration Period, there was evidence of a rise in water levels and the formation of shallow lacustrine phases. This increase in water levels is attributed to increased precipitation and the potential clogging of drainpipes constructed by the Romans. The paleo climatological reconstructions challenge previous historical models that attribute the Great Migrations to aridity and low water levels in the Caspian Sea (Sümegei et al., 2009, p.5-10).

According to Preiser-Kapeller, the mid-7th century did mark a power shift away from the centre, with border regions gaining prominence and the emergence of regional centres such as Carantania at the western periphery of the Khaganate (Preiser-Kapeller, 2018, p. 7-8). During this period, climatic conditions became more turbulent. There was a

significant cooling trend between 685 and 690, including the coldest summer in the late period. Precipitation patterns also fluctuated, with notable dry years in 688 and 695 and an extremely wet year in 700. Harsh winters and great floods were reported in Carolingian sources for 709-711, floods in Rome during the winter of 716/717, and an extreme winter during the Arab siege of Constantinople in 717/718. Such extreme cold events were not seen again until the mid-740s (Preiser-Kapeller, 2018, p. 7-8).

Archaeological evidence and data from Lake Baláta suggest continued growth until the mid-8th century, leading to a better-organized and more egalitarian society. However, between the middle and end of the 8th century, some regions of the Khaganate experienced stagnation or even recession. Settlement growth ceased between the Danube and Tisza rivers, and settlement expansion in modern-day Slovakia also halted. Climatic conditions may have contributed to this reversal, with Lake Nádas shifting towards drier conditions in the 8th century (Preiser-Kapeller, 2018, p. 8-9).

Climatic fluctuations continued, with droughts documented in Constantinople, Saxony, the Moselle region, and Burgundy in the late 8th century, wet years, such as 793 with constant rain, also impacted the area. Charlemagne's strategic planning against the Avar Khaganate, starting in 791, was initially successful but was hindered by an equine epizootic that affected both the Carolingian army and possibly the Avars. Other epidemics and widespread drought occurred in 801 and 809/810, further affecting the region (Preiser-Kapeller, 2018, p. 8-9).

By the early 9th century, the Avar Khaganate had disintegrated into various principalities, many nominally under Carolingian suzerainty. The last reference to an Avar political entity is dated to 822 AD. At this time, another prolonged cold period began, starting in 821 and lasting until 840, with Byzantine sources reporting intense colds, heavy storms, and famines in the early 820s. The Avar era ended as it had begun, with a clustering of extreme weather events (Preiser-Kapeller, 2018, p. 10).

Overall the archaeological evidence from Keszthely-Fenékpuszta suggests that the region had a unique agricultural system known as "sub-Mediterranean" agriculture, which involved cultivating wine, wheat, and walnuts. This agricultural practice continued until the 7th century, indicating its resilience and adaptation to local environmental conditions and occupational techniques from the native population.

Recent paleo-environmental studies conducted in the region, such as analysing pollen, macrofossils, and sediments from Lake Nádás, have revealed significant climate changes during the so-called Avar period. There was a temperature drop in the 6th century, accompanied by a rapid shift from shallow water levels in the 5th century to high levels in the 6th and 7th centuries, along with increased annual precipitation.

The region around Lake Balaton and its surrounding areas may have provided an ideal resource core area for populations during the Avar period. The presence of a lake and fertile land for agriculture could have minimized the impact of climate change and provided a relatively stable and resource-rich environment for the population. The availability of resources and favourable environmental conditions in the Lake Balaton region may have facilitated acculturation and interaction among people of different descent groups. The abundant resources could have supported trade, exchange, and cooperation, promoting regional social and cultural integration.

However, it is essential to note that while the region may have provided some resilience and resources to mitigate the impact of climate change, it does not imply that it was completely immune to its effects. Climate change would still have influenced local environmental conditions, agricultural productivity, and the overall socio-economic dynamics of the Avar-period societies in the region.



## **5. Chapter V. - Conclusions and potential for further research**

The dissertation aimed to comprehensively analyse the archaeological and historical evidence of Avar-style social identities in the Carpathian Basin, focusing on the Keszthely-Fenekpuszta site. By examining various aspects such as funerary customs, material culture, and social organization, this study provides a deeper understanding of identity formation and cultural interaction during the early Middle Ages.

The research highlighted the limitations of past approaches in studying the Avar period, emphasizing the need for a critical and nuanced perspective. It acknowledges the skewed focus on elite burials and grave goods, which led to an incomplete understanding of the broader population's experiences and practices. By adopting interdisciplinary methods and incorporating theoretical frameworks, this study aimed to overcome these limitations and offer fresh insights into Avar-related social identities.

