

The Archaeology/Gender Theory Dualism: A meta-study of sex/gender in archaeological research of the 3rd millennium BCE Europe

Rongen, Remi

Citation

Rongen, R. (2025). The Archaeology/Gender Theory Dualism: A meta-study of sex/gender in archaeological research of the 3rd millennium BCE Europe.

Version: Not Applicable (or Unknown)

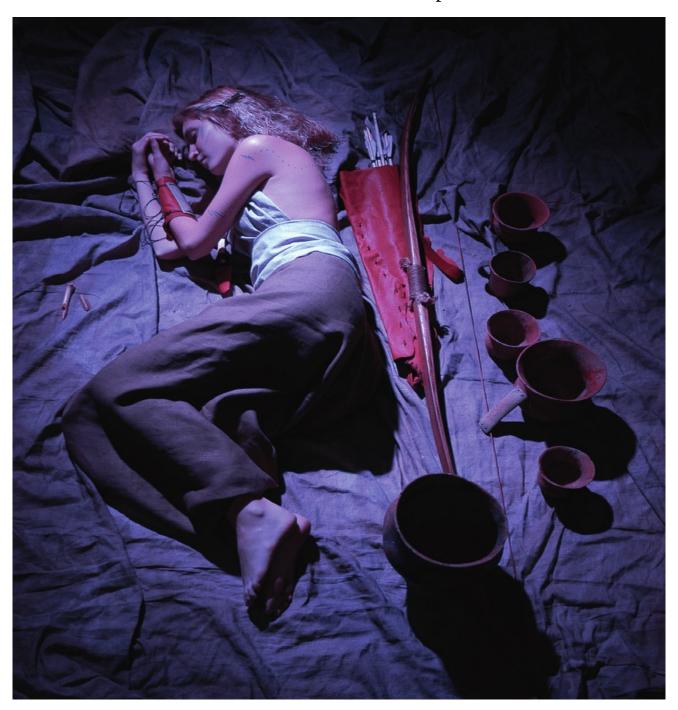
License: License to inclusion and publication of a Bachelor or Master Thesis, 2023

Downloaded from: https://hdl.handle.net/1887/4195048

 $\textbf{Note:} \ \ \textbf{To cite this publication please use the final published version (if applicable)}.$

The Archaeology/Gender Theory Dualism

A meta-study of sex/gender in archaeological research of the $3^{\rm rd}$ millennium BCE Europe



Remi Rongen

Cover image: *Tišice* (*District Mělník*, *Czech Republic*) *grave 77/99. Reconstruction of 'Amazon's' burial (photograph: Petr Berounský).* (Fig. 6 in Turek, 2019, p. 215).

This image has been chosen as cover image for this thesis, due to interplay of archaeology and sex/gender perception that is present in this reconstruction. This Bell Beaker grave is one of the 'Amazon's' burials from the Bell Beaker culture, which is a term used to refer to burials where the skeleton is sexed as female and buried with grave goods that are perceived to be male. This is contrary to the more prominent burial patterns observed for the period. The naming of these burials can be debated and there is not proof for one theory to explain these burials, nor do we know how these individuals identified or were identified by their community.

Therefore, it is interesting to observe the choices that have been made when creating a reconstruction of this burial and how the individual is presented. While it is known the skeleton was female, the manner in which this is presented fits with the cultural idea of what a woman is in Western society today. There is no reason to assume this individual had long hair and wore a skirt and halter top, yet that is how they are presented. In a microcosm, this is a representation of the topic of this thesis, which explores to what extend those choices made by archaeologists are widespread and what that means for research.

The Archaeology/Gender Theory Dualism

A meta-study of sex/gender in archaeological research of the 3rd millennium BCE Europe

Remi Rongen, s2872056
Master Thesis Global Archaeology
1084VTGY
Leiden University, Faculty of Archaeology
Dr. Q.P.J. Bourgeois
Leiden, 15 December 2024
Final Version

Abstract

Sex/gender is a topic that is on the rise, also in archaeology. However, research into the topic can be used politically, therefore researchers must be conscious about potentially pushing problematic rhetoric in their discourse. In this thesis, it is analyzed how gender theory has become integrated into archaeological research about sex/gender in the 3rd millennium BCE Europe of the past 10. Furthermore, handholds are provided to bridge the gap between gender theory and archaeological research through suggestions based on the points where archaeology struggles to integrate gender theory.

In gender theory, the general discourse has placed the origins of the modern gender system in the 17th century Enlightenment period. It is from this period that the colonial conception of European sex/gender starts to develop, which is also exported around the world, becoming caught up in a network of oppression. Furthermore, in the Enlightenment period, sex/gender also becomes a part of science. This entanglement with science creates the cycle between science and society, wherein science reinforces societal ideas about sex/gender, thus legitimizing it as a natural, inherent, ahistorical category. This can also be observed in archaeology, wherein 19th century ideas of osteological remains and grave goods still circulate in the discourse. Currently there is push back against such narratives originating from second wave feminism that birthed gender theory as an academic field.

The 3rd millennium BCE Europe is chosen as case study for this thesis, due to the perceived start of binary and strict gender divisions in this area and period. This interpretation is based on the burial ritual of three Single Grave Burial cultures (Yamnaya, CWC and BB) as well as the settlement patterns that are observed; a patrilocal society with female exogamy and a male warrior elite.

Through a meta-study it is observed that archaeological sex/gender research has not yet incorporated gender theory in many instances. Furthermore, deterministic and binary narratives are often perpetuated and sex/gender determination often hinges solely on osteological remains. Overall, biases are also present in around 34.7% to 46.9% of the 98 publications. When converting to a numerical assessment, it can be stated that archaeological sex/gender research is not integrating gender theory and thus subpar in quality. It can also be stated that the state of archaeological sex/gender research has remained mostly stagnant over the past 10 years, especially outside the gender archaeology specialization.

As a result, archaeological sex/gender research currently feeds into the cycle between science and society that has preconceived notions of how people act based on their sex/gender category, while those categories themselves are thought to be inherent and ahistorical. Suggestions are done for future research are made in relation to areas that result in interpretations not properly grounded in gender theory discourse; namely biological sex, biases that are expected thus found, and the records that are cited. The suggestions that are proposed are an intersectional approach, a more cautious use of language, the exploration of alternative interpretations, an awareness of biases and assumptions in the modern gender system, a caution when citing colonial and post-colonial records and other archaeologists, as well as an acknowledgment of the limits of the archaeological record that allows for space for multiple interpretations of the same data. Furthermore, archaeologists are requested to put in work in decolonizing their own work, without which the discourse will not change.

Keywords: Gender archaeology, Final Neolithic, Chalcolithic, 3rd millennium BCE, prehistoric Europe, metastudy

Content

List of Figures	6
List of Tables	6
1. Introduction: The Future of the Past	. 7
2. Current Gender Theory: Gender in Society, Science and Archaeology	. 9
3. Background: The Current Discourse of the 3 rd Millennium BCE in Europe	. 15
4. Meta-study of Literature: A Binary Look at Data	. 18
5. Discussion: The Gaps and Suggested Handholds	. 38
6. Conclusion: A Step Forward for Sex/gender Research	. 46
Bibliography	. 51
Appendix 1: Dataset of Literature	. 58
Appendix 2: Dataset in APA	65
Appendix 3: Assessment of the Dataset	74

List of Figures

Figure 3.1:	The spatial distribution of the Yamnaya, CWC and BB across Europe in the 3 rd millennium BCE (fig. 5 in Furholt, 2021, p. 500).	16
Figure 4.1:	The spread of the amount publications per year of publication that is used in the dataset	18
Figure 4.2:	The distribution of the amount of times a criterion is present 'Yes' or absent 'No' per criterion in percentages for categories SGMF & SGP	27
Figure 4.3:	The distribution of the amount of times a criterion is present 'Yes' or absent 'No' per criterion in percentages for category SGMF	28
Figure 4.4:	The distribution of the amount of times a criterion is present 'Yes' or absent 'No' per criterion in percentages for category SGP	29
Figure 4.5:	The distribution of 'Yes' and 'No' per criteria that would reflect the most complete incorporation of gender theory a publication could have, along with the weight of each publication	32
Figure 4.6:	Box plots for the GTAI distribution of the dataset, also separated for SGMF $\&$ SGP	33
Figure 4.7:	Graph of the spread of the GTAI per year as well as the average GTAI and the standard deviation of each year of publication for SGMF & SGP	35
Figure 4.8:	Graph of the spread of the GTAI per year as well as the average GTAI and the standard deviation of each year of publication for SGMF	36
Figure 4.9:	Graph of the spread of the GTAI per year as well as the average GTAI and the standard deviation of each year of publication for SGP	37
List of Tables		
Table 1:	The differing levels of engagement with sex/gender present in dataset and the explanations of each category	19
Table 2:	The general criteria with which the dataset will be assessed and the explanation of and reasoning for each criterion	19
Table 3:	The n and average GTAI per year, as well as the average n and weighted average of the total GTAI	34

1. Introduction: The Future of the Past

The idea of a prehistoric bra burning, man-hating, lesbian feminists, as the stereotype often goes, is rightfully ludicrous to many, since it is a very specific historically placed moment of a political movement. This movement is integrated with sex/gender, second wave feminism specifically, which also gave rise to gender theory (Scott, 1986, p. 1054). To transplant this modern woman that rebels against the system into the past, is ludicrous because the specific temporal conditions in which this stereotype was created, did not exist. There is no longue durée for this specific expression of sex/gender, which invites questions about the nature of sex/gender and its history. The field of gender theory was in part created to investigate this question. Gender theory itself has also evolved and grown since its conception, broadening academic understanding of sex/gender and its place in society and how it evolved.

Research into sex/gender has become more common in many fields. However, using sex/gender in research in another academic field and gender theory research into sex/gender are not necessarily the same field of study. Therefore it can be that developments in gender theory do not carry over to research that is being done that uses sex/gender as an object of study, such as in archaeology. While some publications in gender archaeology cite gender theory, there are others that do not. Furthermore, outside of gender archaeology there is a plethora of archaeological research that uses gender and/or sex as an object of study without being classified as gender archaeology. Some of the approaches to sex/gender get criticized by gender archaeologists (*exampl*. Frieman *et al*, 2019; Gaydarska *et al.*, 2023), however, as of writing this, no comprehensive meta-study of the state of gender archaeology and its methods and shortcomings exists.

Therefore, the research question of this thesis is: How does archaeological research about sex/gender in the 3rd millennium BCE in Europe from the past 10 years reflect current gender theory? And how can archaeological sex/gender research in 3rd millennium BCE Europe improve?

In order to full-fill the aims of this thesis, first the current state of gender theory must be explored and summarized. In general the consensus is that gender is understood to be informed by culture, while sex is understood as the biological state of the body (Springer, 2014). However, there have been developments in both fields, such as how the biological can be impacted by the cultural (Fausto-Sterling, 2020). Once the current state of gender theory has been fully explored, the important points can be applied to the literature research into publications about the 3rd millennium BCE in primarily Western and Central Europe that uses sex/gender as a factor in their research, or focuses on sex/gender entirely.

It is important to do this research, since archaeology is a highly interdisciplinary field. Due to the fact that archaeology is tied to many other fields, developments in those fields can be utilized by archaeology to further study our own field of interest. Gender and sex are a big topic currently, both in research and in the political sphere. The United Nations put achieving gender equality on the list of the 17 Sustainable Development Goals (UN, 2015, p. 14), which this research will contribute to in the long run by analyzing the discourse that is present in archaeological sex/gender research. It is important that research does not perpetuate ideas that are considered outdated or misaligned with current discourse, especially when they can be taken out of context and twisted for uses outside of archaeology. Politically transgender issues are a hot topic, which call back on a time when it 'wasn't this complicated' yet. By playing into that ideology or using it without critically looking at it, archaeology plays a part in human right issues of today. This is not something to ignore.

Thus, this thesis also aims to provide handholds to bridge the gap between gender theory and archaeological research to aid those doing research into the topic. It is useful to provide said handholds

while it is a topic of interest, instead of later. A basis of literature is being created, which will be cited by papers in the future and shape what kind of research will be done. Therefore it is important that these publications are grounded in academic discourse and decolonize their narratives. The longer potentially harmful methodologies and theories are perpetuated, the more ingrained they become.

This thesis starts by setting out a theoretical framework for the discourse there is in gender theory about the origins of sex/gender, the way it has become integrated into science, before zooming in on sex/gender in archaeology specifically. This will be the basis with which the dataset will be assessed (chapter 2). Then background is given on the archaeological discourse of the 3rd millennium BCE, which is the case study of this thesis, due to the prominence of sex/gender as a part of research (chapter 3). The meta-study itself is of a dataset of 98 publications and is assessed on the basis of 24 criteria that are grounded in the theoretical framework created in chapter 2 (chapter 4). After the distribution of these criteria is visualized, the impact of their presence or absence on archaeological sex/gender research is discussed. Furthermore suggestions are done to mitigate the potential problems that can arise due to certain ideological underpinnings that are being perpetuated in the assessed research (chapter 5). Finally, the thesis is concluded by recapping the findings of the meta-study and the handholds that are provided for future research into the topic (chapter 6).

2. Current Gender Theory: Gender in Society, Science and Archaeology

To answer the research question, it must first be established how sex/gender is constructed in our own society and how that has bled over into science, before taking a brief look into how current archaeologists have treated sex/gender in their research. Looking at the origins of our current gender system and how the field of gender theory developed helps create a baseline for comparison. Viewing the development of sex/gender in science aids in creating awareness of how sex/gender has been impacted by research, thus what kind of pitfalls one should be aware of when doing research into the field. Finally, a brief look into how archaeologists on the whole have treated sex/gender in their research will give a framework of what will be encountered when taking a more systematic approach to how gender theory is reflected in archaeological research through the case study of the 3rd millennium BCE Europe in the following chapters. Furthermore, everything discussed in this chapter will give the background theory that is necessary to theorize about how to create handholds for archaeological research into gender and sex.

Gender in society

Gender theory is a diverse academic field, which has not just risen to visibility in recent years, but also carries a lot of political weight. It is impossible to separate any field from politics. However, due to gender theory's start in feminism (Scott, 1986, p. 1054), it is inherently tied to political activism and is thus easily transferred to the public sphere. This can be seen in how discussions around gender have become prominent in Western politics, such as how trans individuals and gender care have come under fire (American Oversight, 2023; Hines, 2020). Due to its political profile, it is easy to feel as if an author is pushing their own agenda, since political opinions do play a role in creating discourse. However, gender theory remains an academic field that studies an aspect of the human condition; the sexed and gendered body.

As stated before, gender theory as it is known today, started with feminist movements of the 20th century, however interest in sex and gender is older than that. de Beauvoir (1949, p. 25) details how the seeds of Western views on women were already present in Aristotle's philosophies on the subject. Along with ancient philosophies, ideas about gender are often present in cultures through mythologies of the creation of people, such as the story of Adam's rib in Genesis 2:23 (King James, 2017). Origin stories such as these, if they survive, can be highly valuable for studying gender in the past, however biases of the people who recorded these stories must be taken account. This rings especially true when looking at recordings of non-Western cultures by colonizers, since many had their own gender systems or ways of organizing before European colonization (Driskill, 2004, p. 52; Fausto-Sterling 2020, pp. 21-22; Lugones, 2007, pp. 196-197). The scope of this chapter does not include a detailed history of origin stories from around the world, however, it is important to take note of them when investigating the gendered past.

The focus of this chapter will instead be on the development of gender roles and the understanding of sex/gender in Western societies from the 17th century onward (Fausto-Sterling, 2020, p. 7; Foucault, 1976, pp. 3-5; Lugones, 2007, p. 187). This limitation is chosen, because that is the point from which the colonial European understanding of sex and gender begins to take shape and is exported around the world through colonialism, oftentimes by force, developing into what we know today. From hereon out, the European understanding of sex and gender will be referred to as the modern gender system, this naming is based off Lugones's (2007) work, who refers to it as the colonial/modern gender system. I have chosen for modern gender system since colonialism and modernity are intrinsically linked.

The modern gender system is caught up in a multitude of power structures. Foucault's (1976) ideas of power laid the basis of the interaction between power and gender and sexuality, which are cited by others (Fausto-Sterling, 2020, p. 8; Halperin, 1989, pp. 257-258; Thompson-Garland, 2017, p. 366). Foucault primarily targeted how states needed power over people in different ways after the fall of feudalism; where before people were granted power over death, now governing bodies moved to exercise power over life instead. He coined the term *bio-power* to express this. Bio-power is expressed through the concept of population and the individual's body. With the concept of a population came statistics, one could analyze them, take stock of their composition and classify them, and with that the population could be optimized to function in the newfound capitalism, making people's place in the modern gender system a political and economic matter (Foucault, 1976, pp. 23-27). On the individual level the norm that was established meant that one could fall outside it, those who did were criminalized and later institutionalization, and pedagogy developed to prevent children from growing up into deviants (Foucault, 1976, pp. 36-38, 43). Eugenics are baked into the science of sex and it was the bourgeois, to whom sex first got applied. In the bourgeois family it had to be ensured that the child would not grow perverted and the woman not hysteric, so that the bloodline of those that ruled would remain clean and strong. From them it took a little before that bled down to the other classes (Foucault, 1976, pp. 118-123). This transformation in how gender was utilized and viewed is important to keep in mind. Both because it is tied to a specific form of society and period, and because it a recent transformation, there had been different conceptualizations of gender before that, also in Europe.

The networks of power and oppression that the modern gender system is a part of have been expanded after Foucault. Crenshaw (2006) coined the term intersectionality to talk about people who are on multiple axes of oppression, thus experience an inter-meshed form of, for example, racism and sexism. This can be further used to look at how gender intersects and interacts with sexuality, race, class, and disability. Much has been written about the intersections with gender, such as the colonial history of how gender and sexuality could be expressed and was perceived on a racialized level (exampl. Davis, 1981; Lugones, 2007; McClintock, 1995; Stoler, 1989), or how gender and sexuality interact, since these are tightly interwoven, with the fear of homosexual being what makes one fear a gender nonconforming individual (exampl. Butler, 1988, pp. 524-525; Foucault, 1976, p. 43; Halberstam, 1997; Wittig, 2016), or how class and gender intersect (exampl. Beasley, 2008, pp. 90-91; Fine et al., 2007; Stoler, 1989, p. 640), or how disability and gender play into each other (exampl. Burch & Patterson, 2013; Garland-Thompson, 2017, pp. 364-371). Oftentimes when looking at research into how gender interacts and intersects with other identities, multiple will be discussed. The modern gender system is part of a web of power relations that feed into one another in multiple ways to create identities that are considered normal and natural by us. To sustain this view, science and society are in a cycle wherein they feed into each other to shape these identities and cement them in scientific discourse as natural things, which will be expanded upon below. However, it is not a natural fact that is being discussed, instead it is a historically placed gender system that is based on a performance of gender that is passed down (Butler, 1988; Fausto-Sterling, 2020; Keller, 1995; Springer, 2014).

Gender in science

It is important to be aware of the entanglement between power structures and the modern gender system, since it those entanglements create biases and stereotypes that are infused in society, and it is that society that carries out research. Society has an expectation of stereotypes and research in turn naturalizes these stereotypes, which then allows society to point back to research and state that these stereotypes are proven. This is the previously mentioned cycle between society and science. With the rise of feminism

there has been push back against gender biases in science, such as the bias in test subjects, the research questions that are asked, as well as the theoretical tools and methods (Keller, 1982, pp. 590-591). Getting more diversity in academics will aid somewhat in combating these biases, however, a lot of scientists will disavow gender to gain legitimacy. Furthermore, thinking that differently sexed people inherently think differently too, promotes the idea that there is a biological determinism between males and females. This would make gender a constructed category and sex an objective truth about the body, collapsing it back on the existing knowledge structures in science, which gives them legitimacy (Fausto-Sterling, 2020, p. 23; Keller, 1987, pp. 38-39). It is the ideology of objectivity and dualistic thinking that is the root issue that should be addressed (Fausto-Sterling, 2020, pp. 1-31; Keller, 1982, p. 594; Keller, 1987, pp. 48-49).

These two root issues are intertwined. The ideology of objectivity asserts that there is "an opposition between (male) objectivity and (female) subjectivity and denies the possibility of mediation between the two." (Keller, 1987, p. 594). This is a dualism, male/female, which is tied to another dualism, objectivity/subjectivity. Dualisms are important to the Euro-American understanding of the world, wherein the sex/gender dualism that is seen in the previous two examples is further tied to nature/nurture and real/constructed (Fausto-Sterling, 2020, p. 23). All these dualisms are related to the dualism science/culture, in which science is an objective authority while culture is subjectively shaped, this feeds into the idea science can make independent claims about reality that are not tied to human influence. This is what enables them to naturalize the modern gender system, while in reality science is as shaped by culture as culture is shaped by science (Fausto-Sterling, 2020; Foucault, 1978, p. 54; Keller, 1995; Worthman, 1995, p. 610). By accepting these dualisms uncritically, it allows for space for the stereotype of the male/present/active relation to contrast the female/absent/passive relation, even when these relations are not reflected in observations (Keller, 1995, pp. 34-36).

While dualisms are presented as opposing forces, they often work together to form the material and theoretical world we exist in. In her book, *Sexing the Body*, Fausto-Sterling (2020) writes about how the dualisms sex/gender, nature/nurture and real/constructed work together to shape our understanding of the modern body. Herein she suggests that the body is not just biologically determined by sex, nor entirely shaped by the cultural ideas of gender, instead the biology of the body and the cultural ideas about what a body is, work together to shape it, in what she calls, sex/gender. Sex/gender is used in this thesis unless the emphasis on biology or culture matters. Sex and gender as separate terms can be useful, however, they fit in our understanding through dualisms and should be used cautiously. In our current political and social climate, gender systems are changing, this has impact on how we produce accounts of nature (Fausto-Sterling, 2020, p. 82). There is room to become conscious about how sex/gender enters our knowledge production and actively work on how we present findings about it from an academic perspective, such as through archaeology.

Gender in archaeology

A large chunk of gender theory focuses on imagining new futures for sex/gender organization, however, to keep within the scope of this thesis, the focus will be on the part of gender theory that focuses on sex/gender organization in the past. Researching sex/gender starts with feminist scholars, who seek to trace the history of oppression for gender, class and race (Scott, 1986, p. 1055). Due to sex/gender being naturalized it becomes an ahistoric category, which leads to deterministic thinking and overgeneralizations, which is why historical and anthropological researchers have been called upon to be conscious of the analytical vocabulary that they use and to justify their categories of analysis, questioning what is deemed natural and how it fits in the actual organizational framework of the society they are analyzing (Halperin, 1989, p. 273; Scott, 1986, p. 1065).

It can be interesting to look at historical and anthropological case studies of societies that did not or do not use sex/gender as primary social organizer or have a system that is not dependent on a dimorphic separation (Driskill, 2004, p. 52; Fausto-Sterling, 2020, pp. 21-22; Halperin, 1989, pp. 260-263; Lugones, 2007, pp. 196-197). However, this research usually pertains to societies that have written or suviving oral records or still living people to aid in interpreting their gender systems and ways of organizing socially. This is not always the case when doing archaeological research.

Thus, sex/gender interpretations in archaeology often hinge on sex identifications of osteological remains and the culturally biased associations of accompanying grave goods, which is inherited from 19th century archaeology and deeply bound up in the modern gender system (Olerud, 2021, pp. 14-15). This association between sex/gender and material culture can be seen in the Birka Bj. 581 grave, which got caught up in a controversy after research revealed the skeletal remains had XX chromosomes and are thus classified as female. Before this, the grave had been assumed to be of a man due to the presence of weaponry and the lack of jewelry, weaving equipment and other items associated with women. The occupation of warrior was assumed to be male and interpretations of the grave were based on that assumption (Price *et al.*, 2019, p. 189). It is the osteological reality of these remains that caused the aforementioned controversy, due to the association of sex as gender in the modern gender system, which is then tied to the material culture. These researchers have a nuanced debate about the possible relations between sex and gender and the implications that has in relation to the Birka Bj. 581 grave. (Price *et al.*, 2019, pp. 191-192). However, such a discussion is not present in the original confirmation of the sex of the individual through DNA research (Hedenstierna-Jonson *et al.*, 2017).

In addition to the lack of records that forces archaeologists to rely on skeletal remains and material culture, which is inherently tied to the modern gender system, there are more trends in gender archaeology that have lead to a theoretical stalemate. These trends are described as: "unfortunate recurrences of the 'add women and stir' approach; methodological and theoretical difficulties to differentiate between social constructs (is there gender?) and analytical constructs (what kind of gender?); and inspirational theoretical insights that struggle to find wider resonance." (Gaydarska et al., 2023, p. 273). The final aim of this thesis, as has been mentioned before, is to asses the state of archaeological sex/gender research for the 3rd millennium BCE in Europe, which will include looking at these trends and how archaeologists deal with the lack of records. A functional framework for researching sex/gender can be created with the insights into the current pitfalls, which will hopefully reach a wider resonance. Since sex/gender is a prominent topic in the archaeology of the 3rd millennium BCE in Europe, there is more literature to base the meta-study on. However, it might also aid in reaching an audience, who might not otherwise be reached. Currently, gender is primarily discussed by researchers that are marginalized on the basis of gender themselves. These researchers are underrepresented in publications, thus discussions about sex/gender can be limited, due to the wider political and academic sphere (Gaydarska et al., 2023, p. 278). Filling those gendered gaps is outside the scope of this thesis, however, potentially creating an interest in sex/gender discussions with those who are not marginalized on the basis of sex/gender themselves would also aid in filling those gaps and widening the discussion.

Due to sex/gender being a prominent topic in the research area of this paper, it is often the topic of research or mentioned in a broader article. To highlight some of the ways in which sex/gender research is done three publications that are temporally closer to the 3rd millennium BCE than the Birka Bj. 581 grave are analyzed. These assessment are a less systematic example of how the dataset will be studied in the meta-study in chapter 4.

