

Towards responsible archaeology

A critical look at the literature and public discourse surrounding two controversial burials

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Abstract

What can grave goods and bones truly tell us about the identity of those whose voices have been lost to time? What do archaeologists owe to these individuals, and to today's public?

When grave Bj. 581 was excavated in Birka, Sweden, in the late 19th century, its occupant was assumed to have been a skilled, high-ranking male Viking warrior. In 2017, a team of researchers led by Hedenstierna-Jonson conducted an osteological analysis on the remains collected from Bj. 581, and found them to have belonged to an individual who was biologically female. In 1968, when the Suontaka burial, in Finland, was excavated, archaeologists were baffled to find two swords (one hiltless) next to a skeleton donning feminine clothes and jewelry, thus assuming them to be a woman. In 2022, Moilanen et al. published a paper in which they concluded that the individual buried at Suontaka had XXY chromosomes (Klinefelter syndrome), and that the arrangement of grave goods can be interpreted as indicative of a gender presentation outside the male-female binary. Both articles have since been at the center of critiques, by other academics as well as by the public, and have been accused of "rewriting history" and applying contemporary ideologies to the past.

In the present literature review, the fields of gender archaeology and public archaeology lay the foundations upon which both the literature surrounding these two controversial burials and the public's response to newer interpretations are critically compiled and examined. Analysis of the literature surrounding the Birka grave Bj. 581 highlighted how neither the individual's gender identity as male nor their status as a high-ranking warrior were challenged until the 2017 osteological analysis conducted by Hedenstierna-Jonson et al. In the case of the Suontaka burial, the gender of the individual buried in the grave was similarly never questioned to be anything other than female prior to the results of Moilanen et al.'s aDNA analysis, which revealed the individual to have been biologically male, albeit with a chromosomal anomaly (XXY). Furthermore, the issue of the ownership of the swords found in the Suontaka burial was approached with confusion, leading past archaeologists to speculate on the presence of a lost male body or grave in the vicinity, until Moilanen et al.'s reinterpretation of the burial as belonging to someone whose gender identity was neither male nor female. These changes in interpretations, brought about by technological advancements in the field as well as by new understanding of sex and gender, highlight the necessity for archaeologists to constantly challenge their own biases as well as those of previous researchers. Finally, the analysis of the public discourse conducted in this review further revealed the unwilling position of archaeological research and its implications in politically charged conversations, in this case specifically within the context of forms of oppression rooted in gender essentialism. The findings yielded by this literature review emphasize the responsibility held by those involved in archaeological research in the current sociopolitical landscape.

Key words: Birka, Finnish Bronze Age, gender archaeology, gender essentialism, literature review, public archaeology, queer archaeology, Scandinavian archaeology, Suontaka, Viking Age

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1 Introduction

Right-wing, populist, conservative parties worldwide have been noted to have one popular talking point in common: gender (Enloe et al., 2019; Graff & Korolczuk, 2024; Grzebalska, 2016; Kováts, 2021). According to a recent article by Graff & Korolczuk (2024), the term “gender” has been appropriated, reshaped, and re-signified by right-wing politicians on a global scale, using “anti-gender” rhetoric to fight back against globalizing forces and strengthen nationalistic sentiments rooted in sexism, patriarchal value, and xenophobia. Overall, conservative politicians oppose what they sometimes refer to as “gender ideology”, the idea according to which one’s gender identity is not inherently dependent on one’s sex, but is instead a social construct, and claim it to be unscientific, and an attack on the cultural value of their nations from foreign, globalized forces (Enloe et al., 2019; Graff & Korolczuk, 2024; Grzebalska, 2016; Kováts, 2021). Such hostile climate has resulted in rising violence towards transgender individuals on a global scale (Hansard, 2023; Stanley, 2021). A glaring example of such “anti-gender” politics being actualized can be seen in a recent executive order issued by newly appointed US President Donald Trump on January 20th, 2025. The order is titled “Defending Women from Gender Ideology Extremism and Restoring Biological Truth to the Federal Government” (Exec. Order No. 14168, 2025); section 2 of this executive order outlines a “biological” definition of sex, claiming that “*Female* means a person belonging, at conception, to the sex that produces the large reproductive cell; *Male* means a person belonging, at conception, to the sex that produces the small reproductive cell” (Exec. Order No. 14168, 2025, Section 2, d-e).

The language used in the executive order finds its roots in gender essentialism, a theory that attributes innate and immutable qualities to two recognized sexes, male and female (Heyman & Giles, 2006). This view has been recognized as potentially harmful for several reasons; one central issue is the potential for these essentialist views to fall into the trap of the Pygmalion effect, documented in a landmark study by Rosenthal & Jacobson (1968), according to which expectations can become self-fulfilling prophecies. Another key criticism towards gender essentialism lies in the fact that this view can be used to justify social inequalities by attempting to naturalize them (Heyman & Giles, 2006). Gender essentialism has been historically used to justify the oppression of women; in her foundational feminist text, “The Second Sex” (1949), Simone de Beauvoir states that, “One is not born, but becomes a woman”, claiming that men have othered women in society, and have used essentialist stereotypes dating back to Aristotle

to justify patriarchal systems of oppression. Feminist theorist Monique Wittig (1980) has echoed this sentiment, claiming that gender essentialism is founded in sexism, homophobia, and upholds patriarchal oppression.

Because gender essentialism is rooted in an understanding of human nature as dictated by a simplistic view of biology, archaeology as a discipline finds itself uncomfortably positioned as an involuntary avenue to either perpetrate or dissipate gender essentialist views. An infamous example is the notion that in prehistoric hunter-gatherer societies men hunted and women gathered; while this understanding is now considered outdated and not based on factual archaeological evidence (Anderson et al., 2023; Coltofean-Arizancu et al., 2021), children's history textbooks all over the world report this theory as a historical fact (Burt, 1987; Sorce, 2024). This is alarming, as it shows just how crucial it is for archaeologists to constantly be aware and critical of the theories we formulate when studying the past. Consequently, in a political climate where gender essentialist views are becoming more prominent on a global scale, furthering gender-based oppression, archaeological research that looks at our current understanding of sex and gender from a critical standpoint is vital.

In this literature review, existing research on two famous gravesites – Birka grave Bj 581, in Sweden, and the Suontaka burial, located in Finland – is compiled and analyzed through a critical lens. This literature review aims to explore 1. how the current understanding concerning the gender of the two buried individuals has changed since initial archaeological research on the graves, and 2. the importance of this changed perspective in the current political climate in Europe. Moreover, I will verify whether current literature on these two burials explores the concept of gender from a critical standpoint. Overall, the aim of this literature review is to showcase how archaeological understandings of past gender roles have a real impact on today's world, creating narratives that have persisted decades and can be used to justify sexist and transphobic systems of oppression.

2 Methodology

This literature review was designed with a *qualitative* approach, intended as the in-depth inquiry method preoccupied with descriptive data. A qualitative method was chosen as it is useful in exploring complex phenomena that cannot be properly quantified numerically, in which case a quantitative analysis approach is recommended (Denzin & Lincoln, 2018). An important focal point in this review is on how the discussion surrounding gender in the context of the Birka grave Bj. 581 and the Suontaka burial has developed. Consequently, the literature used in this thesis has been organized with a *chronological* approach. In research, a chronological approach in the context of literature reviews is defined as a means to organize data chronologically, typically with the goal of investigating how studies, debates or theories have developed and dealt with a specific topic or idea throughout the years (Charlesworth Author Services, 2022).

Finally, the literature surrounding the two burials is analyzed through a *critical* lens regarding the discussion surrounding the problematics that may arise in the context of public archaeology, and the responsibility and impact that archaeological research can have on the public opinion.

2.1 Data collection

The literature on the two burials that was analyzed in this thesis was obtained from Google Scholar, Mendeley, Web of Science, JSTOR, and Volter (the official library database of the University of Turku). Part of the literature on the two gravesites was found on the aforementioned databases by inserting the key words “Suontaka burial”, “Birka Bj 581”, “Suontaka archaeology”, “Birka archaeology”, “Suontaka burial gender”, “Birka gender”. This method was useful in gathering recent international literature on the two burials. However, this method did not prove successful when searching for older sources, such as the original excavation reports. In these cases, I made use of the bibliography found in more recent literature on the topics, especially the sources used by Hedenstierna-Jonson et al. (2017), Moilanen et al. (2022), and Price et al. (2019) when discussing previous interpretations of the sites and initial excavation reports. I then consulted these older sources in person when available and did not include sources I could not access directly. Overall, the literature sample consisted mainly of digital sources, with some being consulted physically at the University library when not available online, e.g., Arbman (1940; 1943), Keskitalo (1969), or Nylén (1973). Because this literature

review is structured according to a chronological approach, the selected literature spans over decades, and is not limited to recent research only. The publication languages of the articles and books was mainly English; however, some of the more dated sources were in Swedish or Finnish, with one source (Arbman, 1940; 1943) being in German.

2.2 Limitations

As mentioned, part of the literature was in Finnish, Swedish, or German. This posed as a serious limitation, especially in the case of Swedish and German, two languages that I do not speak, unlike Finnish, which I can speak at an upper-intermediate level. Because of the language barrier, literature in languages outside of English was limited only to essential data. To translate the texts from Swedish and German, I made use of online translation tools and physical dictionaries. The data was further limited by availability; for example, despite finding a digital archive with scanned documents of some of Stolpe's original notes from his excavations at Birka¹, I was unable to trace a copy of his 1889 report "*Ett och annat på Björkö*", which is mentioned in other articles discussing Bj. 581, e.g., Hedenstierna-Jonson et al. (2017).

¹ Link: <https://historiska.se/birka/digitala-resurser/arkivmaterial/hjalmar-stolpes-gravdagbocker/>

3 Theoretical background

The theoretical background of the present review is centered around three main areas of interest: 1. essentialist reasoning and its problematics, 2. gender archaeology and the issue of interpreting gender identities in the past, and 3. the potential influence that archaeology as a discipline can have on the mainstream public, in this case specifically when it comes to the topic of gender identity.

3.1 Essentialism

In a philosophical context, the term *essentialism* broadly refers to the theory which ascribes the status of ultimate reality to the *essence* embodied in all that is perceptible to the senses (Merriam-Webster). Essentialism stands at the other end of the spectrum from *constructivism*, the theory according to which everything is historically constructed within societies and social groups (Thatcher, 2011). In western philosophy, essentialism can be traced back to classical Greece, specifically to Plato and the world of “ideas”; overall, essentialist philosophers throughout history have argued, with some degree of variation, that all things hold an “essence”, an intrinsic *nature* understood as the necessary traits something cannot lose without ceasing to be itself, versus those traits that do not fundamentally describe it (Kurzweily et al., 2020). In other words, essentialism is the view that every object possesses a set of inherent and immutable attributes that are necessary to define its identity (Cartwright, 1968).

In this literature review, the concept of essentialism refers to the process of attributing groups of individuals to social categories with an ascribed essence *a priori*. Depending on the nature of the social categories in question, essentialism takes different forms, e.g., racial essentialism, religious essentialism, or cultural essentialism. As the focus of the present thesis is on gender, the type of essentialism that will be discussed is *gender essentialism*, which operated within the framework of the two recognized social category of “male” and “female”. In literature on the topic, the term *biological essentialism* is also sometimes used when discussing gender essentialism; this is because in both cases, biological differences amongst individuals who were assigned different sexes are at the basis of essentialist thinking. While I will mostly be using the term gender essentialism, I will also at times refer to biological essentialism when discussing broader biological differences related to one’s assigned sex at birth.

In psychology and social studies, essentialist reasoning as a whole has been pointed out as a questionable and potentially harmful approach to understanding and describing individuals; according to Heyman & Giles (2006), essentialist reasoning has the following flawed implications:

- **Essentialism can be used to justify oppression by attempting to naturalize it.** By claiming that certain categories of individuals possess certain characteristics on the basis of the social category they belong to (race, ethnicity, religious denomination, gender identity, sexual orientation, etc.), systems of oppression embedded in society can be explained as the natural state of society; this attitude absolves the oppressing groups from any responsibility, and solidifies these systems further, instead of kickstarting the process to dismantle them. In the context of gender essentialism, important figures in western philosophy and literature dating back to Classical Greece have put forth theories and arguments to explain gender differences from an essentialist perspective. From the advent of Christianity to the mid-nineteenth century, the gender binary was rationalized theologically; God created Adam and Eve, two sexes, with distinct qualities and purposes (Thatcher, 2011). Even after the Enlightenment and the push for the pursuit of scientific truth, essentialist reasonings persisted; according to pioneering psychologist Sandra Bem, “the biological accounts of male-female difference and male dominance that have emerged since the mid-nineteenth century have merely used the language of science, rather than the language of religion, to rationalize and legitimize the sexual status quo” (Bem, 1993, p. 6). An extreme consequence of biological essentialism can be seen in the form of eugenics, which has also emerged in the nineteenth century, and which has been historically used to deny the reproductive rights of disabled individuals, people of color, and other marginalized groups in western societies, as well as to naturalize ableist, racist, colorist, and sexist systems of oppression (Ajitha, 2008).

