Chapter 5
Materialised connectivity and the (in)visible boundary of the Viking sphere
To study the connectivity of Frisia with the wider Viking World from a material perspective is the central challenge of this chapter. In order to investigate this connectivity as reflected in material culture, we have to study objects as media and markers and to determine their distribution. As we cannot study the available material culture in its entirety, case studies into particular groups of objects have been selected to provide exemplary analyses.

All objects for the case studies will concern portable metal finds. These include both recent, unstudied metal-detected finds, as well as older finds, which have come to my attention in various ways. This choice for portable metal objects means that, at the same time, other types of material culture that might be present are not taken into account. It has already been stressed that nowhere is a complete inventory aimed at or suggested, but that the case studies present an illustrative selection of objects. These are first and foremost jewellery, hack-silver and weights, as well as dress and horse harness accessories more generally. Other finds like coins, hoards and related material will be taken into account, but only as complementary evidence to the material that is studied in detail in the case studies. More information on the corpus, selection criteria and the characteristics of the objects and the collections they stem from can be found in Appendix 2. The catalogue in the appendix contains the core objects of the three case studies as well as some contextual finds, whenever this is necessary and feasible. When an object is included in the catalogue there will be a reference in the text.

First, brooches and related ring-pins, as well as hack-silver and weights, are analysed in two case studies. By primarily analysing the brooches and related ring-pins on the one hand, and hack-silver and weights on the other, we cover two very different entrances into the Viking Age world and its connectivity. This is subsequently complemented with a third case study of other categories, to signal broader trends and future prospects. The brooches represent the more personal (cf. Kershaw 2013) and relate to visual identity, whilst they simultaneously allow us to think of both males and females. The material that is linked to the practice of what is known as bullion economy, in contrast, shows us the extent of connectivity in the sphere of exchange and use of silver, in various ways, without necessarily looking into trade and traded ware. Here, the idea of a bullion economy refers to the practice of thinking about and using silver and its value in general, whether used for trade, taxes, gift-giving or the like. We can therefore say that it refers to the Viking sphere of silver.

Despite the great potential of the selected categories, the recurring difficulty is the lack of context for most of the finds. Nevertheless, by studying the context of these finds elsewhere, we can get an idea of the possible context and significance of the objects. In the discussion of the finds below, parallels of the objects are mentioned and the place of our finds within the cross-North Sea corpus is discussed. If there is any idea of the context of the find, the gender relations, information on use of material or any specific aspects such as signs of use, traces of reworking or hints of hybridity, this is taken up in the discussion.
5.1 Case study 1: Brooches and pins
The first case study is concerned with the finds of brooches and pins that can be related to the cultural Viking sphere. We will follow their geographic distribution and what this may tell us about the finds in Frisia. The finds discussed here are listed by type and discussed accordingly.

5.1.1 Disc brooches and related finds
The disc brooch as a general type of object – so simply a disc-shaped brooch – was very popular in many parts of Europe in the (early) medieval period, and many different types came into existence. From the fifth century onwards, disc brooches are frequently found in north-western Europe, both on the Continent and on the British Isles. Continental types of disc brooches were rather popular in (at least parts of) Frisia in the early Middle Ages (Bos 2007/8), whilst Viking types were common in Scandinavia and the British Isles (Jansson 1984). Although popular in Scandinavia, the ground form probably was essentially based on a west-European type (Jansson 1984, 58–9). In the case of both the Continental types of disc brooches and the Viking ones, most are made of copper alloy, sometimes gilded or silver-plated. In the Viking world, production of copper-alloy brooches on a larger scale occurred in the later ninth and tenth centuries (Kershaw 2013, 33), when small disc brooches were popular as part of women’s dress, used to fasten the front of the clothing, in Scandinavia and later the Viking diaspora (Paterson 2004, 268).

The tradition and popularity of Anglo-Saxon disc brooches in England can partially explain why in the ninth and tenth centuries, Scandinavian disc brooches were easily adopted there as part of the Viking influence. Anglo-Scandinavian brooches could subsequently develop as the result of the merging of Anglo-Saxon and Scandinavian types. Both the adoption of Scandinavian brooches and the creation of Anglo-Scandinavian types happened on a relatively large scale, as has been shown by Jane Kershaw (2013). Being part of the local dress already, it was easier to incorporate a disc brooch than, for instance, the tortoise brooches, another characteristic brooch type from the Viking world. Therefore, tortoise brooches were also largely abandoned by Scandinavian settlers in England in order to try and integrate with the existing dress traditions (Paterson 2002; Thomas 2012, 252).

For Frisia, and in fact the Continent in general, there is a large corpus of local/Continental disc brooches, but only a very limited corpus of four clearly recognisable Viking disc brooches to date. The bulk of disc brooches in Frisia are of Continental types that can be dated to the seventh to eleventh centuries (although they continue into the twelfth century), with a peak in the ninth and tenth centuries (Bos 2005/6, 449–51). They include many different types, such as pseudo-coin brooches and brooches with Christian symbols, that are well studied and classified (Bos 2005/6; Heeren and Van der Feijst 2017;).

Stylistic representations of the Viking sphere
The four mentioned disc brooches stand out as Viking in this corpus because of their stylistic aspects. As was outlined in Chapter 3, this may concern form, shape,
decoration, composition, manufacture and use. The Viking sphere knows a number of quite distinctive decorative art styles and sub-styles, which in chronological order are the Oseberg, Borre, Terslev, Jelling, Mammen Ringerike and Urnes styles. What all these styles have in common is that they are based on animal motifs or gripping beasts. The use of some of these styles is restricted to particular types of objects, whilst others are widely applied to both portable and unmovable (for example rune stones and stave churches) material culture, including the brooches we study here. This is partly related to their chronology as well, as the styles occur rather consecutively, but also overlap. For the ninth and tenth centuries, the heyday of the Viking Age when the Viking world was at its largest, the Borre and Jellinge styles are most important and most frequently used as decoration on portable objects. These two styles and the sub-style called Terslev are the styles we encounter on the disc brooches in Frisia.

In 1852, a grave field in Borre, Vestfold, Norway, was excavated and produced a group of finds with decoration after which the Borre style is named (Myhre 1992, 301-14). This style was popular from the later ninth to the mid-tenth century. It is one of the most widespread Viking art styles, as it was not only common throughout all of Scandinavia, but popular in the whole Viking world, including the areas that were visited or settled by Vikings. It has been found from the British Isles in the west, where it even appears on stone carvings, to Russia in the east, where it is found on objects in graves and in settlements. This is perhaps not surprising, as was flourishing in the time of the biggest Viking expansion. Moreover, it was used on many different materials and types of objects and executed in varying quality (Wilson 1995, 87).

