

6 The Lagertha Complex: Archaeogenomics and the Viking Stage

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Once you have seen Lagertha, it is hard to unsee her.

—Judith Jesch, 2019¹

On September 8, 2017, an article with the conspicuous title “A Female Viking Warrior Confirmed by Genomics” was published in the “Brief Communication” section of the *American Journal of Physical Anthropology (AJPA)*.² It presented the results of a genetic sex determination of an individual buried with weapons in a chamber grave at the Viking Age site Birka in present-day Sweden. The article concluded that the individual, who had previously been assumed to have been male, was not only biologically female but the “first confirmed female high-ranking Viking warrior.”³ The article went viral almost within hours and remains one of the most talked about research papers ever according to alternative metrics.⁴ The article was published in close proximity to the airing of the fifth season of the popular History Channel series *Vikings*, and the individual, soon to be known worldwide as the “female Viking warrior,” came to be widely conflated with the lead female character of the show: the shieldmaiden Lagertha.⁵

Nine months earlier, on December 14, 2016, an episode of the docudrama *Real Vikings* had been released. It featured a meeting at the Swedish History Museum in Stockholm between Katheryn Winnick, the actor starring as Lagertha in *Vikings*, and three researchers in archaeology and osteology who were also authors of the scientific article later to be published in the *AJPA*. In front of the camera, Winnick and the researchers study the human remains and weaponry originally found in the chamber grave at Birka in 1878, subsequently stored at the museum. The production soon turns attention to the gender of the buried individual, and it is explained that it has previously

been assumed to be male, owing to the traditional warrior equipment found in the grave. With the bones laid out on a table, the researchers explain confidently, while pointing to the remains of the pelvis, that they have evidence for it being female and that the person buried in the grave was “definitely a female warrior—someone who made her living on the battlefield.” In excitement, Winnick bursts out: “So, this chick was a badass!” Leaning over the original artifacts from the grave, she grasps the hilt of a corroded sword and exclaims: “This is my sword. Oh, yeah! This is Lagertha’s favorite weapon!” The scene ends with a sonorous voiceover which declares: “Finally, physical evidence verifies the legend of the shieldmaiden.”⁶

The scene in *Real Vikings* was no doubt orchestrated to establish an intriguing analogy between the fictional character Lagertha and the real life and identity of the individual buried at Birka some thousand years before. Epitomizing the pop-feminist ambitions of the *Vikings* series—to challenge the stereotype of the Viking male by providing space for “women who wield weapons and women who wield power”⁷—it served simultaneously to authenticate the depiction of female warriors in *Vikings* and to visualize and dramatize knowledge claims in the academic field of archaeology. In what seemed like a win-win collaboration between entertainment and research, where the expertise and authority provided by the archaeologists was grafted onto the visually compelling imagery of Lagertha, fearlessly wielding her sword and shield on the battlefield, the ancient bones at the museum were brought to life as the remains of a true action heroine, a genuine shieldmaiden—a real Lagertha.

While science and entertainment are frequently assumed to be poles apart, here they were openly intertwined. The blockbuster article and the docudrama episode featured the same human remains from Birka, involved the same people, and made the same kind of claims and arguments, not only about the identity of the buried individual but more generally about the existence and characteristics of female Viking warriors as a social category. In an argument based on, first, an osteological assessment, and second, a genetic determination of the individual’s biological sex, medieval legends about shieldmaidens and contemporary action heroines were somehow also confirmed as authentic representations of real-life individuals. In a most remarkable incarnation, the individual once buried in the Birka chamber grave came to converge with the figure of Lagertha, whose lineage extends from the twelfth-century imaginings of the Danish author Saxo Grammaticus to the popular *Vikings* series.

How are we to make sense of this complex taking shape around the figure of Lagertha, with its intimate intertwinement of science and entertainment, legend and genomics? What role did the researchers play in the realization of the “female Viking warrior” as a real Lagertha, and what role did the media play in the production of scientific knowledge? How, and to what effects, was aDNA brought into operation?

A Female Viking Warrior “Confirmed” by Genomics

As a scientific study, the article “A Female Viking Warrior Confirmed by Genomics” presents the results from aDNA and strontium isotope analyses of the human remains from grave Bj 581 at the Viking Age site Birka, located on an island in Lake Mälaren in central Sweden. An important Viking Age site for trade and commerce, Birka has been investigated by archaeologists since the nineteenth century. Originally excavated in 1878, the grave featured in the study includes not only the human skeleton but also assorted weapons and the remains of two horses. In the article, the authors identify this set of grave goods as “the complete equipment of a professional warrior,” and hence describe Bj 581 as the epitome of a warrior grave.⁸ The location of the grave in a prominent place near the garrison is taken as indicative of the social standing of the buried person. Furthermore, a full set of gaming pieces is understood as a sign of “knowledge of tactics and strategy, stressing the individual’s role as a high-ranking officer.”⁹ Once the identity of the individual as a warrior—or even a high-ranking officer—has been put forward with traditional archaeological arguments, the actual scientific analysis, and the bulk of the scientific paper, revolve around the DNA and isotope analyses.

