

Dvergar á öxlum - the oval brooches

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Oval brooches are often used as *the* signifier of a Viking Age woman. This article takes a closer look at how they were used, who would have been wearing them, and what they may have signalled regarding the status and affiliation of the wearer.

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A new type of brooch

The oval brooches are unique for the late Iron Age and Viking Age. They appear around 700 CE, as small, thin-shelled ovals, that are at first plain and later engraved with animal figures. At the start of the Viking Age the brooches have become larger, the shells have grown thicker and the decoration (animal interlace or gripping beasts) is produced by casting instead of engraving. Double-shelled brooches (an open-work shell with a solid inner shell) appear during the second half of the 9th century, almost replacing the single-shelled brooch during the 10th century. Finally, the oval brooches appear to fall out of use during the end of the 10th century (Jørgensen [2008](#), p.1).

Ovale spenner, også kalt skålformede spenner, er unike for yngre jernalder. <...> De opptrer for første gang i funnmaterialet i merovingertiden omkring år 700 e.kr., med de tynnskallede og uornamenterte spennene (Gjessing 1934:146). Spennene blir så dekorert med graverte dyrefigurer og etter hvert får vi også spenner med dyreornamentikk som er støpt. I vikingtiden fortsetter utviklingen videre: godset blir tykkere og spennene dekorerer med nye motiv bl.a. vikingtidens standardmotiv gripedyret. I andre halvdel av 800-tallet utvikles det spenner med dobbelt skall, noe som nærmest blir en standard på 900-tallet. Mot slutten av 900-tallet forsvinner de ovale spennene ut av funnmaterialet (Gjessing 1934:144-159, Petersen 1928).

Jørgensen 2008, p. 1

Unlike the early oval brooches, where each pair is unique, the Viking Age brooches are highly standardized. There appears to have been a limited set of types in use, where a type is "a collection of brooches which all have a pattern that is partly or wholly identical" and the similarities in the pattern are so close that the reproduction of the type can be assumed to have occurred by copying (Jansson [1985](#), p. 221-222).

One of the major works on classification of the brooches is done by Petersen ([1928](#)), who attempts to identify each type and what period they were in use, by using graves where they are found together with other dateable items (e.g. coins).

A chronology of some brooches: Diagram by Gavin and Louise Archer (large version [0.6 MB](#)).

The production of brooches is believed to have been done by using previously manufactured pieces as models. Through this kind of "mass-production", the same type of brooch could be (and was) produced at places far removed from one another and was available to Norse women in different geographic areas at the same time (Jansson 1985, p. 221).

However, not all types were equally in use. The find material is dominated by a few types, whereof **P 37** and **P 51** are the ones that occur most frequently (Jansson 1985, p. 221). **P 37** is ubiquitous in the ninth century, and can occasionally be found in the tenth, while **P 51** appears around 900 and dominates the tenth century (Petersen 1928 p. 33, 67).

The standardisation of the oval brooches means that their chronology is often used to date Viking Age graves whenever there is no other readily dateable material.

However, the use of existing jewellery as models for new pieces means that older brooches could have been copied and produced after the type had gone out of popular use. This complicates the dating of the brooches (Jansson 1985, p. 12, 221).

Furthermore, significant time may have passed from the production of the brooch until it was buried, especially as these are items that may have been inherited from mother to daughter (Jørgensen 2008, p. 12). This would e.g. explain why some graves have brooches that do not match each other and where one brooch is of a significantly older type than the other - possibly due to one brooch breaking and being replaced with a newer version (Jansson 1985, p. 165). Thus, caution is needed whenever the oval brooches is used as the sole source of dating a grave.