The style was applied to a wide range of objects in gold and silver, most prominently on precious metal brooches with filigree, which may have been the example after which the many bronze or copper-alloy objects in Borre style were made. In the ninth and tenth centuries when the Borre style flourished, the disc brooch was a common type of object which was often decorated with Borre motifs. A characteristic element of the Borre style is that the gripping beast stands alone and its body is formed by a ribbon-like shape. The claw often holds the neck and the rim of an object or design. A related aspect is the animal in profile, looking backwards (Wilson 1995, 89-90). Mask-like, en face animal or human heads, often triangular in shape, with pronounced ears and eyes are equally characteristic (Hedenstierna-Jonson 2006, 320). In addition to appearing within other motifs, the mask-like heads appear separately and on the ends of other patterns (Wilson 1995, 89). Another very characteristic aspect of the style is the braided-ribbon pattern or the ring-chain motif. This is a symmetrical pattern with a double (or triple or even more) ribbon, which sometimes terminates in an animal head. This ring-chain in particular has led to different variations in style in some places, one variant being the Scandinavian Terslev style.

The Terslev style could be considered a sub-style of the Borre style and was first encountered on silver pendants in a hoard found in Terslev, Sjælland, Denmark (Paterson 2002, 269-70). It flourished mostly in the mid-tenth century (Paterson
2002, 268-72). Typical is the ring-chain motif, which only in this style is used as the main decorative element on women's brooches and pendants (Kershaw 2009, 27-8). On brooches, the decoration typically comprises three or four symmetrical parts which are bound together by a ring to form a ring-knot pattern (Paterson 2002, 270).

The style that is partly contemporary and partly postdates the Borre style is the Jellinge style that is named after the once-royal site of Denmark, Jelling. Here, in what appears to be the grave mound of King Gorm of Denmark, a small, decorated silver cup was found that gave the style its name. The earliest use of the style is placed in the late ninth century and it probably went out of use towards the end of the tenth century (Wilson 1995, 120). Like the Borre style, the Jellinge style is spread outside Scandinavia as well, to both the British Isles and Russia, but not as widely spread as the Borre style.

Characteristically, the Jellinge style features a ribbon-like, almost s-shaped animal, with a head in profile. The animal's eye is round, the neb long and it has an ear 'lappet'. Usually, the body is indicated by double lines or contours, and the hip of the animal is hard to trace as it is designed in a spiral-shaped wrinkle (Wilson 1995, 115-17). In a few cases, the Borre and Jellinge styles even appear on the same object and sometimes fuse. This may be the case on disc brooches, for instance where the animal is 'typically Jellinge' whereas its position may be considered 'Borre' (Wilson 1995, 117). Overall, the fusion of the two styles appears to occur more in the eastern Viking world outside Scandinavia, and not in the Insular, western Viking world (Wilson 1995, 120-21).

Besides classifying brooches as Viking on the basis of their decoration in characteristically Viking styles or types, there are other aspects of the disc brooches that can help identify a Viking or even Scandinavian background for them. Overviews of such characteristics that distinguish Scandinavian from Anglo-Saxon brooches in England were made by Paterson (2004, 268) and Kershaw (2013, 20-1). We can use the characteristics in these lists as guidelines for the brooches in Frisia as well, even though the context is different and therefore not all aspects are equally relevant.

The first characteristic is that Scandinavian disc brooches are convex in shape, as opposed to the Western European and Anglo-Saxon brooches which are flat. This also concerns the continental disc brooches typically found in Frisia (Kershaw 2013, 22; cf. Bos 2005/6; 2007/8). Secondly, the arrangement of the pin may give away the cultural origin of a brooch. Typically, Scandinavian disc brooches have a pin-lug and pin-catch arrangement that is placed at a 90⁰ angle to the rim. In addition, the pin-lug is double. The non-Scandinavian brooches in the Anglo-Saxon and Continental tradition in the Viking Age have a single pin-lug and catch, which are placed in alignment with the rim (cf. Paterson 2002; Kershaw 2009; 2013; Bos 2005/6, Frick 1993). Before the eighth century, the pin arrangement at a right angle to the rim was much used, but this almost disappears from the eighth century on, and is replaced with the pin that is aligned with the rim (Roxburgh 2013 unpublished, 116-19). Finally, the presence of an extra or third loop on the back of the brooch, besides the pin-lug and pin-catch, is an indicator that it is Scandinavian.
This loop is placed at a right angle to the rim and to the pin arrangement. The third loop is used for a suspended chain, a particularly Scandinavian feature connected to the way of wearing the brooch. Kershaw stresses that in the Viking Age these brooches, having chains with attached tools in the style of chatelaine brooches, represent a uniquely Scandinavian and Baltic fashion. In England, this feature distinguishes the Scandinavian brooches from the Anglo-Saxon and even Anglo-Scandinavian brooches, which subsequently developed and which lack these loops (Kershaw 2009, 300). Continental disc brooches, also in Frisia, similarly lack this third loop (Kershaw 2013, 25). Therefore, it is another characteristic identifying Viking, even Scandinavian brooches.

Furthermore, Viking disc brooches have only relatively little variation in diameter, probably because of mass-production. Most of the disc brooches have a diameter of around 30 mm, but in Scandinavia some are a bit smaller, ranging from 26 to 28 mm. Although not a strict criterion, the diameter can indeed help us identify Viking brooches. Most of the Frisian disc-type brooches as classified and published by Bos (2005/6; 2007/8) have a much smaller diameter. Only the pseudo-coin brooches have diameters that sometimes correspond to the diameter of the Viking disc brooches. As such, the Viking disc brooches are also distinguishable by their size.

Having established the trademarks of Viking disc brooches, these can help us identify the brooches as established types from the Viking sphere. We can test if these trademarks are present on the brooches found along the southern North Sea coast, as we will do below. The brooches will be discussed according to the use of decorative style.

**Object 1.1: Borre-style disc brooch**

The first item that stands out as a Viking object is a leaded bronze (or copper-alloy) disc brooch, with a diameter of 29 mm found in Oosterwijtwerd, Groningen (Cat. 1.1; Fig. 5.1) (IJssennagger 2017). It was found in a dug-away wierde by R.A. Regtop. On the basis of its shape and decoration, it was recognised as a typical Scandinavian Borre-style brooch by the Dutch Cultural Heritage Agency (now RCE, previously called ROB) (Regtop 1995/6, 8-9).

Further classification of the find is, however, possible. The decoration is that of Jansson’s type II D, which is described as ‘mit drei tierköpfen in dreiteilig symmetrischen Entrelachmuster’ (Jansson 1984, 59-63). This type of brooch and decoration is dated to the late ninth or early tenth century. Besides its decoration, classifying the brooch as the well-known II D type, the other characteristics stand out as typically Viking as well. The brooch is convex in shape. Whilst the pin on the back of the brooch itself is missing, the double pin-lug and pin-catch are still present. These are positioned at right angles to the rim. In addition, as noted by the RCE, a third loop is present on the back of the Oosterwijtwerd brooch, also at a 90-degree angle to the pin arrangement.