The genomic analysis is featured prominently, already in the title of the article, where its literal function is to confirm the “female Viking warrior.” On closer inspection, however, it plays only a marginal role in the actual scientific analysis. Biological sex can be determined with a basic genetic analysis—by establishing the absence of a Y-chromosome—and does not require a full genome analysis. A genome-wide analysis, on the other hand, covers the entire nuclear and mitochondrial DNA of an organism. In aDNA studies of prehistoric individuals, such analyses are used to estimate ethnic or family relations and to find out if the individual had any genetically defined characteristics or rare medical conditions.

A genome-wide analysis was indeed performed on two samples from the human remains in Bj 581. First and foremost, it showed that the sampled bones belonged to the same individual. This is a significant result, since the grave had been excavated in 1878 and the human remains (which are now incomplete and lack the skull) were stored among other human remains at an institution that has since been reorganized and relocated. The genomic analysis, moreover, indicated a population affinity with present-day inhabitants of northern Europe. Within Sweden, it showed a stronger affinity with modern inhabitants of the southern and south-central parts than with those of the northern parts of the country. The strontium isotope analysis, which can indicate mobility between geographical regions throughout an individual's lifetime, was not conclusive but suggested that the individual buried in Bj 581 was born elsewhere and had moved to Birka.

However, none of these findings gained traction in the communication of the results that followed the publication of the article. And the article itself makes clear where the significance of the study lies. After accounting for the complicated scientific methodology and broader results of the DNA and strontium analyses, the authors conclude: "Hence the individual in grave Bj 581 is the first confirmed female high-ranking Viking warrior."¹⁰ Moreover, this is said to "suggest that women, indeed, were able to be full members of male dominated spheres."¹¹

Two curious claims are made in these statements. First, they set forth that the study could "confirm" that the buried individual had an in-life identity as a high-ranking warrior, although the genomic study established only biological sex and affinity to present-day populations. Second, they suggest that the study—although it included only a single individual—could say something in general about the position of women in Viking Age society.

Of course, neither of these claims is valid. More importantly, however, they point back to what seems to be the core objective of the study, which has little, if anything, to do with genomics and the analysis of aDNA. Rather, it seems that both the objective and principal results of this study had taken shape long before the publication of the scientific article, and long before the human remains were even sampled for aDNA. As indicated already in the *Real Vikings* scene, aired almost a year before the article was published, the objective was to demonstrate the real existence of a social and professional category of female warriors in the Viking Age, with recourse to legendary shieldmaidens. The analysis of aDNA brought nothing qualitative to this argument, since

previous osteological assessments had already established the biological sex. Genetics acted solely as an agent of absolute confirmation—not only of the biological sex of the human remains but of the existence of professional female warriors in the Viking Age and of the high-ranking status of the individual buried in Bj 581. Like a magic wand, the word “genomics” seemed to have brought legendary shieldmaidens to real life.

A Spectacular Media Career

The publication of the article in the *AJPA* in September 2017 marked the beginning of a spectacular media career, which would turn the buried individual in Bj 581 into a global celebrity showcased in exhibitions, exploited in pornography, printed on t-shirts, and dramatized in documentaries, theater plays, and novels.¹² Presented as the “Viking High Ranking Birka Shield-Maiden,” the individual—or rather the individual’s genetic markers in combination with the mediatized celebrity image—was also used as a beacon for genetic ancestry tests on the website My True Ancestry. Highlighted as a “DNA Spotlight,” the individual was promoted as an ancient ancestor with whom root-seeking consumers could connect and match their DNA.¹³

Only hours after its publication, the academic article had attracted massive media interest across the world.¹⁴ The initial news headlines commonly combined the element of DNA as proof with the feminist implications of a female Viking warrior: “Gender Reveal: Ancient Viking Warrior Was a Woman, DNA Analysis Shows,” “Famous Viking Warrior Was a Woman, DNA Reveals,” and “New Science Shows High-Ranked Viking Warrior Was a Fierce Lady.”¹⁵

According to the Altmetric attention score, which measures public spread and visibility of academic research, some 149 news outlets have to date reported on the *AJPA* article. It has been mentioned on a great number of blogs, Wikipedia and Facebook pages, and in thousands of tweets.¹⁶ Of course, the overall popular appreciation of Vikings, fueled by books, films, and television series provided a fertile soil for the “female Viking warrior” to capture the public imagination. The results from a Google search of the title of the article abound with images of beautiful young women in various historical costumes. Many illustrations include helmets and armor, and words like “fierce” and “fearsome” are recurring. Frequent references are also made to Hollywood sheroes such as Xena Warrior Princess, Wonder Woman, and Daenerys Targaryen (from *Game of Thrones*).