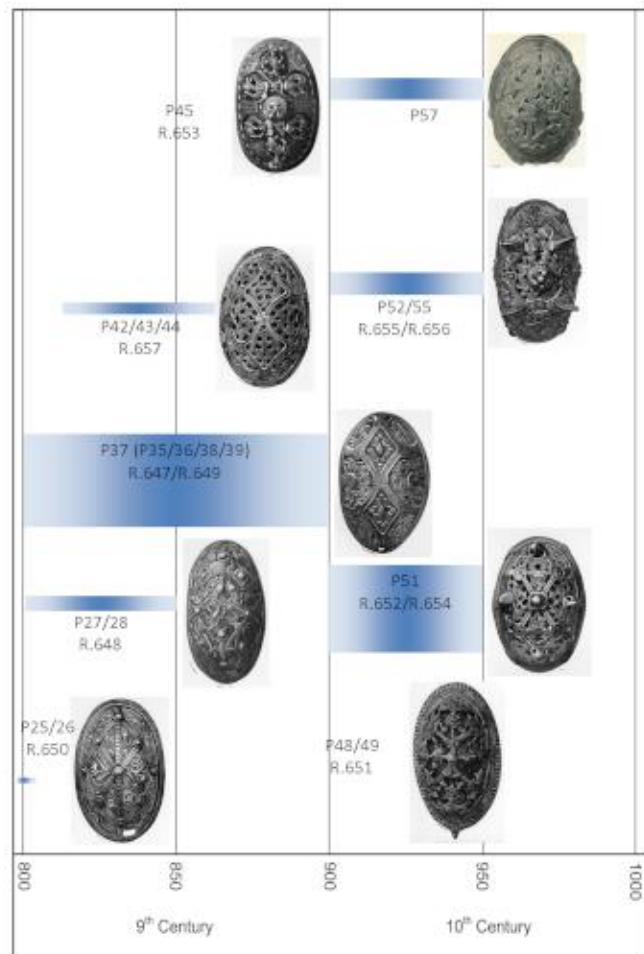
... the technique used means that the similarity of the jewellery cannot be accepted as proof of large-scale production at one or a few places. The finds of moulds and unfinished jewellery so far recorded also show that jewellery of the very same type was fabricated at places far removed from each other.

The technique used also means that similarity cannot be regarded as proof of close contemporaneity. A type of jewellery may have been fabricated over a long period of time or at different times in different areas with no noticeable differences in the design of the brooches. This complicates the dating of the brooches.

Jansson 1985, p. 221

Den vanliga orsaken till att ovala spännbucklor av olika typer och varianter ingår i kombination med varandra torde vara, att spännena varit länge i bruk, och att det ena spännet i ett ursprungligt par blivit kasserat och ersatt med ett annat spänne.

Jansson 1985, p. 165



Function and position on the body

In the Merovingian period, the number of oval brooches varies from 1 to 3 in the graves, indicating that they could be worn in different positions and may have fastened different garments (Jansson 1985, p. 16).

Photograph: Woman from Merovingian period wearing three oval brooches, in Hillesøy, Norway (Niemi 2018).



By the Viking Age however, the oval brooches tend to be worn in pairs, together with what the Norse probably would have called a smokkr (Ewing 2006, p. 37). There are a handful of Viking Age graves where a third oval brooch appears to have been worn as a tunic brooch (Jansson 1985, p. 165, mentions six such graves), but these are an exception.



Photograph: Viking Age Woman from Adwick-le-Street wearing two oval brooches (Heen-Pettersen 2013, p. 72).

Antalet ovalspännen i vendeltidens skjelettgravar varierar mellan 1 och 3, vilket antyder att spännena burits både parvis och udda, alltså haft flera olika funktioner i dräkten.

Jansson 1985, p. 16

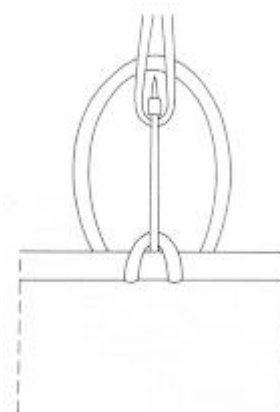
I flera av dessa norska fynd torde dock förklaringen i stället vara, att ett av ovalspännena använts som oparigt tröjspanne liksom under vendeltiden. I tre skjelettgravar (alla "troligen slutna") ingår nämligen tre ovala spännbucklor, två av samma typ och en av avvikande typ: T 17679 från Grande, S-T med to exemplar av P 25 och 1 stort oornerat exemplar, B 10975 från Sårheim, S.o.Fj. med 2 exemplar av P 37:1 (variant) och 1 stort oornerat exemplar samt T 13711 från Nes, S-T med 2 exemplar av P 37:6 och 1 exemplar av P 25. Alla tre fynden tillhör äldre birkatid, men kanske antyder vissa svenska brandgravar med tre ovalspännen, att man i bland ännu under yngre birkatid använde ett ovalspänne som oparigt tröjspanne (grav 23 i Brunby och grav 10 i Gräfstå, NV Uppland; grav 5 i Ulvsta, Gästrikland).