- **Essentialism can limit human potential.** In their pioneering 1965 experiment, psychologists Robert Rosenthal and Lenore Jacobson found that elementary school teachers subconsciously behave in ways that facilitate the success of those students they were told had great potential, regardless of whether this was actually the case (Rosenthal & Jacobson, 1968). While the study has since been criticized for its flawed instruments (Thorndike, 1968) and low replicability (Jussim & Harber, 2005) in the context of educational research, the idea that one’s expectations and biases unwillingly influence their reality, manifesting as self-fulfilling prophecies, is a phenomenon that takes many forms (e.g., the observer-expectancy effect, observer bias effect, and placebo/nocebo effects) and that has been widely documented in research since

Rosenthal & Jacobson's study. According to paleontologist Stephen Jay Gould, biological determinism, a form of essentialist thinking which he defined as the belief that "the social and economic differences between human groups – primarily races, classes, and sexes – arise from inherited, inborn distinctions and that society, in this sense, is an accurate reflection of biology" (Gould, 1981, p. 52), is a *theory of limits* that "takes the current status of groups as a measure of where they should and must be" (Gould, 1981, p. 28). Essentialist reasoning not only influences the range of choices an individual has in society, but also the range of choices they *consider* for themselves when they internalized essentialist beliefs about the social category they belong to (Heyman & Giles, 2006).

- **Essentialist reasoning can promote prejudice and intolerance.** Overall, essentialism is associated with faulty thinking patterns, such as the tendency to conflate sex and social circumstances (Heyman & Giles, 2006). This disregard for heterogeneity, agency and individuality can manifest in those who reason in essentialist ways as judgmental and punitive attitudes (Giles et al., 2008; Jayaratne et al., 2006; Mandalaywala et al., 2018; Peretz-Lange, 2021). In the context of gender, recent studies have shown that essentialist beliefs on gender positively correlate with prejudice and discrimination towards gender nonconforming and transgender individuals, even in children (Fine et al., 2023; Glazier et al., 2021). However, it is important to point out that in certain circumstances, essentialist reasoning can reduce discrimination; research on the topic has found that children's essentialist intuitions on social categories can in some cases promote prejudice, e.g., when it comes to race and gender identity, while in other cases these intuitions can mitigate prejudice development, e.g., in the case of weight, sexual orientation, incarceration status, and mental illness (Carvalho et al., 2021; Dunlea & Heiphetz, 2020; Horn, 2018; Peretz-Lange, 2021).

All in all, essentialist reasoning is not inherently socially harmful; however, even in the case where such reasoning mitigates prejudice, it does so on the basis of rigid and often simplistic views of social categories dictated by *causal discounting* (Peretz-Lange, 2021). Thus, while not always necessarily resulting in negative consequences, essentialist reasoning must be challenged critically, and the mechanisms that drive prejudice must be understood from many different angles (Davoodi et al., 2020; Peretz-Lange, 2021).

3.2 Gender archaeology and the past

Awareness of the aforementioned problematics linked to essentialist thinking is at the core of gender archaeology, defined as the branch of archaeology that aims to give agency and voice to those who have been forgotten and marginalized in the past “by offering a *less essentialist* understanding of the past” (Gutsmiedl-Schümann, 2021, p. 46). A cardinal point at the basis of gender archaeology is the theory that previous archaeologists (in particular those who worked before the second half of the twentieth century) lacked the knowledge and tools to, for example, differentiate between sex and gender, and their implicit essentialist biases led to sometimes unfounded assumptions on e.g., the division of labor between the sexes, social roles based on gender, attitudes towards sexuality and gender identities outside the gender binary (Brumfiel & Robin, 2008). Effectively, both sex and gender are complex constructs subject to biological, cultural, and environmental influences.

Sex. While the binary “male and female” is often presented as a biological reality based on the unequivocal biological existence of the “female” and “male” sex, the reality of human sexual dimorphism is much more complex than that, and presents unique challenges e.g., in comparative studies with other mammals. For example, in most primates, the bigger the species, the more accentuated the dimorphism; however, humans evade this rule (Van Arsdale, 2012). Another issue in defining clear differences in human sexual dimorphism lies in the effects of environmental and behavioral factors; for example, the size and shape of a human pelvis, the bone most often used to determine a skeleton’s sex, can be altered based on the individual’s activity levels and diet (Betti et al., 2013; Walker, 2005). Consequently, in the recent years a number of authors have started to argue in favor of a sex continuum, as opposed to a sexual binary (Fausto-Sterling, 1993; Fausto-Sterling, 2000; Zieminska, 2018). A common argument in favor of a sexual continuum is the existence and incidence of intersex individuals. The term “intersex” has a complex history, and is defined differently in different contexts; in general, in biology and medicine-related publications, intersex can be defined as “the state of being born with biological sex characteristics that vary from what is typically thought of as exclusively male or female” (Griffiths, 2018, p. 125), for example, individuals who have XY chromosomes yet mainly female anatomy or vice versa (Fausto-Sterling, 1993).

However, some academics expand on this definition of intersex and include any “individual who deviates from the Platonic ideal of physical dimorphism at the chromosomal, genital, gonadal, or hormonal levels” (Blackless et al., 2000, p. 161). In the context of this expanded defi-

nition, women with polycystic ovary syndrome (PCOS), which presents with an excess in androgen levels and is estimated to affect 6-13% of reproductive-aged women (World Health Organization, 2025), could be considered a form of intersexuality, and some intersex as well as trans rights activists have been arguing in favor of this interpretation (Lindahl, 2023). Expanding the definition of the “intersex” label would result in a more prominent percentage of individuals whose biological sex defies the very structure of a sex binary, consolidating the notion, previously expressed by Butler (1986), that the concept of a biological sex can be challenged, and that human sexuality thus does not exist as a dichotomy (Fausto-Sterling, 1993; Fausto-Sterling, 2000; Morland, 2001). Some critics argue against the broadening of the intersex label, claiming it deprives the label of clinical meaning, and that available data supports that human sexual differences *do* exist as a dichotomy rather than a continuum (Sax, 2002). However, this criticism has been rebutted by 1. criticizing the very concept of the need for strict classifications – which have always historically been socially situated, in the name of clinical accuracy, and 2. claiming that the current clinical classification system as DSD² does not meet the ethical and social needs of our society (Griffiths, 2018).

Gender. Originally, the term “gender” was mainly related to linguistics and philology, which typically defined it as a “set of mutually exclusive kinds into which a language categorizes its nouns and pronouns” (Pinker, 1994, p. 476). The term was then borrowed from these two disciplines and applied to the categories of the male and female social statuses, according to sexologist John Money, in order to establish more inclusive criteria that comprised all the various components of human sexual differences (Money, 1955; Money, 1988). Feminist studies from the 1960s and 70s investigated gender from a critical and conceptual standpoint in order to “unravel gender politics by examining putative universal subordination of women” (Worthman, 1995, p. 598). Proponents of gender theory defined the term “gender” in a constructivist sense as a sociocultural product, in order to 1. fight the reductionist views that are typically associated with biological sex, even arguing against the universal grounding of gender in a “natural” sexual binary, and 2. to oppose the role imposed on the gender category of “woman” based on their reproductive abilities (Lorber, 1994, pp. 3-5; Martin, 1987; Worthman, 1995). Despite this definition and intentions, in the mainstream gender is understood as a “socially-assigned sex-differentiated category” (Worthman, 1995, p. 599). In her pioneering book,

² In 2006, the “Consensus statement on management of intersex disorders” denominated as new classification for intersex variations, namely the *disorders of sex development* (DSD), which were defined as “congenital conditions in which development of chromosomal, gonadal, or anatomical sex is atypical” (Griffiths, 2018, p. 126).

“Gender Trouble: Feminism and the Subversion of Identity” (1990), post-structuralist, gender-theorist and philosopher Judith Butler argues that gender is ultimately a performance, which is maintained and perpetuated in our society by interacting with one another. While Butler’s theory of performativity is widely accepted in the context of gender theory, some criticize it; Boucher (2006) has accused Butler’s theory of performativity to be a weak alternative to liberal political philosophy, which he described as “only another, somewhat more radical version of moral and political individualism” (Boucher, 2006, p. 137). Others have criticized Butler by claiming that her theory of performativity is overly deterministic, as each performance is seen and interpreted by others in a variety of different ways, while at the same time being too voluntaristic (Wehrle, 2020).

Overall, at the core of gender archaeology is the understanding that sex and gender are both socially and culturally influenced constructs whose understanding and scope have changed throughout the eras. Thus, determining the gender identity of a human remain is a process that must take into account not only the biological cues that hint to the probable sex, but also the contextual clues such as clothes, artifacts, art, inhumation technique etc. (Geller P. L., 2009; Schall et al., 2020; Tate, 2024; Turek, 2017).

3.3 Public archaeology: archaeology in the mainstream

Despite the fact that the discipline of “public archaeology” has grown steadily since the 1970s, its methodology, objectives, and scope are not fully clarified, and pose as a topic of debate amongst archaeologists (Grima, 2016; Matsuda, 2004). In 1999, Schadla-Hall defined public archaeology as the discipline “concerned with any area of archaeological activity that interacts or has the potential to interact with the public – the vast majority of which, for a variety of reasons, know little about archaeology as an academic subject” (Schadla-Hall, 1999, p. 147). In the first volume of *Public Archaeology*, chief editor Ascherson instead defines it as the discipline that is concerned with the “problems which arise when archaeology moves into the real world of economic conflict and political struggle...[it is therefore] about ethics” (Ascherson, 2000, p. 2). According to Matsuda (2004), neither of these two definitions explain the nature of public archaeology in detail, arguing that in order to explicate its meaning, the concept of “the public” should be conceptualized more clearly. Matsuda attempts to do so by stating that the goal of public archaeology should be to foster “a democratic public sphere of archaeology and encourage rational-critical debate therein” (Matsuda, 2004, p. 70).

However, debates on equal footing between archaeologists and non-archaeology are difficult to foster, and some archaeologists wonder if they are even possible (Bonacchi, 2012). The relationship between archaeology and “the public” is further complicated in the current digital era, in which archaeologists are offered dozens of tools to engage the public, e.g., on social media, online TV channels, video games, and podcasts (Bonacchi et al., *Archaeology and Digital Communication: Towards Strategies of Public Engagement*, 2012). Overall, the Internet has been recognized as a tool with great potential when it comes to guiding and supporting “individuals and communities in finding their own archaeological ‘voice’” (Richardson, 2013, p. 8). The issue of what archaeology owes “the public”, who “the public” is, and how the relationship between archaeologists and non-archaeologists shapes the discipline is currently still at the center of debates, however with the general consensus that archaeology as a discipline is alive, and needs to take into account its effects on public opinion (Grima, 2016; Miller et al., 2024; Richardson, 2013). Overall, public archaeology exposes two questions at the core of archaeology, a practice that fundamentally creates a conflict of responsibility (King, 1983): 1. how can archaeologists properly represent and discuss the lives of those who lived in the past without their consent or consultation? and 2. do archaeologists “have a moral obligation as experts not only to share our knowledge, but to put that knowledge to work in the present?” (Horning, 2013, p. 19).

4 Two controversial burials throughout the years

The present literature review is focused on two burials, namely Birka grave Bj. 581 and the Suontaka burial, which were chosen for their relevance in the context of Northern European archaeology, and because of how archaeological research about the gender of the buried individuals has evolved throughout the years. These characteristics positioned the sites as particularly relevant in the context of this literature review.