Most common of all, however, are the allusions in text and imagery to Lagertha. As noted by archaeologist Howard Williams, Lagertha and the individual in grave Bj 581 became “recursively related as part of a wider cultural conversation that is set to run and run.”¹⁷ Not unlike the ways in which the small-bodied hominin *Homo floresiensis*, or the “Flores Hobbit,” was imagined and made sense of when it was discovered in 2004 (relating in particular to Peter Jackson’s recent film adaptation of *Lord of the Rings*), the “female Viking warrior” was configured within the scaffold of popular, fictional creations—an approach that was initiated and endorsed by the researchers themselves.¹⁸

In the media coverage, there were also abundant references to DNA as proof. These were often made in rhetorical combinations that are difficult to sustain from a scientific point of view, as in *Science Magazine’s* headline “DNA Proves Fearsome Viking Warrior Was a Woman.”¹⁹ While fearsomeness, or indeed a warrior occupation, is of course not inscribed in any strings of DNA, it is here, so to speak, evident by association. This should not, however, be regarded as a downstream invention by ignorant journalists. We see similar slippages to bolder claims in the academic article itself, and we see it expressed again by some of the authors reporting on their website that their research team has “uncovered a *fearsome* Viking warrior to be in fact a woman.”²⁰ The leap to bolder claims seems to be characteristic for the recourse to DNA as evidence, by everyone involved in the communication around the individual from Bj 581.

Judging by the media response, the story appealed both to feminist aspirations of finding powerful women in history and to male heterosexual fantasies.²¹ More precisely, the story about the individual buried in Bj 581 gained purchase in two distinct directions. On the one hand, it inspired applause in feminist media outlets and mainstream media reporting with feminist undertones. On the other, it spurred misogynist exclamations and hardcore pornography.

The feminist connection, which was present in the *AJPA* article as well as the episode of *Real Vikings*, was amplified in the subsequent media communication, where the “female Viking warrior” soon became a cudgel in polemic feminist debates. *The Guardian* called for a revision of male-centered Viking historiography, and *Huffington Post* deplored “sexism in research methods.”²² Less established media outlets made even bolder claims. A video from the producer Vocativ, for instance, presented the “female Viking warrior” within a medley of pop-cultural images of fighting women accompanied

by bombastic music and subtitles claiming that “women kick ass” and have been “multi-tasking since at least the 8th century.”²³

Since Vikings, as historian Katherine Lewis notes, have commonly been presented as “the epitome of an unbridled form of hypermasculinity predicated on physical strength . . . and callous brutality,” the idea of female Viking warriors, in fiction and research, comes as a significant and, to some, highly anticipated opportunity for discursive change.²⁴ In this context, the identification of a female individual in what has been described by one of the researchers behind the study as “the world’s ultimate warrior Viking grave,” was loaded with symbolic weight.²⁵ Eventually, the article even came to be associated with the global uprising against the abuse of women that ensued only a few weeks after its publication.²⁶ For instance, a Canadian playwright who later brought the “female Viking warrior” to Broadway claimed that the researchers had “rolled feminism, activism, Vikings and #MeToo up in one tasty, spicy, mind-blowing, intellectual taco.”²⁷ This connection was quite possibly spurred by a promotional video for *Vikings* in which Winnick/Lagertha delivered a #TimesUp speech from her throne in Kattegat, encouraging women to be warriors and queens.²⁸

In the misogynistic direction, by contrast, the Norwegian Nazi apologist and neo-pagan Varg Vikernes questioned the results of the study on his YouTube channel by arguing that “it would not be logical to train women to become warriors” since women “are [physically] inferior” to men.²⁹ And on the Swedish online forum Flashback, self-styled historians suggested that the person buried in Bj 581 was in fact the soldiers’ favorite prostitute, honored with a warrior burial.³⁰ On a similar note, a dedicated porn site (which displays a DOI link to the *AJPA* article) features female actors personifying the “female Viking warrior” being subdued in a number of variations on sexual violence.³¹

The double vision of the “female Viking warrior” represented here—as fierce and powerful, on the one hand, and subordinate to the male gaze and sexual desire, on the other—is in some sense reflected in the academic attempt to frame the individual in Bj 581 and the figure of the shieldmaiden in a language of feminism, while the very origin of the fantasy of warrior women rests on male desires and anxieties.³² Even the figure of Lagertha could be said to accommodate these obviously contradictory visions about the female Viking warrior. While Lagertha in *Vikings* has forcefully been put forth as an empowering character and a feminist role model, the original

Lathgertha, according to Viking studies scholar Judith Jesch, was rather a product of Saxo Grammaticus's "misogynist fantasy about warrior women."³³ Either way, both versions are undeniably products of male imagination.