The orientation of graves suggests a potential influence of both the 'Avars' belief in the sun as a symbol of life and regeneration and earlier German-speaking societies that placed importance on the east-west axis. The presence of Christian characters and elements in the material culture of the Avar graves indicates possible Christian influences and interactions with neighbouring Christian communities. However, Christian symbols do not necessarily imply complete religious conversion. However, they may represent a small Christian community within a predominantly Tengriist society, indicating the inter-adaptation between the local Christian and the avar-style cultures.

The shape and size of the graves have been reevaluated through recent research. Geophysical and archaeological studies have expanded our understanding of the cemetery, revealing a greater diversity of grave shapes, including oval and circular graves. The smaller size of the graves suggests a potentially more egalitarian social structure within the Avar society. Reusing graves and double burials further highlights the importance of kinship ties and social hierarchy in Avar society. The reuse of graves may have been influenced by practical considerations and cultural beliefs surrounding the power of ancestors to protect and watch over their descendants.

The interpretation of horse burials in Avar graves at Keszthely-Fenékpuszta remains debatable. Traditional views suggest sacrificial rituals, while recent research indicates that horse burials may also represent social status, prestige, and changing attitudes towards horses in early medieval Europe. The context, placement, and association with human graves, as well as the presence of horse gear and equipment consistent with everyday use, suggest a variety of meanings associated with horse burials.

Traditional views focused on the symbolic and functional significance of grave goods, such as belt sets and buckles, earrings, bracelets, and weaponry, about social status, gender, and military power. However, recent research has challenged these traditional views and proposed alternative interpretations. For example, belt sets and buckles were not exclusively worn by elites but also used by people of all social classes for practical purposes. They were functional items intended to fasten clothing and equipment rather than solely symbolic of status. Additionally, the designs and placement of belt sets and buckles within the graves suggest complex symbolic meanings, influenced by cultural traditions and potentially serving protective or religious purposes.

Similarly, earrings and bracelets were not solely worn by women but also by men and children, and their materials varied from precious metals to cheaper alternatives. The functional roles of these jewellery items were more diverse than previously thought, serving practical, protective, and ornamental functions. Avar-style jewellery items may have been locally produced or traded with neighbouring regions, indicating a complex cultural exchange.

Regarding weaponry, traditional views emphasized Avar weapons' military power and offensive/defensive roles. However, recent studies have highlighted weapons' social and symbolic functions, their various decorative features, and their significance in determining social status within Avar society. The Avars' expertise in cavalry warfare, including specialised units and tactics, played a crucial role in their military campaigns. Cross-cultural influences from neighbouring regions and variations in weaponry within the same area further demonstrate the complexity of Avar military technology and its societal implications.

The dissertation challenged the traditional three-phase model of Avar material culture found in graves at Keszthely-Fenékpuszta, emphasizing the need for a more nuanced approach that considers regional influences and individual graves. The Avars-related societies adapted and integrated with local populations, as evidenced by graves displaying features characteristic of local people rather than the Avars. The traditional model also fails to account for the chronological overlap between different types of grave goods.

The study at Keszthely-Fenékpuszta reveals that the cemetery was used for a more extended period than previously thought and was a complex and diverse social and cultural landscape. Variations in grave goods, burial structures, and spatial organization indicate social status and wealth differences. Stable isotope analysis provides insights into the dietary habits of buried individuals, reflecting potential social distinctions. Furthermore, evidence from other Avar period cemeteries in the Carpathian Basin suggests a robust network system, with objects obtained through trade, intermarriage, plunder, and local craftsmanship. Isotopic analysis of metal objects indicates extensive trade connections with distant sources, including the eastern Mediterranean and central Europe.

Early scholars like István Pauler and Gyula László viewed the Avars as a homogeneous Mongolian or Turanian people, reflecting the racial theories prevalent in the 19th century. However, more recent research and archaeological findings have challenged this view and highlighted the heterogeneity of the Avar Khaganate. Scholars like Curta or Pohl have emphasised the Avar Khaganate's multi-ethnic composition, recognizing the presence of various ethnic and linguistic groups within the Khaganate. They argue that the Avars were not a small group of elite warriors or a large confederation of Central Asian tribes but a complex confederation of different peoples, including Turkic, Iranian, Germanic, and Slavic-related populations.