4.1 Birka grave Bj. 581

Situated in the middle of Lake Mälaren in Uppland is the island of Björkö³. This small island boasts international fame for housing the Viking Age settlement of Birka, which is considered the first ever urban center in Sweden (Price et al., 2019; Stolp, 2024). Birka was founded in c. 750 CE, and it is estimated to have supported a population of 700–1000 inhabitants for 200 years, after which it was relocated, with many inhabitants moving to Sigtuna (Ambrosiani, 2008). Throughout the 8th-10th century, Birka was a prosperous trading center, “linked to a social, cultural and economic network that reached beyond the Ural Mountains into the Caliphate in the east and south to the Byzantine Empire” (Hedenstierna-Jonson et al., 2017, p. 853). The town comprised a large area facing the lake where the settlements dwelt, and encircling the town area are several cemeteries; together, these contain around 3000 visible mound burials, and many more have been identified via geophysical prospection (Hedenstierna-Jonson et al., 2017; Price et al., 2019). The area was first excavated by archaeologist, ethnologist and entomologist Hjalmar Stolpe in 1874-79, 1881, 1888, and 1895 (Arbman, 1943). In his time at the site, Stolpe excavated a total of 1100 graves, and he is remembered for the meticulous and pioneering methods he employed during the excavations (Arbman, 1943; Gräslund, 1980; Price et al., 2019). According to Arbman (1943), Stolpe became increasingly interested in ethnology, and by the time of his death in 1905, he had been too busy with his position as head of the ethnographic department of the State Museum of Natural History to finish his research on Birka. In 1913, antiquarian Gustaf Hallström published the first volume of a series intended to report Stolpe’s finds, titled *Birka I. Hjalmar Stolpes grafundersökningar*⁴ (Arbman, 1943). Like Stolpe before him, Hallström also found himself too busy to finish the project, and as such, publications on the Birka gravesite based on Stolpe’s field notes and finds were published as a

³ Swedish for “Birch Island”.

⁴ Translation: *Birka I. Hjalmar Stolpe’s grave excavations*. Machine translation.

series of volumes created by different authors throughout the 20th century (Stolp, 2024). In this literature review, I mainly focused on only two of the volumes, namely *Birka II. Die Gräber: Text* (Arbman, 1943) and *Birka IV. The Burial Customs* (Gräslund, 1980). From the same series, I will also reference *Birka I. Die Gräber: Tafeln*⁵ (Arbman, 1940), *Birka III. Die Textilfunde aus den Gräbern*⁶ (Geijer, 1938) and *Birka V. The Filigree and Granulation Work of the Viking Period* (Duczko, 1985) in the discussion section.

The focus of the present literature review is on one of the graves excavated by Stolpe himself, namely grave Bj. 581. In one of his reports to the Royal Academy, Stolpe describes Bj. 581 as “perhaps the most remarkable of all the graves in this field” (Price et al., 2019, p. 184). The grave was an underground wooden chamber which contained a body resting on its right side, two horses, and a great number of artifacts, several of which can no longer be identified (Arbman, 1943). The clothes on the body presented details reminiscent of the fashion of the Eurasian Steppe, and of the two interred horses, a stallion and a mare, only one was bridled (Price et al., 2019). In *Birka II. Die Gräber: Text* (1943), Arbman includes a drawing of Bj. 581, numbering each item (1-24) that was found in the grave (see **fig. 1**). Following is the list of the 24 artifacts and other findings as described and numbered by Arbman (1943, p. 189; fig. 43)⁷:

Item 1: one **iron sword**.

Item 2: one **cutting knife** (very damaged; length of the sheath: 51 cm).

Item 3: one **spearhead** (very damaged; length: 42,6 cm).

Item 4: one **spearhead** (length: 34 cm).

Item 5: one **iron axe** (heavily damaged; length: 20 x 17 cm).

Item 6: twenty-five **arrowheads**, specifically *armor-piercing* arrowheads.

Items 7 & 8: two **shield bosses**. Their position in the grave (diagonally, one facing East and the other West) suggests that they were placed upright.

Item 9: two **stirrups** (damaged by rust).

Item 10: one **iron knife**.

Item 11: one grey slate **whetstone** (length: 13,1 cm).

Item 12: twenty-eight **gaming pieces** (material: horn).

Item 13: one quarter of an **Arabic silver coin**.

Item 14: one **iron ring clasp** or **iron needle**.

Item 15: several **silver decorations** from the cap worn by the deceased (one **pointed silver fitting**, **silk residues**, and four **plum-shaped pendants** going down the nape).

Item 16: a large **bronze bowl** (damaged; diameter: 31-32,5 cm).

⁵ Translation: *Birka I. The Graves: Panels*.

⁶ Translation: *Birka III. The Textile Finds from the Graves*.

⁷ In *Birka I. Die Gräber: Tafeln*, Arbman (1940) compiled pictures of the items found during the excavations of the Birka graves. In the Appendix of this thesis, I included a picture for each item in *Birka I. Die Gräber: Text* that had a corresponding image in *Birka I. Die Gräber: Tafeln*.

Item 17: one **iron ring** (diameter: 3 cm) connected with a **square strap** (size: 2,8 x 1,6 cm).

Item 18: one large **iron buckle** (size: 7,3 x 6,2 cm).

Item 19: one **horn comb** (length: 17 cm).

Items 20 & 21: two **snaffle bits with rings**⁸ (heavily rusted, with rings), and four **square fittings**.

Item 22: one **iron ring with fitting** (uncertain⁹).

Item 23: one **iron ring** (diameter: 6,1 cm).

Item 24: one **iron hook**.

Extra: at least two **iron box fittings** (which were probably the corners of a gameboard), one **human skeleton**, two **horse skeletons** (one stallion, one mare).

Because of the assemblage of warrior-related grave goods, such as the horses, gaming pieces, and weapons, the grave has long been interpreted as belonging to a high-ranking warrior and tactician, who has been assumed to be male (Arbman, 1943; Gräslund, 1980; Hedenstierna-Jonson et al., 2017). The grave has sparked international interest and debate in 2017, after Hedenstierna-Jonson et. al published the results of their osteological and DNA analyses, which revealed that the individual buried in Bj. 581 was most probably biologically female.

In the following subchapters, I will review the contents of the aforementioned volumes from the *Birka* series in discussing Bj. 581, after which I will review four recent articles discussing the identity and profession of the individual buried in Bj. 581.

⁸ A snaffle bit is the part of a horse bridles that is made of metal and goes into the mouth of the horse; it typically presents two rings to attach the reins to (Edwards, 2000).

⁹ Arbman includes a question mark next to this item (Arbman, 1943, p. 190).

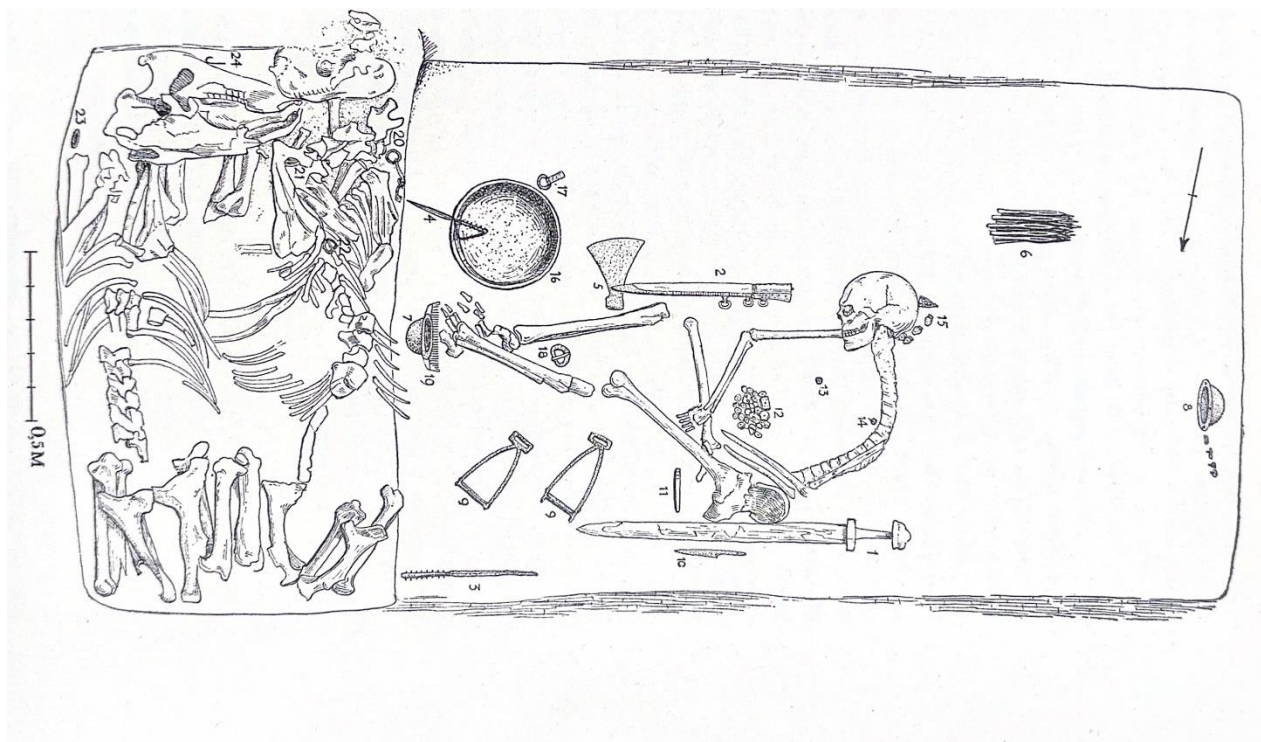


Figure 1. Arbman's reconstruction of Stolpe's sketch of Bj. 581 (Arbman, 1943, p. 189).

4.1.1 *Birka II. Die Gräber: Text* (Arbman, 1943)

In the foreword to *Birka II. Die Gräber: Text*, Arbman mentions having been commissioned in 1931 by the *Vitterhetsakademie* to publish the Björkö finds (Arbman, 1943, p. IX). In the same foreword, he praises Stolpe's conscientiously executed excavations, and remarks on the extensiveness of the materials, artifacts and remains retrieved from the Birka site.

Arbman dedicates three pages to Bj. 581 (pp. 188-190), and states that Stolpe originally drew two sketches of Bj. 581, which do not agree in all respects (1943, p. 188). Thus, Arbman based the drawing presented on page 189 (see **fig. 1**) on Stolpe's second, smaller drawing, which Stolpe claimed was a correction of his original sketch of the grave from 1889. At the end of the first paragraph of Arbman's description of the grave, he claims this:

“The skeleton, **that of a man**, probably buried in a seated position, and those of the two horses, are fairly well preserved” (1943, p. 188)¹⁰.

¹⁰ Machine translation from German. Original text: “Die Skelette, **das eines Mannes**, der wahrscheinlich in sitzender Stellung beigesetzt war, und die der zwei Pferde, ziemlich gut erhalten.” Text bolded by me, as for subsequent quotes from the analyzed articles.

In the rest of the paragraph, Arbman simply describes how the grave looked upon its excavation, its location, size, and type. After this introduction paragraph, in which he describes the grave and the drawing, he lists every item as numbered in the drawing, describing some of them in more detail than others, depending on whether or not they have been lost or are now unable to be identified. He does not specify why he believes the individual in Bj. 581 to be a man.

4.1.2 *Birka IV. The Burial Customs: a study of the graves on Björkö (Gräslund, 1980)*

In this doctoral thesis, Anne-Sofie Gräslund (1980) aims to investigate the burial customs at Birka, in order to draw information surrounding the social structure and composition of the inhabitants. The dissertation gives an overview of the cemeteries on Björkö, discussing various inhumation burial types, techniques, and cultural symbolisms (related to e.g., the type of coffin, orientation of the grave, and grave goods), as well as cremation burials, the external structure of the graves, information on the population who lived in Birka, and Viking Age burial customs in the Mälars region outside of Birka.

The burial Bj. 581 is mentioned multiple times in this dissertation, on pages 29, 32, 37–38, 41, 49, and 63. The grave is also mentioned in indexes and maps shown in the dissertation. However, the two mentions most relevant to this literature review in regard to the individual buried in Bj. 581 are found on pages 29 and 41. On page 29, when introducing the topic of chamber-graves in chapter “3.2. *Chamber-graves*”, Gräslund states:

“In this cemetery only two chamber-graves contained horses, Bj. 496 and 581; in the latter grave two animals were found. **Both are men’s graves** from the Late Period at Birka and were situated in the far western part of area 2B” (Gräslund, 1980, p. 29).

However, Gräslund goes on to state that even though it is more common for men to be buried in grave-chambers, around 40% of the single graves’ occupants whose sex could be determined were found to be female. According to Gräslund, “These two important observations contradict the statement often found in the literature that the custom of burial in chamber-graves was reserved for men, and that it took place almost exclusively during the tenth century. This is obviously not the case” (Gräslund, 1980, p. 29). Despite highlighting this contradiction, Gräslund

does not seem to question the biological sex of the individual buried in Bj. 581, as on the map included on page 11 (see **fig. 2**) Bj. 581 is marked as the **chamber-grave of a man**¹¹.