Firstly, Kristiansen *et al.* (2017) discuss the mobility and formation of culture and language among Corded Ware Culture. In doing so, they also mention and touch upon sex/gender aspects of Corded Ware

Culture. Sex/gender plays a primary role in the formation of Yamnaya and Corded Ware Culture and is mentioned all throughout their interpretation about the spread and formation of these two cultures from the Caspian-Pontic steppe (Kristiansen et al., 2017, pp. 337-340). According to this interpretation, the Yamnaya migration and formation of Corded Ware Culture was dominated by males, who traveled in warrior bands from ages 12-19 under leadership of senior males until they were ready to enter the ranks as warriors. These groups practiced exogamy, marrying in Neolithic women, who brought with them ceramic skills. It cannot be definitively said yet it is still mentioned that the exogamy could be abduction, not giving the Neolithic women an active role or agency (Kristiansen et al., 2017, p. 338). This interpretation creates a male/present/active and female/absent/passive dualism when looking at this period. Furthermore, there is also no mention of Neolithic genders and how these might have opened up space for the interaction with Yamnaya and Corded Ware people that is seen in the archaeological record, furthering the role of the Neolithic female as a passive receptor of the Yamnaya/Corded Ware male. The dualism is pushed further by framing the pastoral as dominant over the agrarian (Kristiansen et al., 2017, p. 340). There is no mention of the pastoral woman or the agricultural man, each sex/gender category is put in the subsistence economy category that fits with their place in the dualism, while being erased from the other category. Furthermore, Neolithic women are not given equal importance in the formation of the Corded Ware Culture, despite being credited with bringing the pottery it is named after (Kristiansen et al., 2017, pp. 339-340). It is also assumed that women were the primary potters, while the skill they brought could have been taught to anyone. This assignment of material culture is not limited to that, earlier in the article the battle axe is named as the most prominent male symbol for the Corded Ware Culture (Kristiansen *et al.*, 2017, p. 336). When this is stated, no explanation or citation is given to support that statement. The association between the battle axe and malehood is likely the result of the association of man and violence, as well as a data based association between axes and skeletons sexed as male, which perpetuates the idea that sex to gender is an one to one connection. Kristiansen et al. (2017) thus has a framework that is based in sex/gender dualisms, further expanding them to encompass material culture, subsistence economy and the formation of culture, not allowing space for males and females to occupy space in what is considered to be the opposite in the dualism.

Secondly, Bourgeois and Kroon (2017) also research Corded Ware Culture, but focus on the construction of Corded Ware identity, which is done by studying, left- and right-flexed burials, which get connected to female and male burials. Their aim is to add cultural exchange to the discussion of Corded Ware Culture, which is currently dominated by a biological perspective. In this, they find that the male dominated society found in aDNA is corroborated by cultural exchange (Bourgeois & Kroon, 2017, pp. 1-2). They do so by observing the placement of objects in burials and comparing how similar that placement is over large distances. The burials they have assigned male are more similar over large regions, thus males are concluded to be the prime vector of cultural information exchange. However, while it is stated that the focus is this sex/gendered burial, there is no discussion as to why right-flexed burials are considered to be male and left-flexed are considered female. This assumption is based on the wider literature and connected to the biological narrative the publication wishes to move away from. There is an acknowledgment that there are deviations from the norm in burials, but these are noted to be rare and appear to have not been carried into any conclusions (Bourgeois & Kroon, 2017, p. 4). Furthermore, the methodology facilitates a binary conclusion, preemptively sorting the population into two categories and assigning those male and female, which means any possible alternative sex/gender systems are not even considered to be able to be a result. This uncritical adoption of the modern gender system is further reflected in their conclusions of a male dominated society. While it is not entirely inconceivable that the more similar right-flexed burials point to a male dominant society, Bourgeois and Kroon (2017, p. 14) state that this pattern fits with the theory of male warrior bands as proposed in Kristiansen et al. (2017),

while greater female mobility is not reflected. The possibility that the women carried important cultural information or how integration into local networks could be important to combine larger and smaller scale communities is not considered, which implicitly renders the female absent and passive.

Thirdly, Robb and Harris (2018) attempt to pull discussions surrounding European Neolithic gender out of a theoretical impasse, which they do in party by contrasting it with Bronze Age gender. Their approach has been criticized by others, see Gaydarska et al. (2023), however, here those critiques are highlighted again and added upon. Robb and Harris (2018) argue that Neolithic gender is contextual, whereas Bronze Age gender is not, there is a fundamental shift between these two periods wherein gender goes from something you do to something you are. Their interpretation of Bronze Age gender hinges on material culture and skeletal remains, which have been interpreted along 19th century lines of thought (Robb & Harris, 2018, pp. 130-131). They also do no specify a specific region beyond Europe, either homogenizing a plethora of cultures or excluding certain regions in a generalization to make a point (Robb & Harris, 2018, pp. 130-133). As for the Neolithic gender they argue for, this is based on multiple regions, which are highly diverse (Robb & Harris, 2018, pp. 133-140). This is, as pointed out by Gaydarska et al. (2023, p. 273), not methodologically sound. Furthermore, the manner in which sex/gender is discussed in the article is very binary. They argue for a mostly genderless Neolithic wherein sex/gender was a temporary activity, however, outside of imagery, the text often reverts back to male/female (Robb & Harris, 2018, pp. 133-140). The way of interpreting sex/gender they suggest, is that in the Neolithic gender was not always performed, but when it was, it was male and female, which consolidated into the permanent distinction in the Bronze Age and thereafter (Robb & Harris, 2018, pp. 140-142). While it was likely not the intent and the narrative they proposed has been adjusted to be more nuanced (Harris & Robb, 2024), the narrative in the 2018 publication has an evolutionist and (bio)deterministic character. It implies that the binarization of sex/gender is a natural outcome of societal progression. As discussed earlier in this chapter, science plays a role in naturalizing cultural constructs, Robb and Harris's (2018) article plays that role, even if unintentional. This also showcases how ingrained the naturalization of sex/gender is.

These three articles all added important parts to the discourse surrounding sex/gender in the 3rd millennium BCE in Europe. However, all also have parts where gender theory isn't integrated. This leads to sometimes problematic assumptions based on the modern gender system and how that modern gender system has become integrated with science to be reflected in the research. Still, these are just three examples. How widespread the lack of integration of gender theory is and possible issues that can cause when interpreting archaeological records in the general discourse, is further explored in the following chapters.

3. Background: The Current Discourse of the 3rd Millennium BCE in Europe

Before the dataset can be studied in more detail, the context of the discourse surrounding sex/gender in the 3rd millennium BCE in Europe is introduced in this chapter. Parts of the discourse have already been touched upon previously, however, a more comprehensive, though incomplete, overview of the current narratives on the topic of this thesis is presented here. When researching the 3rd millennium BCE in Europe three cultures dominate the discourse: the Yamnaya, the Corded Ware Culture (CWC) and the Bell Beakers (BB), thus the focus will be on these three cultures.

The Yamnaya, CWC and BB can all be classified as Single Grave Burial cultures, due to the individual burials that emerged at the time, largely replacing collective burials in many regions of Neolithic Europe. These individual burials are further identifiable through the strict rules regarding the orientation of the individual, as well as a perceived gender differentiation and an association between those considered to be men and specific weaponry (2019, pp. 116-117; 2020, p. 9). The Yamnaya have a pastoral economy and originate on the Caspian-Pontic steppe that migrated into Europe during the 4th and 3rd millennium BCE. Their manner of burial does not appear to have a sex/gender distinction and often contains modest grave goods, however, those sexed as male do tend to dominate Yamnaya burials, leading to the notion that there was a preference for burying males (Frînculeasa et al., 2020, pp. 13-14; Goldberg et al., 2017, p. 2658). In the proceeding cultures, CWC and BB, the perceived sex/gender division is more visible. It is thought that in the CWC those perceived as men are buried on their right side and those perceived as women on their left side in a flexed position with an east-west orientation wherein the head faces south. In BB burials those perceived as men are buried on their left side and those perceived as women on their right side with a north-south orientation wherein the head faces east (Furholt, 2019, p. 116). These divided burials are also associated with grave goods. The CWC right-flexed burial is associated with a battle axe, while left-flexed burials are associated with adornments, both burials contain flint knives as well as pottery, though pottery and axes rarely occur together (Bourgeois & Kroon, 2017, p. 6; Nordqvist & Heyd, 2020, p. 72). The BB right-flexed burial is associated with copper awls, V-shaped buttons and various ceramics, while left-flexed burials are associated with archery equipment, such as arrow heads and wristguards, as well as daggers and beakers (Ryan-Despraz, 2022, pp. xii-xiv). However, often the focus is on the burial of 'the man' and the items associated with those perceived as women are less well defined (Furholt, 2019, p. 116). However, despite the appearance of BB material culture, the associated individual burials are not adopted in Iberia where collective burials continue (Cintas-Peña & García Sanjuán, 2019, p. 501).

The distribution of these cultures across space goes from east to west Europe as seen in fig. 3.1. The manner in which these cultures spread has long dominated the discourse, going back to Huber Schmidt (1864-1933), who first theorized about Iberia being the homeland for the people associated with BB material culture (*cited in.* Lillois, 2019a, p. 231). Theories around migration for the spread CWC have also been in circulation for over a century, in particular in regards to the spread of the Indo-European language, which is argued to have its origins in Anatolia or the North Pontic steppe. However, migration theories became unpopular between the 1960s and 2000s (Haak *et al.*, 2023, p. 63). The publication of Haak *et al.* (2015) and Allentoft *et al.* (2015) changed the discourse around migration through the use of aDNA. These two publications showed that the genetic make up of the European population underwent a dramatic shift during the 3rd millennium BCE, wherein the previously admixed Anatolian Neolithic farmer and eastern/western hunger-gatherer population was replaced by steppe-related ancestry, of which the Yamnaya were the most closely related sampled group. This was interpreted as being the result of a large scale migration, whose admixture is suggested to have resulted in the CWC and other related

cultures (Allentoft *et al.*, 2015, pp. 168-169; Haak *et al.*, 2015, pp. 208-210). Furthermore, both publications concur that the spread and replacement of this genetic material that is observed, fits with the 'steppe hypothesis' as the origin of the Indo-European languages (Allentoft *et al.*, 2015, p. 170; Haak *et al.*, 2015, p. 211). The BB populations were also integrated into the narrative of migration, with Olalde *et al.* (2018, p. 193) showing that the spread of BB culture to Britain went hand in hand with the spread of steppe-related ancestry, most closely related to that of the Netherlands. However, this was not the case for BB individuals in Iberia, suggesting "*a model in which cultural transmission and human migration both had important roles, with the relative balance of these two processes depending on the region."* (Olalde *et al.*, 2018, p. 194). Thus, the question of how these cultures spread was seemingly solved through aDNA and migration gained prominence in the discourse of the 3rd millennium BCE in Europe.

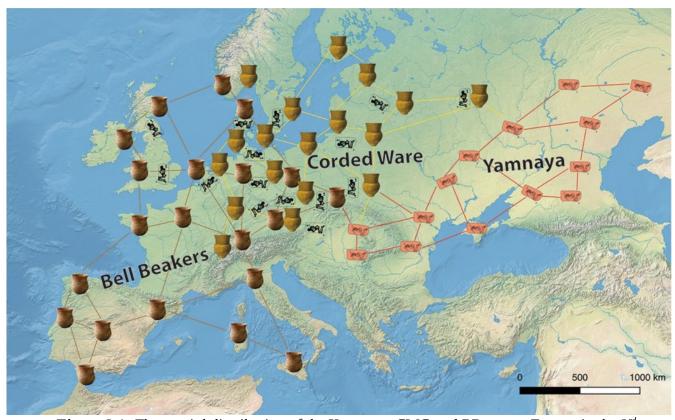


Figure 3.1: The spatial distribution of the Yamnaya, CWC and BB across Europe in the 3rd millennium BCE (fig. 5 in Furholt, 2021, p. 500).

However, with the introduction of aDNA there are also critiques of its use and the interpretations that result from it. The main critique that gets echoed is the biological narrative that gets pushed through aDNA, which equates genetic ancestry with archaeological cultures (Eisenman, 2018, pp. 6-8; Furholt, 2018; Vander Linden, 2016, pp. 721-724). This critique can also be pulled into the dimension of sex/gender. With aDNA research sex determination became more reliable and more widespread as well, allowing researchers to make statements on the movements of people based on haplogroups of Y-chromosomes and X-chromosomes or mtDNA. An example of this is Goldberg *et al.* (2017), who suggest that the migration from the steppe was male biased, as shown through X chromosomes. The results of this study were not replicated (Lazaridis & Reich, 2017), but Goldberg *et al.*'s results are integrated into

Kristiansen *et al.* (2017), thus becoming a part of the archaeological discourse of sex/gender and migration of the 3rd millennium BCE.

Kristiansen *et al.* (2017) is a highly impactful publication that is cited as "by far the best model put forward by a group of archaeologists and geneticists," (Furholt, 2021, p. 505). This paper is already discussed in more detail in chapter 2, however, to shortly recap; the article propose a migration model wherein the Yamnaya migrated from the steppe in male warrior bands that practiced female exogamy. perhaps marriage by abduction, expanding a pastoral economy into Europe, marrying in skills such as pottery that became staples of CWC and BB (Kristiansen et al., 2017, pp. 338-340). The importance of the male was reiterated by Bourgeois and Kroon (2017), also previously discussed, who corroborated the male as focus of society by looking at networks of exchange about the position of grave goods in rightflexed graves, which are considered to be male. The narrative of the male centric society with a male warrior elite, thus became integral to the discourse. Counter-narratives to this dominant male-centric view of the cultures from the 3rd millennium BCE have been suggested (Frieman *et al.*, 2019, pp. 156-161). However, it still remains in circulation and is one of the main interpretations of the period. Sex/gender expectations and biases are also rooted in the tools that are used, thus binary narratives are still prominent and reinforced (Frieman *et al.*, 2019, p. 152). Recently, more space for a sex/gender that falls outside those expectations has been formed (Haughton, 2023; Pape & Ialongo, 2024). However, the 3rd millennium is still regarded as the start for the binary sex/gender system with Robb and Harris (2018) arguing that sex/gender became a part of an individual's identity where before it had been a temporary activity. This stance is repeated, though in a more nuanced framework (Harris & Robb, 2024, pp. 18-22). Despite this more nuanced take, it is a part of the theory that binary gender and the submission of women are a part of societies becoming more complex. Furholt (2021, pp. 515-518) and Kristiansen (2015, pp. 9-11) both reference Mesopotamian society to exemplify this, arguing that the development of urbanism and social stratification gave rise to patriarchy as the reproductive ability of those thought of as female became tied to inheritance and private property, thus social relations became monetized and there was an incentive to control the sexuality of those able to birth heirs, which is traditionally women. The control of women for the political and economic power of men, rendering those perceived as women inferior, is a theme in research into the 3rd millennium BCE in Europe (Kristiansen, 2022, p. 42; Olsen, 2023, pp. 297-299; Ryan-Despraz, 2022, pp. 54-55; Sjörgen *et al.*, 2019, pp. 17-20). This is often connected to female exogamy, which is suggested in Sjörgen et al. (2016, p. 27) since the studied isotopes show how diet indicates that females are more mobile, fitting with female exogamy. Thus, the sex/gender system for 3rd millennium BCE Europe in the current discourse is most often seen as a patrilocal, patrilineal and patriarchal society with female exogamy where a male warrior elite dominates.

4. Meta-study of Literature: A Binary Look at Data

To gain an understanding of how archaeological academic discourse has been engaging with sex/gender in research, a dataset has been created to perform a meta-study on. This dataset consists of 98 publications starting in 2015, see fig 4.1. In this thesis, 2015 has been chosen as a starting point for this dataset, due to it being the year Haak *et al.* (2015) and Allentoft *et al.* (2015) were published, marking the start of the aDNA revolution for this research area. As mentioned earlier, aDNA enabled researchers to to make stronger assertions about the sex determination of osteological remains, thus inviting a new look at the sex/gender organization of the 3rd millennium BCE in Europe.

The publications have been sorted into two categories based on their level of engagement with sex/gender. This is to observe whether there is a difference in how archaeological discourse interacts with sex/gender when it engages with it more extensively (table 1). Appendix 1 provides an overview of the publications as they are in the assessment, as well as the category that is assigned to each publication. The dataset is organized by year to show potential developments over time, before the authors and title are given, and it is asserted whether it is an article, book or book chapter. Appendix 2 show the dataset in APA.

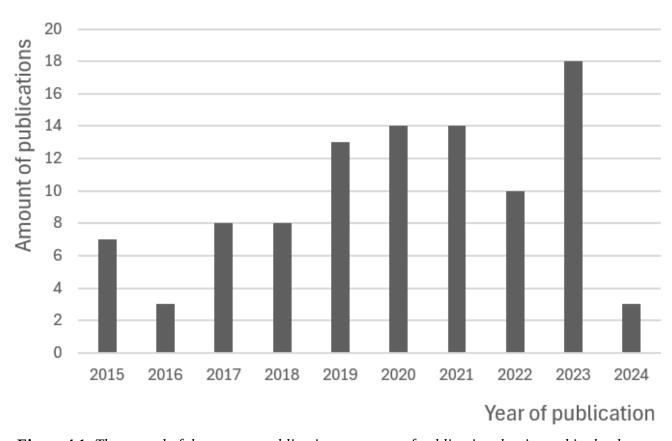


Figure 4.1: The spread of the amount publications per year of publication that is used in the dataset

Level of engagement with sex/gender	Explanation category	Amount of publications in the category		
		n	n in %	
Sex/gender main focus (SGMF)	main facus of the research in the publication. The sime		34.7%	
Sex/gender present (SGP)	In this category, sex/gender is present in the publication, however, it is not the main focus, instead sex/gender is part of research focusing on another aspect of the 3 rd millennium BCE in Europe. Since sex/gender is thought to be a prominent part of social organization in the 3 rd millennium BCE, it is likely to be an aspect of the interpretation even when it is not the main focus. The aim of identifying the publications that do not have sex/gender as main focus, is to observe if researchers, who might not have a background in gender archaeology, have an approach to the topic that is less integrated with gender theory	64	65.3%	

Table 1: The differing levels of engagement with sex/gender present in dataset and the explanations of each category

The publications in the dataset are evaluated by reading them and making an assessment on their contents. To ensure consistent observations can be made, 24 criteria have been created. These criteria are primarily based in the literature that is discussed in chapter 2 and will function as a reference of the gender theory that should be present. This forms the basis on which the publications in the dataset will be assessed. These criteria have been grouped together based on what aspect of sex/gender research is being evaluated. These groupings ensure that patterns can be observed in different aspects of sex/gender research in archaeological discourse. Each criteria is explained and justified in table 2, along with the origin of each criterion in the literature. It will be assessed whether each criterion is present (Yes) or absent (No).

Groupings	Criteria	Explanation criteria
Related to knowledge of gender theory	Distinction sex and gender named	Sex and gender, while connected, can be useful to distinguish from one another to clarify what is is being discussed. Furthermore, naming this distinction aids in preventing the modern creation that

		is biological sex to be equated with the cultural aspect of gender. With this criterion, it will only be noted if the difference between the two is named. This criterion has its basis in the call for historical and anthropological researchers to conscious of their vocabulary (Halperin, 1989, p. 273; Scott, 1986, p. 1065), which can also be applied to archaeological research into sex/gender.
	Distinction sex and gender used	Naming the distinction between sex and gender, however, does not mean that this distinction carries through when interpreting the archaeological data. This criterion is to examine when that distinction is used in the interpretation of the data.
		This criterion has its basis in the fact that it is generally accepted that these concepts refer to different aspects (Springer, 2014). Fautso-Sterling (2020) on the other hand argues that they are intertwined. While this thesis in agreement with Fausto-Sterling, making the distinction can be useful in certain contexts and prevents people from conflating one with the other, which can cause a deterministic narrative to be present. Therefore, it is still oberved as a criterion.
	Sex/gender as historically placed	Sex/gender is tied to its historical context and cannot be transplanted between time periods uncritically. This criterion examines whether researchers regard sex/gender as a historically placed category, thus as being a societal aspect, which is a part of the culture that is being studied. There must be an acknowledgment that sex/gender is not universal. This criterion has its basis in the manner in which gender systems
		are tied to the specific historical cultural contexts that create them, as shown in chapter 2 in the subsection <i>Gender in society</i> . It also has its basis in the cycle between science and society, which falsely presents sex/gender as static (Fausto-Sterling, 2020; Foucault, 1978, p. 54; Keller, 1995; Worthman, 1995, p. 610), a cycle, which could also be perpetuated in archaeology.
	Defines sex/gender categories	Sex/gender is a nebulous concept, which can be defined in many ways. The manner in which the terminology is used, impacts research, therefore it is important that it is clarified what exactly is meant in a publication when sex/gender is used. This criterion is to observe if a publication gives a definition of the terminology that is used in regards to sex/gender.
		This criterion also has its basis in the call for historical and anthropological researchers to conscious of their vocabulary (Halperin, 1989, p. 273; Scott, 1986, p. 1065), which can also be applied to archaeological research into sex/gender.
	Sex/gender as intersecting	An individual holds many different identities at once, with sex/gender possibly being one of them. Each facet of an individual's identity interacts with one another, which is commonly referred to as intersecting identities or intersectionality. This

criterion is to assess whether a publication places the sex/gender identity of an individual in a wider context, intersecting it with aspects such as: age, place of origin, status, occupation, ethnic group, ability, and/or sexuality. This does not necessarily mean that these are mentioned, instead they are a part of how sex/gender is enacted. **For example:** In assessing this criterion, it will be observed if the assigned sex/gender category of an individual is impacted by one or more other identity categories, not if multiple identities are discussed. Therefore, males are migrating from the Steppe and admixing with Central European females, does not count under place of origin intersecting with sex/gender, however, non-local females have distinct burials from local females while non-local males do not, would count, since differing places of origins would impact how the female identity of individual is perceived by the community. This criterion has its basis in Foucault's (1976) ideas of networks of power, which are named by Crenshaw (2006) and have a history in gender theory, as shown in chapter 2 in the subsection Gender in society. More than two In the modern gender system, individuals are placed in two sex/gender categories sex/gender categories: male or female. However, this has not always been the case for every culture. This criterion is to observe if there is an acknowledgment by researchers that their findings can result in a gender system with more than two sex/gender categories. It does not have to be the result, however, the possibility of there being more than two sex/gender categories must be acknowledged. This criterion has its basis in case studies that have an organization around sex/gender with more than two sex/gender categories (Driskill, 2004, p. 52), which proves that the modern gender system with two binary sex/gender categories is not the only option that should be considered as a possibility when imagining past sex/gender systems. No sex/gender Sex/gender does not have to be a part of societal organization. It categories can be present, however, it is not a requirement for a society. This criterion is to assess if a non-sex/gendered approach is taken in a publication or if a researched society is interpreted as not being sex/gendered. For example: When assessing this, it concerns publications that state that sex/gender was not a part of social organization without still sex/gendering the individuals that are discussed regardless. These publications regard a specific culture as sex/gender neutral. This can be in relation to later cultures becoming sex/gendered. This criterion has its basis in case studies that have an society wherein sex/gender was not a primary social organizer (Fausto-Sterling, 2020, pp. 21-22; Lugones, 2007, pp. 196-197), which proves that the modern gender system with two binary sex/gender

categories is not the only option that should be considered as a

		possibility when imagining past sex/gender systems.
	Role of children	Fausto-Sterling (2020) observes how the formation of sex/gender categories starts prenatally in the modern gender system. In a society that is sex/gendered, aspects of the manner in which sex/gender is organized might already be observed in children or imposed on them by their community. This criterion assesses whether publications use children when studying sex/gender in the archaeological record.
		This criterion has its basis in Fausto-Sterling's (2020) discussion on how children become sex/gendered, as well as intersectionality (Crenshaw, 2006). However, intersectionality is not necessarily required, since age might not be an identity that impacts how a sex/gender category is experienced and/or treated.
Related to equating sex with gender	Only biological sex	Sex can be falsely viewed as the objective truth about a body, as has been established in chapter 2. By using only biological sex, one denies that statements are being made about a social construction that is subject to change and might not be fully related to biological sex in the same manner it is in the modern gender system. This criterion examines the phrasing of each publication to establish whether almost exclusively male, female and undetermined are used, or if culturally gendered terms are used instead or as well.
		This criterion also has its basis in the call for historical and anthropological researchers to conscious of their vocabulary (Halperin, 1989, p. 273; Scott, 1986, p. 1065), which can also be applied to archaeological research into sex/gender. It has a basis in the dualistic, binary thinking that is currently being countered in gender theory as well (Keller, 1987, 1995; Fausto-Sterling, 2020).
	Binary thinking	In the modern gender system bodies are placed in two categories (male/female) that are considered to be opposites. This is a binary gender system. Researchers can acknowledge that a gender system with more than two or no sex/gender categories can exist, yet fall into binary thinking regardless. This criterion assess whether binary thinking is present in a publication.
		For example: In assessing this criterion, it is in regard publications that place individuals in two sex/gender categories of male and female, based on chromosomes, cultural artifacts, place in society, or all of the aforementioned.
		This criterion has its basis in the dualistic, binary thinking that is currently being countered in gender theory (Keller, 1987, 1995; Fausto-Sterling, 2020).
	Deterministic narrative	The modern gender system has been naturalized as an innate and objective fact, untouched by culture. In this sex/gender are an inherit part of an individual, who will always be a part of dualisms between male/female. This criterion assesses if a publication follows a deterministic narrative. A deterministic narrative means that the modern gender system is seen as the natural end result for