The Prehistory of the "Female Viking Warrior"

Contrary to what the *AJPA* article from 2017 suggested and what news media subsequently reported, the "female Viking warrior" did not emerge as a result of genomics. The inflated narrative and composite identity embedded in the label "female Viking warrior" had already been articulated several years earlier, and in popular rather than academic contexts. While the DNA component of the study merely confirmed what several osteological assessments had indicated since the 1970s—that the biological sex of the individual in Bj 581 was female—none of these previous assessments had come with any explicit interpretation regarding the social identity of the individual. In scholarly settings, the individual's sex combined with the material context of the grave had merely been discussed as an "interesting and thought-provoking example" or "an interesting (and possibly controversial) find."³⁴ The full-blown "female Viking warrior" story—including assumptions about the individual's social gender, class, character, professional identity, and affinity to the shieldmaidens of Old Norse literature—was first presented in nonscientific contexts committed to the promotion of the popular TV series *Vikings*.

For instance, in a 2015 "Vikings Special" production entitled *Secrets of the Vikings*, the renowned Viking Age expert Neil Price (who would later be one of the authors of the *AJPA* article) presented the individual in Bj 581 as "a woman, buried with this absolute massive collection of weapons" in a grave that ought to be interpreted as "a burial of a shieldmaiden."³⁵ In combination with newly found images and figurines of women with weapons, Price claimed that the individual in Bj 581 added up to "a pretty compelling picture of what these warrior women may actually have looked like." Stressing that these findings were from the Viking Age itself—not from the later literary corpus of the sagas but "the Viking Age as it really was"—the production illustrated these findings with artistic reconstruction drawings and *Vikings* series footage of Kathryn Winnick as Lagertha, charging forward on horseback, shouting "Shield wall!"³⁶ The same suggestive presentation of the archaeological findings from Bj 581 was repeated a year later in the episode of *Real Vikings* discussed in the beginning of this chapter.

The popular productions around the TV series *Vikings* apparently provided scholars with an attractive platform and a dramatic license that allowed for speculative interpretations to be spelled out and potently illustrated. The article in the *AJPA* did not add any qualitative detail to the preexisting narrative; it merely worked as a scientific authorization of the hyperbolic story about the identity and character of the individual buried in Bj 581, and, by association, of the existence of real Viking Age shieldmaidens.

As could be expected, the *Vikings* production team was pleased to see their take on the Viking Age legitimized and reinforced by science. Within days of the publication of the article in 2017, the director of *Vikings* commented: “It’s kind of wonderful to have the character of Lagertha validated in the show.”³⁷ Later, both the director and Katheryn Winnick referred to the article as proof that the depiction of female warriors in *Vikings* was accurate and that shieldmaidens actually existed as a real social category in the Viking Age.³⁸

Unpacking the Lagertha Complex

Its proponents have hailed archaeogenomics as a path to a more correct and scientific version of history, posing the “exquisite accuracy” of genomics against elements of storytelling and guesswork in traditional archaeological research.³⁹ In a particularly pregnant statement by archaeologist Kristian Kristiansen, aDNA is said to have opened “a new door to previously hidden absolute knowledge” that will “reduce the amount of qualified guessing” and reveal new stories about human history “without having to resort to storytelling.”⁴⁰

Considering what we know about the “female Viking warrior,” such claims could at best be understood as promotional discourse. Instead of reducing the amount of storytelling and guesswork, we have seen how aDNA—or rather what has been termed the “DNA mystique” or the “social power of DNA”—has acted as leverage for inflated stories about social and professional roles and individual character in the Viking Age.⁴¹ We have seen how a simple reference to ancient DNA has validated and subsumed narratives and images that cannot otherwise be academically substantiated, under the truth-affirming banner of genomics. As Marianne Sommer has said, this is symptomatic of an unresolved tension in aDNA research between a (genomic) esthetics of numbers and an (archaeological) esthetics of narrativity. The union of history writing and DNA, Sommer suggests, generates a conflict between, on

the one hand, genetic knowledge, which, through its epistemic object and quantitative and technological approach is presented as particularly accurate and authentic, and, on the other hand, the ways in which that knowledge, in order to become meaningful, “needs to be rendered in a narrative, esthetically appealing way.”⁴²

In the *AJPA* article and in numerous interviews and documentaries preceding and following its publication, the authors elaborate on the identity, professional competence and personal character of “the female Viking warrior.” These elaborations go far beyond any empirical evidence coming out of Bj 581. It is significant that the article begins by referring to medieval “narratives about fierce female Vikings fighting alongside men,” and suggests that other scholars have been too quick to dismiss the women featured in these stories as mythological phenomena.⁴³ Correspondingly, it ends with an uncommented quotation from an Edda poem, written approximately two hundred years after the individual was buried at Birka:

Then the high-born lady saw them play the wounding game,
she resolved on a hard course and flung off her cloak;
she took a naked sword and fought for her kinsmen’s lives,
she was handy at fighting, wherever she aimed her blows.⁴⁴

This certainly implies that genomics had confirmed the truthfulness of medieval narratives, and that the individual in Bj 581 was a real-life shieldmaiden.⁴⁵