In the subchapter titled “3.2.6. *Chamber-graves with horses*”, Gräslund states that out of 21 chamber-graves containing horses, 16 were men’s graves, three were double graves (with a man and a woman), and only one was a woman’s grave, namely Bj. 965 (Gräslund, 1980, p. 39). On page 42 of this subchapter, Gräslund includes this relevant paragraph, here reported almost in its entirety:

“Most of the chamber-graves with horses contain weapons [...]. Some (for instance Bj. 581) have a full complement of sword, axe, handseax¹², arrows and shield, while others contain one or more of these weapons (Bj. 710, for instance, only had a shield, while Bj. 975 had only arrows). As is **to be expected**, the woman’s grave Bj. 965 is an exception and contains no weapons” (Gräslund, 1980, p. 41).

I found this passage relevant to include in the context of this literature review, as it shows the widespread understanding that weapons are typically associated with men, and as such, it is “to be expected” that a woman’s grave would not contain weapons as grave goods.

¹¹ In the description of the Map, Gräslund states that “the symbols indicate graves **definitely determined** as to sex and date” (Gräslund, 1980, pp. 10-11). Because Bj. 581 is marked with the ♂ symbol, we can assume that the sex of the individual buried within was thought to be “definitely determined”.

¹² *Handseax*: short sword; dagger. From Proto-Germanic *hand* (hand) + *seax* (dagger).

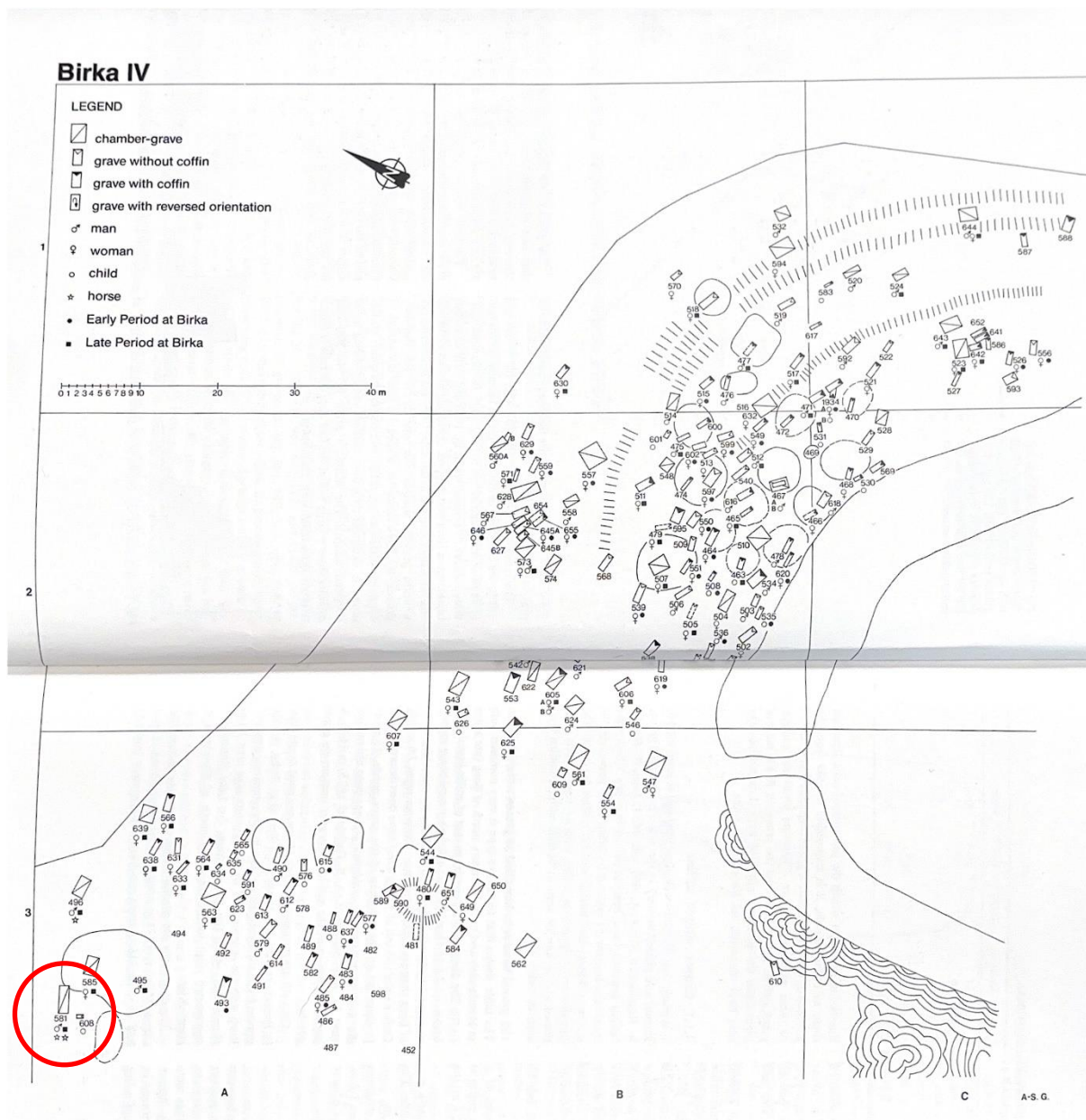


Figure 2. Plan showing the inhumation graves in the cemetery north of Borg, Björkö (Gräslund, 1980, pp. 10–11). Red circle highlighting the location of Bj. 581 added by me.

4.1.3 A female Viking warrior confirmed by genomics (Hedenstierna-Jonson et al., 2017)

In 2017, Hedenstierna-Jonson et al. published a groundbreaking article reporting the results of their analysis of the DNA of the individual buried in Bj. 581, which revealed their sex to be female. The article has since been quoted in international news outlets and online forums all over the world ([ever0nand0n], 2021; Feagans, 2019; Hiironen, 2017; Norton, 2017; Pringle,

2025)¹³, sparking debates both in academic as well as online spaces on whether or not the occupant of Bj. 581 can be considered a “female warrior” (Androshchuk, 2018; Edberg, 2019; [puje12], 2024).

In the paper, Hedenstierna-Jonson et al. (2017) state that the individual buried in Bj. 581 had previously been considered male based on the assortment of grave goods only, as historically the male sex has been associated with Viking warriors. According to the authors, the sex and gender identity of the occupant of Bj. 581 has been questioned only after the publication of Kjellström’s osteological and contextual analysis on the skeletons retrieved from the Mälaren Valley (Kjellström A. , 2016). In the article, Kjellström references the Bj. 581 only indirectly, as such:

“Another interesting (and possibly controversial) find was a grave where the preserved bones do fit the original nineteenth century drawings and descriptions. This is a chamber grave furnished with fine armour and sacrificed horses. Nevertheless, **three different osteological examinations all found that the individual was a woman.** Whether these are not the correct bones for this grave or whether it opens up reinterpretations of weapon graves in Birka, it is too early to say” (Kjellström A. , 2016, p. 198).

For their DNA analysis, Hedenstierna-Jonson et al. (2017) collected two samples from individual Bj. 581, one from their left canine, and the other from their left humerus. Results from this analysis confirmed that the individual 1. was biologically female, and 2. was probably non-local, and had moved to Birka from elsewhere (Hedenstierna-Jonson et al., 2017). In the same paragraph where they report on the DNA analysis confirming the female sex, the authors claim, “[...] the individual in grave Bj 581 is **the first confirmed female high-ranking Viking warrior**” (Hedenstierna-Jonson et al., 2017, p. 857).

4.1.4 Female Viking Revisited (Androshchuk, 2018)

In this paper, Fedir Androshchuk (2018), Associate Researcher at the Swedish Historical Museum in Stockholm, responds to the claim put forward by Hedenstierna-Jonson et al. (2017) that the individual buried in Bj. 581 was biologically female. Androshchuk begins the article by claiming that while many students and colleagues of his have embraced this interpretation,

¹³ The sources listed here are just example of articles and posts found in newspapers, online forums, and blogs following Hedenstierna-Jonson et al.’s 2017 research.

historians have been more critical towards it; according to Androshchuk (2018), historians' traditional depiction of Viking-Age women "differed starkly" from the one suggested by Hedenstierna-Jonson et al. (2017), and "unsurprisingly, the first critique of 'A Female Viking Warrior Confirmed by Genomics' and its reception in the media came from the historians" (Androshchuk, 2018, p. 47). The author of the paper agrees with the criticism raised by historians, namely that the remains sent for analysis lacked context; in general, geneticists who collaborate in such researches depend on the samples provided by the archaeologists, and they probably also have a very limited knowledge on the archaeological circumstances in which the sample was found, or the techniques used to preserve it in post-excavation laboratories and museums (Androshchuk, 2018). Androshchuk also raises the concern that the remains might not even belong to the real occupant of Bj. 581.

Through the analysis of Stolpe's excavation notes and documentation about the collected human remains from Birka, Androshchuk concludes that the **Bj. 581 was a mainly male grave, with a second female burial** that went unnoticed by Stolpe, causing the grave goods and human remains to be assumed to belong to one individual only. One of the sources provided by Androshchuk (2018) that led to the aforementioned conclusion is the unpublished osteological source used by Kjellström in a paper that is only published in Swedish (Kjellström A. , 2012, pp. 71-73). The following is the source, translated by Androshchuk himself (2018, p. 53):

581

Unburnt human and animal bones.

Human bones: lower jaw, vertebrae, ribs, humerus, radius, ulna, pelvis, femur, shin bone, toe bone.

Number of individuals: two: two right-sided fragmentary femurs.

Pathological changes: two neck and four thoracic vertebrae with osteophyte on edges.

Sex determination: fragment of left-sided female pelvis. Length of body: an individual of 173 cm.

Age definition: head of humerus phase four: 40–70 years.

Lower jaw: four front teeth, two canine teeth, four premolars, one six-year-old tooth, two twelve-year-old teeth, two wisdom teeth. The second six years of age, teeth lost during lifetime, entire alveoli regrown. Slight scale formation. Enamel hypoplasia on the front teeth, canine teeth, and three premolars.

Age definition on the basis of tooth wear: 25–35 years.

Horse: skull, upper jaw, lower jaw, teeth, vertebrae, loin-bone, shoulder blade, ribs, humerus, radius, ulna, carpal bones, pelvis, femur, kneecap, shin bone, tarsus, metatarsal bone, toe bone.

Number of individuals: two left-sided fragments of pelvis: **two individuals**.

Sex determination: two fragments of pelvis of a stallion (one left- and one right-sided), one pelvis fragment of a mare (left-sided).

Pathological changes: two lumbar vertebrae with osteophyte on caudal and cranial edges.

Pig: one fragmentary femur with loosened distal epiphysis: <3.5 years.

Bird (not identifiable): one fragment of a sacrum.

This record shows that the remains from **two human individuals** were associated with the grave. Furthermore, Kjellström notably highlights that the skull of the individual buried in Bj. 581 has been lost and is now missing from the Birka osteological collection.

Another issue associated with the reliability of the archaeological record obtained from the late 19th century excavations is to be found in Stolpe's own drawings of the Bj. 581 burial; as previously pointed out by Arbman (1943), Stolpe published two different drawings of the grave; the first was published in 1889 in the weekly journal *Ny Illustrerad Tidning*, while the second, "smaller and more sketch-like" (Arbman, 1943, p. 188) was described by Stolpe himself as a correction of his previous drawing. By analyzing the drawings side by side, Androschuk noticed several errors, most relevantly in how the backbone, arms, and sword are depicted. Hedenstierna-Jonson et al. (2017) had discarded the male bones from the genomic analysis on the basis of Stolpe's account on the presence of a completely preserved backbone in the grave. Androschuk believes that the consistency errors in Stolpe's drawings "collectively indicate that these sketches are too inaccurate to be considered as reliable sources" (Androschuk, 2019, p. 55), thus discrediting Hedenstierna-Jonson et al.'s decision.

Overall, while Androschuk generally agrees with reconsidering the traditional assumption that Viking Age women had a passive role in society, he also warns about the risks that can arise when applying modern ideas to the past, and advocates for the need in scientific research of source critique. In other words, Androschuk mentions the *responsibility* that archaeologists have when presenting such finds. He claims:

"While 'A Female Viking Warrior Confirmed by Genomics' sets a precedent for future discussion on sex and gender roles based on DNA data, it also serves as a reminder of the **responsibility scholars have to avoid sensationalism as they make their findings public**" (Androschuk, 2018, p. 48).