	I	
		sex/gender, either as always present through biology or as the only place cultural development leads to when sex/gender starts forming.
		This criterion has its basis in the observed deterministic narrative by Fausto-Sterling (2020), which is a part of the cycle between society and science, as well as the dualistic, binary thinking that is currently being countered in gender theory (Keller, 1987; 1995; Fausto-Sterling, 2020). This is also based on archaeological publications that implicitly or explicitly perpetuate this idea (Furholt, 2021, pp. 515-518; Kristiansen, 2015, pp. 9-11; Robb & Harris, 2018).
Related to preconceived notions about sex/gender	Active/male and passive/female dualism	Dualisms are a part of the modern gender system, connected to one another to create the stereotypes on which the male/female dichotomy is built.
categories		The active/male and passive/female dualism regards the role of active agents that males are given, while females are delegated a passive role. This criterion examines whether this dualism is present.
		This criterion has a basis in Keller's (1987, p. 594; 1995, pp. 34-36) writing about the dualisms and stereotypes that are perpetuated in science by the cycle between society and science.
	Present/male and absent/female dualism	Dualisms are a part of the modern gender system, connected to one another to create the stereotypes on which the male/female dichotomy is built.
		The present/male and absent/female dualism is in regard to the tendency not include females in narratives as well as identify males by their phallic presence. This criterion examines whether this dualism is present.
		This criterion also has a basis in Keller's (1987, p. 594; 1995, pp. 34-36) writing about the dualisms and stereotypes that are perpetuated in science by the cycle between society and science.
	Dominant/male and submissive/female dualism	Dualisms are a part of the modern gender system, connected to one another to create the stereotypes on which the male/female dichotomy is built.
		The dominant/male and submissive/female dualism proposes that males are inherently dominant to females. Due to this, males are given the dominant role in society, while females are regarded as submissive to them in their role in society. This criterion examines whether males are given a dominant role in society and females a submissive one in publications.
		For example: When assessing, this will regard publications that state there was a patriarchal society or a male elite. However, a publication that uses only patrilocality and/or patrilineality would not count. While both terms are often related to male dominance, inherently tying them to this dualism would be projecting meaning where it might not be present. Thus, unless male dominance is

		made explicit, patrilocality and patrilineality do not count. This criterion also has a basis in Keller's (1987, p. 594; 1995, pp.
		34-36) writing about the dualisms and stereotypes that are perpetuated in science by the cycle between society and science.
	Applies dualisms to other aspects society	The three aforementioned dualisms can get applied to other aspects of society. This criterion is to assess whether a sex/gender dualism gets applied to other societal aspects that do not have to be sex/gendered.
		This criterion has a basis in how dualistic thinking is applied broader in society, such as objective/subjective, science/culture etc (Fausto-Sterling, 2020, p. 23; Keller, 1987, p. 594; 1995, pp. 34-36) as well as the projection of dualisms onto broader society seen in Kristiansen <i>et al.</i> (2017).
	Generalizations sex/gender	Sex/gender is not an inherit trait of an individual and cannot be used to create a monolith. To state that certain aspects are true, because an individual has a certain sex/gender identity is a generalization. Generalizations can be made on an ideological, behavioral, spatial, or demographic level by making blanket statements about sex/gender groups.
		This criterion has a basis the generalizations made by Robb and Harris (2018, pp. 130-140), which are critiqued by Gaydarska <i>et al.</i> (2023, p. 273).
Related to methodological or theoretical problems	'Add women and stir' approach	The 'add women and stir' approach is the idea that merely also taking women into account is gender archaeology, while gender archaeology is a lot more nuanced than that (Gaydarska <i>et al.</i> , 2023). This criterion assesses whether a publication is only adding sex/gender distinctions to an interpretation without looking at what that means for sex/gender.
	Social vs. analytical constructs	There is a difference between social constructs: 'is there gender' and analytical constructs: 'what kind of gender' as pointed out by Gaydarska <i>et al.</i> (2023), which some researcher have trouble distinguishing.
		This criterion is to assess whether the literature claims it is focusing sex/gender as an analytical construct as to research how sex/gender functioned and/or was constructed, but theoretically and/or methodologically it fails to do so.
	Limited to the theoretical	Discussions on a theoretical level as to what problems arise in gender archaeology are important. However, only providing theoretical criticism without practical solutions to approach the discussed problems, does not provide a way for the archaeology of sex/gender to evolve. Thus, this criterion examines whether a publication contains theoretical insights without providing practical ways of using those insights in further research.
		This criterion has a basis in Gaydarska <i>et al.</i> , who describe this as "inspirational theoretical insights that struggle to find wider

		resonance." (2023, p. 273).
	Equal importance male and female	As reflected in the dualisms on which the modern gender system is built, females and their contributions are often considered to be less important or valuable. However, the opposite can also be true, therefore this criterion assesses whether equal importance is given to that what is considered to be male or female, either implicitly or explicitly. This should not be taken to mean that the focus is on either one sex/gender category, since a publication can focus on a limited demographic group and still be respectful towards individuals outside of said group.
		This criterion has a basis in the gender biases that are present in the world (UN, 2015, p. 14), which also are present in science (Keller, 1982, pp. 590-591). This unequal importance has been observed in Kristiansen <i>et al.</i> (2017, pp. 339-340), which is also a reason for this criterion.
Related to research parameters	Osteological remains	Archaeological sex/gender determinations are done partially or wholly on the basis of osteological remains. These interpretations are oftentimes rooted in 19 th century archaeology and the modern gender system. This criterion observes whether osteological remains are used when interpreting sex/gender in the publication. Osteological remains is taken to mean: an anthropological assessment of the osteological remains, aDNA data from the osteological remains and/or isotope data from the osteological remains.
	Grave goods	Archaeological sex/gender determinations are done partially or wholly on the basis of grave goods. These interpretations are oftentimes rooted in 19 th century archaeology and the modern gender system. This criterion observes whether grave goods are used when interpreting sex/gender in the publication.
		In this assessment, grave goods indicates the objects that are found and the manner in which the osteological remains were placed in the grave, since that is cultural information. This has been intentionally separated from osteological remains to observe possible differences.
	Other than osteo remains and grave goods	Sex/gender interpretations in archaeology are limited to what remains of the archaeological record, which often consists of osteological remains and grave goods. Using either when interpreting sex/gender is not inherently problematic, however, 19 th century ideas are deeply entrenched and can become present when the interpretation only hinges on osteological remains and grave goods. Thus, this criterion assesses whether a publication uses additional aspects when interpreting sex/gender.

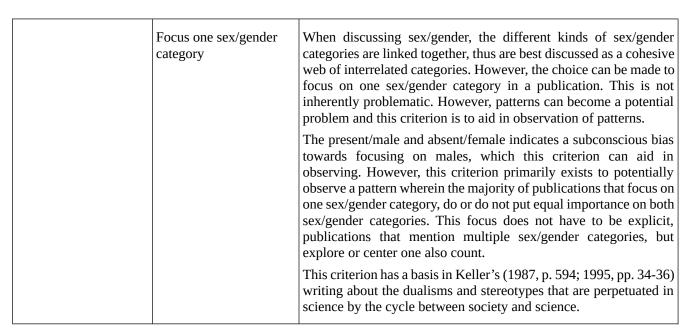


Table 2: The general criteria with which the dataset will be assessed and the explanation of and reasoning for each criterion

The Presence of the Criteria in the Dataset

The assessment for each criterion per publication can be found in appendix 3, which has the same column organization as appendix 1, while the rows follow the same order of the second column in table 2. The category SGMF is marked in gray, while SGP is white to distinguish between the two.

The presence of these 24 criteria is assessed, however, a presence is not necessarily a positive, while an absence is not necessarily a negative. All the criteria are created with a preferred presence or absence, on the basis of which the quality of sex/gender research in the publication will be assessed. The criteria that fall under the grouping related to knowledge gender theory should be present, while those that fall under the groupings related to equating sex with gender, related to preconceived notions about sex/gender categories should be absent. In the groupings related to methodological or theoretical problems and related to research parameters there is no uniform preferred presence or absence. In the grouping related to methodological or theoretical problems most criterion should be absent, 'equal importance male and female' is the exception, which should be present. For the grouping related to research parameters most should be present, with 'osteological remains', 'grave goods' and 'other than osteo remains and grave goods' being preferred as present, while 'focus one sex/gender category' should be absent.

As stated before, the aim of assessing the presence and absence of these criteria is to be able to assess the quality of sex/gender research in publications about 3rd millennium BCE Europe. This thesis does not comment on other aspects of the publication and is not meant to be an indicator of the overall quality of a publication. Its aim is to assess the ideological underpinnings that are present in archaeological sex/gender research, the extend to which gender theory is integrated to strengthen the archaeological discourse surrounding sex/gender in the 3rd millennium BCE in Europe, and what that means for the results of research in this area.

The amount of times each criterion got assigned 'Yes' or 'No' has been visualized in fig. 4.2 for the entire dataset, while fig. 4.3 only shows the results for the category SGMF and fig. 4.4 for the category

SGP. These visualizations are done in percentages. When referenced in text, all percentages are rounded up to one decimal.

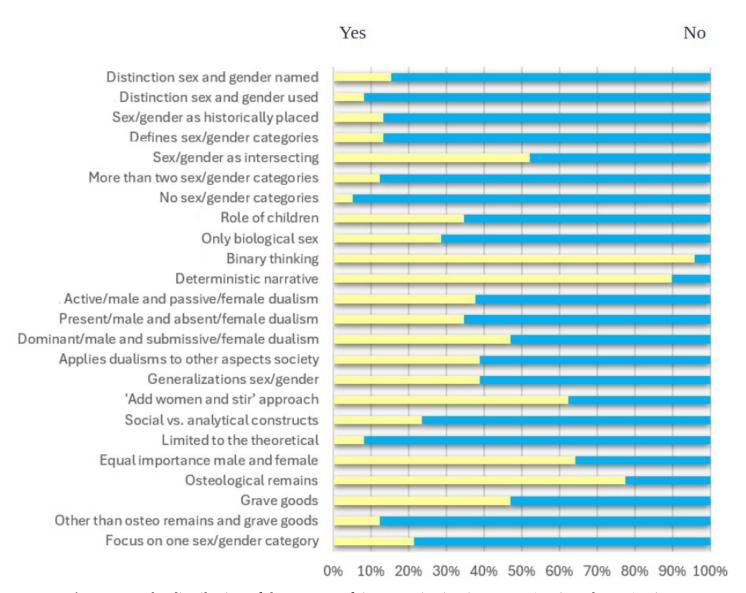


Figure 4.2: The distribution of the amount of times a criterion is present 'Yes' or absent 'No' per criterion in percentages for categories SGMF & SGP

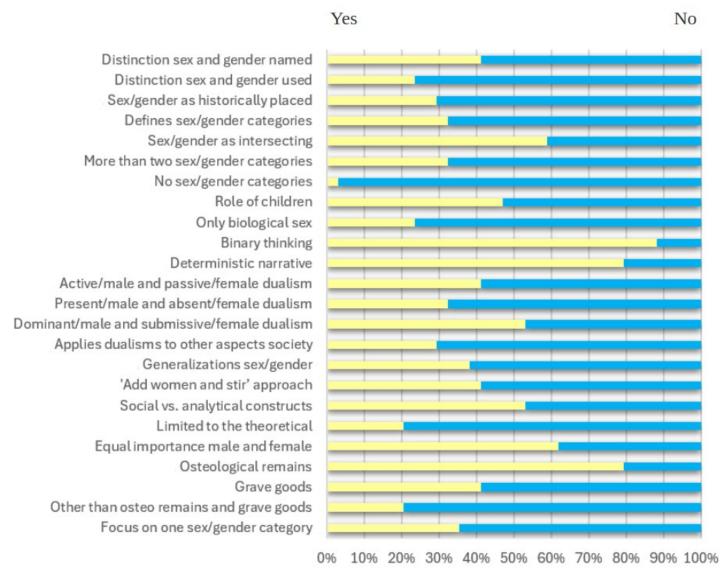


Figure 4.3: The distribution of the amount of times a criterion is present 'Yes' or absent 'No' per criterion in percentages for category SGMF

Yes No.

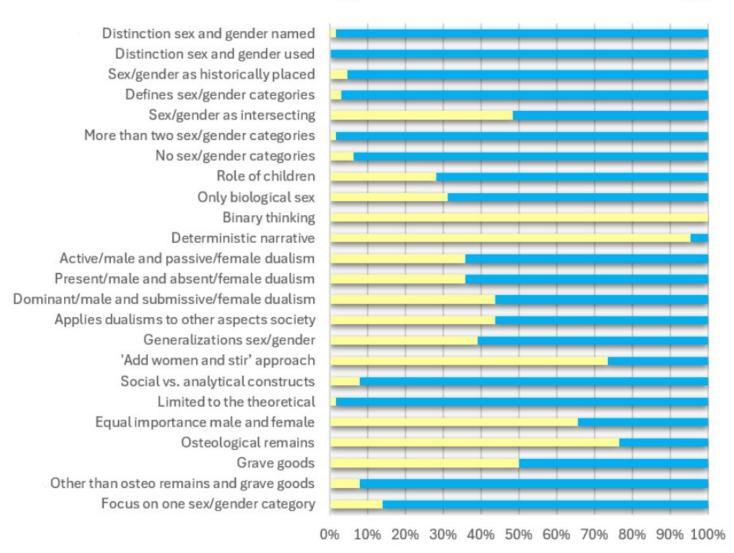


Figure 4.4: The distribution of the amount of times a criterion is present 'Yes' or absent 'No' per criterion in percentages for category SGP

The main differences between SGMF and SGP can be observed in the criteria 'Distinction sex and gender named' (41.2% Yes SGMF; 1.6% Yes SGP), 'Distinction sex and gender used' (23.5% Yes SGMF; 0.0% Yes SGP), 'Sex/gender as a historically placed' (29.4% Yes SGMF; 4.7% Yes SGP), 'Defines sex/gender categories' (32.4% Yes SGMF; 3.1% Yes SGP), and 'More than two sex/gender categories' (32.4% Yes SGMF; 1.6% Yes SGP), all of which are a part of the grouping related to knowledge of gender theory, as well as in the criteria 'Other aspects osteo remains and grave goods' (20.6% Yes SGMF; 7.8% Yes SGP), 'Social vs. analytical constructs' (52.9% Yes SGMF; 6.3% Yes SGP), and 'Limited to the theoretical' (20.6% Yes SGMF; 1.6% Yes SGP), the latter two being a part of the grouping related to methodological and theoretical problems.

The publications were sorted into the categories SGMF and SGP to observe if a focus on sex/gender would result in an approach to the topic that is more integrated with gender theory. With the results, it can

be observed that the publications that center sex/gender in their research rather than sex/gender being an aspect instead of the focus, are more aware of gender theory. This thesis argues that the awareness of gender theory indicates a more nuanced approach, or at least one rooted more firmly in relevant academic discourse. Therefore, SGP publications can benefit from more awareness of gender theory. However, SGMF publications have higher percentage of methodological and theoretical problems present, which appears contradictory. This presence of problems can be explained due to the fact these publications center on sex/gender, since publications that do not, are less likely to have theoretical discussions on the topic or state that an analytical approach will be taken in regard to sex/gender. Therefore, SGMF publications open themselves up to other possible problems by centering sex/gender.

While more differences can be observed in the distribution of the presence or absence of the criteria not previously mentioned, these differences are less severe and the general trends are similar. Thus, the extent to which sex/gender is the focus of a publication, does not impact the distribution of the presence or absence of the other criteria to a notable extend. Due to this, general trends will be observed and commented on further by looking at the complete dataset with the two categories combined as visualized in fig. 4.2.

Two criteria that stand out as having a high presence are 'Binary thinking' (95.9% Yes) and 'Deterministic narrative' (89.8% Yes), both of which are related to equating sex with gender. This trend is further emphasized by 'Distinction sex/gender named' (15.3% Yes) and 'Distinction sex/gender used' (8.2% Yes) that are part of the most absent criteria. Sex and gender are thus treated as the same and rarely named as separate theoretical tools that are useful for interpretation, and when they are named as separate this does not carry through to being used in the interpretation in over half of publications that name it. This is further exacerbated by the absence of 'Defines sex/gender categories' (13.3% Yes). Without clarifying the terms that are used it becomes unclear what exactly is being discussed and can lead to the two terms becoming conflated.

The other two most absent criteria are 'No sex/gender categories' (5.1% Yes) and 'Limited to the theoretical' (8.2% Yes). The latter results can be explained by the fact that the publications wherein it is more likely to be absent have a lower amount of publications (SGMF n=34; SGP n=64) as mentioned above. The low presence of 'No sex/gender categories,' however, cannot be explained by said categories, since the presence is low in both cases (2.9% Yes SGMF; 6.3% Yes SGP). This criterion is most closely related to 'More than two sex/gender categories' which, as mentioned above, does have a difference in presence in either category and is largely absent in SGP. It could be that since only publications that discuss sex/gender are part of the dataset, that a social organization that lacks sex/gender is going to be absent. However, it is argued here that this result is a symptom of the naturalization of the modern gender system. Due to the modern gender system being viewed as a natural and inherent thing, the conceptualization of it as not existing is difficult, therefore there is an absence of an alternate conceptualization. This interpretation is strengthened further by the high presence of 'Binary thinking' and 'Deterministic narrative' that are also a part of this naturalization, as well as relative high absence of the other alternative conceptualization, 'More than two sex/gender categories' (12.2% Yes when regarding the entire dataset) and the absence of 'Sex/gender as historically placed' (13.3% Yes), which de-naturalizes the modern gender system.

To de-naturalize the modern gender system, knowledge of gender theory is beneficial. In the grouping related to knowledge of gender theory, most criteria have already been discussed as having a low presence, 'Sex/gender as intersecting' (52.0% Yes) is an outlier with a high presence. One aspect of identity that can intersect with sex/gender is age, which is measured in 'Role of children' (34.7% Yes), which is also part of this grouping. Of the 34 publications that contain the criterion 'Role of children,' 29

publications have a 'Yes' as well for '*Sex/gender as intersecting*', thus there is a large positive correlation between the two criteria, with a phi coefficient of 0.49.

The grouping that is related to preconceived notions about sex/gender categories is consistent in its presence with all five criteria falling between 34.7% Yes and 46.9% Yes. Of the three dualisms, the dominant/male and submissive/female is the most present, while the present/male and absent/female is the least present. There is also a positive correlation between 'Applies dualisms to other aspects society' and 'Generalizations sex/gender,' meaning that when one is absent, the other is more likely to be absent as well. This is a large correlation with a phi coefficient of 0.57.

In regard to the grouping related to research parameters, three criteria are to observe how sex/gender is determined. There is a clear decrease between the three from 'Osteological remains' (77.6% Yes), 'Grave goods' (46.9% Yes) and 'Other than osteo remains and grave goods' (12.2% Yes). 40 of the 98 publications only use osteological remains to determine sex/gender, while 10 publications only use grave goods, and 5 publications only use other aspects. This could be connected to the observed trend of equating sex with gender, which would feed the cycle between science and society. The cultural idea of what the body is, is taken to be an objective truth through the use of sex and projected onto the past, thus legitimizing the gender binary and collapsing back on the existing knowledge structures in science. A more rounded image of sex/gender would be done through using all three when determining sex/gender, which is done in 3 publications. More objectionable are the 5 publications that use none of these when determining sex/gender, thus do not clarify what the interpretation of sex/gender is based on. This leaves space for biases to form statements about sex/gender, also feeding into the cycle between science and society.

Gender Theory Alignment Index

General trends can be observed by looking at how the criteria are present or absent in the dataset, as done above. However, to be able to comment on the treatment of sex/gender as aspect of research in the archaeological academic discourse, a measurable level of quality would be beneficial. This thesis aims to research how gender theory is reflected in archaeological research about sex/gender in the 3rd millennium BCE in Europe from the past 10 years and argues for the incorporation of gender theory into archaeological discourse. Therefore, the Gender Theory Alignment Index (GTAI) has been created. GTAI observes to what extend gender theory is reflected in the publications on the basis of the 24 criteria, which have been given a yes/no distribution that would overlap with having incorporated gender theory as much as possible, see fig. 4.5. These have all been given a weight, allowing for a 44 maximum to be scored by publications, which indicates how closely they align themselves with gender theory. Therefore a higher GTAI means a larger alignment with the discourse present in gender theory.

While GTAI will be used to asses the quality of archaeological sex/gender research, it is not meant as an assessment of the overall quality of a publication. In this thesis, the focus is solely on how sex/gender is researched and other aspects are not assessed. A publication that has a low GTAI does not integrate gender theory into their research, thus their research about sex/gender, is not as grounded in relevant discourse. Due to this, the sex/gender aspect of the publication is noted here as having a lesser quality. However, it is only the quality of sex/gender research in archaeology that will be commented on, through the usage of the GTAI.

	Distinction sex and gender named	Distinction sex and gender used	Sex/gender as historically placed	Defines sex/gender categories	Sex/gender as intersecting		No sex/gender categories	Role of children	Only biological sex	Binary thinking	Deterministic narrative	Active/male and passive/femal e dualism
GTAI	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Weight	2	2	2	2	2	2	2	2	1	2	2	2
	Present/male and absent/female dualism	Dominant/ male and submissive/fe male dualism	other aspects	Generalizatio ns sex/gender		Social vs. analytical constructs	Limited to the theoretical	Equal importance male and female	Osteological remains	Grave goods	Other than osteo remains and grave goods	Focus on one sex/gender category
GTAI	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	No
Weight	2	2	2	2	2	2	2	2	1	1	2	1

Figure 4.5: The distribution of 'Yes' and 'No' per criteria that would reflect the most complete incorporation of gender theory a publication could have, along with the weight of each publication. If publication has this distribution it would have an GTAI of 44

As previously mentioned, each criteria has been assigned a weight. 4 out of 24 criteria are given a weight of 1, while all others have received a weight of 2. All criteria whose presence is measured, have been created because they are of importance. Getting a lesser weight does not mean the criteria are less important, however, due to various reasons, which will be given below, it has been decided to count them less heavily. Yet, it must be noted that they do still count.

First, 'only biological sex,' which is used to assess if the language used in regards to sex/gender is almost exclusively biological. This thesis takes issue with only using biological language in archaeological research, due to the fact that it implies that the modern perception of the sex of an individual had a cultural impact on them without acknowledging the societal aspects that would indicate that connection is there, thus implicitly assigning a universal connection between sex and gender. The reason this has been weighted less is related to the interdisciplinary nature of archaeology that necessitates communication that adheres to standards outside of archaeology itself. While certain standards must be questioned – such as the constructed sex binary – sexed language is regarded as being neutral when talking about osteological remains and penalizing publications for adhering to standards created to be neutral when discussing the physical body is counterproductive.

Second, 'osteological remains' and 'grave goods' are discussed together, since they are weighted less for the same reason. Both relate to what aspects of the archaeological record are used to determine sex/gender and both are marked with 'Yes' being the option that would fit with gender theory, since it is preferable to use as much data as possible when assessing sex/gender. However, archaeology as a field works with an inherently incomplete record and in certain cases osteological remains or grave goods are not present. To condemn publications for working within the limitations of the archaeological record is not useful for the aim of this thesis.

Third, 'Focus on one sex/gender category,' which has been weighted less, since there is nothing inherently problematic about choosing to focus on one demographic, such as a sex/gender category, much like one can focus on an occupation or age group. It can be problematic if this focus is due to devaluing another sex/gender category, however, this is assessed in 'equal importance male and female'. It can also become problematic, if there is a pattern of focusing on one sex/gender category while disregarding others, implicitly stating these are less important. This can also potentially be related to the 'present/male and absent/female dualism' though this can also be present in publications that focus on multiple sex/gender categories. In the publications in the dataset assessed here, there is no such focus. Of the 21 publications that only focus on one sex/gender category, 8 only focus on those perceived as women as a sex/gender category (Cintas-Peña, 2023b; Díaz-Navarro et al., 2023; Garrido-Pena & Herrero-Corral, 2015; Juras et al., 2018; Knipper et al., 2017; Kyselý et al., 2019; Stockhammer, 2023; Varul et al., 2019), while the others focus on those that are perceived to be men. There are none that only focus on a

sex/gender category other than women or men, which is an indication to how the sex/gender binary is integrated in research, but not measurable in this manner. Therefore, this criterion has a lesser weight.

The manner in which the GTAI of the publications are distributed is shown in fig 4.6. Also shown in fig. 4.6 is how this distribution changes for SGMF and SGP. This is to assess if the different distribution of criteria present would impact the quality of the research when it comes to incorporation gender theory. In fig. 4.6 it can be observed that most publications have an GTAI between 6 and 29, with a few higher outliers and less lower outliers. In the SGMF category those outliers disappear and instead the spread stretches to a GTAI from 4 to 40. Most of the outliers are thus a part of the SGMF category, however, there is also a big fluctuation in quality in SGMF. Comparatively, SGP has a less spread out GTAI, with most falling between 7 and 26, with an outlier at 29. Therefore, SGP quality is more consistent. Overall SGMF has a higher GTAI with 50% having a higher or the same GTAI as the upper 25% of SGP, as well as 25% having a higher GTAI than all of the SGP category, bar the outlier. However, SGMF is also the category that holds the lowest GTAI publications, thus having sex/gender as the main focus is not a guarantee of quality, instead there is more room for problematic discourse to be discussed or perpetuated. Overall results are also still subpar, with over 75% of the publications in this dataset having a GTAI of less than 22, which is half of the overall possible score. This means that gender theory is not integrated well and the quality of specifically the sex/gender part of archaeological research is subpar.

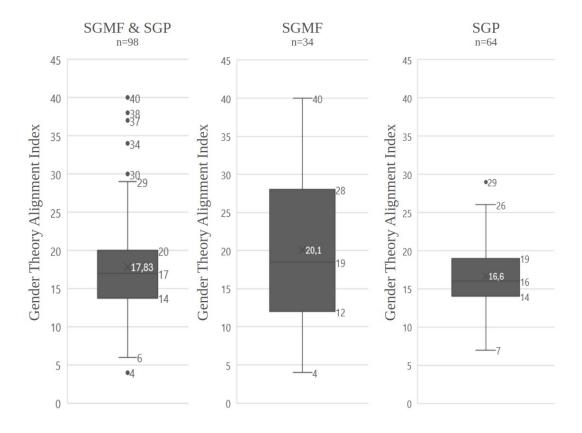


Figure 4.6: Box plots for the GTAI distribution of the dataset, also separated for SGMF & SGP. The average is marked with a dark x and white number, rounded up to 2 decimals for the combined and 1 for SGMF and SGP. All other points are rounded up into whole numbers. Outliers marked with a dot

When viewing the data temporally, it can be observed that sex/gender has become a bigger topic in recent years with the amount of publications regarding sex/gender increasing. This could potentially mean that knowledge of gender theory has increased throughout time as well. In order to examine whether this is the case, GTAI is used. In table 3 an overview of the GTAI for both categories is given as well as separately for SGMF and SGP, along with the the amount of publications for each year. This is further visualized in fig. 4.7, 4.8, and 4.9, which shows the spread and the average GTAI as well as the standard deviation for SGMF & SGP and both categories separately.

Year	SGMF & SGP		SGMF & SGP SGMF		SGP		
	n	GTAI	n	GTAI	n	GTAI	
2015	7	13.1	2	10.0	5	14.4	
2016	3	21.3	0	-	3	21.3	
2017	8	14.1	6	13.0	2	17.5	
2018	8	15.8	3	17.0	5	15.0	
2019	13	20.4	3	30.7	10	17.3	
2020	14	16.1	2	21.5	12	15.3	
2021	14	19.4	5	22.0	9	18.0	
2022	10	19.5	5	23.0	5	16.0	
2023	18	17.4	7	20.0	11	15.7	
2024	3	27.0	1	34.0	2	23.5	
Total	98	17.8	34	20.1	64	16.6	

Table 3: The n and average GTAI per year, as well as the average n and weighted average of the total GTAI. All averages rounded up to one decimal

When splitting the dataset into two 5 year blocks (2015-2019 and 2020-2024), an increase can be observed in both the GTAI and the amount of publications. In the 2015-2019 block there are a total of 39 publications that have an average GTAI of 16.9, while in the 2020-2024 block there are 59 publications that have an average GTAI of 18.4. It can be stated that the the average GTAI and the amount of publications increased over time, so more has been written about sex/gender in 3rd millennium BCE Europe and there is more use of gender theory. However, that increase in GTAI is +1.5, which is less than one criterion and still well below the GTAI which has a maximum of 44. In SGMF and SGP there is a

difference in the increases. For SGMF the 2015-2019 block has an average GTAI of 17.2 with n=14, while the 2020-2024 block has an average GTAI of 22.6 with n=20. For SGP the 2015-2019 block has an average GTAI of 14.7 with n=25, while the 2020-2024 block has an average GTAI of 16.5 with n=39. When comparing the increase of the average GTAI between the two blocks for SGMF and SGP, the average GTAI of SGMF increases more than that of SGP. The average GTAI increase between blocks for SGMF is +5.4, while SGP has an average GTAI increase of +1.8. Therefore, it can be stated that the previously observed higher quality of archaeological sex/gender research in the SGMF category is mostly due to the last five years. This increase in the last five years can point to sex/gender gaining more importance in society, thus the topic is discussed more, leading more researchers towards gender theory and gender archaeology. However, it can be said that those that are not a part of the researchers interested in sex/gender research as a topic, are not also being lead towards gender theory, despite the increased presence of sex/gender in research. Sex/gender has become more prominent in research in the last 10 years, not more in depth.