As noted by sociologists Dorothy Nelkin and Susan Lindee, it is commonplace that DNA is presented as a conclusive solution to “historical questions that were once dependent for their resolution on records and testimonies from those alive at the time.”⁴⁶ Obviously, the “DNA mystique” and the potential to frame unverifiable interpretations as conclusive facts may similarly tempt trained archaeologists to disregard well-established knowledge within the discipline concerning the perils of interpreting social roles from burial arrangements, and gender from chromosomal sex.⁴⁷

While the individual in Bj 581 may have acted as a warrior in life, there is no scientific method by which we could ever find out, nor get to know exactly, what their social gender was, or what symbolic, personal, or functional significances were attributed to the grave goods at the time of burial. In fact, the compound “female-Viking-warrior” is likely to be fraught with suppositions regarding the Viking Age implications of each of these three denominations. Ancient DNA can neither verify nor disprove this or any other interpretation regarding the individual’s in-life identity. The acceptability of the figure of

the “female Viking warrior,” therefore, relied not on a scientific test but on the assertion and authority of genomics, as well as on the persuasive force of its presentation and cultural resonances.

The notion of female Viking warriors that informed the realization of narratives and images of the individual in Bj 581—from *Secrets of the Vikings to Real Vikings* and the article in the *AJPA*—was heavily indebted to the modern interpretation of the figure of the shieldmaiden as accounted for in medieval poetry and saga literature. The inference that the individual in Bj 581 was a “female Viking warrior” thus imposed an identity that drew on stories that were put into writing hundreds of years later, primarily by Christian men imagining a pagan past.⁴⁸ The combination of genomics and legend, science and fantasy, adheres to the conflicting esthetics identified by Sommer, and is also reminiscent of much earlier attempts to produce scientific knowledge about unknown prehistoric phenomena. A similar case is the convergence of myth and science in the nineteenth-century conceptualization of the dinosaur. As shown by film scholar John McGowan-Hartmann, the emergent science of paleontology coopted the ancient mythic figure of the dragon—as concept and image—into a scientific discourse that came to shape the understanding of dinosaurs and their nature. Paraphrasing McGowan-Hartmann’s outline of the paleontological resolution between dragon and dinosaur, the resolution between the shieldmaiden legend and the female individual buried with weapons would read: if there was such a thing as a shieldmaiden, it is here, and it is real. Not fantasy, but science. Not unknown, but known, and confirmed by the infallible science of genomics.⁴⁹

The complex now surrounding the individual buried in Bj 581 can be further unpacked with help of archaeologist John Robb’s term “technologies of individuation.” Robb shows how the encounter with dead bodies in archaeology and bioanthropology “imposes a regime of depersonalization.”⁵⁰ After being provided with numbers or other impersonal designations, human remains are described, stored, catalogued, and exhibited as things or objects. For some of these remains, this is followed by a process of “repersonification,” whereby the human remains are clothed in a social persona. This “calls into operation a range of specialized technologies of individuation” that seek to recreate attributes commonly considered necessary for a social person, such as its sex, age, ethnicity, and individuating marks that reveal its unique history.⁵¹ Various scientific methods are used to support these technologies of individuation, such as facial reconstructions and DNA analysis. According to

Robb, the ultimate goal of these archaeological technologies of individuation “is to assign a name, a history, a social persona.”⁵²

Attempting to answer questions such as what the person ate, what they looked like, what activities they performed, and how they died, archaeologists and forensic scientists tend to assume that the physical body constitutes the principal source of a person’s individuation, commonly conflating biological sex with social gender and fitting chronological age into a normative biographical narrative. Processes of re-personification, therefore, call critical attention to how prehistoric figures are not simply vessels for ancient times but also constructions of modern imagination that are predicated on and tend to reinforce contemporary ideologies and notions about individuality, race, and gender.⁵³ Moreover, re-personalizations and reconstructions produce compelling images and narratives that inform future thinking and that are difficult to dislodge or unthink for researchers as well as publics.⁵⁴

Owing to deliberate acts of re-personification by the researchers—in the *Vikings*-related productions, the scientific article, and the subsequent media communication—“the female Viking warrior,” whose remains were previously known only by their relation to the grave with the impersonal label Bj 581, has now been assigned name(s), a biography, and a social persona. In interviews and dramatized documentaries, the researchers provide generous insights into their own ideas about the individual’s life and personality. In the 2019 docudrama *The Viking Warriorress*, for example, Neil Price says that the “senior, female, Viking commander” was “presumably in charge of some *pretty nasty* things,”⁵⁵ while the lead author of the *AJPA* article, Charlotte Hedenstierna-Jonson, adds that she was “terrific in every sense of the word.”⁵⁶ In *The Viking Warrior Queen*, a similar production from 2020, Hedenstierna-Jonson even speaks on behalf of the individual, suggesting that “she would have loved for us to be standing here today, talking about her, and talking about her achievements more than a thousand years later.”⁵⁷