The brooch of type II D has at least twenty known parallels today (as opposed to 13 in 1995/6), as far as I can trace. There are three from the Birka cemetery (Graves Bj. 644, 738 and 987. Jansson 1984, 59); one from the black soil of Birka;
one from Grindtorp, Östra Syd in Uppland; one from Jämmertuna, Köping in Västmanland (all Sweden); one from Trelleborg on Seeland (Denmark) (Jansson 1984, 63); and four from Haithabu/Hedeby, Schleswig-Holstein (currently Germany), of which two are published and both are found in a settlement context (Capelle 1968, 106; cat. no. 76-7). Regtop (1995/6, 9) also mentions an example from the Faroe Islands and lists the find-spot as Tofting, a place-name which I have been unable to locate in the Faroe Islands. Probably, the name is misspelled and should read Toftir. Other places were also misspelled in Regtop’s list (for example Trelleborg became Tülleborg), making this a likely explanation for the Faroe place-name as well. Whether or not there was a brooch from the Faroe Islands at all, however, remains uncertain, as no literature or further details were found and I have not been able to trace the brooch on the Faroe Islands so far.49

One of the most recently found parallels is a specimen from the excavations at Füsing near Haithabu/Schleswig carried out between 2003 and 2005. This example is made of a copper alloy like most, with an iron pin, and has a 2.6 cm diameter. It is dated to the tenth century (Dobat 2010, 152-3, 238 and 250; cat.nr 1305). The diameter of the Scandinavian type, as described by Jansson, is between 27 and 28 mm, but the two published examples from Haithabu are 26 mm and 30 mm in diameter, respectively. The latter is thus of the same diameter as, or even a mm larger than, the brooch from Frisia and represents its most direct parallel. The two examples from Haithabu both have a third loop, but from the drawings in the catalogue it appears to be lacking on the brooch from Füsing (Dobat 2010, 250).

Kershaw’s inventory of Viking disc brooches from England, which includes material up to 2013, has resulted in the recording of eight type II

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49 This is based on my own search for the brooches, including recent publications. Most of the data comes from the published finds by Jansson and the overview made by Kershaw, which represent the brooches up to 2013. Therefore, it is fair to say that the fullest overview is up to 2013 and that finds from after 2013 may have escaped my attention.
D brooches there, all from the former Danelaw. One is from Aylesby, Lincolnshire; one from Frechenham in Suffolk and the rest are from different places in Norfolk. See the distribution of the type II D as sketched here on the distribution map (Fig. 5.2), which includes the find from Frisia.

This map clearly illustrates how these brooches are distributed in the lower North Sea area, with an interesting concentration in and around the trading place of Birka, a slight concentration around Haithabu and a clear concentration in Norfolk in the former Danelaw. Striking is the absence of these brooches in the Norwegian material. Given the find-spot of the brooch along the coast between Haithabu and the Danelaw, however, it is not surprising to see this brooch turning up in Frisia.

Fig. 5.2 Distribution of the Jansson type II D brooch as mentioned in the text.

Object 1.2: Terslev/Borre-style disc brooch

A fragment of another convex, copper-alloy Viking disc brooch of 26 mm in Terslev or Borre-related style and with traces of the typical pin arrangement and third loop on the back, is from a brooch from Wijnaldum, Friesland (Cat. 1.2; Fig. 5.3). The combination of the clear Viking features form the particular clues that this example was indeed a disc brooch and not a mount, as it was originally described in the inventory of the collector (Zijlstra 1991, 13, 57) and in the NAD-database. It most likely can be dated to the early tenth century.

Only about a third to half of the brooch survives. The fragment furthermore is in a rather worn condition, although the rim is still present. It is uncertain how the brooch came to be so fragmented and whether the wear and tear is pre- or post-deposition. There is no indication that the brooch was deliberately fragmented or cut up, and it seems more likely that the brooch was broken accidentally. Despite the fact that, because of its current state, the decoration is not easy to discern, we can still see features that display similarity with well-known types. Part of the decoration shows similarity to Jansson’s type III C, which is classified as a Borre-style decorated type (Jansson 1984, 61-3). It is uncertain whether the rim originally was decorated with small pellets like Jansson’s example. Type III C disc brooches have a pattern divided in two symmetrical parts with interlacing ribbons or bands. In the middle there appears to be a small square. Whether or not this is present on the Wijnaldum example is unclear due to the wear and tear. According to Jansson these brooches and related types have decoration in the Borre style (Jansson 1984, 61-4), but in her database for England, Kershaw records four brooches of Jansson’s type III C, and these are all called Terslev type VII, based on their decoration. It can thus be said that the Wijnaldum brooch most likely bears the Terslev type VII decoration as well.

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In her study of the dies from Haithabu, Kleingärtner calls Jansson’s type III C ‘Typ Uppåkra’ after a die from that site (Kleingärtner 2007, 55-7, 335 Kat.- Nr. P-43). Her classification is for the examples with granulation or filigree, made with a die, and she considers the cast ones ‘gegossene Imitationen’. Of these, she lists nine (Kleingärtner 2007, 55-6. Kat.- Nr. I-1/I-9). Whilst different in material and production method, the cast brooches imitate the ‘pressblech’ with filigree and granulation brooches. Kleingärtner also mentions that the decoration is usually considered Terslev or a ‘Terslev-variant’, but that the ‘Typ Uppåkra’ and ‘Typ Terslev’ should be seen as distinguishable nonetheless (Kleingärtner 2007, 55-6). Most likely the cast brooches were gilded or silver gilt to have the same effect as the die ones, but this may not always have been the case (Kleingärtner 2007, 15-17). This particular Terslev-style variant was first seen on silver pendants in Denmark. It has a decoration in three or four parts with ring-knots known as Borre style. In the middle it has a triangle or lozenge shape. Besides being found on disc brooches from Scandinavia, and the moulds from Haithabu, it also appears on high-status filigree and granulation objects. According to Paterson, these may even have been directly linked to Danish royal power. The version on the disc brooch is humbler, and as the brooches are cast copper-alloy mass productions which are more widely spread, they are not likely to have any relation to royal power. As the style flourished in the mid-tenth century, we can assume a tenth century date for our disc brooch (Paterson 2004, 268-72). In the case of this particular type of brooch Kleingärtner, with having only the Danish and Swedish examples in mind, expected them to have been produced in two sites in particular: Tissø and Uppåkra (Kleingärtner 2007, 56).

Of the four parallels from England, two of which are from Norfolk, one from North Lincolnshire and one from Hertfordshire (Fig. 5.4), one is Scandinavian and three are Anglo-Scandinavian in nature (Kershaw 2013, 77). Besides these British examples, there are several further parallels from Scandinavia. Jansson lists one from a Birka grave and one from Gäsgivarhagen in Vimmerby, Småland in Sweden; one from Lejre, on Seeland and one from Ketting, Amt Sønderborg in Denmark. This last one is the only known example in silver, the rest are all in a type of copper alloy (Jansson 1984, 63). Kleingärtner adds the cast imitations of the Typ Uppåkra (Jansson type III C) in Dysågergården, Gudme, Rytterkær and Tisso in Denmark and Uppåkra in Sweden. According to Kleingärtner, most of the cast brooches are found on the Danish islands, especially around the east of the Limfjord and around the Roskilde fjord. Apart from the one Birka find, she states, the other brooches are all found in the old Danish realm (Kleingärtner 2007, 56). With the addition of the English ones and the Wijnaldum example, however, this image is altered. Nevertheless, it can still be postulated that the brooches are found in areas where there was Danish influence at that time, or had been in the decades before. For instance, all but one of the British examples – one of which is depicted

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52 See Kleingärtner 2007, 289 for her distribution map of the dies, the end-products and cast imitations.
53 Respectively from Wiveton and Hillington in Norfolk, and from Bygrave in Hertfordshire.
54 Grave Bj. 1083.
below for comparison – stem from the former Danelaw (Kershaw 2013, 77).