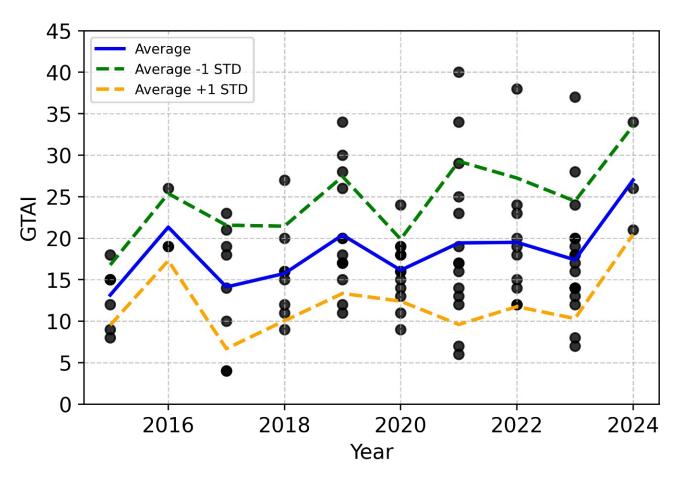


Figure 4.7: Graph of the spread of the GTAI per year as well as the average GTAI and the standard deviation of each year of publication for both SGMF & SGP

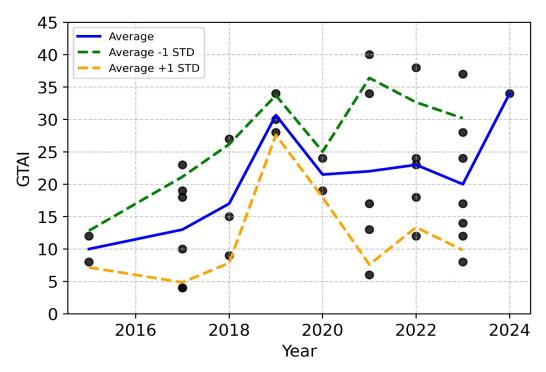


Figure 4.8: Graph of the spread of the GTAI per year as well as the average GTAI and the standard deviation of each year of publication for SGMF

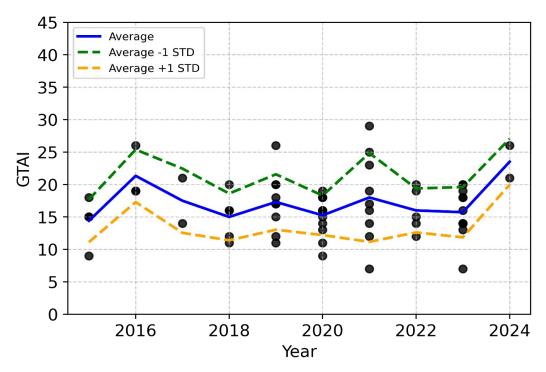


Figure 4.9: Graph of the spread of the GTAI per year as well as the average GTAI and the standard deviation of each year of publication for SGP

In fig. 4.8, the higher GTAI in SGMF publications in the second block (2020-2024) can be observed, however there is no consistent rise in the graph and the standard deviantion fluctates. Furthermore, in the second block, the standard deviation is bigger, thus there is a larger difference in quality between publications within the SGMF category. This could be related to the low amount of publications in the SGMF category, however, when contrasting to SGP, which has a higher amount of publications, there is a difference between standard deviations. For the SGP category, fig. 4.9 shows that the standard deviation remains small and the average consistent. Furthermore, there is no visual jump between the 2015-2019 and 2020-2024 block as seen in SGMF. Both SGMF and SGP do peak at the end, however, this can be ascribed to the low number of publications in 2024.

Therefore, it can be stated that the increase in quality cannot be attributed to a consistent increase in quality of archaeological sex/gender research throughout time. Instead the increase can mostly be attributed to SGMF, which shows that there is a jump in quality and quantity from 2019 onward, which is not echoed in the broader discourse. This is likely related to the previously mentioned observation by Gaydarska *et al.* (2023, p. 278) that gender archaeology is often not discussed outside of already gender marginalized researchers, whose publications are less prominent than those who are not. Due to these publications being less visible and those outside the specialization not engaging with gender archaeology as often, there has been a stagnation of quality archaeological sex/gender research over the past 10 years for those outside of gender archaeology. It cannot definitively be said that this is the reason, however, it can be stated that sex/gender research has not evolved or changed significantly, except for the publications where sex/gender is the main focus.

Yet, the fluctuation of quality in the SGMF category that can be observed indicates that this increase is not an encompassing development for the entirety of gender archaeology. Previously, it has been discussed how the focus on sex/gender in a publication, opens researchers to theorethical and methodological problems. This could be an explanation for this fluctuation. Another possible explanation for this fluctuation could be that while more people are focusing on sex/gender in their research, not all are also studying gender theory to aid in said research.

5. Discussion: The Gaps and Suggested Handholds

Archaeology is a multidisciplinary field of study that researches the many facets of the human experience in the past. In recent years, archaeological research into sex/gender has become more prominent. However, the observations made in chapter 4 show that the quality of archaeological sex/gender research is subpar with over 75% of publications having a GTAI under 22. This shows that the gender theory laid out in chapter 2 is absent, while biases and preconceptions about sex/gender are present. Due to this, there are certain ideological underpinnings present in archaeological sex/gender research that cannot be transplanted into the past and the general archaeological discourse surrounding sex/gender in the 3rd millennium BCE in Europe is separate from the discourse surrounding sex/gender in gender theory. What the impact of these ideological underpinnings and separation of discourse means for the results of archaeological sex/gender research will be discussed in this chapter.

Furthermore, this chapter also provides suggestions for future research into sex/gender to get a less biased and more theoretically grounded view of sex/gender in the past, which does not feed into the cycle between society and science that is described in chapter 2. This cycle ensures a binary and deterministic narrative surrounding sex/gender that relegates it to an ahistoric, universal category. Suggestions to counter this narrative are related the use of biological sex, language, alternatives to common biases and narratives, caution around citing, and the interdisciplinary nature of archaeology. The areas in which suggestions are made are based on the observations made in chapter 4 to guide where the most gaps are that need to be filled.

Biological sex?

As shown, a large part of sex/gender determination hinges on osteological remains, shown in the large percentage of papers (77.6%) that have sex/gender determinations based on osteological remains. This is oftentimes rooted in 19th century archaeology and the modern gender system (Olerud, 2021, pp. 14-15). The manner in which sex is perceived today is a social construction created by science in the last few centuries, despite this, the idea that sex can tell an objective truth about the body is still present in the discourse. Genetics stating objective truths about a body is also a problem in aDNA research, wherein the ancestry of an individual often gets equated to an archaeological culture. There is an active conversation about how the discourse favors a biological narrative that does not always take in account archaeological data (exampl. Bourgeois & Kroon, 2017, p. 2; Frieman & Hofmann, 2019; Furholt, 2019, 2020, 2021; Vander Linden, 2016). Yet, these example publications themselves all present binary and deterministic narratives in regard to sex/gender. Though, there are publications that expand the critique of aDNA narratives to include sex/gender (exampl. Brück, 2021). It appears the modern gender system is normalized and naturalized to the point where critiquing it in the same manner is not considered. Sex/gender can be related to the biological dimension of the body, but it is not equivalent to the modern conception of biological sex. By starting with a determination of biological sex, a binary is automatically imposed. When starting from a binary, it is more difficult to find something other than a binary. Therefore, it would be preferable to minimize the use of biological sex and instead consider the biological condition of the body in its entirety, as well as the cultural context it is found in. It is suggested here to implement an intersectional approach, wherein sex is the last grouping that is considered. First patterns must be sought in cultural artifacts, manner of burial, diet, place of origin, pathologies, body modifications, use wear in osteology, and age. In creating these groupings, one must be open to the possibility of there being no groupings or more than two groupings. When these patterns are established independently of sex, one can see if modern sex can be imposed on the remains.

Even then, biological sex should be used cautiously with the understanding that it is as much a constructed category as gender. In sexing bodies, there is a modern assumption of what those bodies looked like imposed on them. The cycle between science and society has influenced each other greatly in creating this image, however, this image cannot be transplanted onto the past. It would still be interesting data to have, since the physical condition of the body is a part of an individual's experience of the world and themselves. However, one cannot claim that having a certain body type will equate to having certain personality traits, societal positions, behaviors, etcetera. Yet it can be observed that biases are continuously confirmed by researchers with a consistent observation of the dualisms and generalizations being present in the dataset. Furthermore, there is an absence of sex/gender systems with less or more than two sex/gender categories. This can be further observed in the dataset, since that which is considered to be an 'anomaly' in this sexed binary is rarely acknowledged. Despite sex chromosomes found, the phenotype of the individuals studied could have been different from what is commonly associated with them. The existence of intersex individuals is acknowledged in three publications in the dataset, with two discussing the low archaeological visibility of intersex individuals (Frieman *et al.*, 2019, p. 151; Soriano et al., 2021, p. 4) and one not including the two intersex individuals found in the discussion and conclusion (Villalba-Mouco et al., 2021, p. 3). When applying sex to gender identities in the observed patterns outside of biological sex, phenotypes could be lost and present a different image than what is actually being observed. Furthermore, if biological sex does not match these groupings that are created by assessing individuals in an intersectional manner that does not negate those previously observed patterns. Instead this could indicate that sex did not play a role in organization into societal groupings that can be sex/gendered, or that sex did not impact the social organization to a large degree, meaning there could be flexibility in sex/gender. Intersectionality is a tool for archaeologists to prevent biological sex from being the primary source of information when interpreting sex/gender of individuals in the past. Pape and Ialongo (2024) is a good example of taking a step towards changing how the sex binary is treated in regard to the archaeological record, despite their binary approach to nonbinary gender identities and the manner in which they create their research categories being tied to biased ideology. The multi-contextual analysis approach of Olerud (2021, p. 16) also is a type of intersectional approach that removes itself from deterministic narratives surrounding biology.

Another aspect of biological sex that is notable in the context of research into sex/gender is the language that is used. When discussing bodies, sexed language is considered to be a neutral manner in which bodies can be discussed with 28.8% of the publications in this dataset choosing to use primarily sexed language. While there are industry standards and the usage of male and female can be useful to demarcate what is being discussed, the fact of the matter is that it is not neutral language. This is exemplified in Goldberg et al. (2017) that discusses a sex biased migration, suggested on the basis of ancient X chromosomes. The article keeps its observations to what can be observed in aDNA data by refering to sex-specific contributions and sex-specific migrations. In this, there is an implication that sex impacted the behavior of individuals, thus that people in the past behaved in certain ways due to their sex. In doing so, it also becomes a cultural thing, which means it is no longer only biological data that is being discussed. It cannot remain a neutral observation. Therefore, one must be critical of the usage of language. For example, when choosing to use biological sex in the interpretation, does male and female get used interchangeably with man and woman. If modern labels are used, such as nonbinary or transgender, is it made clear that these are modern proxies for identities we cannot label accordingly due to them being lost to time? To what extent is the usage of man and woman justified when talking about past cultural labels, when these are modern cultural names for certain expressions of the body in our time? Research will always be constrained by the language available to us and the cultural sex/gender labels that were used in prehistoric communities have been largely lost to time. Therefore it is not inherently

incorrect to use modern language to communicate findings to a modern audience, however, one must be conscious of the fact that these are modern proxies to lost language. Yet, only 13.3% of publications in this meta-study treat sex/gender categories as historically placed. However, much like ethnographic identities cannot simply be assigned to groups, sex/gender identities cannot be assigned to individuals either. When sex/gendered language is not necessary, it is preferable to avoid it. When such language is unavoidable, it is preferable to be conscious of it and clearly communicate that these are not accurate labels. Through the usage of 'perceived as' or 'what is associated in modern cultures with' for example, a more nuanced approach to how past sex/gender is discussed is created. This can also create clarity in what exactly is being communicated. The call for caution around the used terminology, is not novel (Halperin, 1989, p. 273; Scott, 1986, p. 1065), however, found to still be necessary. Bourgeois and Kroon (2017) are a good example in how to be conscious of language, discussing CWC graves by using left-flexed and right-flexed throughout most of the article. However, they switch to the usage of male for right-flexed and female for left-flexed in a somewhat uncritical manner, which retroactively undoes this otherwise neutral way to describe what is observed in the archaeological record. Harris and Robb (2024, pp. 7-12) also have an interesting discussion about how to define gender and move away from essentialist narratives.

Further connected to this neutral language and biological determinism, is that it renders sex/gender as a natural, inherent, thus ahistorical aspect of identity, since it is seen as an 'objective truth' instead. As shown in the high presence of deterministic narratives and binary thinking. By continuing to consider sex/gender ahistoric, instead of historically placed, the cycle between science and society is only perpetuated. As mentioned before, there has already been a conversation about what terminology is used in gender and sexuality historian spaces for the past few decades. Since sex and gender often get equated, gender gets defined as sex. However, as has been observed only a small percentage of the publications studied here defines the sex/gender terms that are used (13.3%) or names that there is a distinction between sex and gender (15.3%), therefore this connection is mostly implicit, though heavily present. With a clear definition of what is being researched, it becomes easier to avoid citing papers that perpetuate binary and deterministic sex/gender narratives. Furthermore, with a definition of sex/gender, the components that make up sex/gender are also defined, creating a baseline for the data that is necessary, before conclusions can be made about sex/gender that fit with the definition given. This might aid in moving away from osteological remains as primary information source for determining sex/gender. However, definitions are not free from preconceived notions and ideological beliefs. As Cintas-Peña & García Sanjuán state: "The term 'sex' will be employed to refer biological differences among males and females, while 'gender' will be used to allude to the socio-cultural elements ascribed to men and women, commonly – but not necessarily always – in a binary system and established on the basis of sex." (2022, p. 2). This definition is clear, however, it has a binary and a deterministic narrative embedded in it, despite the disclaimer. There is a circular reasoning embedded as well, through the use of ethnography wherein the exported colonial modern gender system that has become naturalized is used to justify the narrative of a binary system, which will be expanded upon later. Therefore, a publication should preferably have a definition of sex/gender that acknowledges the historical and cultural placement of sex/gender, as well as the physical dimension of it without naturalizing it or placing it in a binary. The presence of this binary and determinism in language and definitions can also be subtle to the point where it appears nitpicking to point it out, such as Vierzig (2020, p. 130) who uses 'he' and 'she' when referring to individuals, but 'he' when talking about a chief, however, these subtle uses in language reinforce a status quo.

Biases expected thus found

Archaeologists expect to a certain distribution of tasks and behaviors, therefore find said distribution.

An example of this circular reasoning, is Ryan-Despraz (2022) wherein Neolithic warfare is explored and connected to BB archery. In establishing the history of prehistoric violence in Europe, multiple mass graves are presented, two of which are important to illustrate the argument made here; the Vassil'evka 3 cemetery and the site of Schöneck-Kilianstädten. Both mass graves are missing a demographic group. In the Vassil'evka 3 cemetery those percieved as men are absent and while it is stated that this absence could be for many reasons, the theory that is highlighted is that this group was attacked while the defenders were gone (Ryan-Despraz, 2022, pp. 3-4). At the site of Schöneck-Kilianstädten, those perceived as young women and teenagers are missing, which is taken to be a sign of kidnapping for wives or slaves, though escape is not excluded (Ryan-Despraz, 2022, p. 6). In both cases a specific part of the population is missing, however, due to the fact that in one case it is those perceived as men and in the other those perceived as women, the main interpretation is different. The same type of data, leads to different results and these results fit with the biases of the modern gender system. This is not to say that these interpretations are incorrect, however, they cannot be proven and are rooted in biases instead of data. The confirmation of an expected bias, is reflected in other aspects as well, such as with the idea that violence is a male attribute. Due to this perception of violence being male individuals perceived as females buried with objects that are thought to be related to a male warrior identity are interpreted as a gift from a father or husband (Clément, 2020, p. 34; Turek, 2019, p. 210), while in other instances of individuals perceived as female and thus incapable of fitting with their perceived male burial context are interpreted as symbolically asserting their status through male grave goods (Peška & Štelcl, 2023, p. 794; Turek, 2015, p. 38), or a serving as a stand in when a male offspring was not available (Rebay-Salisbury *et al.*, 2022, p. 9). These preconceived notions are not necessarily related to dualisms, but definitely connected to them, and the dualisms also have a consistent presence in this dataset. Therefore, it is vital to consider alternatives when interpreting the data in regard to sex/gender. Naturally, considering multiple interpretations is not a novel idea. However, this thesis specifically urges researchers to consider narratives that are considered to be queer by modern standard and do not fall into the cisalloheteronormative standard that has been imposed on our society. Frieman *et al.* (2019, pp. 156-161) offer some counter narratives that can be compared to the archaeological record that challenge the patterns in current interpretations, such as the notion that women could have been active agents in female exogamy, the possible presence of homosexuality in female exogamy, as well as challenging the assumption that those perceived as men drove innovation, and the manner in which the role of the mother is often overlooked in the diffusion of ideas.

The role of the mother in archaeology can be a contradiction. On the one hand, the absent/female often renders the role of women, thus mothers, as overlooked, however, fatherhood is also overlooked (Haughton, 2021, p. 364). When reading the publications in the dataset, a pattern was observed wherein those perceived as women are more frequently associated with domestic labor or craft work (*exampl*. Copat *et al.*, 2017, p. 120; Díaz-Navarro, 2023, p. 9; Fitzpatrick, 2022, p. 68; Garrido-Pena *et al.*, 2015, p. 45; Kristiansen, 2022, p. 40), or children are related to those perceived as women (*exampl*. Almela *et al.*, 2015, p. 247; Fitzpatrick, 2022, p. 70; Spatzier *et al.*, 2017, p. 61; Stockhammer, 2023; Zedda *et al.*, 2023, p. 7). The association between the female and domestic work and child rearing is one present in our society, representing the angel in the house, a Victorian ideal of a woman, which is famously critiqued by Virginia Woolf in 1942 (2001). It cannot be assumed that this distribution of labor is universal and to assert that women in a society perform the domestic labor and craft production can become related to the passive/female or absent/female dualisms. This is exemplified in Kristiansen (2022, p. 40) where it is stated that female ornamentation and pottery functioned to identify local groups and mark chiefly territories, functioning like later coinage, making the control over marriage strategies important. Thus, implicitly, this labor that is considered that of women is put in service of men and objectifying them into

being status objects. An example about how the association between child care and those perceived to be women can become problematic is Stockhammer (2023). In this publication, a speculative thought experiment is proposed to rethink mobility, motherhood and children. The conclusion of this article is a model where raising young boys was highly important and women served to produce more offspring or to wet nurse the offspring to shorten the infertile period between pregnancies and ensure that children whose mothers died would be fed. This narrative is highly objectifying to women, reducing their purpose to reproducing with and raising men, being passed around as livestock to feed them, perhaps being forced to abort or never allowed to be pregnant at all (Stockhammer, 2023, pp. 305-306). It is a narrative barely grounded in data, which has allowed preconceived notions about what it means to hold a certain sex/gender identity to become present, as well as the conflation between reproductive organs – thus sex – and gender. While it is necessary to also explore the roles of those not perceived as adult men, not being critical of how those other identities are explored creates space for highly biased narratives with little data backing them to form. Therefore, one must be vigilant of the biases and dualisms on which the modern gender system is built when writing or reading publications on sex/gender. Researchers must put in the effort to learn what biases can be present and question why certain assumptions or interpretations or points of research seem the most reasonable to pursue. It is not inherently incorrect to find sex/gender patterns that fit with biases, as long as such finds are grounded in data other than assumption.

Currently, there are also associations that bleed into the archaeological interpretation of sex/gender in the same manner that biases do. For example, the notion that teeth from bear or wild boar cannot found in graves of those perceived to be of a woman, since these are a symbol of strength and hunting, thus associated with men, despite them not being found at all in the studied graves regardless if the grave was perceived to be of a woman or a man (Kyselý *et al.*, 2019, p. 112), or that the triangle is a symbol of femininity, (Kyselý *et al.*, 2020, p. 72). Of these two examples, only the latter has a citation to justify the interpretation. This citation is to the ethnographic record. While it is a step up from not giving a citation at all, this use of the ethnographic record is problematic, which will be expanded upon below.

The problem of citing certain records

This thesis has argued for interpretations of sex/gender that are grounded in data, which the ethnographic record could provide. However, the use of the ethnographic record has been in part discouraged above. Using the ethnographic record in archaeology is not novel and can be of use to aid in making sense of the past, however, it is an indirect source of information (Bahn & Renfrew, 2016, p. 191). In regards to archaeological sex/gender research, ethnography has been used in various ways, both directly related to the topic or in proxy to it. In the studied dataset, it has been referenced in regard to residential patterns (Cintas-Peña & García Sanjuán, 2022, pp. 5-6), craftwork (Diaz-Navarro et al., 2023, p. 8; Garrido-Pena & Herrero-Corral, 2015, pp. 41-42), breastfeeding patterns (Fernández-Crespo et al., 2018, pp. 547-548), and violence (Ryan-Despraz, 2022, pp. 40-14; Schroeder et al., 2019, pp 10708-10709). Some question marks are put behind the manner in which the ethnographic record is cited in these articles, due to the colonial history of the ethnographic record. The modern gender system was exported oftentimes violently with Western colonial expansion, as discussed in chapter 2. There barely is a precolonial ethnographic record and by uncritically engaging with it, one perpetuates the idea that this colonial/modern gender system is natural and inherent to every society and has remained static throughout history, enabling it to be transplanted onto the past. In reality, sex/gender is heavily bound up in cultural iconography, thus is part of a specific historic context. Much of this context has been lost, thus certain sex/gender iconography is impossible to recover from the archaeological record. Therefore, one must remain critical when using the ethnographic record and reading papers that use it. For example, with

the lack of archaeological record of infants, either due to bad preservation or burial preference (Almela *et al.*, 2015, p.245), can one state that there might be a higher value placed on males in warlike societies (Fernández-Crespo *et al.*, 2018, pp. 547-548)? Or is this a preference born out of colonial contact? Can one state that certain craftwork is women's work (Diaz-Navarro *et al.*, 2023, p. 8; Garrido-Pena & Herrero-Corral, 2015, pp. 41-42)? Or have societies shaped themselves to push women in such roles, because colonial contact would not engage with them? Can one state that certain residential patterns are tied to societal organization based on the mobility of individuals after marriage (Cintas-Peña & García Sanjuán, 2022, pp. 5-6)? Or are these observed patterns grounded in assumed heteronormative ideas of marriage or pre-colonial residential patterns now overlaid with colonial gender roles?

This is not to suggest that the ethnographic record is completely useless for sex/gender research. In chapter 2, this thesis itself cited the ethnographic record when referencing living societies and recorded past societies when discussing gender systems and manners of social organization other than the modern gender system. It can be useful place to start when considering pre-colonial societies that had different a sex/gender organization or when digging at sites that are a part of living cultures that have scholarly discourse surrounding non-Western sex/gender labels that fit into different thinking patterns about sex/gender than those often cited in academics. It can also be interesting to interrogate how the export of the modern gender system to other cultures is reflected in the archaeological record. When discussing the 3rd millennium BCE in Europe, one of the theories surrounding sex/gender is that it was spread with the migration from the east. Therefore having a record of what the exportation of sex/gender might have looked like can be interesting when interrogating contact between different sex/gender organizations, as well as how such contact can impact both cultures that are a part of said contact. The colonial violence associated with the spread of sex/gender specifically can be interested, since there is the theory of the traveling male warrior bands. Thus, the ethnographic record can be a useful tool in getting an idea of how certain societies function, however, these studied societies do not exist in a vacuum when it comes to sex/gender. Colonialism is a particular lens to examine sex/gender through and is a specific sort of contact, which might not be applicable to the archaeological period that is being researched.

Furthermore, it is not just the ethnographic record that has these problems. When citing other researchers one must be equally as critical of the biases and the ingrained colonial heritage of the modern gender system that is often present in the academic record, as shown in chapter 4. Past publications might provide useful and interesting data when making interpretations about sex/gender, however, the manner in which they present that data is not up to date with current discourse. The way in which those findings are cited matters in how future discourse is shaped. For example, Bourgeois and Kroon (2017) talk about the network of information exchange surrounding the placement of grave goods in the burials of rightflexed or left-flexed individuals, which they show are consistent over large distances for right-flexed burials. It is with the connection of right-flexed burials to male burials that the interpretation of a male focused society arise. While this thesis does not claim this interpretation is necessarily incorrect, it is rooted in a sexed assumption that is also connected to multiple sex/gender dualisms. However it is this sexed assumption that gets cited by other papers, instead of connecting findings about right-flexed and left-flexed burials to other frameworks of interpretation regarding sex/gender (exampl. Furholt, 2021, pp. 510-511; Ryan-Despraz, 2022, p. ix). In citing this paper in this manner, it is a specific assumption that gets cemented in the discourse, until it is generally interpreted as accepted truth. Although, this paper also gets nuanced citations, these are not necessarily linked to sex/gender interpretations (exampl. Furholt, 2021, p. 510; Haughton, 2021, p. 374). However, it does not have to be the ideology embedded in the paper itself. It can be its methodology, as noted in Cintas-Peña and Herraro-Corral (2019, pp. 263-264), who point out methodological biases that can sway sex ratios, thus impacting conclusions. Or methodologies that limit what can be observed, leading to the exclusion of intersex individuals (Freiman

et al., 2019, p. 151). It can also be the use of legacy data as pointed out in Haughton (2021, p. 366), which has a ripple effect of carrying forth biases that were held when collecting into current research.