Interesting with regard to re-personification are also the reconstruction drawings included in the *AJPA* article and in a follow-up paper published in the archaeological journal *Antiquity* in 2019.⁵⁸ Three reconstruction drawings are presented in these publications, and they were also included in the media packages distributed on publication. The first is an etching by Evald Hansen, originally published in a popular magazine in 1889, featuring the Bj 581 skeleton from above surrounded by the grave inventory, as if just uncovered by the excavator.⁵⁹ The second image is a commissioned artistic reconstruction

drawing by illustrator Þórhallur Þráinsson picturing the individual at the time of the burial and showing a slender young woman in seated position, with soft facial features and fair hair in a ponytail.⁶⁰ The third image, included in the *Antiquity* article, is a page-size drawing by the artist Trancredi Valeri showing the individual “reconstructed as a female warrior of high status.”⁶¹ Pictured alive in a proud posture with arms crossed, surrounded by shields and weapons and the two horses, the “female Viking warrior” bears recognizably feminine features, with a slightly marked jaw, and long, dark, unbridled hair. Together, the three images form a triptych—a composite portrait by which the individual in Bj 581 is successively reinvented and brought back to life—from an anonymous and incomplete skeleton to a relatable and humanized subject: a full-fledged and independent warrior woman.

Since the skeleton is incomplete and the skull went missing in 1889, there is little evidence to support these visualizations. Apart from the use of original artifacts from Bj 581 as props in the in-life reconstruction, the drawings do not portray the actual individual but a generalized idea and image of the shieldmaiden, superimposed by the iconography of nineteenth-century romantic art and the visual presence of Lagertha in *Vikings*. As imaginative attempts to envision the in-life appearance of the individual buried in Bj 581, these reconstruction drawings come off as particularly strange when combined with the esthetics of numbers associated with genomics. As noted by archaeologist Simon James, “The only certain thing about any reconstruction drawing is that it is wrong.”⁶²

The visualizations of the “female Viking warrior” should not, however, be dismissed as mere illustrations or insignificant ornaments to the scientific facts. As noted by other scholars, reconstruction drawings constitute arguments in themselves and serve to reinforce particular interpretations.⁶³ Images cannot express ambivalence, interpretative uncertainty, or chains of assumptions; instead, they minimize or even eliminate ambiguity and support the impression that the past is known in its entirety.⁶⁴ In the case of the “female Viking warrior,” we see reconstruction drawings combined, to extraordinary effect, with the symbolic truth-value of genomics. Drawings and genomics work as two separate strategies for reducing complexity and conveying certitude. Archaeologist Joan Gero has called critical attention to how such rhetorical strategies—“mechanisms of closure”—are used in archaeological research to conceal necessary and ethically important ambiguities in historical interpretation. The presentation of the results from the

scientific study of the human remains from Bj 581, with images of complete living women and allusions to the absolute determining power of genomics, serves to create an aura of certainty around the findings—or, as Gero puts it, “to produce a knowledge product that is unassailable and unambiguous.”⁶⁵ By naming their preferred understanding of the individual in Bj 581 a “genomic reinterpretation,”⁶⁶ the researchers present the “female Viking warrior” not as a result of various considerations, assumptions, and efforts to repersonalize the individual, but as an unambiguous and impersonal reading of machined data—as if merely extracted from the bones and made available through full-genome sequencing.⁶⁷

The Allure of Closure and Attention

The central position awarded to DNA and genomics in the academic articles about the skeleton in Bj 581, as in the media coverage more generally, was not coincidental. We have seen how the researchers had invested in and committed to the shieldmaiden-inspired interpretation of the “female Viking warrior” years before the genetic analysis was performed. Like the *Real Vikings* episode aspired to settle “once and for all” the question about the reality of shieldmaidens, the scientific study employed genomics in order to “solve the issue”—that is, to ward off any disbelief and ambiguity regarding the “female Viking warrior” interpretation.⁶⁸ Science has indeed been recognized as “the most potent instrument of persuasion in our culture,”⁶⁹ but attention has also been called to the persuasive capability of images, narratives, and popularizations and their roles in the construction of scientific knowledge.⁷⁰ While these resources were put to use in abundance in the making of the “female Viking warrior,” the work of the researchers has been framed as a purely scientific endeavor, removed from any instances of meaning-making and interpretation—as if the “female Viking warrior” was merely found or discovered. This dovetails with what sociologists of science have noted about the factness of facts: that they, as Amade M’charek puts it, depend on “their ability to disconnect themselves from the practices that helped produce them.”⁷¹ By purposefully distancing the accomplishment of the “female Viking warrior” from the sphere of popularization and the esthetics of narrativity it ultimately relied on, the knowledge claims could come off as more certain and authoritative.