4.1.5 *Viking warrior women? Reassessing Birka chamber grave Bj. 581 (Price et al., 2019)*

As mentioned, the article by Hedenstierna-Jonson et al. (2017) received international attention upon publication; the paper "was covered by more than 130 international news agencies,

and was discussed across some 2200 individual online accounts, accessed by millions of followers” (Price et al., 2019, p. 182), and Altmetric ranked the article as the 43rd most accessed one out of over 2.2 million publications (Price et al., 2019). In this article, titled “Viking warrior women? Reassessing Birka chamber grave Bj. 581”, the same team of researchers behind Hedenstierna-Jonson et al. (2017), this time led by Price, reply to the global attention their previous article received, in order to 1. critically explore *why* DNA analysis conducted on a single grave generated such an overwhelming response, 2. reply to the criticism aimed at their research, specifically criticism on the reliability of the sample and on the interpretation of the individual as a warrior, and 3. conduct a deeper interpretive analysis regarding the gender identity of individual Bj. 581, as this was not the focus of their previous publication, which instead focused on the genomic analysis (Price et al., 2019).

Price et al. (2019) argue in favor of interpreting the individual buried in Bj. 581 as a warrior based on the contextual clues offered by the arrangement of grave goods. Only 75 out of over 1100 graves that were excavated in Birka contained one or more offensive weapons, and Bj. 581 is the only one of two graves with a full complement of weapons, and it is among the 20 richest graves on the site (Price et al., 2019). Ever since it was first excavated by Stolpe, Bj. 581 has been interpreted as the resting place of a high-status warrior, probably a mounted archer who was able to make use of a wide repertoire of combat techniques (Price et al., 2019). The warrior hypothesis is further supported by the lack of grave goods related to the domestic sphere, such as tools used in the house or agricultural implements, as well as by the presence of the gaming pieces (Price et al. 2019). While individual dice and gaming pieces were common grave goods in Viking Age burials, Bj. 581 stands out, as within it was found a full set of gaming pieces, as well as iron-bound boards (Arbman, 1943; Price et al., 2019). The fact that the individual in Bj. 581 was buried with a full gaming set and board, which were placed in proximity to the body, suggests a commanding role according to Price et al. (2019). Additionally, Birka’s leading textile expert Inga Hägg has argued that the clothing of individual Bj. 581 are indicative of a high-status cavalry commander under the immediate authority of a royal war-leader (Hägg, 2002, p. 204).

In the article, the authors rebuke the accusation that they have “gone looking for female Viking warriors” (Price et al. 2019, p. 194) and assert that they chose to investigate Bj. 581 only after Kjellström’s study on the Mälars population; the researchers also question the re-

sistance from the wider scientific community to reject the possibility of a female Viking warrior. They conclude the article by reaffirming the reliability of their source materials, and claiming that the implications of their finds need further examining within a broader context:

“This article is not, and for practical reasons cannot be, an attempt to achieve a greater understanding of Viking Age sex/gender systems in their totality. Instead, this is a case study [...]. In the specific case of Bj. 581, one may draw different conclusions, but **the integrity of the grave and the biological sex determination are secure.**” (Price et al. 2019, p. 194).

4.1.6 *Some comments on the interpretation of Birka grave Bj 581 (Edberg, 2019)*

This article is another critique of the claim that the individual buried in Bj. 581 was a “female Viking warrior” found in Hedenstierna-Jonson et al. (2017) and the following article by Price et al. (2019). Edberg’s (2019) main argument is that the grave goods associated with the Bj. 581 burial are not enough to label the deceased as a “high-ranking warrior”. Even dismissing the reliability issues found in the osteological record that Androshchuk pointed out in his 2018 paper “Female Viking Revisited”, Edberg argues that the grave goods associated with the burial do not necessarily indicate that individual Bj. 581 was a warrior, even though these same artifacts, e.g., the weapons, the horses, and the gaming pieces, have been used as contextual clues to determine individual’s profession and rank before (Edberg, 2019). For example, the gaming pieces found in Bj. 581 have been widely interpreted to be a sign that the individual buried with them might have been a military strategist; moreover, gaming pieces have also been associated with the higher classes, and the ones found in Bj. 581 were of particularly high quality, which led to the interpretation of Bj. 581 as not only a skilled warrior, but a high-ranking one (Edberg, 2019; Price et al., 2019). However, according to Edberg (2019), gaming pieces such as dice do not necessarily indicate military expertise, as they were also used in divination rituals. Edberg ends his 2019 critique with the statement:

“In conclusion, **the interpretation of the buried person in Bj 581 as ‘a high-ranking warrior woman’ is not convincing** and the image presented by the ten co-authors of the conclusions of older research is misleading” (Edberg, 2019, p. 6).

4.2 The Suontaka burial

In 1968, an early medieval grave (dated to 1050-1300 CE) was excavated at Suontaka Vesitornimäki, Hattula. The grave was initially noticed by water pipeline workers, whose machine

accidentally dug up a bronze-hilted sword. As such, emergency excavations were carried out immediately, despite it being October, when the temperatures had already dropped to -10°C (Ojanen, 2002; Moilanen et al., 2022). Following is a list of all artifacts that were collected from the Suontaka burial (see **fig. 3**):

Item A: one **bronze-hilted sword** (NM¹⁴ 17777:1) with Urnes-style ornaments on the hilt.

Item B: one **hiltless sword blade** (NM 17777:2) with silver inlays (see **fig. 4**).

Item C: two **oval brooches** (NM 17777:4–5) with textile fragments.

Item D: one **twin-spiral chain-bearer** (NM 17777:6).

Item E: one **sheathed knife** (NM 17777:3).

Item F: one small **penannular brooch** (NM 17777:7).

Item G: one **sickle** (NM 17777:8).

This array of grave goods is peculiar; in Finnish graves from this age, swords are typically associated with masculine graves, while jewelry (such as the brooches and chain-bearer found in the Suontaka burial) are typically found in feminine graves; as for sickles, these are found in both female and male graves, albeit more commonly in male ones (Moilanen et al., 2022). Ever since its discovery, the grave has garnered attention for the presence two swords, especially the bronze-hilted sword, alongside typically feminine jewelry, which has led to the burial being interpreted as the evidence, albeit uncertain, of the supposed great reputation women in Finland were shown in the 11th century (Lehtosalo-Hilander, 1983, p. 304). For example, the burial was part of the National Museum of Finland’s permanent exhibition (1995-2016), in which it was presented as proof of Finnish female leaders in the past (Erä-Esko et al., 1995).

Despite its popularity, literature that focuses solely on the Suontaka burial is difficult to find; according to Moilanen et al. (2022), their article “A Woman with a Sword? – Weapon Grave at Suontaka Vesitorninmäki, Finland” is the *first* detailed study of the Suontaka grave. Thus, in the subchapters below I present the reports and articles that have discussed the gender of the individual in the Suontaka burial.

¹⁴ National Museum of Finland (Suomen Kansallismuseo), in this thesis shortened to NM as in Moilanen et al. (2022, p. 45).



Figure 3. The artifacts from the Suontaka grave. Picture from Moilanen et al., 2022, p. 46. © Finnish Heritage Agency.

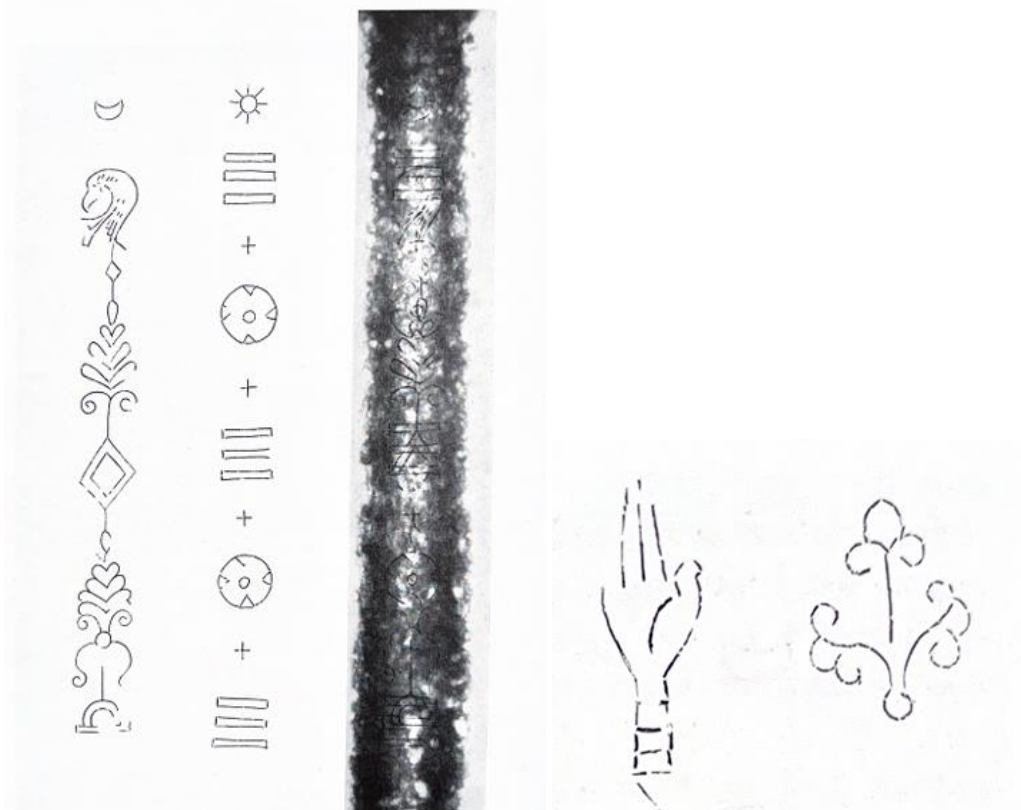


Figure 4. The silver inlays on the blade of the hiltless sword (Keskitalo, 1969, pp. 89-90).

4.2.1 *Kertomus myöhäisrautakautisen ruumishaudan tutkimisesta Suontaan kartanon Vesitorninmäessä Tyrvännön pitäjässä 25.10.1968 (Keskitalo, 1968) & Suontaka-svärdet¹⁵ (Keskitalo, 1969)*

In his field report, dated October 25th, 1968, Keskitalo details the data gathered after the first day of excavations (Keskitalo, 1968). He describes the burial mound, the temperature (-10°C), and the circumstances surrounding the waterline workers finding the bronze-hilted sword, which got caught in the excavator machine. According to the field report, the upper right corner of the grave (depth: 70-90cm, length: 2m, width: 1m), where the bronze-hilted was located, had been severely damaged. Keskitalo reports that the body was buried without a coffin, and that most of the decomposed bones were still *in situ* (the tibias, femurs, pelvis, elbow joints, ribs, part of the skull). However, the bones had already started decomposing, and the archaeological team could only collect fragments from the two femurs. The body was found with a hiltless sword on its left, and a sickle placed crosswise on the chest, with the tip (broken off) pointing up. On both sides of the chest of the deceased were oval Hauho-type buckles with intact needles. The buckles were made of a grey metal alloy and still presented traces of wool fabric. A bronze, horseshoe-type buckle was also found at the body's mid-section. Keskitalo claims that it was not possible to verify whether the burial belonged to a larger cemetery, but he believes it is possible (Keskitalo, 1968).

In 1969, Keskitalo published a full report on the excavations that took place in 1968. According to Keskitalo, the burial site was noticeable thanks to a patch of dark soil. Keskitalo describes the findings in greater detail than in the initial report, especially the two swords. Keskitalo reiterates that no other graves were found in the vicinity, and that the grave could only fit one person (Keskitalo, 1969). However, judging by the mixed-gender array of grave goods, Keskitalo believes that the question of whether the individual was a woman, or whether a man and a woman were buried one of top of each other should be left open. After discussing the belligerent times in Häme in the 11th century, Keskitalo ends the report by saying:

“Perhaps in Tavastland during the troubled 11th century there really were concrete equivalents to the Kalevala's Louhi, **manly housewives** who measured up to the men in martial virtues and **who received the best spoils of war with them in the grave** as

¹⁵ Translation: *Suontaka's swords*. Machine translation.

a sign of their position and in recognition of their feats. This possibility must be taken into account.”¹⁶ (Keskitalo, 1969, p. 98).