However, it is not only the collection and presentation of data by archaeologists. When it comes to interpreting sex/gender the nature of the archaeological record is inherently problematic for attempting to interpret past sex/gender systems. Sex/gender is highly cultural with specific symbolism that can be material and immaterial. As Butler (1988) theorizes, sex/gender is embodied in the way in which individuals move. Much like in rituals, only a part of the material and immaterial culture of a bigger cosmology remains in regard to sex/gender, making it impossible to fully grasp in its entire complexity. Harris and Robb (2024, p. 2) argue that their criticized take on the nature of gender (Robb & Harris, 2018; crit. Gaydarska et al., 2023) is blamed on defective archaeological evidence that stops researchers from confronting a non-traditional interpretation of sex/gender. Naturally, this is not what is suggested here when pointing out the limitations of the archaeological record. The problem with the record is that so much has been lost, which is previously discussed in this thesis in regard to the weight assigned to the use of osteological remains and grave good when assessing GTAI. Harris and Robb (2024, pp. 15-22) propose different models for how gender could have evolved and provide a narrative for what that might have looked like in prehistoric Europe. However, while the models provide interesting starting points for further investigation, nothing can be concretely proven and no practical ways to further investigate this are provided. Multiple theories about sex/gender can be given a narrative that fits within the archaeological record, since there is not enough left to fully exclude any of them. While archaeology as a whole should strive to gather as much insight into the past and work on methodologies that enable researchers to better understand the past and this paper should not be discounted in that, there will always be aspects of sex/gender that will remain unknown. Pointing out that the proposed theory is not solid due to lack of evidence, is not blaming defective archaeological evidence, instead it is facing the reality of doing archaeological research. There should be an acceptance that sex/gender is a historically placed, culture-bound expression that is non-universal and partly constructed of archaeologically invisible practices. Grand narratives focused on finding the origin or starting point of sex/gender will always have to grapple with the limits of the archaeological record. It is true that grand narratives can be useful, however, there should also be a focus on smaller scale sex/gendered aspects or potential sex/gender patterns, instead of fully fledged narratives that wholly encompass past gender systems. This is exemplified in Haughton (2023), who considers if the evidence is defective, since Scotland and Ireland do not fit into the grand narrative proposed for the 3rd millennium BCE in Europe, then questions if the grand narrative is useful when it cannot include areas as large as Scotland and Ireland. This is not to state that smaller scale archaeological sex/gender research will not run into the same limitations as research into grand narratives. However, the development of sex/gender does not have to be uniform over a vast area. There does not need to be a singular prehistoric European sex/gender system. By introducing insecurity into archaeological sex/gender research that is inherent to the nature of the archaeological record, there can be space for varied and co-existing interpretations. This can lead to more nuanced discussions about the topic, instead of trying to fit a continent into a grand narrative that is built on incomplete data, thus created with filled in blanks.

The work for archaeologists

In chapter 4, it has been observed that there are the differences between SGMF and SGP, which are primarily part of the groupings related to knowledge of gender theory and related to methodological or theoretical problems. Therefore, there are different areas that need the most work for different types of archaeological sex/gender research. Both groupings more present in SGMF, which is beneficial in regard

to knowledge of gender theory, but not in regard to methodological or theoretical problems. The methodological or theoretical problems that have been observed here are taking an 'add women and stir' approach, trouble distinguishing between social and analytical constructs, and limited to the theoretical. This latter issue can make it more difficult for those outside of gender archaeology to incorporate certain discourse into their own research. In this chapter, a few practical suggestions have been made to provide a starting point to hopefully bridge that gap somewhat. The criterion 'add women and stir' approach addresses if a publication does not look at what an interpretation around sex/gender means for sex/gender. The criterion trouble distinguishing between social and analytical constructs assesses if there is an interrogation into what kind of sex/gender there is when a publication has claimed that to be its goal, instead of only asking if there is sex/gender. For both a suggestion would be for researchers to be conscious of what it is they are researching and follow through on their research aims. An aid in achieving this can also be the previously suggested care around the language that is used and clarifying the definitions of terms.

SGP has a lack of integration with gender theory compared to SGMF. This should not be taken to mean that gender archaeologists are inherently more up to date with gender theory and do not have to work to further integrate gender theory. The fluctuating quality of SGMF indicated by GTAI, shows that there are still advancements to be made in sex/gender research that is a part of the SGMF category. However, it has been observed that the positive changes in SGMF have not carried over to SGP. This might be contributed to non-sex/gender marginalized researchers not having an interest in the topic, or a percieved irrelevancy of gender archaeology for their research. Yet, even when sex/gender does not appear to be an important part of the research project, it is still important to be aware of the discourse surrounding sex/gender. While gender archaeology might not seem relevant to many archaeologists, this thesis has shown there are many archaeological research topics in which sex/gender gets taken into account as aspect, such as residential organization (exampl. Cintas-Peña & García Sanjuán, 2022; Sjörgen et al., 2020; Villalba et al., 2020), diet (exampl. González-Rabanal et al., 2020; Knipper et al., 2020; Lei et al., 2023), information networks (exampl. Bourgeois & Kroon, 2017), and childcare (exampl. Haughton, 2021; Zedda et al., 2023). If sex/gender is a part of society, then it can become a part of what is being researched, and if it is not a part of society, then that is a position that is part of gender theory discourse. This is not to say that every researcher needs to make sex/gender a part of their research. Instead this is to point out that there is a relevancy for archaeologists to be somewhat aware of the current discourse in gender theory.

However, merely discussing what has lead to subpar quality of archaeological sex/gender research observed in chapter 4 and offering suggestions on what can be done, will not change the discourse. As shown in fig. 4.7, there has been virtually no change in how archaeological sex/gender research is done over the past 10 years. If there is to be a change, archaeologists that want to include sex/gender as a part of their interpretative framework either as the focus or on the periphery, must do the work towards unlearning sex/gender biases to further decolonize the discipline. There must be a consciousness in the discipline about the problematic narratives surrounding sex/gender due to its origins and development through time, both socially and scientifically. Currently, there still is not an interest for specialized archaeological sex/gender research outside researchers that are marginalized on the basis of sex/gender themselves (Gaydarska et al., 2023, p. 278). This must change if there is to be a serious shift in the archaeological discourse surrounding sex/gender. It is not unreasonable to request archaeologists make themselves aware of the discourse in gender theory when researching sex/gender, though it is unreasonable to request every archaeologists specializes themselves into the topic. To mitigate this knowledge gap that is inherent to working outside one's specialization, is the interdisciplinary nature of archaeology that overlaps with multiple other disciplines including gender theory. Therefore, it is suggested to bring in sex/gender specialists when working on large scale projects in which sex/gender

will be a prominent aspect of research, much like Fausto-Sterling (2020, pp. 266-267) suggests for biology. However, this does not negate the responsibility of archaeologists to work on unlearning their own sex/gender biases that might be present in their research, even when sex/gender is not the main focus of their research project. To truly change current archaeological discourse surrounding sex/gender in the entire field, work must be done by all archaeologists.

Conclusion: A Step Forward for Sex/gender Research

To conclude, the aim of this thesis was to assess how archaeological research into sex/gender in 3rd millennium BCE Europe of the past 10 years reflect current gender theory, as well as provide handholds to bridge gaps between the theory and its practical application. This has been done though reviewing gender theory, providing background on the current discourse of sex/gender in 3rd millennium BCE Europe, a meta-study of 98 publications on the basis of 24 criteria, a discussion on what the result of the assessment means for archaeological sex/gender research, as well as providing suggestions for future archaeological sex/gender research.

Research into this topic is important, since gender inequality is a Sustainable Development Goal according to the UN. Sex/gender research can be used politically and with discussions surrounding transgender issues on the rise in Western politics, it is important to be conscious of what narratives are perpetuated in the discourse. By uncritically playing into certain problematic narratives, such as the idea that sex/gender was not as complicated in the past, archaeological sex/gender research can be used by those attacking human rights today, despite these finds not being grounded in actual evidence. However, changing current discourse can be difficult, due to the fact that there is a gap between theoretical approaches to sex/gender and practical application of that theory for archaeologists. Therefore, it becomes instrumental to be aware of which parts of gender theory are not used and the potential problems that can cause for the results of research and the discourse as a whole. Furthermore, suggestions on how researchers can approach sex/gender in future research to ensure that finds are not based on problematic ideology that have no basis in academic discourse, are thus also relevant.

The origins of the modern gender system can be found in 17th century Enlightenment and colonial thinking. It arose in the historical context that was the switch from a feudal system to a state, civil political system, which Foucault (1976) writes about. The eugenics of racial purity and the institutionalization of what was thought to be outside the norm on basis of sexuality, class, race and disabilities were baked into this modern gender system. This has lead to sex/gender becoming a part of a web of power structures that interacts with multiple identities. However, sex/gender is not an inherent part of an individual's identity, instead it is a taught performance that is placed in a particular historical period. Due to its origins in Enlightenment thinking, sex/gender has also become a part of scientific discourse. Many biases exist in the scientific community that continue to be reinforced. A cycle exists between society and science that has naturalized the modern gender system, creating a discourse of binary thinking and biological determinism. The social construction of the biological sex is taken to be an objective truth, which can be equated with gender the cultural opposite of the dualism. Fausto-Serling (2020) argues for the breakdown of the dualisms that are a part of our society, such as the science/culture dualism, as well as the objective/subjective dualism. In that, she presents the use of the term sex/gender, which combines the lived experience of the body with the cultural idea of what a body is that shapes it, a term which is used throughout this thesis. Since these dualisms work to naturalize gender as an inherent part of a person, sex/gender can become an ahistoric category with biological determinism dictating sex/gender. Historical and anthropological researchers have thus been urged to be aware of the analytical vocabulary that is used. In archaeology, research into sex/gender has often hinges on the osteological remains and grave goods of past individuals. This can lead to sex/gender interpretation hinging on 19th century archaeology, in which the modern gender system is ingrained, exemplified in the Birka Bj. 581 grave. Furthermore, gender archaeology often does not reach outside those already interested in the topic, allowing certain ideas to continue to circulate in academic discourse. A valid argument can be made that sex/gender is not always applicable in research, however due to the ingrained nature of sex/gender it is still important that in continuing archaeological discourse researchers are somewhat familiar with theoretical concepts from the field of gender theory. The circulation of certain ideas surrounding sex/gender in archaeology that would no longer hold up in gender theory can be observed as well in a few publications about the 3rd millennium BCE Europe, which is the case study for this thesis.

The 3rd millennium BCE Europe is a period in which culture shifts. Three prominent Single Grave Burial cultures (Yamnaya, CWC and BB) start to replace collective burials and metallurgy starts to be introduced alongside a pastoral subsistence economy. The individual burials are thought to be sex/gendered in a binary manner. While a difference in orientation and type of goods exists between CWC and BB, each buries their dead with two distinct positions of the body and grave goods assemblages. These burials are associated with the concept of 'man' and the concept of 'woman' based on the biological sex of the osteological remains and the type of grave goods. It is thought that 'the man' is a warrior; associated with a battle axe for CWC and archery equipment for the BB. The items associated with 'the woman' is often less defined, however, in CWC they are associated with adornments and in the BB burials they are associated with copper awls, V-shaped buttons and various ceramics. This is a change from the communal burials from the earlier Neolithic. With the coming of aDNA it has become generally accepted that these cultures spread through migration, which is thought to have been a male dominant migration, since aDNA allows for clearer sex determination. However, this aDNA narrative has been critiqued on the basis that it equates DNA with culture, and the same can be said for the equation between sex and gender. Counter-narratives are suggested and there has been more space for individuals outside the assumed male/female binary. Yet, the general discourse of the period is that society was strictly sex/gendered in a binary manner, wherein a male warrior elite organizes society in a patrilocal, patrilineal and patriarchal manner and practices female exogamy.

A meta-study is performed on 98 publications, which span from 2015 until 2024. 2015 has been chosen as a starting point, due to the publication of both Haak *et al.* (2015) and Allentoft *et al.* (2015). This marked the start of the aDNA revolution for the discourse of the 3rd millennium BCE in Europe, which changed how sex/gender could be studied due to the aforementioned clearer sex determination. The publications themselves were split into two categories (SGMF and SGP) and assessed on the basis whether 24 criteria were present (Yes) or absent (No). All criteria were part of five groupings, which were 1) related to knowledge of gender theory, 2) related to equating sex with gender, 3) related to preconceived notions about sex/gender categories, 4) related to methodological or theoretical problems, and 5) related to research parameters.

The assessment of the publications show that there is a difference between publications that are a part of SGMF and SGP, mainly in the groupings related to knowledge of gender theory and related to methodological and theoretical problems. In both cases, SGMF has a higher presence than SGP. It can thus be stated that by focusing on sex/gender publications are rooted more in relevant gender theory discourse, however, it also means a publication is more susceptible to have theoretical and methodological issues regarding sex/gender. Overall, the two categories are similar in the distribution of presences and absences, thus outside those two groupings the focus of sex/gender has a lesser impact. Two criteria that stand out as having a high presence are 'Binary thinking' and 'Deterministic narrative,' which are both related to equating sex with gender. Previously it has been determined that this is a part of the cycle between science and society that naturalizes sex/gender as an inherent and ahistoric category. The publications studied in this thesis perpetuating the cycle between science and society can be further observed in the high absence of 'No sex/gender categories,' 'More than two sex/gender categories,' 'Defines sex/gender categories' and 'Sex/gender as historically placed'. The preconceived notions about sex/gender categories that are related to the deterministic narrative of the modern gender system are consistently present in between 34.7% and 46.9% of the publications. It is suggested that this might be the

result of the high presence of the use of osteological remains when determining sex/gender, which is the only determining factor in 40 out of 98 publications. Only using sex when doing sex/gender research feeds into the cycle between science and society by viewing sex as an objective fact of the body and thus naturalizing and ahistoricizing sex/gender.

While the criteria give an insight into what narratives are prominent and what manner of researching sex/gender is favored in the current discourse, it cannot give a clear measurable level of overall quality. In order to get an overview of the quality of archaeological sex/gender research GTAI has been created, which scores publications on a scale of 0 to 44 based on how much overlap there is between the publication and gender theory. This score is based on the yes/no distribution of the assessed criteria. The distribution of the GTAI shows that most publications have an GTAI between 6 and 29, wherein over 75% has an GTAI that is less than 22. Most of the outlier GTAI scores are higher than 29, however, there are also outliers lower than 6. Both high and low outliers are part of the SGMF category, which also has the biggest fluctuation in quality. SGP on the other hand is overall more consistent in its quality, however, the GTAI is lower as well. On average the dataset as a whole has an GTAI of 17.8, while SGMF has an average GTAI of 20.1 and SGP of 16.6. Temporally, when splitting the dataset into two blocks (2015-2019) and 2020-2024), it can be said that there is an increase in average GTAI, as well as an increase of the amount of publications about sex/gender. However, this increase can mostly be attributed to the SGMF category, which has an increase of +5.4, while SGP has an increase of +1.8. Therefore, this awareness of gender theory remains contained to those already interested in the topic, which often are those who are marginalized on the basis of sex/gender themselves (Gaydarska et al., 2023, p. 278). Furthermore, this increased awareness is not consistent throughout this category with a large standard deviation, thus fluctuation in quality. Over the entire dataset, it can be observed that the last ten years of archaeological sex/gender research has not experienced a change and has remained consistent in its incorporation of gender theory, as shown with the GTAI.

When discussing what the observations made in chapter 4 mean for the results of archaeological sex/gender research four topics come up to which most can be related to. These topics are the use of biological sex, the biases that are expected thus found, the manner in which certain records are cited, as well as the work that archaeologists have to do. Suggestions are made on how sex/gender research can incorporate gender theory to lessen the impact of the gaps observed in chapter 4.

The usage of biological sex can presents a particular constructed image of what the body will look like, yet it is continuously used without much critique. Research often starts by imposing a binary onto the past, making it more difficult to find anything other than a binary. Therefore, it is suggested to start with an intersectional approach that does not use biological sex when making groupings related to potential sex/gender categories. Biological sex can be used after, since gender can be impacted by the biological dimension of the body. However, use of sex is cautioned, since the phenotype of the body can still be different from the expectation set by the modern gender system and it can be that what we define as sex characteristics did not impact past sex/gender organization. A lack of match does not negate the intersectionally observed groupings. Furthermore, there is an associated language with biological sex that is also present. The usage of male and female is often thought of as neutral descriptors for an objective truth about the body that can be observed. However, the equation between sex and gender is implied when different behaviors are assigned to sex categories, connecting a cultural aspect to biology. Research is constrained by modern language, however, one should be critical about what analytical language is used when presenting and interpreting sex/gender research and clearly define what terminology is used.

In archaeological sex/gender research, it can be observed that there is a circular reasoning in which archaeologists expect to find a certain distribution of tasks and behaviors on the basis of sex/gender, thus

interpret the data to find it. The same sort of sex/gender data is interpreted differently depending on what sex/gender category is thought to be a part of the archaeological record that is being studied. It is suggested that by considering alternative narratives that do not fit the cisalloheteronormative standard, there can be a change in the current patterns of interpretation. Furthermore, researchers are urged to be vigilant of sex/gender biases and associations that are connected to the modern gender system that can slip into research without basis in data. This thesis does not argue against any interpretation of the past that fits in part or completely with how the modern gender system is structured. However, such interpretations must be grounded in data, not assumption, which currently does not appear to be the case.

However, grounding past sex/gender interpretations in data can become difficult. The different records that can be cited can become problematic due the nature of certain records, such as the ethnographic, academic and archaeological records that are discussed here. The ethnographic record is cited in multiple papers, however, it is a colonial record and cultural imagery cannot simply be transplanted onto the past. When citing other archaeological sex/gender research, one must also be critical of the biases and the ingrained colonial heritage of the modern gender system that is often present. When citing particular problematic bits of other papers, whether that be due to the use of biased methodologies, legacy data or deterministic interpretations, it is those problematic notions that get cemented in the discourse. However, it is not always a preventable fault of researchers, the archaeological record itself does not lend itself to sex/gender interpretations, due to the archaeologically invisible nature of aspects of sex/gender organization. This is not to say that investigating sex/gender is impossible and none of these records are useful for this endeavor. However, when constructing sex/gender narratives for the past, there are limits to what can be concluded and multiple theories can fit within the same data. By allowing insecurity into sex/gender interpretations in archaeology, there is room for co-existing interpretations and more nuanced discussions, instead of attempting to find one, uniform, continent-wide, grand narrative interpretation of sex/gender.

In the end, however, no overview about where archaeological sex/gender research struggles and no suggestions on how to improve moving forward, will matter unless archaeologists put in the work. To decolonize the discipline, there must be a willingness to take sex/gender seriously, as well as a willingness to put effort into changing current narratives, both for those specializing in gender archaeology and those who perceive sex/gender as irrelevant for their research. This thesis has aimed to be a step in that direction.

Bibliography

Allentoft, M. E., Sikora, M., Sjögren, K.-G., Rasmussen, S., Rasmussen, M., Stenderup, J., Damgaard, P. B., Schroeder, H., Ahlström, T., Vinner, L., Malaspinas, A.-S., Margaryan, A., Higham, T., Chivall, D., Lynnerup, N., Harvig, L., Baron, J., Della Casa, P., Dąbrowski, P., ... Willerslev, E. (2015). Population genomics of Bronze Age Eurasia. *Nature*, *522*(7555), 167–172. DOI: https://doi.org/10.1038/nature14507

Almela, R.A., Liesau, C., Ríos, P., Blasco, C., & Galindo, L. (2015). Infant Burials during the Copper and Bronze Ages in the Iberian Jarama River Valley: A Preliminary Study about Childhood in the Funerary Context during III–II Millennium BC. In M. S. Romero, E. A. García, & G. A. Jiménez (Eds.), *Children, Spaces and Identity* (Vol. 4), pp. 243-261. Oxbow Books.

American Oversight. (2023, June 1). Attacks on LGBTQ Rights. *American Oversight*. https://www.americanoversight.org/investigation/attacks-on-lgbtq-rights

Bahn, P., & Renfrew, C. (2016). Archaeology: Theories, Methods and Practice. Thames & Hudson.

Beasley, C. (2008). Rethinking Hegemonic Masculinity in a Globalizing. *Men and Masculinties*, *11*(1), 86-103. DOI: https://doi.org/10.1177/1097184X08315102

Bourgeois, Q., & Kroon, E. (2017). The impact of male burials on the construction of Corded Ware identity: Reconstructing networks of information in the 3rd millennium BC. *PloS One*, *12*(10), e0185971–e0185971. DOI: https://doi.org/10.1371/journal.pone.0185971

Brück, J. (2021). Ancient DNA, kinship and relational identities in Bronze Age Britain. *Antiquity*, 95(379), 228–237. DOI: https://doi.org/10.15184/aqy.2020.216

Burch, S. & Patterson., L. (2013). Not Just Any Body: Disability, Gender, and History. *Journal of Women's History*, 25(4), 122-137. DOI: https://doi.org/10.1353/jowh.2013.0060

Butler, J. (1988). Performative Acts and Gender Constitution: An Essay in Phenomenology and Feminist Theory. *Theatre Journal*, *40*(4), 519-531. DOI: https://www.jstor.org/stable/3207893

Clément, N. (2020). The prestige of warriors: Bell Beaker archers' equipment in Central Europe. *Préhistoires Méditerranéennes*, *8*, 1-63. DOI: https://doi.org/10.4000/pm.2167

Cintas-Peña, M., & García Sanjuán, L. (2019). Gender Inequalities in Neolithic Iberia: A Multi-Proxy Approach. *European Journal of Archaeology*, *22*(4), 499–522. DOI: https://doi.org/10.1017/eaa.2019.3

Cintas-Peña, M., Luciañez-Triviño, M., Montero Artús, R., Bileck, A., Bortel, P., Kanz, F., Rebay-Salisbury, K., & García Sanjuán, L. (2023b). Amelogenin peptide analyses reveal female leadership in Copper Age Iberia (c. 2900-2650 BC). *Scientific Reports*, *13*(1), 9594–9594. https://doi.org/10.1038/s41598-023-36368-x

Copat, V., Costa, A., & Piccione, P. (2017). Castelluccio painted pottery: shared repertoires and local identity: A case study from Early Bronze Age Sicily. In S. Bergerbrant & A. Wessman (Eds.), *New Perspectives on the Bronze Age: Proceedings of the 13th Nordic Bronze Age Symposium Held in Gothenburg 9th to 13th June 2015.* (pp. 109-126). Archaeopress Publishing. DOI: https://doi.org/10.2307/j.ctv1pzk2c1.13

Crenshaw, K.W. (2006). Mapping the margins: Intersectionality, Identity Politics and Violence Against Women of Color. *Stanford Law Review*, 43(6), 1241–1299. DOI: https://doi.org/10.2307/1229039

Davis, A.Y. (1981). Women, Race & Class. Penguin Books.

Díaz-Navarro, S., García-González, R., Cirotto, N., & Haber Uriarte, M. (2023). New insight into prehistoric craft specialisation. Tooth-tool use in the Chalcolithic burial site of Camino del Molino,

Murcia, SE Spain. *Journal of Archaeological Science: Reports*, 50, 104066-. DOI: https://doi.org/10.1016/j.jasrep.2023.104066

de Beauvoir, S. (1949). The Second Sex. Vintage Books.

Driskill, Q. (2004). Stolen From Our Bodies: First Nations Two-Spirits/Queers and the Journey to a Sovereign Erotic. *Studies in American Indian Literatures*, *16*(2), 50-64. DOI: https://doi.org/10.1353/ail.2004.0020

Eisenmann, S., Bánffy, E., van Dommelen, P., Hofmann, K. P., Maran, J., Lazaridis, I., Mittnik, A., McCormick, M., Krause, J., Reich, D., & Stockhammer, P. W. (2018). Reconciling material cultures in archaeology with genetic data: The nomenclature of clusters emerging from archaeogenomic analysis. *Scientific Reports*, *8*(1), 13003–13012. DOI: https://doi.org/10.1038/s41598-018-31123-z

Fausto-Sterling, A. (2020). *Sexing the Body: Gender Politics and the Construction of Sexuality* [Updated Edition]. Basic Books.

Fernández-Crespo, T., Czermak, A., Lee-Thorp, J. A., & Schulting, R. J. (2018). Infant and childhood diet at the passage tomb of Alto de la Huesera (north-central Iberia) from bone collagen and sequential dentine isotope composition. *International Journal of Osteoarchaeology*, *28*(5), 542–551. https://doi.org/10.1002/oa.2659

Fitzpatrick, A. P. (2022). Bell Beaker Mobility, Marriage, Migration and Mortality. In M. Fernández-Götz, C. Nimura, P. Stockhammer, & R. Cartwright (Eds.), *Rethinking migrations in late prehistoric Eurasia*, pp. 63-88. Oxford University Press. DOI: https://doi.org/10.5871/bacad/9780197267356.003.0004

Frieman, C. J., Teather, A., & Morgan, C. (2019). Bodies in Motion: Narratives and Counter Narratives of Gendered Mobility in European Later Prehistory. *Norwegian Archaeological Review*, *52*(2), 148–169. DOI: https://doi.org/10.1080/00293652.2019.1697355

Frînculeasa, A., Garvăn, D., Mărgărit, M., Bălăşescu, A., Lazăr, I., Frînculeasa M. N., Soficaru, D.A., Molnár, M., & Georgescu, M. (2020). Between worlds and elites at the beginning of the Early Bronze Age in the Lower Danube Basin: a pluridisciplinary approach to personal ornaments. *Archaeological and Anthropological Sciences*, *12*(9), 213. DOI: https://doi-org/10.1007/s12520-020-01177-0

Fine, M., Weis, L., Addleston, J., & Marusza, J. (2007). (In) Secure Times: Constructing White Working-Class Masculinities in the Late Twentieth Century. In B. A. Arrighi (Eds.), *Understanding Inequality: The Intersection of Race/Ethnicity, Class, and Gender* [second edition] (pp. 93-100). Rowman & Littlefield Publishers Inc.

Foucault, M. (1976). *The History of Sexuality Volume 1: The Will to Knowledge* [translation by R. Hurley]. Penguin Books.

Furholt, M. (2018). Massive Migrations? The Impact of Recent aDNA Studies on our View of Third Millennium Europe. *European Journal of Archaeology*, *21*(2), 159–191. DOI: https://doi.org/10.1017/eaa.2017.43

Furholt, M. (2019). Re-integrating Archaeology: A Contribution to aDNA Studies and the Migration Discourse on the 3rd Millennium BC in Europe. *Proceedings of the Prehistoric Society*, *85*, 115–129. DOI: https://doi.org/10.1017/ppr.2019.4

Furholt, M. (2020). Social Worlds and Communities of Practice: a polythetic culture model for 3rd millennium BC Europe in the light of current migration debates. *Préhistoires méditerranéennes*, *8*, 1-24. DOI: https://doi.org/10.4000/pm.2383

Furholt, M. (2021). Mobility and Social Change: Understanding the European Neolithic Period after the Archaeogenetic Revolution. *Journal of Archaeological Research*, 29(4), 481–535. DOI: https://doi.org/10.1007/s10814-020-09153-x

Garland-Thomson, R. (2017). Integrating Disability, Transforming Feminist Theory. In L.J. Davis (Eds.), *The Disability Studies Reader* [fifth edition], pp. 360-380. Routledge.