This strategy is particularly apparent in the second academic article in *Antiquity*, where the researchers initially reflect on the public attention that

was generated by the first article in the *AJPA*. Despite the already established connection to Lagertha, and the fact that the article comprised a catalog of components that could be expected to create headlines—DNA, Vikings, an individual hero figure, legendary tales, female empowerment, violence, and weapons—the researchers imply that the “level of interest” took them by surprise.⁷² Obviously turning a blind eye to their own efforts to bring the “female Viking warrior” to life, they explicitly distance their research from pop-cultural renderings of Vikings, which are dismissed as a problematic legacy and a “tangle of history, myth and cliché.”⁷³ Finally, in an attempt to further downplay the significance of their own interpretive work, outreach, and agency, it is implied that the massive global attention that was bestowed on their research was owing merely to the grave itself, or “the genomic data” alone.⁷⁴

Considering that this concerns one of the most successful research papers ever in terms of public outreach, these accounts do not come across as entirely sincere. One commentator has indeed suggested that the article in the *AJPA* had been “designed for maximum worldwide public impact.”⁷⁵ In many ways, the case of the “female Viking warrior” presents itself as something of a textbook example of what has been termed a “mediatization of science”—involving, for example, the presentation of results in the media prior to peer review and scientific publication, and an increasing entwinement of scientific, political, and popular discourses.⁷⁶

The field of aDNA research appears to have been particularly adaptive to the imperatives of visibility and public outreach in science. Studying the history of aDNA research, historian of science Elizabeth Jones has argued that this field can be considered a “celebrity science,” since considerations of celebrity and public attention tend to shape the kind of research that gets funded and pursued. With its propensity for sensational knowledge claims, archaeogenetics thrives in the media limelight.⁷⁷ This is particularly true of the kind of aDNA research to which the “female Viking warrior” was subject. This line of research is characterized by its preoccupation with, and production of, celebrity in a more literal and traditional sense, through biographical inquiries into the lives and identities of prehistoric individuals.

While this branch of research has been dismissed as inferior and populist—as something of a “forensic version of tabloid history” rather than serious research⁷⁸—a changing rationale for science communication that puts a high premium on media visibility and public attention has made celebrity-oriented research attractive for competitive academics.⁷⁹ With mummies, Vikings,

and famous individuals amounting to nearly 70 percent of the press coverage of bioarchaeological research, bioarchaeologists Christopher Stojanowski and William Duncan suggest that these insights should form the basis for a research agenda that would “draw the public to our discipline.”⁸⁰ Putting center stage what John Robb critically discusses as technologies of individuation, Stojanowski and Duncan propose that research should attempt to “establish emotional connections to the past” by focusing on individuals.⁸¹ To tell the stories of these individuals, and to bring them to life as relational persons with names and faces, they argue, will “maximize our potential in public arenas.”⁸²

Conclusion

If anything, the case of the “female Viking warrior” and the massive media attention it acquired attest to Stojanowski and Duncan’s observation. Being the most widely exposed output from the field of aDNA research, however, one may ask what it tells about the research field it has so amply brought awareness to. As we have seen, genomics and aDNA played only marginal roles as analytical tools and empirical evidence. Rather than an outcome of a genomic analysis of “empirically testable Viking Age reality,”⁸³ as the researchers would have it, the “female Viking warrior” was accomplished through stories told and images drawn of how this individual—with recourse to supposedly comparable figures in Old Norse texts and contemporary popular culture—lived out their existence. Like Ötzi the Iceman and other prehistoric media celebrities, the “female Viking warrior” appears to have been approached from the very beginning, not as a research project but as a person with a story, provoking a research agenda whose core objective was to repersonalize and resocialize the previously dehumanized skeletal remains.⁸⁴ In this respect, ancient DNA worked mainly as a resource for embedding these interpretations and imaginative realizations in a language of scientific authority and objectivity. While heavily dependent on an esthetics of narrativity, and in some respects even on what could be described as “real person fan-fiction,” the “female Viking warrior” was filtered through the esthetics of numbers associated with genomics.⁸⁵ As scholar of science and technology Andreas Gunnarsson puts it, genomics here served as something of a narrative utility tool for “enhancing the credibility of the fantastical.”⁸⁶

As made clear by the intense debate following the publication of “A Female Viking Warrior Confirmed by Genomics,” the confident conclusion

that the individual in Bj 581 was “the first confirmed female high-ranking Viking warrior” was conceivable only if countless ambiguities, uncertainties, and alternative interpretations were removed from consideration.⁸⁷ The very ambition, one may add, to scientifically “confirm” and “determine”⁸⁸ the complex social identity of a 1000-year-old set of human remains, could either appear to have been inspired by the selection criteria of the media or be seen as the effect of an “objectionable hubris,”⁸⁹ rather than any “trans-disciplinary wisdom”⁹⁰ gathered in aDNA research. Social identities, after all, cannot simply be deduced from biological data and objects left behind, nor pinned down as if operating on a continuum from the more to the less likely.⁹¹ Rather than being the “most incontestable” example of a female Viking warrior, as suggested by an enthusiastic archaeologist, it could well be argued that it is one of the most disputable, precisely on behalf of these pretensions at scientific closure.⁹²