Again, the distribution pattern, as can be seen on the distribution map (Fig. 5.5), illustrates the geographic range of the spread of these brooches. As is clearly visible, the Frisian example, when added to the examples from the former Danelaw and south-eastern Scandinavia, fills a big, blank spot on the map in a logical location.

Kleingärtner distinguishes the ones from Sweden, which are 28–29 mm in diameter from the ones from Denmark measuring 25–26 mm in diameter (Kleingärtner 2007, 56). The English brooches, of which one is not measured, are 22 mm (the Scandinavian specimen), 28 mm and 29 mm in diameter respectively. With its 26 mm in diameter, the brooch from Wijnaldum seems to fit best with the Danish group.

Wijnaldum and its terps are best known for the amount of early medieval archaeology, which includes finds like the famous Wijnaldum brooch, and has thus not traditionally been thought of as an area of interest for the Viking Age. Therefore, little research has been conducted focussing on Wijnaldum specifically for Viking activity or Viking finds, rather than just on the site through time, and particularly as an important sixth- and seventh-century site. The finds discussed here nevertheless indicate that there was also Viking Age activity here related to the Viking sphere, regardless of what the activities were or by whom they were being conducted.

Besides the disc brooch, there is a cluster of three dirhams and one dirham-turned-to-jewellery (Cat. REL.1.2.1–4) found in Wijnaldum that may be considered as relating to the Viking sphere. Three of them are fragmented Abbasid dirhams of the ninth or tenth century, but the exact issuer or location is unreadable. This is
due to the fact that only half of two a third of the other were found. Unfortunately, one of these fragments has now gone missing. One of the remaining half dirhams comes from the collection Zijlstra (Zijlstra 1990-94), like the disc brooch. The other fragments were found during the 1991-92 excavations in Wijnaldum as part of the Frisia project (Besteman et al., 1999). This too is the case with the dirham-turned-to-jewellery, which is made of an Abbasid dirham (Harun-al-Rashid; Balkh, 170-93 AH / AD 786-809) that is mounted in a quadruple-beaded rim. It must be noted that these rims are not uniform but differ and a fragment is missing of the outer two. Dirhams in general, but particularly dirhams turned to hack-silver by fragmentation and displaying test marks, nips and cuts, as well as dirhams turned to jewellery by being mounted in beaded wire (see also the Westerkrief I hoard), are typically identified as Viking objects (Pol 1999). Besides the dirhams, there is a gilt copper imitation solidus of Louis the Pious from Wijnaldum, which is now regarded as belonging to a corpus of Viking imitations (Coupland 2016). Further discussion of the work of Coupland on these imitations can be found below (see general remarks and insights).

Another find from the former collection Zijlstra that is said to have been found in Wijnaldum is a fragment in the shape of, possibly, a Thor’s hammer (Cat. REL
1.2.5). The fragment is made of copper alloy and is 28 mm wide. It appears the hammer was undecorated, or any decoration it may have had is no longer clear. A Thor’s hammer, as a symbolic amulet referring to the Norse god Thor who carried a hammer called Mjölnir, clearly refers to the Viking sphere, as we do not know the Thor’s hammer as a symbol from elsewhere. As far as I have been able to establish, this is the first original Thor’s hammer to have been found in the Low Countries. Earlier Thor’s hammers that appeared in Frisia were said to have been found as part of the hoard from Winsum, which was discovered to be a falsification (see Chapter 1, Fig. 1.1; Elzinga 1975). Therefore, the corroded and fragmented Thor’s hammer from Wijnaldum can rightly be called the first Thor’s hammer of the Low Countries.

In general, the terp-cluster from Wijnaldum to Berlikum, which also includes Dongjum, Boer and Ried, is rich in finds and bears a fair amount of material from the ninth and tenth centuries, including Continental disc brooches. Although this is not an extensive investigation of all the material from one site, the selection of objects mentioned here shows what extensive research on a site can in fact reveal. Namely, we must keep in mind the fact that Wijnaldum is a place that has seen thorough archaeological investigation and attention. The same can be said for other terps or locations that were researched within the Frisia-project, such as Dongjum, as we will see later (See Besteman et al. 1999; Bazelmans et al. 1999; De langen et al. 1997; De Langen and Hommes 1998). Consequently, the unswerving interest of detectorists, collectors and researchers makes it likely that finds from Wijnaldum have turned up more easily than stray finds from other locations. The fact that there is an accumulation of finds dating to the Viking Age that can also be connected to the Viking cultural and/or economic sphere in Wijnaldum, just as in nearby Dongjum, does not, therefore, mean that these places necessarily saw more Viking activity than others, although they are clearly places with a rich history and thus rich archaeology in general. On the contrary, the fact that these well-researched coastal sites reveal a number of Viking-related finds indicates that this may also happen at other sites in the future, as this is the tip of the iceberg (or the tip of the terp, so to speak). This is not a problem in the context of this study, it merely reminds us that there may be many more finds than we presently know, from less well-known locations in the same area. We must remember that these terps are situated in a very rich and strategic area, which was inhabited over a long period of time and was fertile, as the palaeogeographical map (Fig 2.4) shows. Also, it reminds us in general that even though, as Sindbæk (2011) suggests, contacts happened at specific locations such as trading sites or other ‘nodal points’, the connections nevertheless spread much further than that and objects linked to these connections entered the world beyond those nodal points, also in the terp area, as suggested by Loveluck and Tys (2006).

Object 1.3: Jellinge-style disc brooch
A third Viking find is the upper plate of a composite brooch with an openwork ornament in Jellinge or Borre-Jellinge style (Cat. 1.3; Fig. 5.6). The brooch was
found in Kenwerd, Groningen, and is in the private collection of Jan Zijlstra, who acquired it from another collector who had previously bought it from the metal detectorist. It was published in a detectorist magazine when Zijlstra acquired it (Zijlstra 2001).

Fig 5.6 The convex brooch-plate from Kenwerd Cat. 1.3. Photo: Zijlstra. Not to scale. Currently this is the only photo of the object.