Garrido-Pena, R., & Herrero-Corral, A. M. (2015). Children as Potters: Apprenticeship Patterns from Bell Beaker Potteryof Copper Age Inner Iberia (Spain) (c. 2500–2000 cal BC). In M. S. Romero, E. A. García, & G. A. Jiménez (Eds.), *Children, Spaces and Identity* (Vol. 4), pp. 40-58. Oxbow Books.

Gaydarska, B., Rebay-Salisbury, K., Ramírez Valiente, P., Fries, J. E., Hofmann, D., Augereau, A., Chapman, J., Mina, M., Pape, E., Ialongo, N., Nordholz, D., Bickle, P., Haughton, M., Robb., J., and Harris, O. (2023). To Gender or not To Gender? Exploring Gender Variations through Time and Space. *European Journal of Archaeology*, *26*, 271-298. DOI: https://doi.org/10.1017/eaa.2022.51

Goldberg, A., Günther, T., Rosenberg, N. A., & Jakobsson, M. (2017). Ancient X chromosomes reveal contrasting sex bias in Neolithic and Bronze Age Eurasian migrations. *PNAS*, *114*(10), 2657 – 2662. DOI: https://doi.org/10.1073/pnas.1616392114

González-Rabanal, B., Marín-Arroyo, A. B., Jones, J. R., Agudo Pérez, L., Vega-Maeso, C., & González-Morales, M. R. (2020). Diet, mobility and death of Late Neolithic and Chalcolithic groups of the Cantabrian Region (northern Spain). A multidisciplinary approach towards studying the Los Avellanos I and II burial caves. *Journal of Archaeological Science: Reports*, *34*, 102644-. DOI: https://doi.org/10.1016/j.jasrep.2020.102644

Haak, W., Lazaridis, I., Patterson, N., Rohland, N., Mallick, S., Llamas, B., Brandt, G., Nordenfelt, S., Harney, E., Stewardson, K., Fu, Q., Mittnik, A., Bánffy, E., Economou, C., Francken, M., Friederich, S., Pena, R. G., Hallgren, F., Khartanovich, V., ... Reich, D. (2015). Massive migration from the steppe was a source for Indo-European languages in Europe. *Nature*, *522*(7555), 207–211. DOI: https://doi.org/10.1038/nature14317

Haak, W., Furholt, M., Sikora, M., Rohrlach, A. B., Papac, L., Sjögren, K. G., Heyd, V., Mortensen, M. F., Nielsen, A. B., Müller, J., Feeser, I., Kroonen, G., & Kristiansen, K. (2023). The Corded Ware Complex in Europe in Light of Current Archaeogenetic and Environmental Evidence. In K. Kristiansen, G. Kroonen, & E. Willerslev (Eds.), *The Indo-European Puzzle Revisited: Integrating Archaeology, Genetics*, *and Linguistics* (pp. 63-80). Cambridge University Press. DOI: https://doi.org/10.1017/9781009261753

Halberstam, J. (1997). Mackdaddy, Superfly, Rapper: Gender, Race, and Masculinity in the Drag King Scene: Queer transexions of race, nation, and gender. *Social Text*, *52*–*53*, 104–131. DOI: https://www.jstor.org/stable/466736

Halperin, D. M. (1989). Is There a History of Sexuality? *History and Theory :Studies in the Philosophy of History*, *28*(3), 257–274. DOI: https://doi.org/10.2307/2505179

Harris, O.J.T., & Robb, J. (2024). Before, during and after gender: notes on a non-essentialist history of difference. *Current Anthropology*, [in press for 2024], 1-30.

Haughton, M. (2021). Seeing Children in Prehistory: A View from Bronze Age Ireland. *Cambridge Archaeological Journal*, *31*(3), 363–378. DOI: https://doi.org/10.1017/S0959774321000032

Haughton, M. (2023). Gender in Earlier Bronze Age Ireland and Scotland. *European Journal of Archaeology*, *26*(1), 19–38. DOI: https://doi.org/10.1017/eaa.2022.29

Hedenstierna-Jonson, C., Kjellström, A., Zachrisson, T., Krzewińska, M., Sobrado, V., Price, N., Günther, T., Jakobsson, M., Götherström, A., & Storå, J. (2017). A female Viking warrior confirmed by genomics. *American Journal of Physical Anthropology*, *164*(4), 853–860. DOI: https://doi.org/10.1002/ajpa.23308

Hines, S. (2020). Sex wars and (trans) gender panics: Identity and body politics in contemporary UK feminism. *The Sociological Review Monographs*, *68*(4), 699-717. DOI: https://doi.org/10.1177/0038026120934684

Juras, A., Chyleński, M., Ehler, E., Malmström, H., Żurkiewicz, D., Włodarczak, P., Wilk, S., Peška, J., Fojtík, P., Králík, M., Libera, J., Bagińska, J., Tunia, K., Klochko, V. I., Dabert, M., Jakobsson, M., & Kośko, A. (2018). Mitochondrial genomes reveal an east to west cline of steppe ancestry in Corded Ware populations. *Scientific Reports*, *8*(1), 11603–11610. DOI: https://doi.org/10.1038/s41598-018-29914-5

Keller, E. F. (1982). Feminism and Science. *Spring*, *7*(3), 589-602. DOI: https://www.jstor.org/stable/3173856

Keller, E. F. (1987). The Gender/Science System: Or, Is Sex to Gender as Nature Is to Science? *Hypatia*, *2*(3), 37-49. DOI: https://www.jstor.org/stable/3810121

Keller, E. F. (1995). Gender and Science: Origin, History, and Politics. *Osiris*, *10*, 26-28. DOI: https://www.jstor.org/stable/301911

King James Bible. (2017). King James Bible Online. https://www.kingjamesbibleonline.org/ (Original work published 1769).

Knipper, C., Reinhold, S., Gresky, J., Berezina, N., Gerling, C., Pichler, S. L., Buzhilova, A. P., Kantorovich, A. R., Maslov, V. E., Petrenko, V. G., Lyakhov, S. V., Kalmykov, A. A., Belinskiy, A. B., Hansen, S., & Alt, K. W. (2020). Diet and subsistence in Bronze Age pastoral communities from the southern Russian steppes and the North Caucasus. *PloS One*, *15*(10), e0239861–e0239861. DOI: https://doi.org/10.1371/journal.pone.0239861

Kristiansen, K. (2015). The Decline of the Neolithic and the Rise of Bronze Age Society. In C. Fowler, J, Harding, & D. Hofmann (Eds.), *The Oxford Handbook of Neolithic Europe*, pp. 1093-1118. DOI: https://doi.org/10.1093/oxfordhb/9780199545841.013.057

Kristiansen, K., Allentoft, M. E., Frei, K. M., Iversen, R., Johannsen, N. N., Kroonen, G., ... Willerslev, E. (2017). Re-theorising mobility and the formation of culture and language among the Corded Ware Culture in Europe. *Antiquity*, *91*(356), 334–347. DOI: https://doi.org/10.15184/aqy.2017.17

Kristiansen, K. (2022). *Archaeology and the Genetic Revolution in European Prehistory*. Cambridge University Press.

Kyselý, R., Dobeš, M., & Svoboda, K. (2019). Drilled teeth and shell artefacts from a graveat Prague-Březiněves and a review of decorative artefacts made from animal material from Corded Ware culture in the Czech Republic. *Archaeological and Anthropological Sciences*, *11*(1), 87–131. https://doi.org/10.1007/s12520-017-0514-5

Kyselý, R., Limburský, P., Šumberová, R., Langová, M., & Ernée, M. (2020). Scapulae and phalanges as grave goods: a mystery from the Early Bronze Age. *Archaeological and Anthropological Sciences*, *12*(3), 72. DOI: https://doi-org/10.1007/s12520-019-01004-1

Lai, L., Pittoni, E., Goddard, E., Hollander, D., Medda, L., Tanda, G., & Rosaria Manunza, M. (2023). An isotopic investigation on diet and inequality: The human remains from Gannì (Sardinia, 3rd

- millennium BC). *Journal of Archaeological Science: Reports*, 51, 104143-. DOI: https://doi.org/10.1016/j.jasrep.2023.104143
- Lazaridis, I., & Reich, D. (2017). Failure to replicate a genetic signal for sex bias in the steppe migration into central Europe. *Proceedings of the National Academy of Sciences PNAS*, *114*(20), E3873–E3874. DOI: https://doi.org/10.1073/pnas.1704308114
- Lugones, M. (2007). Heterosexualism and the Colonial / Modern Gender System. *Hypatia*, *22*(1), 186-209. DOI: https://muse.jhu.edu/article/206329
- McClintock, A. (1995). The Lay of the Land: Genealogies of Imperialism. In A. McClintock (Eds), *Imperial leather: race, gender and sexuality in the colonial contest*, pp. 21-74. Routledge.
- Merriam-Webster Dictionary. (n.d.) Ideal. In *Merriam-Webster Dictionary*. Retrieved 30 September 2024, from: https://www.merriam-webster.com/dictionary/ideal
- Nordqvist, K., & Heyd, V. (2020). The Forgotten Child of the Wider Corded Ware Family: Russian Fatyanovo Culture in Context. *Proceedings of the Prehistoric Society*, *86*, 65–93. DOI: https://doi.org/10.1017/ppr.2020.9
- Olalde, I., Brace, S., Allentoft, M. E., Armit, I., Kristiansen, K., Booth, T., Rohland, N., Mallick, S., Szécsényi-Nagy, A., Altena, E., Lipson, M., Harper, T. K., Patterson, N., Broomandkhoshbacht, N., Fernandes, D., Ferry, M., de Knijff, P., Michel, M., Miguel, J. V., ... Reich, D. (2018). The Beaker phenomenon and the genomic transformation of northwest Europe. *Nature (London)*, *555*(7695), 190–196. DOI: https://doi.org/10.1038/nature25738
- Olerud, L. (2021). Reassessing the Gender Ideology of the Supra-Regional Corded Ware Culture. *Kleos Amsterdam Bulletin of Ancient Studies and Archaeology*, *4*, 10-42.
- Olsen, B. A. (2023). Marriage Strategies and Fosterage among the Indo-Europeans: A Linguistic Perspective. In K. Kristiansen, G. Kroonen, & E. Willerslev (Eds.), *The Indo-European Puzzle Revisited: Integrating Archaeology, Genetics, and Linguistics* (pp. 296–302). DOI: https://doi.org/10.1017/9781009261753.027
- Pape, E., & Ialongo, N. (2024). Error or Minority? The Identification of Non-binary Gender in Prehistoric Burials in Central Europe. *Cambridge Archaeological Journal*, *34*(1), 43–63. DOI: https://doi.org/10.1017/S0959774323000082
- Peška, J., & Štelcl, J. (2023). Results of micrometallographic analysis of metalworking tools in graves of metallurgists in Moravia/Czech Republic. *Archaeometry*, *65*(4), 771–797. DOI: https://doi.org/10.1111/arcm.12843
- Price, N., Hedenstierna-Jonson, C., Zachrisson, T., Kjellström, A., Storå, J., Krzewińska, M., Günther, T., Sobrado, V., Jakobsson, M., & Götherström, A. (2019). Viking warrior women? Reassessing Birka chamber grave Bj.581. *Antiquity*, *93*(367), 181–198. DOI: https://doi.org/10.15184/aqy.2018.258
- Rebay-Salisbury, K., Bortel, P., Janker, L., Bas, M., Pany-Kucera, D., Salisbury, R. B., Gerner, C., & Kanz, F. (2022). Gendered burial practices of early Bronze Age children align with peptide-based sex identification: A case study from Franzhausen I, Austria. *Journal of Archaeological Science*, 139, 105549-. DOI: https://doi.org/10.1016/j.jas.2022.105549
- Robb, J., & Harris, O.J.T. (2018). Becoming gendered in European Prehistory: Was Neolithic Gender Fundamentally different? *American Antiquity*, 83(1), 128–147. DOI: https://doi.org/10.1017/aaq.2017.54

Ryan-Despraz, J. (2022). *Practice and Prestige: an exploration of Neolithic warfare, Bell Beaker archery, and social stratification from an anthropological perspective*. Archaeopress Publishing.

Schroeder, H., Margaryan, A., Szmyt, M., Theulot, B., Włodarczak, P., Rasmussen, S., Gopalakrishnan, S., Szczepanek, A., Konopka, T., Jensen, T. Z. T., Witkowska, B., Wilk, S., Przybyła, M. M., Pospieszny, Ł., Sjögren, K.-G., Belka, Z., Olsen, J., Kristiansen, K., Willerslev, E., ... Allentoft, M. E. (2019). Unraveling ancestry, kinship, and violence in a Late Neolithic mass grave. *PNAS*, *116*(22), 10705–10710. DOI: https://doi.org/10.1073/pnas.1820210116

Scott, J. W. (1986). Gender: A Useful Category of Historical Analysis. *The American Historical Review*, *91*(5), 1053-1075. DOI: https://www.jstor.org/stable/1864376

Soriano, I., Herrero-Corral, A. M., Garrido-Pena, R., & Majó, T. (2021). Sex/gender system and social hierarchization in Bell Beaker burials from Iberia. *Journal of Anthropological Archaeology*, *64*, 101335. DOI: https://doi.org/10.1016/j.jaa.2021.101335

Spatzier, A., Stecher, M., & Alt, K. W. (2017). The honoured and the sacrificed?: Gender and violence at a sanctuary of the late 3rd millennium BC in Central Germany. In U. Matić & B. Jensen (Eds.), *Archaeologies of Gender and Violence* (1st ed., pp. 45–76). Oxbow Books. DOI: https://doi.org/10.2307/j.ctvh1dp2p.7

springer, k. (2014). how bioloGy supporTs Gender As A soCiAl ConsTruCTion. *Contexts*, *13*(4), 20-22. https://www.jstor.org/stable/24710577

Sjögren, K.-G., Price, T. D., & Kristiansen, K. (2016). Diet and Mobility in the Corded Ware of Central Europe. *PloS One*, *11*(5), e0155083–e0155083. DOI: https://doi.org/10.1371/journal.pone.0155083

Sjögren, K.-G., Olalde, I., Carver, S., Allentoft, M. E., Knowles, T., Kroonen, G., Pike, A. W. G., Schröter, P., Brown, K. A., Brown, K. R., Harrison, R. J., Bertemes, F., Reich, D., Kristiansen, K., & Heyd, V. (2020). Kinship and social organization in Copper Age Europe. A cross-disciplinary analysis of archaeology, DNA, isotopes, and anthropology from two Bell Beaker cemeteries. *PLoS One*, *15*(11), e0241278–e0241278. DOI: https://doi.org/10.1371/journal.pone.0241278

Stockhammer, P. W. (2023). Fostering Women and Mobile Children in Final Neolithic and Early Bronze Age Central Europe. In K. Kristiansen, G. Kroonen, & E. Willerslev (Eds.), *The Indo-European Puzzle Revisited: Integrating Archaeology, Genetics, and Linguistics* (pp. 303–307). Cambridge University Press. DOI: https://doi.org/10.1017/9781009261753.028

Stoler, A. L. (1989). making empire respectable: the politics of race and sexual morality in 20th-century colonial cultures. *American Ethnologist*, *16*(4), 634–660. DOI: https://doi.org/10.1525/ae.1989.16.4.02a00030

Turek, J. (2019). Copper Age transformations in gender identities. An Essay. In Koch, J. K., & Kirleis, W. (Eds.), *Gender Transformations in Prehistoric and Archaic Societies* (1st ed., Vol. 6), pp. 205-220. Sidestone Press.

UN (2015). Transforming Our World: The 2030 Agenda for Sustainable Development. Resolution Adopted by the General Assembly on 25 September 2015, 42809, 1-13.

Vander Linden, M. (2016). Population history in third-millennium-BC Europe: assessing the contribution of genetics. *World Archaeology*, *48*(5), 714–728. DOI: https://doi.org/10.1080/00438243.2016.1209124

Varul, L., Galeev, R. M., Malytina, A. A., Tõrv, M., Vasilyev, S. V., Lõugas, L., & Kriiska, A. (2019). Complex mortuary treatment of a Corded Ware Culture individual from the Eastern Baltic: A case study

of a secondary deposit in Sope, Estonia. *Journal of Archaeological Science: Reports*, *24*, 463–472. DOI: https://doi.org/10.1016/j.jasrep.2019.02.003

Vierzig, A. (2020). Anthropomorphic Stelae of the 4th and 3rd Millennia Between the Caucasus and the Atlantic Ocean. *Proceedings of the Prehistoric Society*, *86*, 111–137. DOI: https://doi.org/10.1017/ppr.2020.12

Villalba-Mouco, V., Oliart, C., Rihuete-Herrada, C., Childebayeva, A., Rohrlach, A. B., Fregeiro, M. I., Celdrán Beltrán, E., Velasco-Felipe, C., Aron, F., Himmel, M., Freund, C., Alt, K. W., Salazar-García, D. C., García Atiénzar, G., de Miguel Ibáñez, M. P., Hernández Pérez, M. S., Barciela, V., Romero, A., Ponce, J., ... Haak, W. (2021). Genomic transformation and social organization during the Copper Age-Bronze Age transition in southern Iberia. *Science Advances*, *7*(47), eabi7038-. DOI: https://doi.org/10.1126/sciadv.abi7038

Wittig, M. (2016). Montique Wittig, "One Is Not Born a Woman". In C. R. McCann & S. Kim (Eds.), *The Feminist Theory Reader: Local and Global Perspectives* [fourth edition], pp. 282-287. Routledge.

Woolf, V. (2001). "Professions for Women" (1942). In J. Ritchie & K. Ronald (Eds.), *Available Means* (pp. 242-246). University of Pittsburgh Press. https://doi.org/10.2307/j.ctt5hjqnj.43

Worthman, C.M. (1995). Hormones, Sex, and Gender. *Annual Review of Anthropology*, *24*, 593-617. DOI: https://www.jstor.org/stable/2155951

Zedda, N., Meheux, K., Blöcher, J., Diekmann, Y., Gorelik, A. V., Kalle, M., Klein, K., Titze, A.-L., Winkelbach, L., Naish, E., Brou, L., Valotteau, F., Le Brun-Ricalens, F., Burger, J., & Brami, M. (2023). Biological and substitute parents in Beaker period adult—child graves. *Scientific Reports*, *13*(1), 18765—18765. DOI: https://doi.org/10.1038/s41598-023-45612-3

Appendix 1: Dataset of Literature

Level of engagement	Publishing year	Author(s)	Title	Publication type			
SGP	2015	Almela et al.	Infant Burials during the Copper and Bronze Ages in the Iberian Jarama River Valley: A Preliminary Study about Childhood in the Funerary Context during III–II Millennium BC	Book chapter			
SGP	2015	Frînculeasa <i>et</i> al.	Pit-Graves, Yamnaya and Kurgans along the Lower Danube: Disentangling IVth and IIIrd Millennium BC Burial Customs, Equipment and Chronology	Article			
SGP	2015	Garrido-Pena & Herrero- Corral	Children as Potters: Apprenticeship Patterns from Bell Beaker Potteryof Copper Age Inner Iberia (Spain) (c. 2500–2000 cal BC)	Book chapter			
SGP	2015	Kristiansen	The Decline of the Neolithic and the Rise of Bronze Age Society	Book chapter			
SGMF	2015	Makarowicz	Personal identity and social structure of Bell Beakers: the upper basins of the Oder and Vistula rivers	Book chapter			
SGP	2015	Pospieszny et al.	Remains of a late Neolithic barrow at Kruszyn. A glimpse of ritual and everyday life in early Corded Ware societies of the Polish Lowland	Article			
SGMF	2015	Turek	Bell Beaker stone wrist-guards as symbolic male ornament: the significance of ceremonial warfare in 3rd millennium BC Central Europe	Book chapter			
SGP	2016	Parker Pearson <i>et al</i> .	Beaker people in Britain: migration, mobility and diet	Article			
SGP	2016	Sjörgren <i>et al</i> .	Diet and Mobility in the Corded Ware of Central Europe	Article			
SGP	2016	Vander Linden	Population history in third-millennium-BC Europe: assessing the contribution of genetics	Article			
SGP	2017	Austvoll	Tracing boundaries of local group identities in the Early Bronze Age — south-west Norway	Book chapter			
SGMF	2017	Bourgeois & Kroon	The impact of male burials on the construction of Corded Ware identity: Reconstructing networks of information in the 3rd millennium BC	Article			

2017	Copat et al.	Castelluccio painted pottery: shared repertoires and local identity: A case study from Early Bronze Age Sicily	Book chapter
2018	Carlin	Fragments of the Dead?	Book chapter
2018	Díaz-Zorita Bonilla <i>et al</i> .	Isotopic evidence for mobility at large-scale human aggregations in Copper Age Iberia: the mega-site of Marroquíes	Article
2018	Fernández- Crespo <i>et al</i> .	Infant and childhood diet at the passage tomb of Alto de la Huesera (north-central Iberia) from bone collagen and sequential dentine isotope composition	Article
2017	Goldberg et al.	Ancient X chromosomes reveal contrasting sex bias in Neolithic and Bronze Age Eurasian migrations	Article
2017	Knipper et al.	Female exogamy and gene pool diversification at the transition from the Final Neolithic to the Early Bronze Age in central Europe	Article
2017	Kristiansen et al.	Re-theorising mobility and the formation of culture and language among the Corded Ware Culture in Europe	Article
2017	Saag et al.	Extensive Farming in Estonia Started through a Sex-Biased Migration from the Steppe	Article
2017	Spatzier et al.	The honoured and the sacrificed?: Gender and violence at a sanctuary of the late 3rd millennium BC in Central Germany	Book chapter
2018	Haughton	Social Relations and the Local: Revisiting Our Approaches to Finding Gender and Age in Prehistory. A Case Study from Bronze Age Scotland.	Article
2018	Juras et al.	Mitochondrial genomes reveal an east to west cline of steppe ancestry in Corded Ware populations	Article
2018	Monroy Kuhn et al.	Estimating genetic kin relationships in prehistoric populations	Article
2018	Szczepanek <i>et al</i> .	Understanding Final Neolithic communities in south-eastern Poland: New insights on diet and mobility from isotopic data	Article
2018	Zeng et al.	Cultural hitchhiking and competition between patrilineal kin groups explain the post-Neolithic Y-chromosome bottleneck	Article
	2018 2018 2018 2017 2017 2017 2017 2017 2018 2018 2018	2018 Carlin 2018 Díaz-Zorita Bonilla et al. 2018 Fernández-Crespo et al. 2017 Goldberg et al. 2017 Kristiansen et al. 2017 Saag et al. 2017 Spatzier et al. 2018 Haughton 2018 Juras et al. 2018 Szczepanek et al. 2018 Szczepanek et al.	repertoires and local identity: A case study from Early Bronze Age Sicily 2018

SGP	2019	Baron et al.	Differentiation of burial practices in the	Article
			Corded Ware Culture. The example of the Magnice site in SW Poland	
SGMF	2019	Cintas-Peña & García Sanjuán	Gender Inequalities in Neolithic Iberia: A Multi-Proxy Approach.	Article
SGP	2019	Frieman & Hofmann	Present pasts in the archaeology of genetics, identity, and migration in Europe: a critical essay	Article
SGMF	2019	Frieman <i>et al</i> .	Bodies in Motion: Narratives and Counter Narratives of Gendered Mobility in European Later Prehistory	Article
SGP	2019	Fernández- Crespo <i>et al</i> .	The Bell Beaker multiple burial pit of La Atalayuela (La Rioja, Spain): stable isotope insights into diet, identity and mortuary practices in Chalcolithic Iberia	Article
SGP	2019	Furholt	Re-integrating Archaeology: A Contribution to aDNA Studies and the Migration Discourse on the 3rd Millennium BC in Europe	Article
SGP	2019	Kyselý et al.	Drilled teeth and shell artefacts from a graveat Prague-Březiněves and a review of decorative artefacts made from animal material from Corded Ware culture in the Czech Republic	Article
SGP	2019a	Lillios	The Emergence of Ranked Societies:: The Late Copper Age to Early Bronze Age (2,500–1,500 BCE)	Book chapter
SGP	2019ь	Lillios	The Expansion of Interregional Contacts:: The Late Neolithic and Early Copper Age (3,500–2,500 BCE)	Book chapter
SGP	2019	Mittnik et al.	Kinship-based social inequality in Bronze Age Europe	Article
SGP	2019	Schroeder <i>et al</i> .	Unraveling ancestry, kinship, and violence in a Late Neolithic mass grave	Article
SGMF	2019	Turek	Copper Age transformations in gender identities. An Essay	Book chapter
SGP	2019	Varul et al.	Complex mortuary treatment of a Corded Ware Culture individual from the Eastern Baltic: A case study of a secondary deposit in Sope, Estonia	Article
SGP	2020	Carlin	Haunted by the ghost of the Beak folk?	Article

SGMF	2020	Cintas-Peña & Herrero- Corral	Missing prehistoric women? Sex ratio as an indicator for analyzing the population of Iberia from the 8th to the 3rd millennia B.C.	Article
SGP	2020	Clément	The prestige of warriors: Bell Beaker archers' equipment in Central Europe	Article
SGP	2020	Frînculeasa <i>et al</i> .	Between worlds and elites at the beginning of the Early Bronze Age in the Lower Danube Basin: a pluridisciplinary approach to personal ornaments	Article
SGP	2020	Furholt	Social Worlds and Communities of Practice: a polythetic culture model for 3rd millennium BC Europe in the light of current migration debates	Article
SGP	2020	Furtwängler et al.	Ancient genomes reveal social and genetic structure of Late Neolithic Switzerland	Article
SGP	2020	González- Rabanal <i>et al</i> .	Diet, mobility and death of Late Neolithic and Chalcolithic groups of the Cantabrian Region (northern Spain). A multidisciplinary approach towards studying the Los Avellanos I and II burial caves	Article
SGMF	2020	Kern	Inherited rank and own abilities: children in Corded Ware and Bell Beaker communities of the Traisen Valley, Lower Austria	Book chapter
SGP	2020	Knipper et al.	Diet and subsistence in Bronze Age pastoral communities from the southern Russian steppes and the North Caucasus	Article
SGP	2020	Kyselý et al.	Scapulae and phalanges as grave goods: a mystery from the Early Bronze Age	Article
SGP	2020	Nordqvist & Heyd	The Forgotten Child of the Wider Corded Ware Family: Russian Fatyanovo Culture in Context	Article
SGP	2020	Siebke et al.	Crops vs. animals: regional differences in subsistence strategies of Swiss Neolithic farmers revealed by stable isotopes	Article
SGP	2020	Sjögren <i>et al</i> .	Kinship and social organization in Copper Age Europe. A cross-disciplinary analysis of archaeology, DNA, isotopes, and anthropology from two Bell Beaker cemeteries	Article
SGP	2020	Vierzig	Anthropomorphic Stelae of the 4th and 3rd Millennia Between the Caucasus and the Atlantic Ocean	Article