Jansson 1985, p. 165

From the archaeological evidence we know that the smokkr, however it may have looked, was a type of dress held up by two fabric loops at the front and two at the back (running over the shoulders). The loops were fastened by two oval brooches (Hägg 1974, 2015, Thunem 2017).

Illustration: Hägg 2015, p 61

The oval brooches are markedly different in shape, and thus function, than their predecessors; the early Iron Age "bow brooches" (designed to gather loose folds of fabric) and "saucer brooches" (fastened directly at the edges of the garment). Their domed shape makes them well suited to hold the fabric loops while lying flat against the body (Ewing 2006, p. 25).



Their specialized shape, and the fact that they are seldom used in relation to other garments, indicates that they were designed mainly with the smokkr in mind.

In graves where there are enough skeletal remains to allow for identification of the position of the brooches in relation to the body, most of the oval brooches turns out to be in the upper area of the chest. There are a few exceptions, where the brooches are placed on top of where the breasts would have been, but these are mainly graves where the women were buried in a sitting position. The lower placement of the brooches in these graves are explained by them slipping downwards as the flesh beneath them deteriorated (Hägg [2009](#)).

Larsson ([2008](#)) disagrees with this interpretation, calling it prudish and proposing that the usual position of the tortoise brooches was on top of the breasts. However, she fails to explain how, if her theory is correct, the brooches would have moved upward from the breasts to the position where they are found in the majority of the graves.

Signifiers of status, rank and Scandinavianness

Viking Age society was divided into several social strata, something that is reflected by analysis of the grave goods and by written sources (Solberg [1985](#)). The poem *Rígsþula* tells the story of the god Ríg's visit to mankind, describing three couples belonging to distinct social groups; thralls, free farmers, and a high-status couple. It is likely that *Rígsþula* presents a simplified view of society, but a more nuanced stratification is indicated by several paragraphs in the Frostating and Gulating laws.

The legal rights of a person corresponded to his social esteem (*metnaðr*), which again depended on the rank and economic status of his family, especially upon the ownership of land. This is clearly seen from the fines system. The diversified fines in § 200 of the Gulating Law are as follows: '3/4 mork for freedman, 1 mork for freedman's son, 1.5 for bonde, 3 for hauld, 6 for the king's marshal (*lendmann/stallar*) and 12 for bishop/earl'. This paragraph reflects a hierarchical society with the freedman at the bottom and the bishop/earl at the top of the pyramid. The lowest group, the thralls or slaves, is not mentioned, since they had no legal rights and were regarded as no more than cattle.

Also the older parts of the Frostating Law describe a similar social stratification: 'If it is necessary to turn a man on his belly (because he is wounded) then a 6-øyra fine is to be paid for a hauld, 4-øyra for an "årbåren mann", 3-øyra for "rekstegn" and 2-øyra for freedman'. The term "årbåren mann" means a man whose ancestors had been free for at least four generations. The term "rekstegn" is more ambiguous. Most likely, it represents the free generations between the freedman and the "årbåren mann".

Solberg 1985, p. 69

Although the laws occasionally mention women, e.g. in relation to inheritance and paying or receiving fines, they do not describe a similar stratification in detail (Solberg 1985, p. 69-70). There were specific circumstances where a woman had the same legal status as men (e.g. widows with children that were not of age). However, for most women it is likely that their status depended on the rank and status of their family, or the family they had married into.

In a stratified society, dress and jewellery would have been important signifiers of rank and status for both genders. Moreover, it is likely that jewellery like oval brooches may have carried multiple meanings, signalling the social group, individual position and cultural affiliation of the wearer. These signals are lost to us, but the sum of archaeological finds of brooches, and their context, can still provide some clues to their meaning.

Which social class would have been wearing the oval brooches?