The decoration on the brooch is zoomorphic and depicts a single gripping beast in profile or interlacing animal with a ribbon-like body. The gripping beast has an extended kind of ear and ear lappet. Two types of brooches with this decoration exist, Jansson type I A1 and I A2 (1984, 60-2). The latter is made from one solid piece, whilst the first is made of an open-worked convex front-plate and a one-piece, flat back-plate. The specimen from Kenwerd is open-worked and the original back-plate is lost. The brooch can therefore be classified as a Jansson type I A1 brooch. As explained by Kershaw (2013, 104-5) the fact that the outline of the gripping beast is in Jellinge style, but the arched form of it can be considered to belong to the Borre style, makes this I A1 brooch-type a composite Borre/Jellinge brooch. The type is dated between 900 and 950, so early tenth century. Mills (2001, 46) describes a similar brooch from Norfolk and argues that the body of the animal is ‘segmented in the middle to form a ladder pattern’, a distinctive feature of this style that is also visible on the Kenwerd-plate. On the right of the central body of the animal in the Norfolk example, there is a rivet connecting front- and back-plate (Mills 2001, 46). On the Kenwerd example, this is missing, but there appears to be ample space on the right side of the animal’s body for such a rivet.

The I A1 brooch-type was originally found in Sweden, which led James Graham-Campbell (1976, 449) to suggest it was a group of brooches of eastern Scandinavian origin. Recent discoveries have been made in Northern Germany and Denmark in particular (Dähre and Hamburg in Germany, Randers, Ålborg and Lolland in Denmark), as well as one in Iceland. Consequently, a geographical focus of distribution on southern Scandinavia should be assumed (Kershaw 2013, 105 and 254).

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55 Personal information of J. Zijlstra 17/10/2016, who we thank for the information on the find
56 Personal communication J. Zijlstra 4/2/2013.
In 2009, Kershaw recorded the eleven known examples of type I A1 in England, between Lincoln in the east and Chester in the west (2009, 317). By 2013 (Kershaw 2013) this image had not changed. It should be noted that in England, the I A1 type brooch was one of the first Jellinge-style types to have been recognised, and whilst there were several finds of the type in 2013, none of the type I A2 were recorded (Kershaw 2013, 104–5). Jansson lists type I A1 brooches for a grave in Birka, another one from Södermanland in Sweden, and one from Dublin, besides one without a find-spot and the previously mentioned one from Chester. Type I A2 brooches are listed for the black soil of Birka, two from Denmark and one from Haithabu (Jansson 1984, 60). Another three type I A brooches are known from Kaupang, at least one of which is clearly a one-piece example (Skre 2011, 47–8). Two earlier found examples are of the type I A2, thus of one piece, and according to Heyerdahl-Larsen, they deviate in some details from the other brooches of this type (Blindheim and Heyerdahl-Larsen 1999, 34–5). An example of the composite brooch secondarily made into a pin-brooch from tenth-century Dublin has been published by Graham-Campbell (1980, 57, 233 (no. 200)) and this is most likely the same example Jansson is referring to.

Fig. 5.7 Distribution of the Jansson Type 1 A1 brooch.

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57 Grave Bj. 777.
As can be seen from the distribution map (Fig. 5.7) where the known finds are combined, this brooch now has a widespread geographical distribution due to, especially, the many examples in the British Isles. With the example from Dublin as the most western and the ones from Birka as the most eastern, the brooch from Kenwerd is very centrally located among the entire geographical distribution.

**Object 1.4: Ambiguous Viking Disc Brooch**

The last of the four disc brooches which may have a Scandinavian background is the most ambiguous one in several ways. This brooch (Cat. 1.4; Fig. 5.8) from the former collection of Regtop was found in the province of Groningen, but the exact location is unknown. Unlike the previous examples, this brooch is flat instead of convex. The pin on the back plate is present and the attachment is placed at a right angle towards the rim. No third loop is present, nor is there any indication one was ever attached. As such, the brooch does not meet all the ‘criteria’ for a Viking brooch as set out in the beginning of this case study, apart from the possible pin arrangement, which appears to be with a double pin-lug. The decoration of the brooch, however, is clearly in a Viking interlace-pattern style. Although the details are hard to see in some places due to corrosion, an interlace pattern covering the whole surface can definitely be discerned. Around it is a slightly pronounced rim. The interlace pattern appears to be a Borre-style or related Terslev-type of decoration. It shows some similarities with a brooch from Hjörring, Denmark (See Capelle 1968, tafel 28 nr. 9, karte 32 and pages 112 and 117). Some – perhaps more – similarity may also be drawn with type IIID as found in Birka (Jansson 1984, 61. Grave Bj. 431). Perhaps most of all, it appears that the interlace resembles Gaut’s interlace, which is a characteristic of the Insular Borre style.

Fig 5.8  The disc brooch from Groningen Cat. 1.4. Photo: NAD Nuis, Jelle Schokker

Because of its features, this find appeared very ambiguous and hard to find parallels for. The real parallels of this type of disc brooch, however, are three examples from the Limfjord area in Denmark (Fig. 5.9) that have recently been pointed out to me. They are from two different sites not far from each other on the southern Limfjord coast: two brooches from the Nørholm hill and the other from Bejsebakken. The

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58 With thanks to Torben Trier Christiansen, who is working on Danish metal-detected finds, for sharing this information with me (Dec. 2015).
various brooches from the Bejsebakken site, including this one, are used for dating the site and for looking into other detector sites, because it was possible to relate detectorist stray finds to finds from datable contexts (Christiansen and Sarauw 2014, 132). The Danish disc brooches at least date to the Viking Age, and therefore a similar date is suggested for the Groningen brooch. So far, aside from these Danish parallels, no other parallels have been found to my knowledge, and they do not seem to appear in the English material.

With a diameter of 33 mm the brooch is larger than the traditional small Viking disc brooches described here, but still falls within the range of the small disc brooches, which according to Jansson is 24-34 mm (Jansson 1984, 58). The two Danish examples, which I have only have examined on the basis of photos, are also 33 mm (5180K032 and 5177K144 from Nørholm on photo with scale, the Bejsebakken-find is published on scale in Christiansen and Sarauw 20014, 132). Furthermore, it appears that the Danish examples, like our case study, are flat instead of convex. It thus appears that the Groningen find is not such an unusual exception as initially thought, but belongs to a group of the same type, which have the 33 mm diameter, the flat shape, the interlace pattern and their ‘Scandinavian’ pin arrangement as characteristics.

The question is what we must make of this type, as it does not tick all the ‘Scandinavian’ boxes, but clearly is a Viking brooch. One possibility is that this brooch is a hybrid form with both Continental and Viking characteristics. In the former Danelaw the development of Anglo-Scandinavian brooches is attested. Here, the imported Scandinavian disc brooches led to the production of brooches locally and with Anglo-Saxon characteristics (flat, no third loop), but with Scandinavian decorations and styles. They are thus hybrid forms, worn in Anglo-Saxon fashion (Kershaw 2009, 297-8). We can, therefore, rightly question whether the same applies to this brooch: a brooch combining Viking or Scandinavian characteristics with
Continental, Frisian or Anglo-Saxon ones, whether in Denmark or on the Continent. The fact that the brooch is flat and does not have a third loop also leads to the question of how the brooch was worn, and suggestively this could have been as a single brooch. Indeed, whilst traditional Viking women's costume is characterised by the use of two brooches with the addition of a third brooch, as in Birka, in Denmark the use of single brooches had become increasingly popular by the tenth century. This is seen as a likely reflection of the influence of the Continental or neighbouring Western European tradition of wearing a single brooch on the Danish or South-Scandinavian fashion (Kershaw 2013, 159 with reference to Egon Wamers). Naturally, as studies such as those of Wamers and Baastrup (2012) have shown, the South Scandinavian material is characterised by a larger number of Carolingian imports, copies and hybrids than the other regions (Baastrup 2012).