4.2.2 *Finskt, gotländskt eller nordiskt. Kring ett ovanligt exempel på sen runste nornamentik*¹⁷ (Nylén, 1973)

In the 75th volume of the Finnish Antiquarian Society magazine¹⁸, Erik Nylén presents an article dedicated to the differences between rune ornamentations on Finnish, Gotlandic, and Nordic artifacts dating to the advent of Christianity in Northern Europe (Nylén, 1973). One of the artifacts whose ornamentation is mentioned in the article is the bronze-hilted sword that was found in Suontaka; in introducing it, Nylén describes it as “a strange iron sword”¹⁹ (Nylén, 1973, pg. 164), and recounts how it was first discovered by construction workers. He dedicates only one paragraph to discussing the gender of the individual buried in the grave, as his article is focused on ornamentations such as the ones found on the hilt of the sword. In the paragraph in question, Nylén reports Keskitalo’s open question on whether the burial was for a woman or a double burial. Nylén also hypothesizes that the hilted sword might have belonged to **another, male grave** that was accidentally destroyed by the water pipeline workers (Nylén, 1973).

4.2.3 *Ancient Hillforts of Finland: Problems of Analysis, Chronology and Interpretation with Special Reference to the Hillfort of Kuhmoinen* (Taavitsainen, 1990)

In this tome dedicated to ancient Finnish hillforts, Taavitsainen dedicates almost one full page to discussing the artifacts found in the Suontaka burial and offering hypotheses as to why the grave contained two swords alongside jewelry. According to Taavitsainen, the Vesitorninmäki burial at Suontaka was already “partially destroyed” and was excavated in “difficult conditions in late autumn” (Taavitsainen, 1990, p. 91). While acknowledging Nylén’s suggestion that the sword might have belonged to a separate, male grave that was accidentally destroyed before the archaeologists arrived at the site, he believes that that this hypothesis does not account for the presence of the second, hiltless sword. Because swords are such rare finds in women’s graves, and the excavation conditions were suboptimal, Taavitsainen suggests that

¹⁶ Machine translation from Swedish. Original text: “Kanske har det i Tavastland under det oroliga 1000-talet verkligen funnits konkreta motsvarigheter till Kalevalas Louhi, manhaftiga hus- fruar som i krigiska dygder mätte sig med männen och som fick det bästa krigsbytet med sig i graven som tecken på sin ställning och som erkänsla för sina bragder. Denna möjlighet måste tas med i räkningen” (Keskitalo, 1969, p. 98).

¹⁷ Translation: *Finnish, Gotlandic or Nordic. Around an unusual example of late runic ornamentation*. Machine translation).

¹⁸ Original name: Suomen Muinaismuistoyhdistys aikakauskirja

¹⁹ Original text: “Ett märkligt järnsvärd” (Nylén, 1973, p. 164).

the Suontaka burial might have been a **twin or even triple mixed-gender burial** that was damaged by digging machines, making it seem like a single burial (Taavitsainen, 1990).

4.2.4 *Tyrvännön historia (Ojanen, 2002)*

In this book, Ojanen details the history of Tyrvantö. The author dedicates two pages of the book to discussing the Suontaka burial. When discussing the grave, Ojanen initially reports on the uniqueness of the finds, and the popularity of the swords, especially the bronze-hilted one. Ojanen put forward the theory that the person buried might have been a powerful female leader; based on historical records such as the taxation documents of the area of Häme in the Middle Aged, Suontaka was one of the largest villages. As such, Ojanen suggests that the person buried in the grave might have been a leader of this rich community, which would explain the richness of the artifacts found with them. However, Ojanen also argues that **the theory of a powerful female leader might be misguided**, as the grave was disturbed before archaeologists could get there. Ojanen states that it is quite likely that the bronze-hilted sword belonged to someone else, and not the individual whose remains were found. Ojanen does not explain why he is certain the deceased is a woman, nor delves any deeper into the meaning of the hiltless sword.

4.2.5 *A Woman with a Sword? – Weapon Grave at Suontaka Vesitorninmäki, Finland (Moilanen et al., 2022)*

In this article, Moilanen et al. (2022) attempt to determine whether the site was truly a double burial that was damaged during its excavation in 1968 by conducting a thorough analysis on the original field documentation. At the same time, the authors aim to investigate the original context of the grave using modern technologies unavailable upon its discovery; specifically, they report their findings from 1. the microscopic analysis of animal hairs and fibers that were retrieved from the grave, and 2. the ancient DNA (aDNA) analysis on the skeletal remains of the individual buried within.

Moilanen et al. start their article by discussing the complexities related to determining the gender identity of past individuals, from both a biological and sociocultural perspective; while grave goods are typically interpreted as contextual clues as to the gender identity of the individual buried in burial, it is unclear how closely these artifacts relate to the gender roles, identities and lived realities of people who lived thousands of years ago, especially when these are typically understood on the basis of a binary perspective (Hedenstierna-Jonson et al., 2017; Moilanen et al., 2022; Price et al., 2019). In the context of northern European archaeology,

weapons have long been associated with warriors, typically assumed to be male; according to Moilanen et al. (2022), swords buried in early medieval graves in northern Europe have conventionally been associated with masculinity and interpreted as a symbol of social status and power (Moilanen et al., 2022, p. 44). Despite the fact that certain types of weapons, such as arrowheads, spearheads and axes have sometimes been found in burials containing female-bodied people alongside jewelry, swords are a rare find in such graves. Interestingly, the few burials with osteologically-determined female remains tend to lack typically feminine grave goods, such as jewelry and accessories (Moilanen et al., 2022; Price et al., 2019). According to Clover (1993), this tendency is in line with the Scandinavian gender system, in which masculinity was the default, and only under certain circumstances, female-bodied individuals were allowed to don a masculine gender identity. In this context, it is understandable that the Suontaka burial, which presents two swords alongside a skeleton equipped with feminine-style jewelry, has puzzled archaeologists since its excavation, leading experts such as Taavitsainen (1990) and Nylén (1973) to hypothesize that grave goods must belong to different individuals. Keskitalo himself was also confused by this arrangement of grave goods, which led him to look for evidence for the presence of other human remains, to no avail (Keskitalo, 1968, 1969).

In discussing Keskitalo's excavation notes, Moilanen et al. (2022) challenge Taavitsainen's (1990) claim that the burial was partly destroyed and excavated in difficult circumstances; while it is true that it was October, and the temperature had dropped below 0°C, only the upper surface of the ground was frozen, according to Keskitalo (1969). This led Moilanen et al. to suggest that "the conditions at the bottom of the grave pit (70–90cm from the topsoil) where the skeleton was lying, were not significantly different from those of summertime excavations", meaning that Keskitalo's "field observations should be considered reliable" (Moilanen et al., 2022, p. 46). On the basis of this assumption, Moilanen et al. further challenge both Nylén's hypothesis of a second burial that was destroyed, and Taavitsainen's theory of a twin grave. According to Keskitalo's field notes, the burial pit had an even floor, and its size is suitable for only one person; if there really were multiple people buried in the same grave, they would have had to have been buried on top of the first. Corpses buried on top of another tend to decompose faster (Troutman et al., 2014), which would account for the lack of a second set of human remains, despite the presence of an observable skeleton mostly *in situ* at the bottom of the pit. This theory would also explain the puzzling location of bronze-hilted sword, which was found separated from the main body by a layer of soil (Keskitalo, 1969; Moilanen, 2022). However, Moilanen et al. (2022) claim this hypothesis as implausible; the soil coloring did not indicate the presence

of any other decomposition layers above the remains, and no other artifacts were excavated from the upper layers. Moreover, even if there was another body somewhere in the vicinity of the burial, all excavated grave goods, apart from the bronze-hilted sword, can be directedly associated to the documented corpse, and the hiltless sword was placed directly on the body upon inhumation (see **fig. 5**). In order to account for the presence of the second sword, Moilanen et al. (2022) suggest that this might have been hidden or placed in the grave after the burial for magical purposes, a common practice at the time, perhaps by the next generation.

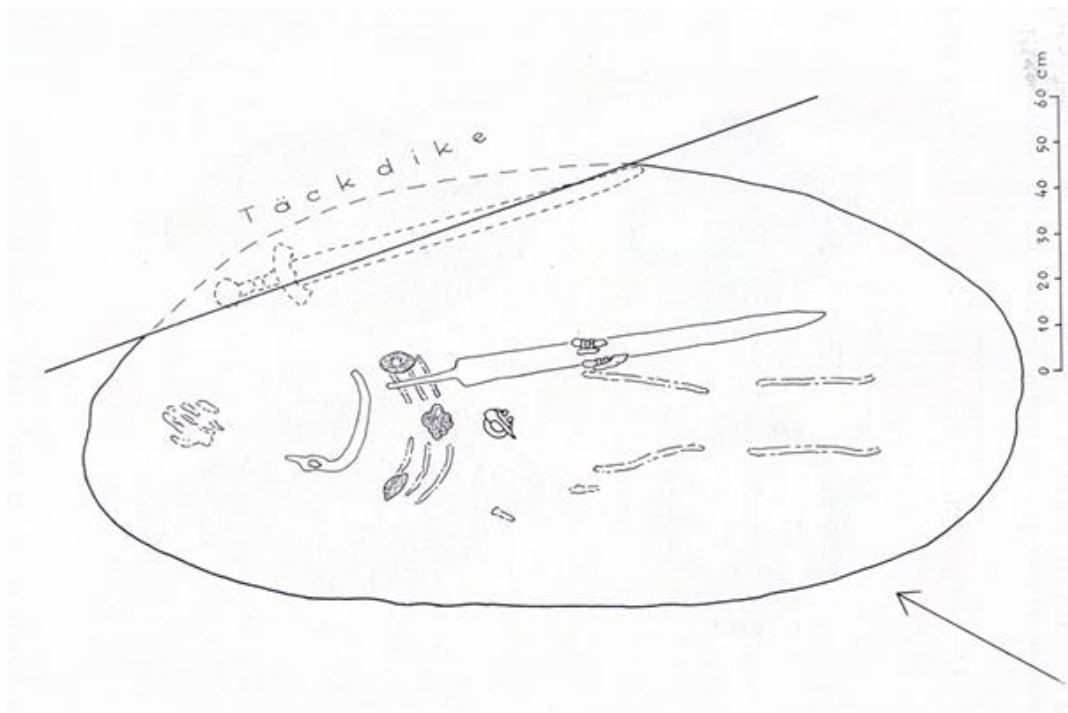


Figure 5. The drawing included in Keskitalo's report; as shown, the bronze-hilted sword was located next to the waterline trench (marked by the text *täckdike*). The damaged upper right corner is marked with a dotted line (Keskitalo, 1969, p. 85).

By analyzing the animal hairs in the grave, Moilanen et al. (2020) found that the grave was exceptionally equipped; the individual was buried with colored woolly textiles, furs, and on top of a bedding or pillow made of rare bird feathers. Moilanen et al. argue that this array shows signs of wealth as well as care in burying the deceased. The aDNA analysis of the individual's osteological remains proved challenging, but Moilanen et al. argue that it seems likely that the individual found in the Suontaka burial had male chromosomal aneuploidy XXY (Klinefelter

syndrome²⁰). This find is interesting, especially when associated with the peculiar nature of the burial. However, the authors warn:

“While Klinefelter syndrome would be an intriguing explanation behind the mixed-gender grave goods of the Suontaka burial, it is important to remember that **chromosomal sex is different from gender**, and karyotype XXY does not automatically define an individual’s gender identity or even anatomical appearance” (Moilanen et al., 2022, p. 51).

While chromosomes do not necessarily have a bearing in an individual’s gender identity, factors such as one’s biological sex, gender identity, and sexual orientation all have an impact in the construction of the self, and in a wider context, in the construction society’s perception of the individual (Moilanen et al., 2022). In the discussion section of the article, Moilanen et al. (2022) argue that the individual buried in the Suontaka grave might have identified with a gender identity outside the strict male-female binary we are familiar with:

“The Suontaka burial could be seen as **evidence of non-binary gender identities being given a prominent value and visibility in early medieval northern European society**. The individual could have been a respected member of a community because of their physical and psychological differences from the other members of that community; but it is also possible that the individual was accepted as a non-binary person because they already had a distinctive or secured position in the community for other reasons; for example, by belonging to a relatively wealthy and well-connected family” (Moilanen et al., 2022, p. 53).