Apart from it being empirically and ethically questionable to attempt to impose a comprehensive identity on the individual in Bj 581—who, for all we know, may still have identified as a Christian man with an inclination for amusement and games, as suggested by the original excavator—the desire for closure and determination does not sit well with the study’s concurrent ambitions for female restoration and empowerment.⁹³ If anything, feminist scholars have sought to resist a scientific discourse of finality in favor of the partly understood, paying tribute to “technologies of humility” rather than mechanisms of closure.⁹⁴ The kind of feminism powered by ancient genomics that transformed the individual in Bj 581 into a real Lagertha appears to have been guided primarily by present-day concerns about representation and by aspirations to reinvigorate the image of the Viking Age. Not actually “confirmed by genomics,” the “female Viking warrior” was rather accomplished by something that it is tempting to designate as “bygonics.” Effectively blurring the lines between the empirical Viking Age and its contemporary representation in popular culture, the case of the “female Viking warrior” presents itself as the ultimate confirmation, not of any historical reality, but of a prophesy made by one of the researchers in the *Real Vikings* episode: “We are going to see female warriors taking their place on the Viking stage.”

Notes

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3. Hedenstierna-Jonson et al., "Female Viking Warrior," 857.
4. Anna Källén et al., "Archaeogenetics in Popular Media: Contemporary Implications of Ancient DNA," *Current Swedish Archaeology* 27, no. 1 (2019): 69–91. Altmetric tracks the online activity around scholarly outputs, for example, tweets, news stories, and mentions on Wikipedia. The scientific article was number 43 on Altmetric's 2017 top 100 list of the most discussed journal articles that year. See "The Altmetric Top 100," Altmetric, accessed December 16, 2022, <https://www.altmetric.com/top100/2017>.
5. Shieldmaiden is a literary term for women taking part in battles. Shieldmaidens are found in medieval literature such as the Poetic Edda and the writings of Saxo Grammaticus. This literature features Old Norse culture (in the Scandinavian or Icelandic Viking Age, AD 800–1050), and it is debated among scholars to what extent they refer to real-world events and to what extent they are mythological representations of oral history narratives or the authors' own fantasies.
6. *Real Vikings*, season 1, episode 3, "Viking Women," directed by Rebecca Snow, aired December 14, 2016, on History Channel. Historical consultant to the series was professor of archaeology Neil Price—one of the researchers in the scene and one of the authors of the *AJPA* article.
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10. Hedenstierna-Jonson et al., "Female Viking Warrior," 857.
11. Hedenstierna-Jonson et al., "Female Viking Warrior," 858.
12. See the exhibition "Buried at Birka," Birka Museum, 2020, <https://www.birkavikingastaden.se/en/attraction/new-exhibition-buried-at-birka>. For an example of its use in pornography see Källén et al., "Archaeogenetics in Popular Media," 83. T-shirts are for sale in the Birka Museum shop. Documentaries include *The Viking Warrioress (La Guerrière de Birka)*, directed by Gautier Dubois and Aleksandar Dzerdz, 2019; and *Viking Warrior Women*, directed by Stuart Strickson, aired December 3, 2019, on National Geographic. In the theater is the play written and directed by

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13. "DNA Spotlight: High Ranking Birka Shield-Maiden," My True Ancestry, <https://mytrueancestry.com/en/spotlights/birka>.

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This is a section of [doi:10.7551/mitpress/15190.001.0001](https://doi.org/10.7551/mitpress/15190.001.0001)

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Citation:

Critical Perspectives on Ancient DNA

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DOI: 10.7551/mitpress/15190.001.0001

ISBN (electronic): 9780262378765

Publisher: The MIT Press

Published: 2024

The open access edition of this book was made possible by generous funding and support from MIT Press Direct to Open



The MIT Press

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The MIT Press would like to thank the anonymous peer reviewers who provided comments on drafts of this book. The generous work of academic experts is essential for establishing the authority and quality of our publications. We acknowledge with gratitude the contributions of these otherwise uncredited readers.

This book was set in Stone Serif and Stone Sans by Westchester Publishing Services.

Library of Congress Cataloging-in-Publication Data

Names: Strand, Daniel, 1984– editor. | Källén, Anna, editor. | Mulcare, Charlotte, editor.

Title: Critical perspectives on ancient DNA / edited by Daniel Strand, Anna Källén and Charlotte Mulcare.

Description: Cambridge, Massachusetts : The MIT Press, [2024] | Includes bibliographical references.

Identifiers: LCCN 2023037457 (print) | LCCN 2023037458 (ebook) | ISBN 9780262548090 (paperback) | ISBN 9780262378772 (epub) | ISBN 9780262378765 (pdf)

Subjects: LCSH: Biomolecular archaeology. | DNA, Fossil—Research. | Human genetics—Research. | Anthropology, Prehistoric.

Classification: LCC CC79.B56 C75 2024 (print) | LCC CC79.B56 (ebook) | DDC 599.93/509009—dc23/eng/20231124

LC record available at <https://lcn.loc.gov/2023037457>

LC ebook record available at <https://lcn.loc.gov/2023037458>