The current pattern of distribution (Fig. 5.10) would encourage the suggestion that the type is a northern-Danish or ‘Limfjord type’. However, with such a small corpus of finds and the type still not fully understood, it is hard to prove that it indeed originates in the Limfjord area. Nevertheless, it does at present seem more likely than it being a Continental or Frisian product per se, but in any case it is connected to both.

Fig. 5.10. Distribution of the ambiguous brooch type, here referred to as ‘Limfjord type’.
Disc brooch composition

In order to determine where a brooch was produced, we may turn to methods of establishing brooch composition, for instance by XRF-scanning. X-Ray Fluorescence (XRF) is a technique with which the exact chemical composition of metal alloys, amongst other things, can be determined. Recent studies have been dedicated to testing XRF-analysis as a means to establish geographical differences in metal-alloy compositions and use, identify locations of manufacture and, where possible, study the movement of objects (Roxburgh 2013; Kershaw 2013).

Analysing the disc brooches with XRF-methods was not part of this research project and has not been systematically performed on the objects under discussion here. However, in the recent master thesis of Roxburgh (2013 unpublished), two of the four discussed disc brooches were among the hundreds of brooches from Frisia analysed, and we can use those results to briefly discuss the Viking disc brooches in Frisia. This concerns the two finds from the former collection of Regtop (objects 1.1 and 1.4)

Roxburgh divided his corpus of Frisian brooches into two groups, based on their composition, among other attributes. The first group included brooches from the fifth to the eighth centuries; the second group was composed of brooches from the eighth to the twelfth centuries. In the brooches from the Frisian coastal area, Roxburgh (2013 unpublished, 134) namely notices a shift in composition in the eighth century, which happens to coincide with the incorporation of the area into the Frankish Empire and the connected conversion. In the period up to the eighth century, brooches were produced using mainly bronze-based alloys. From the eighth century onward, brooches are made of brass or sometimes leaded copper. The two Viking disc brooches clearly fall within the second group in terms of time, but not in terms of composition. Both proved to be composed of leaded bronzes, so with regard to composition they are more comparable to the Frisian brooches of the first period. These results can tentatively be taken to suggest that the production of small brooches with bronze continued in Scandinavia, while brass replaced bronze in such brooches on the Continent (Roxburgh 2013 unpublished). It must be mentioned, however, that for other types of objects, brass production seems to be attested for Scandinavia as well; it has even been suggested that it is a Scandinavian characteristic (Kershaw 2013, 36-8). The suggestion of the continued use of bronze would support the assignment of the ambiguous disc brooch (Cat Obj. 1.4) to the Viking material like the clear Borre-style brooch (Cat Obj 1.1) and also support the idea that it may be a South Scandinavian or Danish product, but influenced by Continental traditions. Of the two Viking brooches, this brooch is also closest to the Frisian brooches from the pre-eighth century, but still deviates from them. Based on the composition, we cannot speak of a ‘local product’ in Frisia influenced by Viking styles, but should rather think of the object as being produced in a non-local manufacture process, possibly in Scandinavia or in Scandinavian fashion.\(^{59}\)

The conclusion then should be that the two Viking brooches can be classified as

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\(^{59}\) Personal comment A. Roxburgh, for which many thanks.
such on the basis of their appearance and stylistic aspects and that this is supported by their deviant composition. In the future, further research into these differences in composition and manufacture may illuminate different brooch traditions more and add to our understanding of the production of the brooches.

The Disc Brooches considered
The number of Viking disc brooches may seem slight for the whole Dutch, former Frisian coastal area, but we have to bear in mind that the ones presented here are the first ones known and represent the smallest possible number of brooches. In the future, the number of finds can only increase. Comparing these few now-known items to the existing list of finds for the particular types in general, however, immediately shows their significance. This becomes particularly clear from the distribution maps of the disc brooches, on which the Frisian coastal finds almost appear as a geographical ‘missing link’ and fit in nicely with the general North Sea distribution. Also, the distribution in time – late ninth to early tenth century – and the styles used match the general North Sea image, particularly in south Scandinavia and England. The disc brooches from former Frisia thus provide us with information that can be placed, and gain context, in a larger North Sea perspective. We can now ask what the presence of the disc brooches along the Frisian coast and the location of their parallels represent, and how the brooches may have ended up there.

It must be stressed that no direct link with any of the other find-spots of the parallels to our finds can be postulated. Rather, we should look at the places on the distribution maps as all connected via a network or networks. It at least shows a connection through interlinked sites and through people, and a whole system of connections that also touches the Frisian coast. As such they display connectivity (Sindbæk 2007, 66). This system of embedded connections stretches from south-eastern Scandinavia (with Birka in the far east) to the Danelaw, and in one case as far west as Dublin. The main areas included thus belong to the Danish realm, to which Kaupang in Skiringssal – the most prominent Norwegian connection – can also be added for this period of time. Some of the (disc) brooches have parallels in well-known trading places in Scandinavia. Parallels of the Terslev-style brooch fragment from Wijnaldum (Cat. Obj. 1.2) have been found in a number of what is known in Scandinavian archaeology as ‘central places’, namely Uppåkra, Gudme and Tisso. These are places that are classified as relatively big, rich and multifunctional in the (south) Scandinavian late Iron Age, right up to the Viking Age. Long-distance trade, and the presence of power and of some ritual or religious function appear to characterise the sites (Hedeager 2002, 3). The function of such places thus surpasses the purely economical. Looking at the find-spots of all four types of brooches in Scandinavia, it is striking that they often occur in the well-known trading sites of Birka, Haithabu and one-time Kaupang. A clear reason for this may be the intense research history of these sites, which thus have yielded more of these finds. Moreover, finds from such well-investigated and important sites have a better chance of having been made accessible through publication. But in addition, these are clear hubs for contact and exchange.
According to Sindbæk (2007, 60), as was mentioned earlier, most of the contacts happened in a number of specific places, such as the trading sites which function as hubs. Possibly, this is also a factor that has contributed to the distribution pattern, as it was possibly in these places that objects were exchanged and produced. Kleingärtner (2007, 17) suggests that the limitation of the distribution of these brooches to particular trading sites may be caused by the fact that those who made the brooches relied on originals as models, and were therefore bound to certain places where social differentiation and established craftsmanship, as well as trade, were present. It has, however, been stressed that, in general, due to their material and the relatively easy production method, these types of objects should not be seen as tradeware themselves but as objects that could be produced in many different places (Kleingärtner 2007, 17). The production may have thus been in the hands of travelling craftsmen. Besides the fact that the brooches are mass-produced and possibly made by travelling craftsmen, Loveluck and Tys (2006) stress that there are certain dynamics of exchange, including free peasant exchange in the coastal area, which also result in more scattered distribution patterns that extend beyond the trading centres and nodal points. Moreover, when brooches are being produced in different sites around the North Sea, they may be influenced by local ideas, fashions and needs, even if made by craftsmen from the Viking World. Such a scenario is one of the possible scenarios for the ambiguous brooch (Cat. 1.4; fig. 5.8), which may bear characteristics of both Continental and Viking manufacture.