The graves and grave goods found at Keszthely Fenékpuszta reflect a mixture of local and foreign elements, suggesting a complex cultural and economic network rather than a simple takeover by a small group of elites. The diversity of burial practices, grave goods, and physical features found at the site supports the idea of the Avars as a confederation of various ethnic and cultural groups. The genetic studies on the Avar-related population indicate that the Avars were a heterogeneous group with high genetic diversity. They originated from the Altai Mountains region of modern-day Mongolia and migrated westward into Central Asia and Eastern Europe during the 6th century AD. The 'Avars'

exhibited genetic affinities with populations from the Eurasian steppe, such as present-day Kazakhstan and Mongolia, as well as with people from the Near East and the Caucasus.

The genetic analyses revealed significant contributions from East Asian populations, traced back to the Altai Mountains and West Eurasian populations, including the Caucasus and the Near East. The 'Avars' also showed evidence of genetic mixing with other regional populations, such as the Slavs. These findings support that the 'Avars' were cosmopolitan people open to cultural and genetic interactions. However, the studies did not find clear evidence for a specific ethnic affiliation of the 'Avars', suggesting their identity may have been more fluid and complex. The 'Avars' likely intermixed with various populations along their migration route, contributing to their genetic diversity.

While the genetic studies provide valuable understanding, it is essential to note that they are still in their early stages, and more research is needed to understand the genetic diversity of the 'Avars' fully. Further studies, including wide-scale DNA testing, would help to compare the genetic makeup of the 'Avars' with other contemporary populations, identify specific genetic markers associated with the 'Avars', trace their ancestry, and study their genetic diversity and health.

The Avar-period societies that flourished over the Caspian Sea region through the Carpathian Basin were significantly impacted by climate change, among other elements like political turmoil and power shift changes. The Late Antique Little Ice Age (LALIA) and other climatic fluctuations during the 6th to 9th centuries AD had profound social effects on the Avar Empire. The decline in livestock productivity due to the LALIA led to food shortages and famine, resulting in increased social unrest and violence. Archaeological and bioarchaeological evidence suggests that resource scarcity and competition for critical resources like water and land contributed to increased societal violence and conflict. Moreover, the impacts of climate change varied across regions, with some areas

experiencing greater vulnerability and conflict than others due to local environmental conditions and social organization.

Climate change-induced environmental stress also led to dietary shifts among the Avar population as they adapted to crop failures and decreased availability of animal-based food sources. The Avar Khaganate's collapse coincided with climate change in the Carpathian Basin, with colder and wetter conditions impacting grassland productivity and contributing to food shortages and social unrest. The climatic fluctuations and extreme weather events during the Avar period influenced settlement patterns, political stability, and agricultural practices. However, certain regions, such as the Lake Balaton area, may have provided some resilience and resources that mitigated the impact of climate change. The availability of resources and favourable environmental conditions in the region facilitated social and cultural integration, trade, and cooperation among different descent groups. While the area provided some resilience, climate change still influenced the Avar-period societies' environmental conditions and socio-economic dynamics. The study of the Avar-period societies' response to climate change highlights the importance of considering local conditions and social organization in understanding the impacts of climate change on past and present cultures.

Further research could delve deeper into regional variations in climate change patterns, environmental conditions, and social consequences. By examining different regions within the Avar Empire, researchers can better understand how local factors interacted with climate change to shape social dynamics and adaptation strategies. In addition, further studies could employ multi-proxy analysis, combining different scientific techniques to explore the complex interactions between climate change, human behaviour, and socio-cultural developments. Integrating archaeological, paleoenvironmental, and historical data can provide a more comprehensive picture of the Avar-period societies and their responses to climate change.

I will focus on the above perspectives and methodologies in investigating the interaction between the Avar and Magyar-related societies, which presents an exciting avenue for future research. Exploring the connections, cultural exchanges, and potential influences between these two groups will shed light on the dynamic relationships and transformations in the Carpathian Basin during the medieval period. By delving into the material culture, linguistic evidence, and historical accounts, this study can deepen our understanding of the complex interplay between the Avars and Magyars, contributing to the broader narrative of cultural continuity and change in the region.