In *Rígsþula* it is the free farmer woman who wears 'dwarves' at her shoulders, a poetic term interpreted to be the oval brooches.



Sat þar kona... sveigr var á höfði, smokkr var á bringu, dúkr var á halsi, dvergar á öxlum.

There sat a woman... a sveigr was on her head, a 'smock' on her chest, a cloth was at her neck, 'dwarf' brooches at her shoulders.
Rígsþula (translation by Ewing, 2006 p. 37)

Photograph: Stiklestad Nasjonale Kultursenter and Hilde Thunem

It is significant that the poet chooses to mention the brooches within the single sentence used to describe the dress of the farmwife, especially as the focus of this part of the poem is to show the social stratification of Viking Age society. However, the limitations inherent in poetry means the descriptions cannot be taken too literally. For example, oval brooches are not mentioned in the verse about the high-status woman. This may be because they were only worn by farmers, or because the poet chose not to repeat himself but instead focused on the items that would differentiate the high-status woman from the farmwife (Ewing 2006, p. 41).

However, the archaeological evidence show that oval brooches were both numerous and widely spread, something that is not indicative of being a rare luxury item worn by the few. In 1985, more than 3 600 oval brooches had been found in Scandinavia and other areas with a Norse population during the Viking Age (Jansson 1985, p. 12). The number has increased since then (Jesch [2015](#), p. 95), and they remain the by far most common type of brooch found from the Viking age.

Antalet spännan, som i dag förvaras i museerna runtom i Europa, är enligt mina beräkningar (bygda på musei- och litteraturstudier) minst 3.600. <...> Alla kända ovala spännbucklor är gjutna i brons utom ett spännepar från Hedeby, som är gjort av silverbleck med filigrandekor (...).

Jansson 1985, p. 12, 13

In 1985, Ingmar Jansson attempted to summarise the numbers of oval brooches known then, which came to at least 3,600. <...> All of these numbers now need revision upwards, as oval brooches continue to be found, not least through the activities of metal-detectorists.

Jesch 2015, p. 95

Apart from a pair of silver brooches from Hedeby, all the oval brooches found are made from copper alloy (Jansson 1985, p. 13). The quality of the work varies, depending on the skill of the craftsman. Many have flaws from poorly executed casting, or have been (badly) repaired, e.g. by having replacement parts riveted onto them. They show signs of wear on the outer surface, probably from having been polished to make them shine, and some have been silver-plated or gilded in order to look more valuable (Lønborg [1999](#), p. 262-263). Even the brooch types (e.g. P 42) with complex patterns that require more skill to create show a similar variation in quality as the simpler types (Jørgensen 2008, p. 116-117).

This indicates that the owners of these brooches did not belong to the highest layers of society. Instead they were a social group that had to accept flaws in their jewellery, but still aspired upwards by using gilding or plating to make brooches resemble the gold items of the

higher classes. In conclusion, it is likely that such artefacts belonged to the prosperous farmers (Lønborg 1999, p. 267, Jesch 2015, p. 97). The conclusion is further supported by e.g. Jørgensen (2008, p. 125) who found that distribution of oval brooches in Trøndelag in Norway largely follows the areas with good agricultural conditions.

Ud fra undersøgelser af skålformede, ligearmede, trefligede, små og store runde fibler og andre støbte metallgjenstande, særlig af kobberlegeringer, fremgår det, at støbefejl, som giver sig til kende i form af manglende dele, var almindelige og accepterede, da sådanne gjenstande oftest utviser slid. Slidet ses dog kun på forsiderne, ikke på bagsiderne, hvorfor det ikke kan være fremkommet under brug, men snarere som følge af pudning. Disse gjenstande viser endvidere ofte reparationer, dele af eller hele nåleholderen/nåleskeden er knækket af og en ny i jern påsat med jern-nitter, der ofte er fæstnet på genstanden uden hensyntagen til fiblens oprindelige udseende. På gjenstande af kobberlegeringer ses ydermere ofte ændringer af udseendet i form af forgyldninger, blancheringer eller påloddede dele i sølv. Formålet med disse ændringer må have været at få disse gjenstande til at syne kostbare. Endvidere er gjenstandenes efterbearbejdning sjældent af førsteklasses udførelse.