There is another reason why we should not think of the disc brooches as traded ware. According to Wamers, brooches at this time were still highly culturally and ethnically charged, and were thus not necessarily items of trade. Although trade connections (and thus contact, travelling merchants and possibly their families, as the Kaupang-example of a Frisian merchant’s house would suggest, see Skre 2010, 2011) can be a precondition for the distribution, and would thus show in the distribution map, it is according to Wamers not trade itself that distributes them (Wamers 2011, 76). Even though it may be true that the brooches are not commodities per se, we can question if this is necessarily true in all cases, and we have to always be careful with assigning the brooches to an ethnical identity in general. Moreover, that they express a form of cultural identity and are thus culturally charged, seems quite clear from the British examples (cf. Kershaw 2013). Theuws (2014) stresses that the early medieval economy and systems of exchange were to a great extent eclectic, the result of which being that objects could change from one sphere of exchange to another quite regularly. What the precise sphere of exchange and function of the object was depended on the context. For example, it could even go from one gender context to the other, as we have seen above. Therefore, we cannot rule out a connection to trade or an exchange within different spheres and contexts.

These types of items made of cheaper metals and production, especially those which were functionally related to the dress fashion, may thus in many instances

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60 He specifically mentions the eighth and ninth centuries, as this is the period for which he discusses the Kaupang finds, but this continues into later centuries as well
have continued to be cultural markers to some extent (Skre 2011, 422). For Continental and, sometimes most likely, Frisian brooches in Kaupang, this is at least the argumentation Wamers and Skre follow. On the basis of these arguments, their conclusion is that the Frisian and Frankish brooches came to Kaupang as personal items. Kershaw also takes the argument of Wamers into account for England, and believes that the items were introduced ‘on the clothing of female settlers from Scandinavia, rather than items through trade’ (Kershaw 2009, 299). This may indeed seem the most likely scenario. Due to the complexity of the networks and spheres of exchange, as well as the limited amount of sources, it is very hard to give such a conclusion for the Viking brooches in Frisia. Moreover, although the argument of brooches being very personal and visible items connected to a cultural background is very convincing, and in fact used in the present study, we should be careful to conclude from this that it is only a cultural marker transported on women's dress. We cannot draw any conclusions on the nature of the sphere of exchange behind the presence of the Viking brooches in Frisia. What we can conclude, however, is that these brooches are present and link Frisia to a larger North Sea network and the Viking sphere.

As was already hinted at above, the disc brooches can be related to women in the Viking world. This is interesting as, in the current view of the Viking Age and Viking activity in Frisia, we mostly think of and focus on men. The brooches thus give us an insight into the connectivity, the system of connections and the way in which the Frisian coast and the Viking sphere cohere, via a direct or an indirect female line. As personal female items, they lead us to think of a number of scenarios for their distribution. First of all, the trade or raid scenario, in which Scandinavian men and women travel together to Frisia, perhaps stay there briefly, and for some reason leave a brooch behind. This is the scenario which Wamers and Skre see for continental brooches in Kaupang. Another possibility is that of Scandinavian women marrying people on the Frisian coast (whether they were Frisian, Frankish, Scandinavian, Saxon, etc.). Alternatively, the brooch might have been taken back to Frisia by a man for his wife, as a form of souvenir. In that case, the brooch is not at all a cultural, ethnic or identity marker, but more an identity maker. The brooch does not represent the direct identity of the woman, but reflects that she is the wife to a man who has been across the North Sea, or has contacts there. The idea of male Vikings bringing items for their wives, who may then wear these to show their husbands' overseas activities and affiliations, is a generally accepted idea for the Viking Age (Graham-Campbell 1980, 102). Although female items, they may thus represent the male identity as well. In any case, the disc brooches found in Frisia mark out some Viking cultural affiliation.

In terms of social and geographical distribution, we do see a very interesting and significant tendency in this first part of the case study. In contrast to the objects of precious metals found in an important hub and place of exchange such as Dorestad

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61 ‘Other women proudly displayed an imported ornament as their shawl-brooch maybe converted from a piece of loot, so advertising their men’s success in ventures overseas.’
(see below), we now have a set of mass-produced, small objects which may be personal in nature, and found in the terp-region. This is, as established above, a more or less rural area with more localised power connected to the North Sea world. We do know that this area has seen Viking activity, yet it is most likely not the location of a Danish fiefdom or the like. It is not the part of Frisia we traditionally connect to the heaviest Viking activity, nor the one that has yielded the most or the most significant Viking-related finds so far, which are Dorestad and Wieringen. Here, we can actually draw a comparison to the distribution of Viking disc brooches in England. The bulk of the finds come from those areas of the Danelaw, in the south, not traditionally associated with the heaviest Viking activity as in the North. According to Kershaw (2013), the brooches mark the areas of Scandinavian settlement and those of Scandinavian cultural influence. These sometimes are the areas less marked by other evidence of Viking Age and Viking activity. Strikingly, however, the southern Danelaw and the Frisian terp area were via some network connected to the North Sea world, and particularly to southern Scandinavia. Apparently, the interconnectivity was such that these kinds of mass-produced, personal objects penetrated the rural society of the terp area. This adds a new layer to our image of Frisia in the Viking Age, for which we can now state that it was touched by the cultural influence of the Vikings and shows connectivity with the Viking sphere.

5.1.2 Oval brooches
Another characteristic element of the Scandinavian, Viking Age women's dress is the pair of oval brooches that were worn on the front of the dress to fasten the shoulder straps of the tunic. Between them, a chain could be hung for decoration purposes or as a suspension chain. Sometimes, it was combined with a third brooch that was worn under the neck to close the garment there, for instance, a disc or trefoil brooch. Oval brooches, which are often called tortoise brooches because of their shape and appearance, developed over time from the Vendel period (AD 550-793) up into the Viking Age. From this last period, we know the large, decorated tortoise examples. The smaller brooches from before that are often called oval or domed oblong brooches. A survey and study of these domed oblong brooches by Rundkvist (2010), has resulted in an overview of the brooches and a typology that covers the Vendel period into the Viking Age. Most important is the emphasis on length as an indicator of age, and the awareness that there are many different varieties of brooches and unique types. These include thin-shelled, cast and carved oval brooches. Thin-shelled examples, in particular, are a Norwegian type.

Oval brooches from the Viking Age traditionally were made of two layers, of which the top layer is intricately decorated in relief, sometimes open-worked. The decoration shows mostly stylised animals and bosses. The brooches are regularly found in pairs in women's graves all over Scandinavia. In the later Viking Age, they were also frequently found in the Baltics. In areas of Viking influence outside Scandinavia, such as in the British Isles and Normandy, pairs of oval brooches sometimes are found, but they are relatively scarce compared to Scandinavia and
compared to the disc brooches. The ones that are found are of a few specific Viking Age types (Types Berdal, P37, P51 in Britain; Kershaw 2009, 298; Petersen 1928). From former Frisia, we know of only one example of this typical Viking oval brooch.