## List of Figures

<b>Figure 1.</b> Pannonia with a location of Keszthely-Fenékpuszta between the 4th and 5th century AD. Heinrich-Tamáška, Müller, Straub, 2017, p.7. ....	16
<b>Figure 2.</b> Keszthely-Fenékpuszta as a Late Roman settlement or castellum. Plan with building structure reconstruction. Heinrich-Tamáška, Müller, Straub, 2017, p.29.....	17
<b>Figure 3.</b> Complete plan of the Keszthely-Fenékpuszta fortress areas with information about the excavators and the years of excavation at each site. Heinrich-Tamáška, 2013, Arealbreich/katalog. Castellum Pannonicum Pelsonense. ....	19
<b>Figure 4.</b> Approximate summary of the Keszthely-Fenékpuszta burials from 13 cemetery complexes, with their orientation and assumed chronological period. It's important to note that the information on the orientation and the number of the graves may not be accurate for all the burials, as details may still be subject to further research investigation. Gal, 2023. Nottingham.....	10
<b>Figure 5.</b> 1-4 Keszthely - Fenékpuszta material culture. 1-4 early Christian Basilica. 5-11 various scales: Keszthely-Fenékpuszta, horreum cemetery- number. 7: gold pin with the name 'Bonosa'. Müller, 2020, p.74. ....	21
<b>Figure 6.</b> Some of the essential Carolingian burials at Keszthely-Fenekpuszta include Grave 5, which contained a richly furnished male burial, and Grave 8, which had a female burial with several high-quality jewellery items. Gal. 2023. Nottingham.....	23
<b>Figure 7.</b> Typological analyses have often been used to compare the material culture of Avar communities in the Balaton region with those in other areas of the Carpathian Basin and beyond. Gal,2023. Nottingham.....	27
<b>Figure 8.</b> Summarises some of the types of material culture found at Keszthely-Fenékpuszta, which supports the existence of a native population in the region between AD 550-900 to represent typological analyses. Gal, 2023. Nottingham. ....	28
<b>Figure 9.</b> Table of summary with a few Avar-related sites from around the Carpathian basin to reconstruct the environmental conditions in which Avar communities lived, including climate, vegetation, and natural resources as a representation of contextual analyses. Gal, 2023. Nottingham. ....	30



<b>Figure 10.</b> Grave 2000/86, with the wrongly marked west-east orientation by Csák during and after development. Müller, 2010a, p. 132. ....	35
<b>Figure 11.</b> Grave 2000/69; 2-4: Grave 2000/73; 5-6: Grave. 2000/74; 7-10: Grave. 2000/75; 11-12: Grave 2000/76-77-79. 1-7, 11-12: 1:2; 8-10: without scale; Grave drawings: 1:40. Müller, 2010a, p. 336. ....	40
<b>Figure 12</b> 1-8: Grave 2000/97A; 8: Grave 2000/978; 10-12: Grave 2000/100; 13: Grave 2000/102; 14-16: Grave 2000/104; 17: Grave 2000/105; 18-19: Grave 2000/108. 11-12: 1:1; 1-10, 13-19:1:2; Grave drawings: 1:40. Müller, 2010a, p. 340. ....	42
<b>Figure 13.</b> The position of the skeletons in the graves of horses buried with dogs indicates that the bodies of the animals were carefully placed in the burial pits. Kovrig 1999, p. 116. ....	50
<b>Figure 14.</b> The designs on the belt sets and buckles were often influenced by the cultures with which the Avar-style societies came into contact, including the Byzantines, the Sasanians, and the Germanic people. For example, some belt sets and buckles feature Christian iconography, indicating that the wearer was either a Christian or had a close tight with a Christian community. The table include only a few examples as even some grave ID numbers are still under debate. Gal, 2023. Nottingham. ....	55
<b>Figure 15.</b> 2000/81; 4-13: Grave 2000/82; 14-18: Grave 2000/83 with chain. 4: 1:1; 1, 5-13: 1:2; 2-3: without scale; Grave drawings: 1:40. Müller, 2010a, p.337. ....	57
<b>Figure 16.</b> The Avars were skilled metalworkers who produced a range of weapons, including swords, spears, axes, and arrows. Gal, 2023. Nottingham.....	64
<b>Figure 17.</b> Grave 1951/19; 2-3: Grave 1951/21; 4-7: Grave 1951/22; 8: Grave 1951/23. 8: Grave 1951/23. 8:1:1; 1, 3-7: 1:2. Müller, 2010a, p.270.....	66
<b>Figure 18.</b> Attached to grave 43, a man's grave has been excavated. The grave pit with rounded corners became visible at 96 cm. The walls of the pit were vertical. The northeast corner of the pit intersected the older and shallower horse grave in 1999/43 Müller, 2010a, p.120 .....	71
<b>Figure 19.</b> Distribution of the 29 Conqueror paternal lineages according to their phylogeographic origin based on Figure 2 in Neparáczi et al. 2019, p. 3-4. ....	80

**Figure 20.** Representation of the ongoing scholarly theories and their arguments regarding the movements of the Avar-related societies in a summary. Gal, 2023. Nottingham..... 86