Dette fører frem til, at ejere af disse genstande næppe tilhørte samfundets højeste lag, men tilhørte en stand, der accepterede fejl og mangler ved deres dragtudstyr samtidig med, at de "snobbete oppad". Det er derfor sandsynligt, at den dragt, som de skålformede fibler har siddet på, var båret af kvinder, der tilhørte den økonomisk bedrestillede del af bønderne.

Lønborg 1999, p. 262-263

Certainly, the craftsmanship and metals involved in making an oval brooch show that the wearer had sufficient wealth to acquire such jewellery, and they could therefore indicate her social rank or status. However, this rank is not of the highest. Oval brooches are most often made of copper alloy, gilded, and thus of a metal which resembles gold but is much cheaper to produce, suggesting an aspirant status.

Jesch 2015, p. 97

Funnfordelingen for de ovale spennene ser i stor grad ut til å følge gode jordbruksområder, dette kombinert med en gjennomgang av et utvalg funnkontekster synes å støtte oppfatning om at kvinner innenfor bondestandens øvre sosiale lag har vært brukerne av de ovale spennene.

Jørgensen 2008, p. 125

An examination of Merovingian and Viking Age female graves in Norway by Solberg (1985) sheds further light on the social stratification. She analyses 833 graves, dividing them into three categories; a lower group (34% of the graves) with beads and/or textile utensils, an intermediate group (51% of the graves) with at least one oval brooch, and a small upper group (15% of the graves) with oval brooches and a third brooch. In addition to the brooches, the graves in the intermediate and upper category usually contained keys, beads, agricultural and textile utensils (Solberg 1985, p. 67-68).

Given that thralls were unlikely to be buried with goods at all, the lower group probably represents the free, but less prosperous farmers. This group is likely to be underrepresented in the recorded finds, as their simple graves with few items are much easier to overlook in the field than the richer graves (Solberg 1985, p. 71). However, even taking that into account, the fraction of graves with oval brooches confirm that they were used by a social stratum more numerous than the nobility, but wealthier than the lowest layer among the free individuals.

The small group of richer graves containing a third brooch in addition to the oval brooches indicate that there may have been further social differences within the group of prosperous farmers. Like all simplifications however, the categorisation by number of brooches doesn't capture all the nuances. For example, there are several graves in Trøndelag without a third brooch, but with valuable imported items elevating the status of the deceased (Heen-Pettersen

2013, p. 65). Still, the categorisation may provide a useful guideline to the different strata of Viking age farmers.

Altogether 833 women's graves were recorded. They were divided into three groups. Group 1 has five or more beads and/or textile utensils, group 2 at least one conical or oval brooch, and group 3 conical or oval brooches and a third brooch. Group 1 constituted 44%, 24%, and 33% of the women's graves in western, central and eastern Norway, respectively. <...> Group 2 represents 40%, 60% and 54% of the women's graves in western, central and eastern Norway, respectively. Keys, beads and agricultural and textile utensils are often found in these graves. Group 3 represents the richest graves. In addition to the oval brooches and the third brooch, beads keys and agricultural and textile utensils are usually present. This group constitutes 16% in western and central Norway and 13% in eastern Norway.

Solberg 1985, p. 67-68

Brooches as signifiers of individual position

In addition to indicating the social stratum of the woman and her family, the oval brooches may have been a signal of her position as an individual.

When comparing the grave lengths of women graves at Birka, Ewing (2006) finds that the shortest graves (180 cm or less) are almost always without oval brooches. Although a longer grave can sometimes be a mark of status, grave length often gives an indication of the height of the deceased.

Thus, it is likely that the shortest graves contained children, and the slightly longer graves young women. The lack of oval brooches in these graves, leads Ewing to propose that these brooches may have been the mark of a married woman. He further interprets the broochless women in the longer graves as having been unmarried (Ewing 2006, p. 39-40).