SGP	2021	Armit & Reich	The return of the Beaker folk? Rethinking migration and population change in British prehistory	Article
SGMF	2021	Booth et al.	Tales from the Supplementary Information: Ancestry Change in Chalcolithic–Early Bronze Age Britain Was Gradual with Varied Kinship Organization	Article
SGP	2021	Brück	Ancient DNA, kinship and relational identities in Bronze Age Britain	Article
SGMF	2021	Dolfini	Warrior graves reconsidered: metal, power and identity in Copper Age Italy	Article
SGP	2021	Egfjord et al.	Genomic Steppe ancestry in skeletons from the Neolithic Single Grave Culture in Denmark	Article
SGP	2021	Furholt	Mobility and Social Change: Understanding the European Neolithic Period after the Archaeogenetic Revolution	Article
SGP	2021	Haughton	Seeing Children in Prehistory: A View from Bronze Age Ireland	Article
SGP	2021	Ochir- Goryaeva <i>et</i> <i>al</i> .	Ancestry and identity in Bronze Age Catacomb culture burials: A meta-tale of graves, skeletons, and DNA	Article
SGMF	2021	Olerud	Reassessing the Gender Ideology of the Supra-Regional Corded Ware Culture	Article
SGP	2021	Papac et al.	Dynamic changes in genomic and social structures in third millennium BCE central Europe	Article
SGMF	2021	Scorrano <i>et al</i> .	The genetic and cultural impact of the Steppe migration into Europe	Article
SGMF	2021	Soriano et al.	Sex/gender system and social hierarchization in Bell Beaker burials from Iberia	Article
SGP	2021a	Visser	Burying things with the dead: Creating an image	Book chapter
SGP	2021b	Visser	Selective deposition before 2000 BC	Book chapter
SGMF	2022	Cintas-Peña & García Sanjuán	Women, residential patterns and early social complexity. From theory to practice in Copper Age Iberia	Article
SGMF	2022	Dulias et al.	Ancient DNA at the edge of the world: Continental immigration and the persistence of Neolithic male lineages in Bronze Age Orkney	Article

SGP	2022	Farval & Nicolas	Bell Beaker Burial Customs in Northwestern France	Article
SGMF	2022	Fitzpatrick	Bell Beaker Mobility, Marriage, Migration and Mortality	Book Chapter
SGMF	2022	Heyd	The Mobility and Migration Revolution in 3rd Millennium BC Europe	Book Chapter
SGP	2022	Kristiansen	Archaeology and the Genetic Revolution in European Prehistory	Book
SGMF	2022	Puster	The Bell Beaker Phenomenon in the Southern Upper Rhine Valley: A Presentation of Old and New Excavated Graves of the South Baden Group in Germany	Book chapter
SGP	2022	Ryan-Despraz	Practice and Prestige: an exploration of Neolithic warfare, Bell Beaker archery, and social stratification from an anthropological perspective	Book
SGMF	2022	Rebay- Salisbury <i>et</i> <i>al</i> .	Gendered burial practices of early Bronze Age children align with peptide-based sex identification: A case study from Franzhausen I, Austria	Article
SGP	2022	Villalba- Mouco <i>et al</i> .	Genomic transformation and social organization during the Copper Age-Bronze Age transition in southern Iberia	Article
SGP	2023	Bourgeois & Kroon	Emergent Properties of the Corded Ware Culture: An Information Approach	Book chapter
SGMF	2023a	Cintas-Peña <i>et al</i> .	Isotopic Evidence for Mobility in the Copper and Bronze Age Cemetery of Humanejos (Parla, Madrid): a Diachronic Approach Using Biological and Archaeological Variables.	Article
SGMF	2023b	Cintas-Peña <i>et al</i> .	Amelogenin peptide analyses reveal female leadership in Copper Age Iberia (c. 2900-2650 BC)	Article
SGMF	2023	Díaz-Navarro et al.	New insight into prehistoric craft specialisation. Tooth-tool use in the Chalcolithic burial site of Camino del Molino, Murcia, SE Spain	Article
SGP	2023	Drtikolová Kaupová et al.	Isotopic reconstruction of the early life experience of individuals from the early Bronze age Vliněves site (Czech Republic)	Article
SGP	2023	Dunne et al.	The Milky Way: Mobility and Economy at the Turn of the 3rd Millennium in Southern Central Europe	Article

SGP	2023	Haak et al.	The Corded Ware Complex in Europe in Light of Current Archaeogenetic and Environmental Evidence	Book chapter
SGMF	2023	Haughton	Gender in Earlier Bronze Age Ireland and Scotland	Article
SGP	2023	Kaňáková & Peška	Two faces of warrior elite. Stone wrist- guards and wrist-guard-like artefacts	Article
SGP	2023	Lai et al.	An isotopic investigation on diet and inequality: The human remains from Gannì (Sardinia, 3rd millennium BC)	Article
SGP	2023	Mallory	From the Steppe to Ireland: The Impact of aDNA Research	Book chapter
SGP	2023	Olsen	Marriage Strategies and Fosterage among the Indo-Europeans: A Linguistic Perspective	Book chapter
SGMF	2023	Paladin et al.	Archaeological questions and genetic answers: Male paternal kinship in a copper age multiple burial from the eastern Italian Alps	Article
SGP	2023	Peška & Štelcl	Results of micrometallographic analysis of metalworking tools in graves of metallurgists in Moravia/Czech Republic	Article
SGMF	2023	Pronk	Mobility, Kinship, and Marriage in Indo- European Society	Book chapter
SGMF	2023	Stockhammer	Fostering Women and Mobile Children in Final Neolithic and Early Bronze Age Central Europe	Book chapter
SGP	2023	Turek	The social meaning of multiple burials in the Corded Ware culture	Article
SGP	2023	Zedda et al.	Biological and substitute parents in Beaker period adult–child graves	Article
SGP	2024	Kurzawska & Sobkowiak- Tabaka	Uncovering the tradition of shell ornaments in Neolithic Poland	Article
SGMF	2024	Pape & Ialongo	Error or Minority? The Identification of Non-binary Gender in Prehistoric Burials in Central Europe	Article
SGP	2024	Vander Linden	The Bell Beaker Phenomenon in Europe: A Harmony of Difference	Book

Appendix 2: Dataset Citations in APA

Almela, R.A., Liesau, C., Ríos, P., Blasco, C., & Galindo, L. (2015). Infant Burials during the Copper and Bronze Ages in the Iberian Jarama River Valley: A Preliminary Study about Childhood in the Funerary Context during III–II Millennium BC. In M. S. Romero, E. A. García, & G. A. Jiménez (Eds.), *Children, Spaces and Identity* (Vol. 4), pp. 243-261. Oxbow Books.

Armit, I., & Reich, D. (2021). The return of the Beaker folk? Rethinking migration and population change in British prehistory. *Antiquity*, 95(384), 1464–1477. DOI: https://doi.org/10.15184/aqy.2021.129

Austvoll, K. I.. (2017). Tracing boundaries of local group identities in the Early Bronze Age — southwest Norway. In S. Bergerbrant & A. Wessman (Eds.), *New Perspectives on the Bronze Age: Proceedings of the 13th Nordic Bronze Age Symposium Held in Gothenburg 9th to 13th June 2015.* (pp. 421-434). Archaeopress Publishing. DOI https://doi.org/10.2307/j.ctv1pzk2c1.39

Baron, J., Furmanek, M., Hałuszko, A., & Kufel-Diakowska, B. (2019). Differentiation of burial practices in the Corded Ware Culture. The example of the Magnice site in SW Poland. *Praehistorische Zeitschrift*, 93(2), 169–184. DOI: https://doi.org/10.1515/pz-2018-0009

Booth, T. J., Brück, J., Brace, S., & Barnes, I. (2021). Tales from the Supplementary Information: Ancestry Change in Chalcolithic–Early Bronze Age Britain Was Gradual with Varied Kinship Organization. *Cambridge Archaeological Journal*, *31*(3), 379–400. DOI: https://doi.org/10.1017/S0959774321000019

Bourgeois, Q., & Kroon, E. (2017). The impact of male burials on the construction of Corded Ware identity: Reconstructing networks of information in the 3rd millennium BC. *PloS One*, *12*(10), e0185971–e0185971. DOI: https://doi.org/10.1371/journal.pone.0185971

Bourgeois, Q. (2023). Emergent Properties of the Corded Ware Culture: An Information Approach. In K. Kristiansen, G. Kroonen, & E. Willerslev (Eds.), *The Indo-European Puzzle Revisited: Integrating Archaeology, Genetics, and Linguistics* (pp. 81–92). Cambridge University Press. DOI: https://doi.org/10.1017/9781009261753.010

Brück, J. (2021). Ancient DNA, kinship and relational identities in Bronze Age Britain. *Antiquity*, 95(379), 228–237. DOI: https://doi.org/10.15184/aqy.2020.216

Carlin, N. (2018). Fragments of the dead? In, *The beaker phenomenon?*: understanding the character and context of social practices in *Ireland*, 2500-2000 BC, pp. 95-133. Sidestone Press.

Carlin, N. (2020). Haunted by the ghost of the Beaker folk? *The Biochemist (London, England)*, *42*(1), 30–33. DOI https://doi.org/10.1042/BIO04201030

Clément, N. (2020). The prestige of warriors: Bell Beaker archers' equipment in Central Europe. *Préhistoires Méditerranéennes*, *8*, 1-63. DOI: https://doi.org/10.4000/pm.2167

Cintas-Peña, M., & García Sanjuán, L. (2019). Gender Inequalities in Neolithic Iberia: A Multi-Proxy Approach. *European Journal of Archaeology*, 22(4), 499–522. DOI: https://doi.org/10.1017/eaa.2019.3

Cintas-Peña, M., & Herrero-Corral, A. M. (2020). Missing prehistoric women? Sex ratio as an indicator for analyzing the population of Iberia from the 8th to the 3rd millennia B.C. *Archaeological and Anthropological Sciences*, *12*(11). https://doi.org/10.1007/s12520-020-01215-x

Cintas-Peña, M., & García Sanjuán, L. (2022). Women, residential patterns and early social complexity. From theory to practice in Copper Age Iberia. *Journal of Anthropological Archaeology*, *67*, 101422-. DOI: https://doi.org/10.1016/j.jaa.2022.101422

Cintas-Peña, M., Garrido Pena, R., Herrero-Corral, A. M., Flores Fernández, R., Waterman, A. J., Díaz-Zorita Bonilla, M., Díaz-del-Río, P., & Peate, D. W. (2023a). Isotopic Evidence for Mobility in the Copper and Bronze Age Cemetery of Humanejos (Parla, Madrid): a Diachronic Approach Using Biological and Archaeological Variables. *Journal of Archaeological Method and Theory*. DOI: https://doi.org/10.1007/s10816-023-09633-6

Cintas-Peña, M., Luciañez-Triviño, M., Montero Artús, R., Bileck, A., Bortel, P., Kanz, F., Rebay-Salisbury, K., & García Sanjuán, L. (2023b). Amelogenin peptide analyses reveal female leadership in Copper Age Iberia (c. 2900-2650 BC). *Scientific Reports*, *13*(1), 9594–9594. https://doi.org/10.1038/s41598-023-36368-x

Copat, V., Costa, A., & Piccione, P. (2017). Castelluccio painted pottery: shared repertoires and local identity: A case study from Early Bronze Age Sicily. In S. Bergerbrant & A. Wessman (Eds.), *New Perspectives on the Bronze Age: Proceedings of the 13th Nordic Bronze Age Symposium Held in Gothenburg 9th to 13th June 2015.* (pp. 109-126). Archaeopress Publishing. DOI: https://doi.org/10.2307/j.ctv1pzk2c1.13

Díaz-Navarro, S., García-González, R., Cirotto, N., & Haber Uriarte, M. (2023). New insight into prehistoric craft specialisation. Tooth-tool use in the Chalcolithic burial site of Camino del Molino, Murcia, SE Spain. *Journal of Archaeological Science: Reports*, 50, 104066-. DOI: https://doi.org/10.1016/j.jasrep.2023.104066

Díaz-Zorita Bonilla, M., Beck, J., Bocherens, H., & Díaz-del-Río, P. (2018). Isotopic evidence for mobility at large-scale human aggregations in Copper Age Iberia: the mega-site of Marroquíes. *Antiquity*, 92(364), 991–1007. DOI: https://doi.org/10.15184/aqy.2018.33

Dolfini, A. (2021). Warrior graves reconsidered: metal, power and identity in Copper Age Italy. *World Archaeology*, 53(5), 809–833. DOI: https://doi.org/10.1080/00438243.2021.2013307

Drtikolová Kaupová, S., Limburský, P., & Vélová, L. (2023). Isotopic reconstruction of the early life experience of individuals from the early Bronze age Vliněves site (Czech Republic). *Journal of Archaeological Science: Reports*, *50*, 104085-. DOI: https://doi.org/10.1016/j.jasrep.2023.104085

Dulias, K., Foody, M. G. B., Justeau, P., Silva, M., Martiniano, R., Oteo-García, G., Fichera, A., Rodrigues, S., Gandini, F., Meynert, A., Donnelly, K., Aitman, T. J., Chamberlain, A., Lelong, O., Kozikowski, G., Powlesland, D., Waddington, C., Mattiangeli, V., Bradley, D. G., ... Richards, M. B. (2022). Ancient DNA at the edge of the world: Continental immigration and the persistence of Neolithic male lineages in Bronze Age Orkney. *PNAS*, *119*(8). DOI: https://doi.org/10.1073/pnas.2108001119

Dunne, J., Szilágyi, M., Casanova, E., Griffiths, S., Knowles, T. T. J., Evershed, R. P., & Hofmann, D. (2023). The Milky Way: Mobility and Economy at the Turn of the 3rd Millennium in Southern Central Europe. *Proceedings of the Prehistoric Society*, *89*, 23–50. DOI: https://doi.org/10.1017/ppr.2023.3

Egfjord, A. F.-H., Margaryan, A., Fischer, A., Sjögren, K.-G., Price, T. D., Johannsen, N. N., Nielsen, P. O., Sørensen, L., Willerslev, E., Iversen, R., Sikora, M., Kristiansen, K., & Allentoft, M. E. (2021). Genomic Steppe ancestry in skeletons from the Neolithic Single Grave Culture in Denmark. *PloS One*, *16*(1), e0244872–e0244872. DOI: https://doi.org/10.1371/journal.pone.0244872

Favrel Q, Nicolas C. (2022). Bell Beaker Burial Customs in North-western France. *Proceedings of the Prehistoric Society, 88*, 285-320. DOI: https://doi.org/10.1017/ppr.2022.13

Fernández-Crespo, T., Czermak, A., Lee-Thorp, J. A., & Schulting, R. J. (2018). Infant and childhood diet at the passage tomb of Alto de la Huesera (north-central Iberia) from bone collagen and sequential

dentine isotope composition. *International Journal of Osteoarchaeology*, *28*(5), 542–551. https://doi.org/10.1002/oa.2659

Fernández-Crespo, T., Ordoño, J., Barandiarán, I., Andrés, M. T., & Schulting, R. J. (2019). The Bell Beaker multiple burial pit of La Atalayuela (La Rioja, Spain): stable isotope insights into diet, identity and mortuary practices in Chalcolithic Iberia. *Archaeological and Anthropological Sciences*, *11*(8), 3733–3749. DOI: https://doi.org/10.1007/s12520-018-0610-1

Fitzpatrick, A. P. (2022). Bell Beaker Mobility, Marriage, Migration and Mortality. In M. Fernández-Götz, C. Nimura, P. Stockhammer, & R. Cartwright (Eds.), *Rethinking migrations in late prehistoric Eurasia*, pp. 63-88. Oxford University Press. DOI: https://doi.org/10.5871/bacad/9780197267356.003.0004

Frieman, C. J., & Hofmann, D. (2019). Present pasts in the archaeology of genetics, identity, and migration in Europe: a critical essay. *World Archaeology*, *51*(4), 528–545. DOI: https://doi.org/10.1080/00438243.2019.1627907

Frieman, C. J., Teather, A., & Morgan, C. (2019). Bodies in Motion: Narratives and Counter Narratives of Gendered Mobility in European Later Prehistory. *Norwegian Archaeological Review*, *52*(2), 148–169. DOI: https://doi.org/10.1080/00293652.2019.1697355

Frînculeasa, A., Preda, B., & Heyd, V. (2015). Pit-Graves, Yamnaya and Kurgans along the Lower Danube: Disentangling IVth and IIIrd Millennium BC Burial Customs, Equipment and Chronology. *Praehistorische Zeitschrift*, 90(1), 45–113. DOI: https://doi.org/10.1515/pz-2015-0002

Frînculeasa, A., Garvăn, D., Mărgărit, M., Bălăşescu, A., Lazăr, I., Frînculeasa M. N., Soficaru, D.A., Molnár, M., & Georgescu, M. (2020). Between worlds and elites at the beginning of the Early Bronze Age in the Lower Danube Basin: a pluridisciplinary approach to personal ornaments. *Archaeological and Anthropological Sciences*, *12*(9), 213. DOI: https://doi-org/10.1007/s12520-020-01177-0

Furholt, M. (2019). Re-integrating Archaeology: A Contribution to aDNA Studies and the Migration Discourse on the 3rd Millennium BC in Europe. *Proceedings of the Prehistoric Society*, *85*, 115–129. DOI: https://doi.org/10.1017/ppr.2019.4

Furholt, M. (2020). Social Worlds and Communities of Practice: a polythetic culture model for 3rd millennium BC Europe in the light of current migration debates. *Préhistoires méditerranéennes*, *8*, 1-24. DOI: https://doi.org/10.4000/pm.2383

Furholt, M. (2021). Mobility and Social Change: Understanding the European Neolithic Period after the Archaeogenetic Revolution. *Journal of Archaeological Research*, *29*(4), 481–535. DOI: https://doi.org/10.1007/s10814-020-09153-x

Furtwängler, A., Rohrlach, A. B., Lamnidis, T. C., Papac, L., Neumann, G. U., Siebke, I., Reiter, E., Steuri, N., Hald, J., Denaire, A., Schnitzler, B., Wahl, J., Ramstein, M., Schuenemann, V. J., Stockhammer, P. W., Hafner, A., Lösch, S., Haak, W., Schiffels, S., & Krause, J. (2020). Ancient genomes reveal social and genetic structure of Late Neolithic Switzerland. *Nature Communications*, *(11)*. DOI: https://doi.org/10.1038/s41467-020-15560-x

Garrido-Pena, R., & Herrero-Corral, A. M. (2015). Children as Potters: Apprenticeship Patterns from Bell Beaker Potteryof Copper Age Inner Iberia (Spain) (c. 2500–2000 cal BC). In M. S. Romero, E. A. García, & G. A. Jiménez (Eds.), *Children, Spaces and Identity* (Vol. 4), pp. 40-58. Oxbow Books.

Goldberg, A., Günther, T., Rosenberg, N. A., & Jakobsson, M. (2017). Ancient X chromosomes reveal contrasting sex bias in Neolithic and Bronze Age Eurasian migrations. *PNAS*, *114*(10), 2657 – 2662. DOI: https://doi.org/10.1073/pnas.1616392114

González-Rabanal, B., Marín-Arroyo, A. B., Jones, J. R., Agudo Pérez, L., Vega-Maeso, C., & González-Morales, M. R. (2020). Diet, mobility and death of Late Neolithic and Chalcolithic groups of the Cantabrian Region (northern Spain). A multidisciplinary approach towards studying the Los Avellanos I and II burial caves. *Journal of Archaeological Science: Reports*, *34*, 102644-. DOI: https://doi.org/10.1016/j.jasrep.2020.102644

Haak, W., Furholt, M., Sikora, M., Rohrlach, A. B., Papac, L., Sjögren, K. G., Heyd, V., Mortensen, M. F., Nielsen, A. B., Müller, J., Feeser, I., Kroonen, G., & Kristiansen, K. (2023). The Corded Ware Complex in Europe in Light of Current Archaeogenetic and Environmental Evidence. In K. Kristiansen, G. Kroonen, & E. Willerslev (Eds.), *The Indo-European Puzzle Revisited: Integrating Archaeology, Genetics*, *and Linguistics* (pp. 63-80). Cambridge University Press. DOI: https://doi.org/10.1017/9781009261753

Haughton, M. (2018). Social Relations and the Local: Revisiting Our Approaches to Finding Gender and Age in Prehistory. A Case Study from Bronze Age Scotland. *Norwegian Archaeological Review*, 51(1–2), 64–77. DOI: https://doi.org/10.1080/00293652.2018.1517821

Haughton, M. (2021). Seeing Children in Prehistory: A View from Bronze Age Ireland. *Cambridge Archaeological Journal*, *31*(3), 363–378. DOI: https://doi.org/10.1017/S0959774321000032

Haughton, M. (2023). Gender in Earlier Bronze Age Ireland and Scotland. *European Journal of Archaeology*, *26*(1), 19–38. DOI: https://doi.org/10.1017/eaa.2022.29

Heyd, V. (2022). The Mobility and Migration Revolution in 3rd Millennium BC Europe. In M. Fernández-Götz, C. Nimura, P. Stockhammer, & R. Cartwright (Eds.), *Rethinking migrations in late prehistoric Eurasia*, pp. 41-62. Oxford University Press. DOI: https://doi.org/10.5871/bacad/9780197267356.003.0003

Juras, A., Chyleński, M., Ehler, E., Malmström, H., Żurkiewicz, D., Włodarczak, P., Wilk, S., Peška, J., Fojtík, P., Králík, M., Libera, J., Bagińska, J., Tunia, K., Klochko, V. I., Dabert, M., Jakobsson, M., & Kośko, A. (2018). Mitochondrial genomes reveal an east to west cline of steppe ancestry in Corded Ware populations. *Scientific Reports*, *8*(1), 11603–11610. DOI: https://doi.org/10.1038/s41598-018-29914-5

Kaňáková, L., & Peška, J. (2023). Two faces of warrior elite. Stone wrist-guards and wrist-guard-like artefacts. *Journal of Archaeological Science: Reports*, *47*, 103823-. DOI: https://doi.org/10.1016/j.jasrep.2022.103823

Kern, D. (2020). Inherited rank and own abilities: children in Corded Ware and Bell Beaker communities of the Traisen Valley, Lower Austria. In K. Rebay-Salisbury & D. Pany-Kucera (Eds.), *Ages and Abilities: The Stages of Childhood and their Social Recognition in Prehistoric Europe and Beyond*. Archaeopress Publishing.

Knipper, C., Mittnik, A., Massy, K., Kociumaka, C., Kucukkalipci, I., Maus, M., Wittenborn, F., Metz, S. E., Staskiewicz, A., Krause, J., & Stockhammer, P. W. (2017). Female exogamy and gene pool diversification at the transition from the Final Neolithic to the Early Bronze Age in central Europe. *PNAS*, 114(38), 10083–10088. DOI: https://doi.org/10.1073/pnas.1706355114

Knipper, C., Reinhold, S., Gresky, J., Berezina, N., Gerling, C., Pichler, S. L., Buzhilova, A. P., Kantorovich, A. R., Maslov, V. E., Petrenko, V. G., Lyakhov, S. V., Kalmykov, A. A., Belinskiy, A. B., Hansen, S., & Alt, K. W. (2020). Diet and subsistence in Bronze Age pastoral communities from the southern Russian steppes and the North Caucasus. *PloS One*, *15*(10), e0239861–e0239861. DOI: https://doi.org/10.1371/journal.pone.0239861

Kristiansen, K. (2015). The Decline of the Neolithic and the Rise of Bronze Age Society. In C. Fowler, J, Harding, & D. Hofmann (Eds.), *The Oxford Handbook of Neolithic Europe*, pp. 1093-1118. DOI: https://doi.org/10.1093/oxfordhb/9780199545841.013.057

Kristiansen, K., Allentoft, M. E., Frei, K. M., Iversen, R., Johannsen, N. N., Kroonen, G., Pospieszny, Ł., Price, T. D., Rasmussen, S., Sjögren, K.-G., Sikora, M., & Willerslev, E. (2017). Re-theorising mobility and the formation of culture and language among the Corded Ware Culture in Europe. *Antiquity*, *91*(356), 334–347. DOI: https://doi.org/10.15184/aqy.2017.17

Kristiansen, K. (2022). *Archaeology and the Genetic Revolution in European Prehistory*. Cambridge University Press.

Kurzawska, A., & Sobkowiak-Tabaka, I. (2024). Uncovering the tradition of shell ornaments in Neolithic Poland. *Journal of Archaeological Science: Reports*, *55*, 104476-. DOI: https://doi.org/10.1016/j.jasrep.2024.104476

Kyselý, R., Dobeš, M., & Svoboda, K. (2019). Drilled teeth and shell artefacts from a graveat Prague-Březiněves and a review of decorative artefacts made from animal material from Corded Ware culture in the Czech Republic. *Archaeological and Anthropological Sciences*, *11*(1), 87–131. https://doi.org/10.1007/s12520-017-0514-5

Kyselý, R., Limburský, P., Šumberová, R., Langová, M., & Ernée, M. (2020). Scapulae and phalanges as grave goods: a mystery from the Early Bronze Age. *Archaeological and Anthropological Sciences*, *12*(3), 72. DOI: https://doi-org/10.1007/s12520-019-01004-1

Lai, L., Pittoni, E., Goddard, E., Hollander, D., Medda, L., Tanda, G., & Rosaria Manunza, M. (2023). An isotopic investigation on diet and inequality: The human remains from Gannì (Sardinia, 3rd millennium BC). *Journal of Archaeological Science: Reports*, *51*, 104143-. DOI: https://doi.org/10.1016/j.jasrep.2023.104143

Lillios, K. T. (2019a). The Emergence of Ranked Societies:: The Late Copper Age to Early Bronze Age (2,500–1,500 BCE). In *The Archaeology of the Iberian Peninsula: From the Paleolithic to the Bronze Age* (pp. 227–292). Cambridge University Press.