4.3 Comparisons

Overall, analysis on the literature surrounding Birka Bj. 581 has highlighted a shift, over the years, from the implicit assumption that because the grave goods included weapons, horses, and game pieces, the individual buried within was a. a high-ranking, rich warrior, and b. a man. After Hedenstierna-Jonson et al. (2017) discovered the remains in Bj. 581 to belong to a biological female, discourse on the individual buried within started being more nuanced, with academics questioning the presence, so far unnoticed, of a second, male body, as well as of the social standing and rank as a warrior of the individual whose remains were found to be female.

²⁰ Males born with Klinefelter syndrome carry XXY chromosomes (1 in 576 male births), and many present as typical XY cisgender males. However, in some the clinical signs are more accentuated, and they present with traits such as infertility, gynecomastia, testosterone deficiencies (Moilanen et al., 2022).

Moreover, discussion on Bj. 581 has seen a rise in pointed critique of Stolpe, previously held in high regards for his meticulousness (Arbman, 1943; Gräslund, 1980), and the results of his excavations and the reliability of his finds and field reports. The findings of this analysis are summarized in the table below (see **table 1**).

Year	Author(s)	Title	Interpretation
1943	Arbman, Holger	<i>Birka II. Die Gräber: Text</i>	Gender: man (male). Status: high-ranking warrior.
1980	Gräslund, Anne-Sofie	<i>Birka IV. The Burial Customs: a study of the graves on Björkö</i>	Gender: man (male). Status: high-ranking warrior.
2017	Hedenstierna-Jonsson et al.	<i>A female Viking warrior confirmed by genomics</i>	Gender: woman (female). Status: high-ranking warrior.
2018	Androshchuk, Fedir	<i>Female Viking Revisited</i>	Gender: unsure (archaeological record too unreliable). Status: high-ranking warrior.
2019	Price et al.	<i>Viking warrior women? Re-assessing Birka chamber grave Bj. 581</i>	Gender: biologically female, but gender identity can be speculated on. Status: high-ranking warrior.
2019	Edberg, Rune	<i>Some comments on the interpretation of Birka grave Bj 581</i>	Gender: possibly female. Status: unsure; contextual clues could potentially point to other professions.

Table 1. The interpretations on the sex, gender identity, and status of the individual buried in Bj. 581 present in the literature analyzed in this thesis.

As in the case of the Suontaka burial, the literature review conducted thus far has highlighted how, prior to Moilanen et al.'s 2022 article, past researchers never questioned that the individual buried at Suontaka could be anything else but a woman, as they were found wearing feminine clothes and jewelry. The presence of the hilted sword has been typically understood, until Moilanen et al., as proof of the presence of another (male) body that decomposed at a faster rate than the “female” one, or of the presence of a second (male) grave that was destroyed, even though Keskitalo's 1968 report clearly states that the presence of other graves is highly unlikely. Literature on Suontaka prior Moilanen et al. also does not speculate on the meaning of the hiltless sword. The aDNA analysis conducted by Moilanen et al. in 2022 revealed that the chromosomal

makeup of the individual buried at Suontaka was XXY, making them biologically male. Moilanen et al. speculate that the presence of mixed-gender grave goods (feminine clothes and jewelry, alongside swords) could indicate that the individual's gender identity defied the male-female gender binary, and because of their high-status, they were allowed more freedom in their gender expression. Moilanen et al. further suggest that the presence of rare bird feathers, pelts, and the aforementioned grave goods show that the individual was a respected member of the community. Finally, the authors hypothesize that the hilted sword could have been placed on the grave by succeeding generations. The findings of this analysis are summarized in the table below (see **table 2**).

Year	Author(s)	Title	Interpretation
1968 & 1969	Keskitalo, Oiva	<i>Kertomus myöhäisrauta- kautisen ruumishaudan tutki- misesta Suontaan kartanon Vesitorinmäessä Tyrvännön pitäjässä 25.10.1968. & Suontaka-svärdet</i>	Gender: woman (female). Grave type: unsure (but unlikely to have been other graves nearby). Either a single grave belonging to a woman OR a double burial, with the woman buried underneath and the man above her. Ownership of the swords: unsure. Either they both belonged to the individual OR only the hiltless one did, with the hilted sword belonging to a man who could not be located.
1973	Nylén, Erik	<i>Finskt, gotländskt eller nor- diskt. Kring ett ovanligt exempel på sen runste norma- mentik</i>	Gender: woman (female). Grave type: possibly a single grave for the woman, and a second, male grave that was destroyed. Ownership of the swords: hilted sword probably belonged to a second, male grave.
1990	Taavitsainen, Jussi- Pekka	<i>Ancient Hillforts of Finland: Problems of Analysis, Chro- nology and Interpretation with Special Reference to the Hillfort of Kuhmoinen</i>	Gender: woman (female). Grave type: Possibly a twin or even triple mixed-gender burial, disturbed during excavations. Ownership of the swords: belong- ing to the other people who were

			probably buried on top of the woman and whose remains decayed more quickly.
2002	Ojanen, Eero	<i>Tyrvännön historia</i>	Gender: woman (female). Grave type: unsure. Possibility of a second, male burial nearby that was destroyed. Ownership of the swords: unsure. Hilted sword probably belonged to someone else than the woman.
2022	Moilanen et al.	<i>A Woman with a Sword? – Weapon Grave at Suontaka Vesitorninmäki, Finland</i>	Gender: possibly non-binary (chromosomal sex: XXY, male). Grave type: single grave. Ownership of the swords: the hiltless sword most likely belonged to the individual. The hilted sword might have been laid on top of their graves by later generations.

Table 2. The interpretations on the gender identity of the individual buried at Suontaka and on the ownership of the swords as well as on the typology of the grave present in the literature analyzed in this thesis.

5 Discussion

Both Hedenstierna-Jonson et al.'s (2017) and Moilanen et al.'s (2022) articles were at the center of international mediatic attention upon publication. This attention was not always positive, and both papers, especially Moilanen et al.'s, have been met with harsh criticism online (Myllylä, 2024). As previously mentioned, in 2019 Price et al. published a paper aimed at answering critics of the work the authors had put forward in their 2017 article on Bj. 581. In the article, they state:

“Many other interpretations of both funerary treatment and gender are possible, but Occam’s razor would suggest that to reach for them as a first resort is to attempt to ‘explain away’ what seems to be the most obvious and logical conclusion. **In our opinion, Bj. 581 was the grave of a woman who lived as a professional warrior and was buried in a martial environment as an individual of rank.** [...] To those who do take issue, we suggest that it is not supportable to react only now, when the individual has been shown to be female, without explaining why **neither the warrior interpretations nor any supposed source-critical factors were a problem when the person in Bj. 581 was believed to be male**” (Price et al., 2019, p. 192).

In the context of public archaeology, the two cases illustrated above are poignant examples of the responsibility that academics in the field are tasked with when discussing the results of their research. Both publications challenged previously held notions on gender identity – that the individual buried in Bj. 581 with weapons, horses and a game set must have been a male warrior, and that the person buried with brooches and jewelry must have been a woman with a sword. In the current digitalized era, reaching the public has become easier than ever; experts can share their finds on various social media in different formats, and the public can actively interact in as many ways (Brophy, 2018; Hurcum, 2024; Richardson, 2013).

In the article “Analyysi Suontaan haudan arkeologisesta uutisoinnista Suomessa ja kansainvälisesti”²¹ (2024), Myllylä explores the mediatic coverage surrounding Moilanen et al.’s article, “A Woman with a Sword? – Weapon Grave at Suontaka Vesitorinmäki, Finland” (2022), both from a domestic as well as international perspective, with a focus on scientific publications, newspapers, and online sources. In the article, Myllylä (2024) also investigates the reactions elicited by Moilanen et al.’s 2022 article in the comment sections of the online

²¹ Translation: *Analysis of the coverage of the Suontaka burial in Finnish and international archaeological news.* My translation.

newspapers reporting the study's findings in regard to the possibility that the individual found in the Suontaka burial might have identified outside the gender binary we are familiar with. According to Myllylä, the comment sections found under Finnish sources have high instances of visible sexism, homophobia, and transphobia; the commenters criticize the Finnish government for spending public funds on research that aims to "rewrite history" and adheres to the "woke" agenda (Myllylä, 2024, p. 17-18). As for international comment sections, Myllylä notes similar comments left by the public on online newspapers; for example, commenters in the Daily Mail comment section also lamented about the "woke" mindset, and criticized the quality of the research and results of the aDNA analysis (Myllylä, 2024, p. 23). According to Myllylä, the longest comment section, with over 500 comments, was found under the Washington Post's report on Moilanen et al.'s research. Because of the high number of comments, Myllylä was able to gather a large body of data from this source alone, and found that there were many users who strongly defended the findings, pointing out the limitations that Moilanen et al. had already admitted in the original research paper, or by factually arguing about e.g., the history of the pronoun "they" as a singular (Myllylä, 2024). Overall, Myllylä also found that international news tended to use terms that are currently considered controversial, such as *non-binary*, more often than Finnish news outlets; for example, YLE was vaguer in the terminology used. Myllylä hypothesizes this might be due to YLE having been the target of criticism from the supporters of the populist, right-wing Finnish political party Perussuomalaiset (Myllylä, 2024, p. 31). Overall, memes about both papers were shared by conservative parody accounts on X (formerly Twitter), Reddit, and other social media, mocking the authors for distorting the past (Hurcum, 2024). Despite the fact that these are usually disregarded as merely humorous, harmless images shared by individual Internet users, memes have been found to yield a considerable power – according to a study by Marlin-Bennet & Jackson (2022), hateful memes have the potential to foster the normalization of divisiveness, derisiveness, and bigotry, and are successful vehicles for arguments in favor of the justifications of violence towards "the other side".

The reactions to the theories put forth by Hedenstierna-Jonson et al. (2017) and Moilanen et al. (2022) are in line with the current state of the world; as stated in the introduction of this literature review, transphobic sentiments and legislation are on the rise in the western world, and topics related to gender identity have become a central issue in politics at a global level (Enloe et al., 2019; Graff & Korolczuk, 2024; Grzebalska, 2016; Hansard, 2023; Nechemias, 2016; Stanley, 2021). Transphobia is profoundly connected to the previously established concept of gender essentialism; in an essentialist worldview, the bodies we are born in come with

biological, *a priori* traits that can never be challenged or viewed through a sociocultural lens. In this context, it is not surprising that a rise in transphobic sentiment in the public opinion is being followed by an increase in sexist and anti-feminist online content (Fox et al., 2015; Lennon, 2025); the popularization of jokes such as “girl math” (Stathopoulou, 2024), the spread of the “tradwife” lifestyle and aesthetic on platforms like TikTok (Mattheis, 2021; Proctor, 2022), streamers such as Andrew Tate, whose platform is built around sexist remarks towards women, and whose fanbase largely consists of young men (Haslop et al., 2024), are all factors that are contributing to the normalization of misogyny through the lens of gender essentialism (Hurcum, 2024).

According to Brophy (2018), the increase in opportunities for archaeologists to share their research with the public has led to archaeological data and research to be used and mobilized in online political debates surrounding nationalism, culture wars, and identity politics.

“Once published, archaeological data and conclusions are used in ways that we neither intended, nor fully understand.” (Brophy, 2018, p. 1650)

As previously discussed, matters such as what archaeology “owes” to the public, and how in turn the public affects the discipline, are still under intense academic debate (Grima, 2016; Miller et al., 2024; Richardson, 2013). The two questions at the heart of public archaeology as a field of study, ring clear in instances such as the gender identity and lived experiences of the Bj. 581 and Suontaka grave individuals; do archaeologists truly have a moral obligation towards the public in how they relay their research? How can archaeologists ethically discuss the lives of people who are no longer alive, whose culture has been lost to time, and who cannot consent to the modern interpretation of their own self? Current publications and research in gender archaeology and its subfields (e.g., queer archaeology, transgender archaeology, and disability archaeology) suggest that the answer to the first question is a resounding yes, while the second question is seen in a more nuanced light.