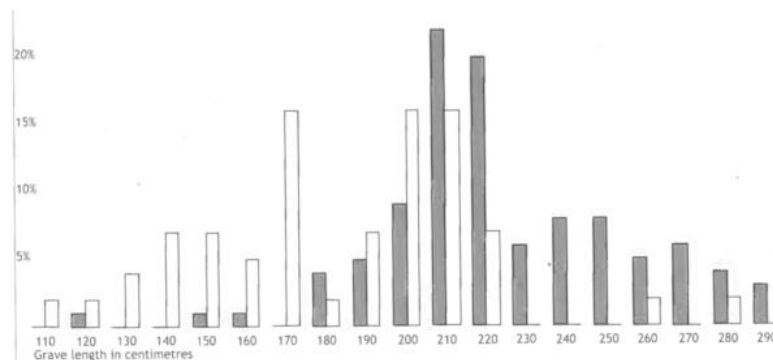


Illustration: Graph comparing percentage figures for lengths of Birka graves with and without oval brooches. Shaded columns represent graves with oval brooches, white columns graves without (Ewing 2006, p. 39).

The graves examined by Ewing are limited in numbers (roughly 230-240 graves) and from a very specific context, the cemeteries of a prosperous trading port. The analysis by Solberg (1985) provides a more representative picture, covering a larger and more diverse geographical area. Here the fraction of graves without oval brooches is too large to be explained as merely consisting of the underage and unmarried. Instead, Solberg interprets them as less prosperous, but still free, farmers (Solberg 1985, p. 71).

However, within the social stratum that wore oval brooches, they may have been a sign of marriage. This would explain why they are usually not found in children's graves. Furthermore, in her analysis of Norwegian Viking graves, Solberg (2000) found that bronze keys usually appeared in graves with oval brooches. Keys had symbolic value in addition to

their practical use. They were worn by the mistress of the house, representing her position of authority on the farm. Solberg thus proposes that among the prosperous farmers it would have been married women, or women in a position where they had the same legal position as men (e.g. a widow), that were wearing the oval brooches (Solberg 2000, p. 269).

Utstyret i de to rikest utstyrte gruppene, der parspenner festet drakten sammen på skuldrene, svarer til beskrivelsen i Rigsthula. Trolig representerer disse kvinnene husfruer. Bronsenøkler opptrer hovedsakelig i disse gravene. Det viser sannsynligvis tilbake på at kvinnen fikk overdratt nøklene til husets rom og kister idet hun overtok myndigheten som kone på gården. Dette har ikke bare vært en praktisk ordning, men også et viktig symbol på hennes husfrueposisjon.

Det er store tallmessige forskjeller mellom manns- og kvinnegraver, hele fem mannsgraver for hver kvinnegrav. Kanskje avspeiler det at det bare var kvinner som bestyrte gård og gods som ble æret med slike begravelser? En vet at i enkelte situasjoner overtok kona på gården mannens funksjoner (...). Når han var på reise eller i krig, var det hun som styrte gården. Som enke kunne hun få en særlig selvstendig status. Hvis barna var umyndige, bestyrte hun gård og gods. I Gulatingloven er det passasjer som omtaler "baugkvinner" som hadde rettslig status på linje med menn. Trolig har de fleste slike vært enker. Kvinnegravene reflekterer sannsynligvis slike "baugkvinner".

Solberg 2000, p. 269

Cultural affiliation

The oval brooches and smokkr was not the only garment worn by Viking women. However, it is believed to have been a unique Scandinavian garment, not worn by other cultures. Thus, whenever oval brooches are found, they are interpreted as signifying the Scandinavianness of the wearer, in addition to her social class and position (Jesch 2015, p. 95-97).

Although by no means the only possible attire for women in the Viking Age, the strap-dress held up by oval brooches was nevertheless widespread in both time and space, judging from the distribution of those oval brooches. Because of their construction, oval brooches could only be worn in one way and had only one possible function, which was to hold up this type of dress. Their distribution is thus a strong indicator, not only of this fashion, but of its Scandinavianness.

Jesch 2015, p. 95

In the diaspora, it is assumed that they signify the Scandinavianness, or at least a Scandinavian affiliation, of the wearer, particularly in those contexts, such as England or Russia, where there were also indigenous inhabitants from whom the wearer might have wished to distinguish herself.

Jesch 2015, p. 96-97

Although the use of brooches was widespread, there are geographic variations, even within Scandinavia. The number of oval brooches found in Denmark is very low compared to Norway and Sweden (Jansson 1985, p. 13, Jesch 2015, p.95).