Lillios, K. T. (2019b). The Expansion of Interregional Contacts:: The Late Neolithic and Early Copper Age (3,500–2,500 BCE). In *The Archaeology of the Iberian Peninsula: From the Paleolithic to the Bronze Age* (pp. 171–226). Cambridge University Press.

Makarowicz, P. (2015). Personal identity and social structure of Bell Beakers: the upper basins of the Oder and Vistula rivers. In M. Pilar Prieto Martínez & L. Salanova (Eds.), *The Bell Beaker Transition in Europe: Mobility and Local Evolution During the 3rd Millennium BC*, pp. 15-27. Oxbow Books.

Mallory, J. P. (2023). From the Steppe to Ireland: The Impact of aDNA Research. In K. Kristiansen, G. Kroonen, & E. Willerslev (Eds.), *The Indo-European Puzzle Revisited: Integrating Archaeology, Genetics, and Linguistics* (pp. 129–145). Cambridge University Press.

Mittnik, A., Massy, K., Knipper, C., Wittenborn, F., Friedrich, R., Pfrengle, S., Burri, M., Carlichi-Witjes, N., Deeg, H., Furtwängler, A., Harbeck, M., von Heyking, K., Kociumaka, C., Kucukkalipci, I., Lindauer, S., Metz, S., Staskiewicz, A., Thiel, A., Wahl, J., ... Krause, J. (2019). Kinship-based social inequality in Bronze Age Europe. *Science (American Association for the Advancement of Science)*, 366(6466), 731–734. DOI: https://doi.org/10.1126/science.aax6219

Monroy Kuhn, J. M., Jakobsson, M., & Günther, T. (2018). Estimating genetic kin relationships in prehistoric populations. *PLOS ONE*, *13*(4), e0-e0195491. DOI: https://doi.org/10.1371/journal.pone.0195491

Nordqvist, K., & Heyd, V. (2020). The Forgotten Child of the Wider Corded Ware Family: Russian Fatyanovo Culture in Context. *Proceedings of the Prehistoric Society*, *86*, 65–93. DOI: https://doi.org/10.1017/ppr.2020.9

Ochir-Goryaeva, M. A., Kornienko, I. V., Faleeva, T. G., Aramova, O. Y., Makhotkin, M. A., Kekeev, E. A., Burataev, E. G., Kukanova, V. V., Sidorenko, Y. S., Chartier, D. R., Schurr, T. G., & Tatarinova, T. V. (2021). Ancestry and identity in Bronze Age Catacomb culture burials: A meta-tale of graves, skeletons, and DNA. *Journal of Archaeological Science: Reports*, *37*, 102894-. DOI: https://doi.org/10.1016/j.jasrep.2021.102894

Olerud, L. (2021). Reassessing the Gender Ideology of the Supra-Regional Corded Ware Culture. *Kleos Amsterdam Bulletin of Ancient Studies and Archaeology*, *4*, 10-42.

Olsen, B. A. (2023). Marriage Strategies and Fosterage among the Indo-Europeans: A Linguistic Perspective. In K. Kristiansen, G. Kroonen, & E. Willerslev (Eds.), *The Indo-European Puzzle Revisited: Integrating Archaeology, Genetics, and Linguistics* (pp. 296–302). DOI: https://doi.org/10.1017/9781009261753.027

Paladin, A., Zingale, S., Croze, M., Marzoli, C., Tecchiati, U., Zink, A., & Coia, V. (2023). Archaeological questions and genetic answers: Male paternal kinship in a copper age multiple burial from the eastern Italian Alps. *Journal of Archaeological Science: Reports*, *50*, 104103-. DOI: https://doi.org/10.1016/j.jasrep.2023.104103

Papac, L., Ernée, M., Dobeš, M., Langová, M., Rohrlach, A. B., Aron, F., Neumann, G. U., Spyrou, M. A., Rohland, N., Velemínský, P., Kuna, M., Brzobohatá, H., Culleton, B., Daněček, D., Danielisová, A., Dobisíková, M., Hložek, J., Kennett, D. J., Klementová, J., ... Haak, W. (2021). Dynamic changes in genomic and social structures in third millennium BCE central Europe. *Science Advances*, *7*(35). DOI: https://doi.org/10.1126/sciadv.abi6941

Pape, E., & Ialongo, N. (2024). Error or Minority? The Identification of Non-binary Gender in Prehistoric Burials in Central Europe. *Cambridge Archaeological Journal*, *34*(1), 43–63. DOI: https://doi.org/10.1017/S0959774323000082

Parker Pearson, M., Chamberlain, A., Jay, M., Richards, M., Sheridan, A., Curtis, N., ... Wilkin, N. (2016). Beaker people in Britain: migration, mobility and diet. *Antiquity*, *90*(351), 620–637. DOI: https://doi.org/10.15184/aqy.2016.72

Peška, J., & Štelcl, J. (2023). Results of micrometallographic analysis of metallworking tools in graves of metallurgists in Moravia/Czech Republic. *Archaeometry*, 65(4), 771–797. DOI: https://doi.org/10.1111/arcm.12843

Pospieszny, Ł., Sobkowiak-Tabaka, I., Price, T. D., Frei, K. M., Hildebrandt-Radke, I., Kowalewska-Marszałek, H., Krenz-Niedbała, M., Osypińska, M., Stróżyk, M., & Winiarska-Kabacińska, M. (2015). Remains of a late Neolithic barrow at Kruszyn. A glimpse of ritual and everyday life in early Corded Ware societies of the Polish Lowland. *Praehistorische Zeitschrift*, *90*(1), 185–213. DOI: https://doi.org/10.1515/pz-2015-0009

Pronk, T. (2023). Mobility, Kinship, and Marriage in Indo-European Society. In K. Kristiansen, G. Kroonen, & E. Willerslev (Eds.), *The Indo-European Puzzle Revisited: Integrating Archaeology, Genetics*, *and Linguistics* (pp. 289–295). Cambridge University Press. DOI: https://doi.org/10.1017/9781009261753.026

Puster, K. (2022). The Bell Beaker Phenomenon in the Southern Upper Rhine Valley: A Presentation of Old and New Excavated Graves of the South Baden Group in Germany. In C. Abegg, F. Cousseau, & D.

Carloni (Eds.), *The Bell Beaker Culture in All its Forms: Proceedings of the 22nd Meeting of "Archéologie et Gobelets" 2021 (Geneva, Switzerland)*, pp. 163-176. Archaeopress Publishing.

Rebay-Salisbury, K., Bortel, P., Janker, L., Bas, M., Pany-Kucera, D., Salisbury, R. B., Gerner, C., & Kanz, F. (2022). Gendered burial practices of early Bronze Age children align with peptide-based sex identification: A case study from Franzhausen I, Austria. *Journal of Archaeological Science*, *139*, 105549-. DOI: https://doi.org/10.1016/j.jas.2022.105549

Ryan-Despraz, J. (2022). Practice and Prestige: an exploration of Neolithic warfare, Bell Beaker archery, and social stratification from an anthropological perspective. Archaeopress Publishing.

Saag, L., Varul, L., Scheib, C. L., Stenderup, J., Allentoft, M. E., Saag, L., Pagani, L., Reidla, M., Tambets, K., Metspalu, E., Kriiska, A., Willerslev, E., Kivisild, T., & Metspalu, M. (2017). Extensive Farming in Estonia Started through a Sex-Biased Migration from the Steppe. *Current Biology*, *27*(14), 2185-2193.e6. DOI: https://doi.org/10.1016/j.cub.2017.06.022

Schroeder, H., Margaryan, A., Szmyt, M., Theulot, B., Włodarczak, P., Rasmussen, S., Gopalakrishnan, S., Szczepanek, A., Konopka, T., Jensen, T. Z. T., Witkowska, B., Wilk, S., Przybyła, M. M., Pospieszny, Ł., Sjögren, K.-G., Belka, Z., Olsen, J., Kristiansen, K., Willerslev, E., ... Allentoft, M. E. (2019). Unraveling ancestry, kinship, and violence in a Late Neolithic mass grave. *PNAS*, *116*(22), 10705–10710. DOI: https://doi.org/10.1073/pnas.1820210116

Scorrano, G., Yediay, F. E., Pinotti, T., Feizabadifarahani, M., & Kristiansen, K. (2021). The genetic and cultural impact of the Steppe migration into Europe. *Annals of Human Biology*, *48*(3), 223–233. DOI: https://doi.org/10.1080/03014460.2021.1942984

Siebke, I., Furtwängler, A., Steuri, N., Hafner, A., Ramstein, M., Krause, J., & Lösch, S. (2020). Crops vs. animals: regional differences in subsistence strategies of Swiss Neolithic farmers revealed by stable isotopes. *Archaeological and Anthropological Sciences*, *12*(10). DOI: https://doi.org/10.1007/s12520-020-01122-1

Sjögren, K.-G., Price, T. D., & Kristiansen, K. (2016). Diet and Mobility in the Corded Ware of Central Europe. *PloS One*, *11*(5), e0155083–e0155083. DOI: https://doi.org/10.1371/journal.pone.0155083

Sjögren, K.-G., Olalde, I., Carver, S., Allentoft, M. E., Knowles, T., Kroonen, G., Pike, A. W. G., Schröter, P., Brown, K. A., Brown, K. R., Harrison, R. J., Bertemes, F., Reich, D., Kristiansen, K., & Heyd, V. (2020). Kinship and social organization in Copper Age Europe. A cross-disciplinary analysis of archaeology, DNA, isotopes, and anthropology from two Bell Beaker cemeteries. *PLoS One*, *15*(11), e0241278–e0241278. DOI: https://doi.org/10.1371/journal.pone.0241278

Soriano, I., Herrero-Corral, A. M., Garrido-Pena, R., & Majó, T. (2021). Sex/gender system and social hierarchization in Bell Beaker burials from Iberia. *Journal of Anthropological Archaeology*, *64*, 101335. DOI: https://doi.org/10.1016/j.jaa.2021.101335

Spatzier, A., Stecher, M., & Alt, K. W. (2017). The honoured and the sacrificed?: Gender and violence at a sanctuary of the late 3rd millennium BC in Central Germany. In U. Matić & B. Jensen (Eds.), *Archaeologies of Gender and Violence* (1st ed., pp. 45–76). Oxbow Books. DOI: https://doi.org/10.2307/j.ctvh1dp2p.7

Stockhammer, P. W. (2023). Fostering Women and Mobile Children in Final Neolithic and Early Bronze Age Central Europe. In K. Kristiansen, G. Kroonen, & E. Willerslev (Eds.), *The Indo-European Puzzle Revisited: Integrating Archaeology, Genetics, and Linguistics* (pp. 303–307). Cambridge University Press. DOI: https://doi.org/10.1017/9781009261753.028

Szczepanek, A., Belka, Z., Jarosz, P., Pospieszny, Ł., Dopieralska, J., Frei, K. M., Rauba-Bukowska, A., Werens, K., Górski, J., Hozer, M., Mazurek, M., & Włodarczak, P. (2018). Understanding Final Neolithic communities in south-eastern Poland: New insights on diet and mobility from isotopic data. *PloS One*, *13*(12), e0207748–e0207748. DOI: https://doi.org/10.1371/journal.pone.0207748

Turek, J. (2015). Bell Beaker stone wrist-guards as symbolic male ornament: the significance of ceremonial warfare in 3rd millennium BC Central Europe. In M. Pilar Prieto Martínez & L. Salanova (Eds.)., *The Bell Beaker Transition in Europe: Mobility and Local Evolution During the 3rd Millennium BC*, pp. 28-40. Oxbow Books.

Turek, J. (2019). Copper Age transformations in gender identities. An Essay. In Koch, J. K., & Kirleis, W. (Eds.), *Gender Transformations in Prehistoric and Archaic Societies* (1st ed., Vol. 6), pp. 205-220. Sidestone Press.

Turek, J. (2023). The social meaning of multiple burials in the Corded Ware culture. *Přehled výzkumů*, 64, 77-83. DOI: https://doi.org/10.47382/pv0641-08

Vander Linden, M. (2015). Bell Beaker Pottery and Society. In C. Fowler, J, Harding, & D. Hofmann (Eds.), *The Oxford Handbook of Neolithic Europe*, pp. 605-620. DOI: https://doi.org/10.1093/oxfordhb/9780199545841.013.031

Vander Linden, M. (2016). Population history in third-millennium-BC Europe: assessing the contribution of genetics. *World Archaeology*, *48*(5), 714–728. DOI: https://doi.org/10.1080/00438243.2016.1209124

Vander Linden, M. (2024). *The Bell Beaker Phenomenon in Europe: A Harmony of Difference*. Cambridge University Press. DOI: https://doi.org/10.1017/9781009496872

Varul, L., Galeev, R. M., Malytina, A. A., Tõrv, M., Vasilyev, S. V., Lõugas, L., & Kriiska, A. (2019). Complex mortuary treatment of a Corded Ware Culture individual from the Eastern Baltic: A case study of a secondary deposit in Sope, Estonia. *Journal of Archaeological Science: Reports*, *24*, 463–472. DOI: https://doi.org/10.1016/j.jasrep.2019.02.003

Vierzig, A. (2020). Anthropomorphic Stelae of the 4th and 3rd Millennia Between the Caucasus and the Atlantic Ocean. *Proceedings of the Prehistoric Society*, 86, 111–137. DOI: https://doi.org/10.1017/ppr.2020.12

Villalba-Mouco, V., Oliart, C., Rihuete-Herrada, C., Childebayeva, A., Rohrlach, A. B., Fregeiro, M. I., Celdrán Beltrán, E., Velasco-Felipe, C., Aron, F., Himmel, M., Freund, C., Alt, K. W., Salazar-García, D. C., García Atiénzar, G., de Miguel Ibáñez, M. P., Hernández Pérez, M. S., Barciela, V., Romero, A., Ponce, J., ... Haak, W. (2021). Genomic transformation and social organization during the Copper Age-Bronze Age transition in southern Iberia. *Science Advances*, *7*(47), eabi7038-. DOI: https://doi.org/10.1126/sciadv.abi7038

Visser, M. (2021a). Burying things with the dead: Creating an image. In M. Visser, *A Completely Normal Practice* (pp. 217-233). Sidestone Press.

Visser, M. (2021b). Selective deposition before 2000 BC. In M. Visser, *A Completely Normal Practice* (pp. 49-76). Sidestone Press.

Zedda, N., Meheux, K., Blöcher, J., Diekmann, Y., Gorelik, A. V., Kalle, M., Klein, K., Titze, A.-L., Winkelbach, L., Naish, E., Brou, L., Valotteau, F., Le Brun-Ricalens, F., Burger, J., & Brami, M. (2023). Biological and substitute parents in Beaker period adult–child graves. *Scientific Reports*, *13*(1), 18765–18765. DOI: https://doi.org/10.1038/s41598-023-45612-3

Zeng, T. C., Aw, A. J., & Feldman, & M. W. (2018). Cultural hitchhiking and competition between patrilineal kin groups explain the post-Neolithic Y-chromosome bottleneck. *Nature Communications*, 9(1), 2077–12. DOI: https://doi.org/10.1038/s41467-018-04375-6

Appendix 3: Assessment of the Dataset

	Distinction sex and gender named	sex and	Sex/gender as historically placed	Defines sex/gender categories	Sex/gender as intersecting	More than two sex/gender categories	No sex/gender categories		Only biological sex		Deterministic narrative	and	and absent/female	Dominant/ male and submissive/fe male dualism	dualisms to other aspects	Generalizatio ns sex/gender		Social vs. analytical constructs	Limited to the theoretical		Osteological remains		Other than osteo remains and grave goods		Gender Theory Alignment Index
Almela et al., 2015	No	No	No	No	No	No	No 1	No	No	Yes	Yes	No	No	Yes	Yes	No	Yes	No	No	Yes	Yes	No	No 1	No	15
Frinculeasa et al., 2015	No			No	No	No	No 1	No							No	No	Yes	No	No			No	No 1	No	18
Garrido-Pena & Herrero-Corral, 2015	No			No			No 1	No			Yes	No		Yes	No	Yes		No	No			No		Yes	15
Kristiansen, 2015	No .																	No						Yes	9
Makarowicz, 2015	No																	No						No	12
Pospieszny et al., 2015	No																							Yes	15
Turek, 2015	No.				Yes							Yes		Yes				Yes			No			Yes	8 19
Parker Pearson et al., 2016	No.																	No No	No No					No No	26
Sjörgen et al., 2016 Vander Linden, 2016	No.																	No	No No					No	19
Austvoll, 2017	No																	No						No	14
Bourgeois & Kroon, 2017	No				No							Yes		Yes				Yes			No			Yes	4
Copat et al., 2017	No																	No						No	21
Goldberg et al., 2017	No													Yes				No						No	10
Knipper et al., 2017	No	No																						Yes	23
Kristiansen et al., 2017	No	No			No									Yes				Yes			No			Yes	4
Saag et al., 2017	No			No	No													No		Yes			No 1	No	18
Spatzier et al., 2017	Yes				Yes							No						No		No				No	19
Carlin, 2018	No																	No						No	20
Diaz-Zorita Bonilla et al., 2018	No																	No						No	16
Fernández-Crespo et al., 2018	No .																	No						No	16
Haughton, 2018	Yes																	Yes						No	27
Juras et al., 2018	INO .													No				No No						Yes	15
Monroy Kuhn et al., 2018	No.																	No No						No No	12
Szczepanek et al., 2018	No				No Vos			No No				No Yes						No Yes	No No		Yes Yes			No Yes	9
Zeng et al., 2018 Baron et al., 2019	No				Yes No							Yes		Yes				Yes	No No					Yes No	12
Cintas-Peña & García Sanjuán, 2019	Ves																	Yes	No No					No No	28
Frieman & Hofmann, 2019	No																	No	Yes					No	20
Frieman et al., 2019	Yes																	No	Yes					No	34
Fernández-Crespo et al., 2019	No																	No						No	17
Furholt, 2019	No																	No						No	17
Kuselý et al., 2019	No																	No			Yes			Yes	15
Lillios, 2019a	No						No		No :	Yes	Yes	Yes		Yes	No	No	Yes	No	No	Yes	No			No	17
Lillios, 2019b	No				Yes			No	No :	Yes							Yes	No				No	No 1	No	20
Mittnik et al., 2019	No				Yes									No				No	No		Yes			No	26
Schroeder et al., 2019																		No						No	11
Turek, 2019	Yes											Yes						No						No	30
Varul et al., 2019	No .													No				No	No					Yes	18
Carlin, 2020	No.																	No	No					No	18
Cintas-Peña & Herrero-Corral, 2020	No.																	Yes No	Yes					No No	19 16
Clément, 2020 Frinculeasa et al., 2020	No																	No No						No No	9
Frinculeasa et al., 2020 Furholt, 2020	No.											Yes Yes						No						No No	15
Furnoit, 2020 Furtwängler et al., 2020	No													No No				Yes						No _	15 16
González-Rabanal et al., 2020	No																	No						No	19
Kern, 2020	No				Yes									Yes				Yes	No					No	24
Knipper et al., 2020	No											No						No	No					No	16
Kuselý, 2020	No																	No	No	Yes				No	18
Nordqvist & Heyd, 2020	No	No	No	No	Yes	No						Yes	No	Yes			No	No	No		No		No 1	No	18
Siebke et al., 2020	No	No	No			No										No	Yes	No	No					No	14
Sjörgen et al., 2020	No			No				Yes			Yes	Yes	No	Yes			No	Yes	No	No	Yes	No	No 1	No	13
Vierzig, 2020	No			No		No			No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	No	No		Yes 1	No	11
Armit & Reich, 2021	No																	No						No	19
Booth et al., 2021	No I	No	No	No	No	No	No 1	No	No	Yes	Yes	No	No	Yes	No	No	Yes	No	No	Yes	Yes	No	No I	No	17

	Distinction sex and gender named	Distinction sex and gender used	Sex/gender as historically placed	Defines sex/gender categories	Sex/gender as intersecting	More than two sex/gender categories	No sex/gender categories	Role of children	Only biological sex	Binary thinking	Deterministic narrative	Active/male and passive/femal e dualism	Present/male and absent/female dualism	Dominant/ male and submissive/fe male dualism	other aspects	Generalizatio ns sex/gender		Social vs. analytical constructs	Limited to the theoretical	Equal importance male and female	Osteological remains	Grave goods	Other than osteo remains and grave goods	Focus on one sex/gender category	Gender Theory Alignment Index
Brück, 2021	No	No	Yes	No	Yes	No	No	Yes	No	Yes	No	No	No	No	No	No	Yes	No	No	Yes	Yes	No	Yes	No	29
Dolfini, 2021	No	No	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	13
Egfjord et al., 2021	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	No	No	No	No	Yes	No	No	Yes	Yes	Yes	No	No	17
Furholt, 2021	No	No	No	No	Yes	No	No	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	No	No	14
Haughton, 2021	No	No	Yes	No	Yes	No	No	Yes	No	Yes	Yes	No	No	No	No	No	Yes	No	No	Yes	Yes	No	No	No	25
Ochir-Goryaeva et al., 2021	No	No	No	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		No	No	No	Yes	No		Yes	7
Olerud, 2021		Yes	Yes	No		Yes	No	Yes		Yes		No	No	No	No	No	No	Yes	No	Yes	No	No		No	34
Papac et al., 2021		No	No	No	No	No	Yes	No		Yes		No	No	No	No	No	Yes	No	No	Yes	Yes	Yes	No	No	23
Scorrano et al., 2021		No	No	No	No	No	No	No		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	No		No	6
Soriano et al., 2021		Yes	Yes	Yes		Yes	No	Yes		No		No	No	No	No	No	No	Yes	No	Yes	Yes	Yes		No	40
Visser, 2021a		No	No	No		No		No		Yes		No	Yes	No	Yes	Yes		No	No	No	No	Yes		Yes	16
Visser, 2021b		No	No	No		No		No		Yes		No	Yes	No	No	Yes		No	No	No	No	Yes		No	12
Cintas-Peña & García Sanjuán, 2022		No	Yes	No	No	Yes		No		Yes			No	Yes	No	Yes	No	Yes	No	Yes	Yes	No		No	23
Dulias et al., 2022		No	No	No	No	No		No		Yes		Yes	Yes	Yes	No	No		No	No	No	Yes	No	No	Yes	12
Farval & Nicolas, 2022		No	No	No		No		No		Yes		No	No	No	No	No		No	No	Yes	Yes	Yes		No	19
Fitzpatrick, 2022		No	No	No	Yes	No	No	Yes		Yes		No	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	18
Heyd, 2022		No	No	No		No	Yes	No		Yes			No	No	No	No	Yes	Yes	No	Yes	Yes	Yes		No	20
Kristiansen, 2022		No	No	No		No		No		Yes			Yes	Yes	Yes	Yes		No	No	No	Yes	Yes	No	No	12
Puster, 2022		Yes	No	No		No		No		Yes			No	Yes	No	No		No	No	Yes	Yes	Yes		No	24
Ryan-Despraz, 2022		No	No	No		No	No	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	No	No	14
Rebay-Salisbury et al., 2022		Yes	Yes	Yes	Yes	Yes	No	Yes		No	No	Yes	No	No	No	No		No	No	Yes	Yes	Yes		No	38
Villalba-Mouco et al., 2022	No	No	No	No	No	Yes		No		Yes			No	Yes	Yes	No		No	No	No	Yes	No	No	No	15
Bourgeois & Kroon, 2023	No	No	No	No	Yes	No		No		Yes		Yes	Yes	No	No	Yes		No	No	No	No	Yes		No	13
Cintas-Peña et al., 2023a	Yes	No	No	Yes		No		No		Yes		No	No	No	No	No	No	Yes	No	Yes	Yes	Yes		No	24
Cintas-Peña et al., 2023b	Yes	No	Yes	Yes		Yes		No		Yes		No	No	No	No	No		No	No	No	Yes	No		Yes	28
Diaz-Navarro et al., 2023	NO No	No No	No	No	Yes	No No		No		Yes		Yes	No No	No	Yes	Yes	Yes	Yes N-	No	Yes	Yes	No	No No	Yes	12
Drtikolová Kaupová et al., 2023	No	No No	No No	No No		No No		No		Yes		No	No		No	No No		No No	No No	Yes	Yes	Yes	No No	No	19
Dunne et al., 2023	No.	No No	No No	No No		No No		No No		Yes		No	Yes	Yes No	Yes	No No		No No	No No	Yes	No	No	No No	No	14 18
Haak et al., 2023 Haughton, 2023		No Yes	No Van	No Yes		No Yes	No Yes	No Yes		Yes No		Yes No	Yes No	No	No	No No	Yes No	No	No Yes	Yes	Yes No	Yes No	No Yes	No No	18 37
Kaňáková & Peška, 2023		No	Yes No	No		No		Y es No		Yes		No	Yes	Yes	No Yes			Yes	No	Yes				Yes	14
Lai et al., 2023	No	No	No	No	Yes No	No		No		Yes		No	No	No	No	No No		No No	No	Yes Yes	Yes Yes	Yes No		No	18
Mallory, 2023	No	No	No	No		No		No		Yes			Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	No		No	7
Olsen, 2023	No	No	No	No	No Yes	No	No	Yes		Yes		Yes	Yes	Yes	Yes	Yes		No	No	No	No	No		No	14
Paladin et al., 2023	No	No	No	No	No	No		No		Yes			No	No	No	No		No	No	Yes	Yes	No		Yes	17
Peška & Štelci, 2023	No	No	No	No	Yes	No	No	Yes		Yes		Yes	Yes	Yes	Yes	No		No	No	Yes	No	Yes	No	Yes	16
Pronk, 2023	No	No	No	No		No	No	Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No		No	8
Stockhammer, 2023	No	No	No	No	Yes	No	No	Yes		Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	No	No	Yes	14
Turek, 2023	No	No	No	No		No	No	Yes		Yes		No	No	Yes	No	No	No	Yes	No No	Yes	Yes	Yes		No	20
Zedda et al., 2023	No	No	No	No		No	No	Yes		Yes	Yes	Yes	No	No	Yes	No		No	No	Yes	Yes	Yes		No	20
Kurzawska & Sobkowiak-Tabaka, 2024	No	No	No	No		No	No	No		Yes		No	No	No	No	No		No	No	Yes	No	Yes	No	No	21
Pape & Ialongo, 2024		Yes	Yes	Yes		Yes		No		Yes		No	No	No	No	No		No	No	Yes	Yes	Yes	No	No	34
Vander Linden, 2024		No	Yes	No	No	No	No	No		Yes		No	No	No	No	No		No	No	Yes	Yes	Yes		No	26
valuet Linuen, 2027	140	110	105	110	140	140	140	140	110	1 03	110	140	110	140	110	110	140	110	140	163	163	165	110	110	20