**Figure 21.** Grave 1999/51; 3-4: Grave 1999/52; 5-8: Grave 1999/54; 9: Grave 1999/55; 10-15: Grave 1999/56; 16: Grave 1999/57. 10, 14: 1:1; 1-9, 11-13, 15-16:1:2; Grave drawings: 1:40. Müller, 2010a, p. 334. .... 91

## Appendix: Supplementary Figures

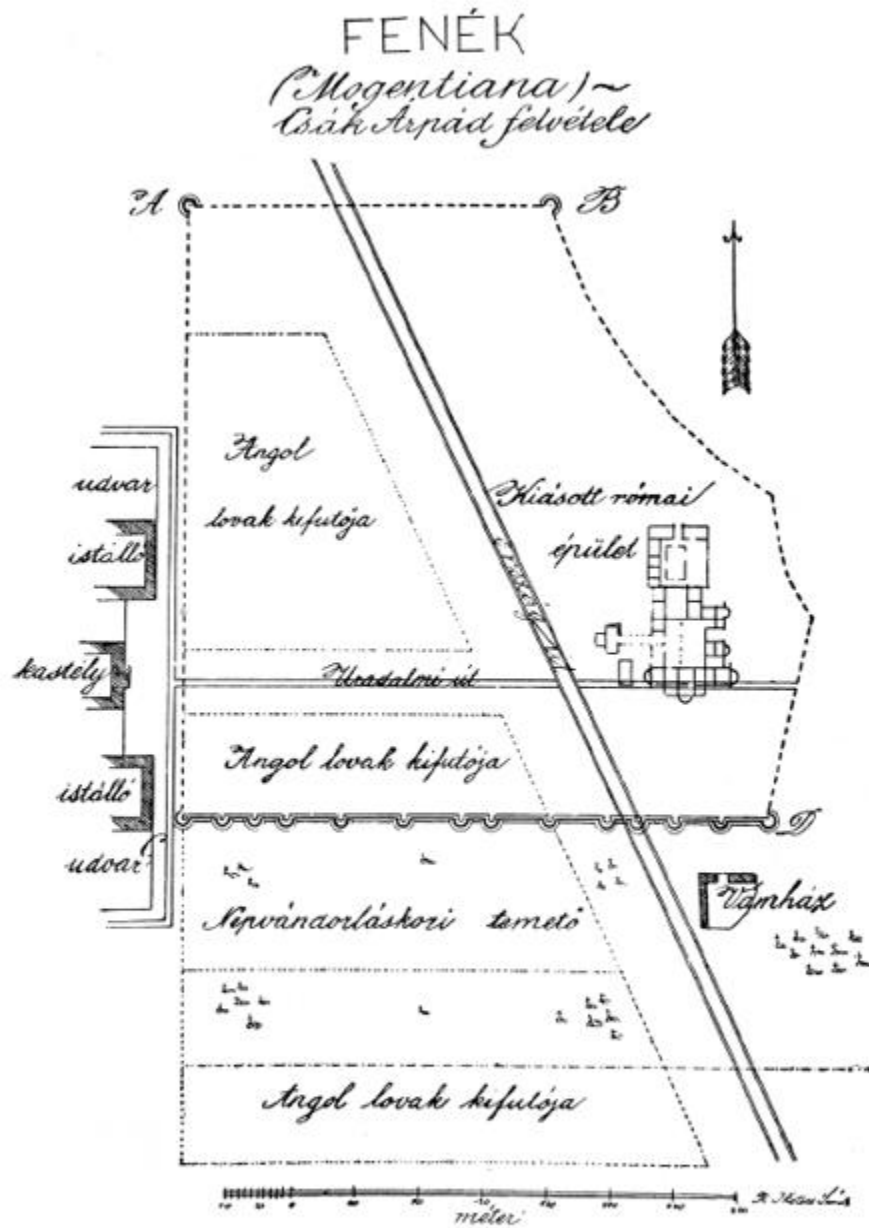


Figure A1. Map from Fenékpuszta to Csák indicating the locations of the Migration Period burial grounds (according to CSÁK 1903) in Müller 2010a,p.14.



Figure A2. Various finds from the excavation of Csák in the year 1901. In Müller, 2010a, p.30.



Figure A3. Example of the features of Pit 3223 with negative results, Müller excavation/2002 in Heinrich-Tamáška, 2013, p.166



Figure A4. Doppelgrab 1971/58 - Visual example of Human skeletal remains in a double burial, assumable with a close family ties in Müller, 2010a, p.73



Figure A5. Example of Dog skeletons in situ in pit 2812, Sági excavation/1972 in Heinrich-Tamáška, 2013, p.29.

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