Number of brooches recorded in museums (Jansson 1985, p. 13).

Norway	1500	Russia	160-170
Sweden	Ca 1500	British Isles	75
Denmark	170 (120 in Denmark, 50 in Haithabu)	Iceland	35

Antalet spännen, som i dag förvaras i museerna runtom i Europa, är enligt mina beräkningar (bygda på musei- och litteraturstudier) minst 3.600. Från Sverige kommer minst 1.500 spännen - hur många fler som finns i småmuseer och privatsamlingar eller som försvunnit, kan jag inte uppskatta. Från Norge, där statistiken är säkrare, är också ca 1.500 spännen kända (...). De närmast mest omfattande fyndmaterialen härrör från Ryssland (ca 160 ex. ...) och Danmark (ca 120 ex. ...). Från Island är 35 ovalspännen kända (...) och från Britiska öarna ca

75 (...). Från Hedeby i Schleswig-Holstein är dryft 50 ovala spännbucklor kända (...).
Jansson 1985, p. 13

Danish examples now (counted slightly differently) number close to 400, though they remain low compared to Norway and Sweden, undoubtedly because this type of dress went out of fashion earlier in Denmark than elsewhere. The relatively small number of oval brooches found in England may be due to its strong links with and hence emulation of Denmark, although recent finds may change this picture.

Jesch 2015, p. 95

The use of brooches in Denmark changes over time; there are twice as many finds from the 9th century than the 10th. Furthermore, while the 9th century brooches are geographically spread, in the 10th century there is a division between the north-east where the graves contain oval brooches and the south-west where they don't.

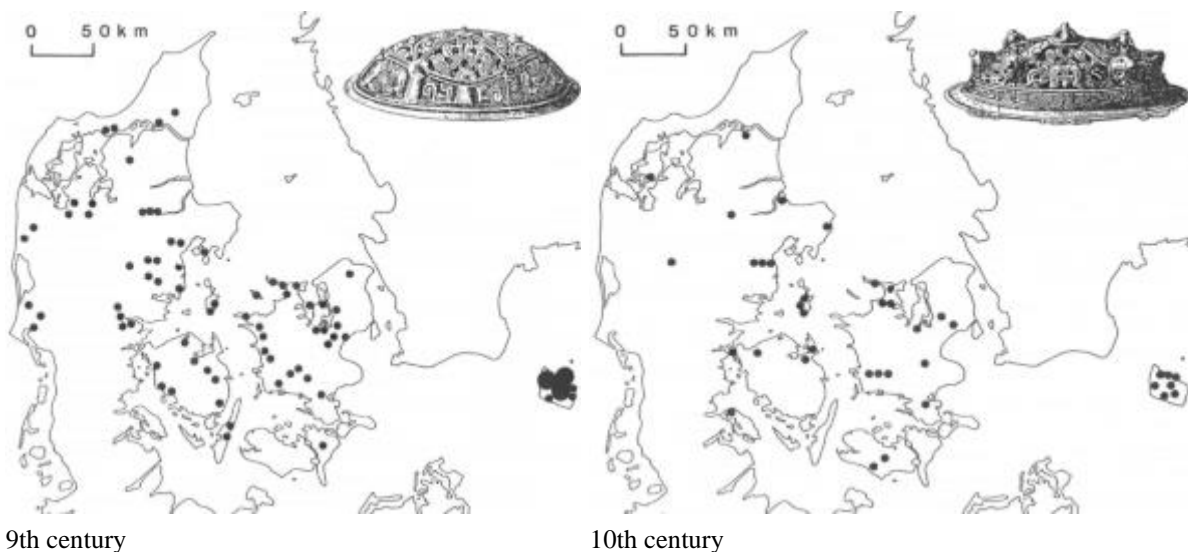


Illustration: Hedeager Madsen 1990, p. 102-103

This indicates a change in fashion, where the smokkr and brooches fell out of use in the south-west, possibly replaced by clothing influenced by the area's contact with western Europe (Hedeager Madsen [1990](#), p. 101-105).

All this would suggest that at least some rich graves in 10th century Jutland reflect a western influence upon Danish fashions, while the earlier fashion was strongly entrenched in eastern Scandinavia, as evidenced by the tortoise-brooched costume.