When it comes to moral obligations towards the public, specifically in the context of biological essentialism, a poignant example can be found in the common misconception that in prehistoric hunter-gatherer societies, men hunted and women gathered. Despite the fact that current research has largely debunked this myth (Anderson et al., 2023; Augereau, 2022; Beaune, 2019; Estioko-Griffin & Bion-Griffin, 1981; Owen, 2005), children’s history textbooks still largely report this misconception as a fact (Burt, 1987; Sorce, 2024). Prehistory, by virtue of being considered the most distant past, tends to be seen by the public as the time when humans were

closest to their natural inclinations and less shackled by societal norms (Burt, 1987). Because of this, teaching young children that men hunted and women gathered in the Stone Age has the potential to further instill an essentialist understanding on the nature of gender roles and the gender binary as a natural, long-standing biological reality (Sorce, 2024). This misconception reinforces the idea that boys are naturally stronger, more aggressive, vivacious, and wild, while girls are calmer, more focused, caring, and responsible (Anderson et al., 2023; Burt, 1987; Sorce, 2024). As Heyman & Giles (2006) argued, essentialist thinking has the dangerous potential of becoming a self-fulfilling prophecy. In the long term, differences in how children are treated on the basis of their perceived gender, reinforced not only within the family, but by society as a whole, can shape psychological as well as physiological differences between children who were assigned the male sex at birth and children who were assigned the female sex, thus reinforcing the biological essentialist understanding of sex and gender (Pinho & Gaunt, 2021; Shelonitta, 2020). While the misconception on hunter-gatherer gender roles is not at all the main factor behind essentialist biases, it is one of those “facts” that are taken at face value, mentioned in media without ever being questioned, that can contribute to the naturalization of patriarchal views and expectations on how the gender binary of man-woman is dictated by natural instincts that have been within us since the beginning (Anderson et al., 2023; Augereau, 2022; Beaune, 2019; Estioko-Griffin & Bion-Griffin, 1981; Owen, 2005; Sorce, 2024).

As for the matter related to how archaeologists can faithfully and responsibly discuss a dead individual’s innermost details (e.g., their gender identity, sexual orientation, how society perceived them) or the sociocultural norms they existed in, the answer is much more complex, nuanced, and not without dissenting opinions in the field. Despite the fact that, as explored in a previous section of this thesis, both sex and gender are culturally charged concepts, the idea of a natural binary system is currently deep-rooted and widespread at a global level. The current dichotomy male-female has been shaped by millennia of patriarchal oppression in the west, further embedded in western culture with the advent of Christianity, and the high regards reserved for Greek figures such as Plato and Aristotle in the philosophical and scientific European canon up until the Enlightenment (Kurzweil et al., 2020). The matter is further complicated by issues such as colonialism and the racialization of gender roles and identities. Western colonialism has been blamed for imposing the concept of a gender binary on indigenous populations whose culture allowed for more fluidity (Geller P. L., 2009; Sander, 2023). For example, in pre-colonial Hawai’i, *māhū* were notable healers and respected members of society who em-

bodied both female and male spirit, and whose existence was demonized by European colonizers, who stifled and attempted to erase all non-patriarchal, non-androcentric, non-binary views on gender and sexuality in the name of “civilization” (Manalo-Camp, 2020). According to Wynter (2001; 2003), culture and socialization have a direct physiological impact on the mind and the body; in other words, colonization of the body can lead to colonization of the mind itself via a series of external reinforcements. In this lens, concepts such as “sex” or “race”, typically seen as biological realities, are instead understood as social constructs that reinforce themselves at a physiological level (Everhart, 2022; Wynter, 2001; 2003). In the context of archaeology, this theory poses as a critical issue when it comes to racializing or gendering past individuals, especially when the sociocultural contexts in which they lived have been altered, erased, or simply lost to time. Overall, gender archaeologists argue in favor of laying stronger foundations, e.g., by implementing more courses on sex/gender, critical gender theory, colonialism, race theory, and adjacent topics in the early years of archaeology education in university, in order to foster more nuanced and critical approaches to archaeological research (Geller, 2009; Sander, 2023).

6 Conclusion

In 2017, Hedenstierna-Jonson et al. published a paper in which osteological analyses revealed that the previously-assumed-male warrior buried in one of the richest graves in Birka was instead biologically female. The article received great international attention and has since been at the center of academic debates on the reliability of the osteological analysis, as well as on the interpretation of the deceased as a “powerful female warrior”. In 2022, Moilanen et al. were similarly at the center of mediatic attention and controversies, when they published an article in which they re-examined a peculiar Finnish burial in Suontaka, hypothesizing that the body buried within might have identified outside of the male-female gender binary, and finding that aDNA analyses revealed their chromosomal makeup was XXY. Both articles were targets of similar complaints; critics of Hedenstierna-Jonson et al. (2017) accused the researchers of having “gone looking” (Price et al., 2019, po. 194) for a female warrior in the records, hence approaching the analysis from a biased perspective. Similarly, Moilanen et al. (2022) were also accused of historical inaccuracy based on a desire to see a minority represented in the past (Myllylä, 2024). These allegations appear both in academic as well as non-academic spaces, despite the fact that both Hedenstierna-Jonson et al. (2017) and Moilanen et al. (2022) acknowledge the limitations in their research, and do not negate other interpretations on the burials. For example, Moilanen et al. mention how “[...] the graves may not tell us about the gender systems of the past per se, but rather about the assumptions of the modern people making the interpretations” (Moilanen et al. p. 45). This statement rings true for all archaeologists: those who in the past assumed that Bj. 581 must have been male, and those who now see them as a female warrior; those who insisted that the Suontaka swords must have belonged to a male body that was never found, those who believe the individual to have been a powerful woman, and those who interpret them as non-binary.

Overall, the analysis of the literature surrounding these burials conducted in this thesis highlighted how archaeologists’ implicit biases, when left unchallenged, impact the objectivity and reliability of one’s research, which in turn can lead to harmful, deep-rooted, essentialist beliefs about the past that spread at a societal level, e.g., the assumption that men are natural hunters and warriors, while women are natural caretakers. While contextual clues such as grave goods and written sources may provide valuable insight in the lives of those who preceded us, we must come to terms with the reality that archaeological research is a constant, never-ending effort, for “the past is a foreign country” (Lowenthal, 2015) and one’s own modern biases might

be so deep-rooted and naturalized that they might go unnoticed. Yet, even though we may never reach an objective “truth” of what the past used to be, we can get closer and closer with newer technologies and discoveries, but also with the courage to challenge past assumptions, as well as constant efforts to critically re-evaluate one’s own biases, understanding the responsibility of archaeology as a discipline that has an active role in the fight towards liberation from systems of oppression.

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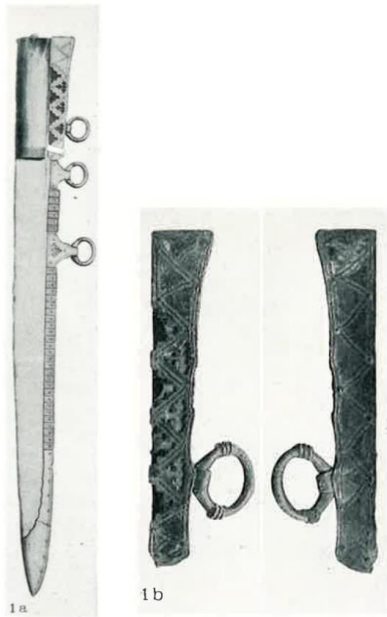
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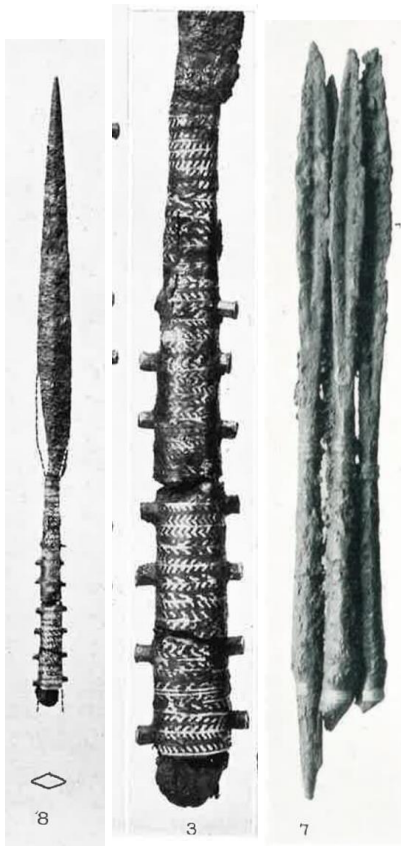
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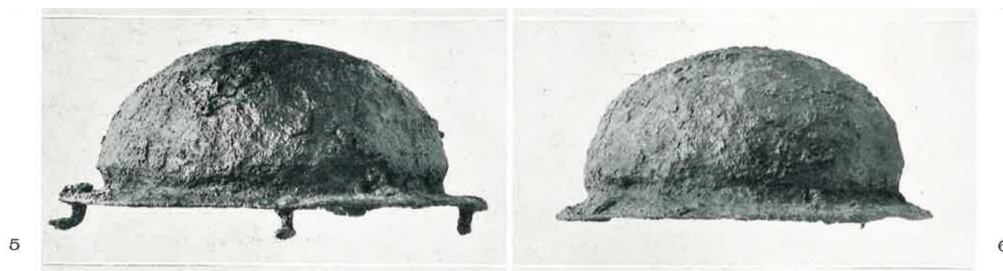
Appendix



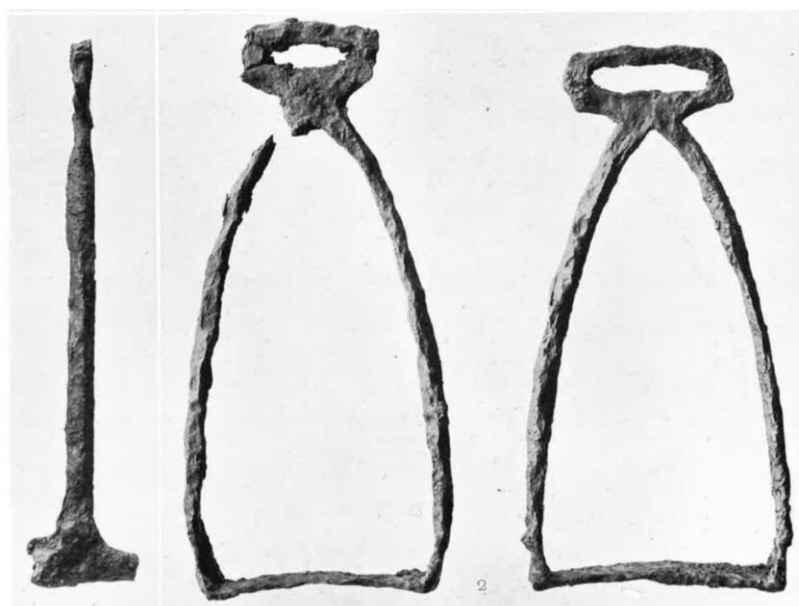
Item 2: cutting knife. *Birka I. Die Gräber: Tafeln*. Table 6 (1a; 1b). Arbman, 1940.



Item 6: examples of the arrowheads. *Birka I. Die Gräber: Tafeln*. Table 7 (8); Table 9 (3); Table 12 (7). Arbman, 1940.



Item 7 & 8: shield bosses. *Birka I. Die Gräber: Tafeln.* Table 16 (5; 6). Arbman, 1940.



Item 9: stirrups. *Birka I. Die Gräber: Tafeln.* Table 37 (2). Arbman, 1940.



Item 11: grey slate whetstone. *Birka I. Die Gräber: Tafeln.* Table 187 (7). Arbman, 1940.



8

Item 12: gaming pieces. *Birka I. Die Gräber: Tafeln.* Table 147 (3). Arbman, 1940.



2

Item 13: Arabic silver coin. *Birka I. Die Gräber: Tafeln.* Table 140 (2). Arbman, 1940.



1

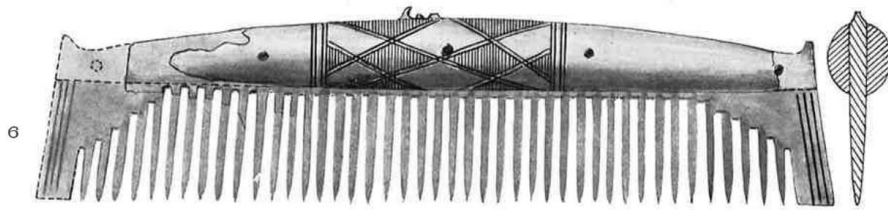


2

Item 15: silver fittings (on the left), and reconstruction of their position around the skull. *Birka I. Die Gräber: Tafeln.* Table 94 (1; 2). Arbman, 1940.



Item 16: bronze bowl. *Birka I. Die Gräber: Tafeln.* Table 201 (1a; 1b). Arbman, 1940.



Item 19: horn comb. *Birka I. Die Gräber: Tafeln.* Table 162 (6). Arbman, 1940.



Item 24: iron hook. *Birka I. Die Gräber: Tafeln.* Table 31 (3). Arbman, 1940.