Hedeager Madsen 1990, p. 105

The geographic variance demonstrates that while the oval brooches and smokkr was a widespread and characteristic garment for the Viking women, it was not the only one. In addition, the same type of brooches may have had different meanings depending on whether they were worn by someone in Scandinavia among her kin and neighbors, or by a settler in Iceland where the inhabitants were Norse from many different geographical areas, or a settler in the British Isles as a foreigner among indigenous inhabitants.

In summary, the wearing of oval brooches would have carried multiple meanings, signaling social status, individual position and cultural affiliation, and their significance would have been further shaped by the identity and customs of the local community of the wearer. However, the limitations of a burial with its somewhat standardized context, means that some of these nuances are lost to time.

Bibliography

- Ewing, T. 2006. *Viking Clothing*. ISBN 978-0752435879
- Hägg, I. 1974. *Kvinnodräkten i Birka: Livplaggens rekonstruktion på grundval av det arkeologiska materialet*. Uppsala, Archaeological Institute. ISBN 9150600028.
- Hägg, I. 2009. *Populärvetenskap - en samvetsfråga?*
Originally at: http://www.ingahagg.cybersite.se/text_108109.html, now only available via the [Internet Archive](#)
- Hägg, I. 2015. *Textilien und Tracht in Haithabu und Schleswig*. Die Ausgrabungen in Haithabu 18. ISBN 978-3529014185
- Hedeager Madsen A. 1990. *Women's dress in the Viking period in Denmark, based on the tortoise brooches and textile remains*. Textiles in Northern Archaeology: NESAT III Textile Symposium in York 6-9 May 1987.
- Heen-Pettersen, A. M. 2013. *Mellom De britiske øyer og Midt-Norge: En arkeologisk analyse av insulær kontakt og gjenstandsfunn fra vikingtidsgraver i Trøndelag*. ([PDF 7 MB](#))
- Jansson, I. 1985. *Ovala spännbucklor - En studie av vikingatida standardsmycken med utgångspunkt från Björkö-fyndet*. Archaeological Studies 7.
- Jesch J. 2015. *The Viking Diaspora*. Medieval World Series. ISBN 9781138020795
- Jørgensen, E. 2008. *Ovale Spenner i Trøndelag - En Arkeologisk Analyse av Opphav og Betydning*. NTNU
- Larsson, A. 2008. *Förbjöd kyrkan den vikingatida kvinnodräkten?* Populär arkeologi Nr 1. årgång 26. ISSN 0281-01.
- Lønborg, B. 1999. *Vikingetidens kvindedragter*. KUML. Universitetsforlaget i Aarhus. Side 259-267.
- Petersen, J. 1928. *Vikingetidens smykker*. Stavanger Museums skrifter 2, Stavanger. <http://ub-fmserver.uio.no/minuskel/viewRecord.php?recid=164>
- Solberg, B. 1985. *Social status in the Merovingian and Viking periods in Norway from Archaeological and Historical Sources*. Norwegian Archaeological review. 18. 61-76.
- Solberg, B. 2000. *Jernalderen i Norge ca. 500 f.Kr.-1030 e.Kr.* ISBN 9788202198718
- Thunem, H. 2017. *Viking women: Aprondress* ([PDF 2.2 MB](#))

Illustration sources

- Archer, G., Archer, L. *Oval brooches*. Used under Creative Commons Attribution Non-Commercial Share Alike.
http://www.vikingage.org/wiki/wiki/File:Brooches_-_Oval.png
- Heen-Pettersen, A. M., Wood, P. 2015. *Forgotten treasures: Insular metalwork from Viking burials in Norway*. British Archaeology Magazine. ([PDF 6.5 MB](#))
- Niemi, A. R. 2018. *Merovingertids kvinnegrav i båt*.
<http://www.norark.no/prosjekter/nodvegen-pa-hillesoy/merovingertids-kvinnegrav-i-bat/>
- Universitetenes Fotoportal: Photographs of T 16136
<http://www.unimus.no/artefacts/vm/180797/?f=html> (Oval brooch)
<http://www.unimus.no/artefacts/vm/518841/?f=html> (Oval brooch)