Object 1.5: Oval brooch
This brooch (Cat. 1.5; Fig. 5.11) was found in the excavations of Dorestad in Wijk bij Duurstede. It is a single, damaged brooch that was preserved in the local museum of Wijk bij Duurstede before it came to the National Museum of Antiquities in 2009. The brooch, measuring 50 by 85 mm (measured on photo to scale), is thin-shelled and appears to be cast. No traces of pin or pin attachment are left on the rear. There is a decoration on the surface, which appears to have been carved or incised after casting. The decoration is divided in four medallions of equal size, possibly containing stylised animals/quadrupeds. But, because of the wear and tear to the brooch, as well as the decoration technique, the decoration is not easy to discern.

Initially, the brooch was interpreted as a local, continental imitation or a copy of a Scandinavian tortoise brooch (Willemsen 2009). As the brooch is different in its manufacture and style from the Scandinavian Viking Age tortoise brooches (that is, not cast in relief, but cast and carved), it was believed to be a local variant that was derived from Scandinavian examples. However, Rundkvist’s study (2010) shows that these types of brooches also occur in Scandinavia before (in the Vendel period) or alongside the Viking Age tortoise brooches, and it appears that we can place the Dorestad brooch in this light.

As Rundkvist (2010, 128) argues, there is no use in making a distinction between many different types, because the designs indicate a common world of ideas and close contacts among artisans in the area Rundkvist studied, which is most of

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62 Many thanks to RMO registrar Heikki Pauts and curator Annemarieke Willemsen for providing this information.
63 But see the reconstruction drawing by R. Bakker in Willemsen 2009, 166.
Scandinavia. Variability seems due to the intentional manufacture of unique pieces. In the Vendel period, animal art was a symbolic medium controlled by the aristocracy. Only in the early Viking Age, with mass production, did it become mainstream. Therefore, it is not surprising that although types can be distinguished, there are many variants and no exact parallels for the Dorestad brooch. Looking at the brooches’ characteristics, two types come quite close to the Dorestad brooch and can help classify it: type TT, the Transitional Type, and type R643, which stands for a group of thin-shelled Norwegian ones. The main difference between the two types is the pin-fastening. Type TT, in general, has a cast pin-fastening, whilst R643 has a pin fastening soldered into the brooch. As the pin is completely absent on our brooch, it is hard to tell which type of pin fastening we are looking at here. It must be remarked that pins are often absent on R643 brooches when found, as they are more easily damaged. In addition, because the R643 are such thin-shelled examples, the shells are often damaged when recovered. This is the case with the Dorestad brooch as well, yet this is too little evidence in itself to identify the Dorestad finds as an R643 type. Characteristics of the TT brooches, moreover, are that they may be a size larger than 77 mm and have a decoration in four medallions. It should be stressed that these types – and particularly type TT – each have many different variants and unique examples. Some even seem to be a mix between two sorts or types, and we can question if the Dorestad brooch could perhaps very tentatively be considered a mixed TT/R643 type, or should belong to one of those two types. As for the size of the brooch, it appears to fit the R643B type well.

Although we thus cannot exactly pinpoint the type, we have a general direction and can state that the brooch is a domed oblong brooch, which is slightly earlier than most Viking Age tortoise brooches. This means we can reconsider the dating of the object. If we regard it as a Norwegian or a transitional type, meaning late Vendel to early Viking Age, it should be dated between 750 and 840. TT brooches are found over large parts of Scandinavia, and up to the Viking Age seem to be more widely spread than in the Vendel period. Two brooches classified as TT brooches were also found in Nebel, on Amrum, in Nordfriesland, as well as two from Northern Germany (Fehmarn (Johannisberg) and Oldenburg), the last which may be regarded as former Frisia (Rundkvist 2010; Bakka 1971/2).

Rundkvist emphasises that the brooches under study in his article signal the presence of aristocratic women. This is an interesting suggestion, yet we cannot be sure about what it means for our brooch, especially as we believe it to be a later, transitional type, which is more widespread geographically. Nevertheless, the presence of an aristocratic, Scandinavian woman in Dorestad between 750 and 840, or in the years after 840, does not have to surprise us at all. In this period we know that Danish warlords, throne-pretenders and traders visited the harbour town. That women also could travel to Dorestad is exemplified by the story of the rich Catla from Birka, which is told by Rimbert in the *Vita Anskarii* (ch. 20) and

64 With thanks to Martin Rundkvist for discussing the brooch and the types.
would have taken place around 850.

One of the reasons for its identification as a local imitation, which is still a possibility, may also be the fact that only one brooch was found, instead of a pair, which in addition is damaged. A possible explanation for this is that the brooch had come to Dorestad in a pair of which only one survived, or as a single souvenir. It may, for instance, have been re-used as a single brooch before it ended up in the ground, but there is no evidence whatsoever for this hypothesis. In addition, the find context is unclear to such a degree that we cannot know if there indeed was only one, or perhaps two. Therefore, we can only speculate how the brooch came to Dorestad and how we should identify it precisely. What is clear, however, is that it most likely is a Scandinavian brooch from between AD 750 and 840, or shortly after. Its date of deposition, naturally, may be later than this.

In their recent and thorough typology of fibulae from the Netherlands, Heeren and Feijst (2017, 224-5) consider the brooch as falling into the category of type 87 – early medieval composite disc brooches – and classify it as type 87c. In this same category, they also place the find of an animal-head fibula from the same site. Heeren and Feijst state that both this fragmentary object and the tortoise brooch derive from Scandinavia, and that they are the most southern finds of the type. The animal-head brooch, however, is earlier than the tortoise brooch and should be dated pre-Viking. The find-spot of both brooches, Wijk bij Duurstede or the site of historic Dorestad, which has been the topic of centuries of research and publication, was also the location of other finds related to the Vikings, which have been listed by Willemsen (2004, 71-7). Besides these objects, which include a finger ring, arm-rings, needles and a Viking Age sword, there also is a dirham (NUMISnr. 1033482).

Such a single and conspicuous find, although with some form of parallel in northern Frisia, is a difficult find to study or draw conclusions from beyond what has been done here. It could, however, be said that it should not be surprising that the only find of this type in the Netherlands is from Dorestad, especially as it is a rather early object. What is perhaps more remarkable is that the disc brooches, which are also connected to the female costume, have not yet been found in Dorestad or the river area, but only in the northern coastal area up to now. This most likely has to do both with the dating of these brooches in the late ninth or early tenth centuries, so after Dorestad’s heyday, and with different dynamics of distribution.

5.1.3 Ring-pins and ring-brooches

Ring-pins and ring-brooches are perhaps most well-known from Insular contexts, where many different types developed over time (Laing 1993, 73-5). But they also occurred regularly in Viking Age Scandinavia, either as direct imports from the Insular world or as Scandinavian copies or types based on the Insular ones. In graves at the famous Viking Age trading site Birka on Björkö in Sweden, for instance, no less than 33 ring-pins or ring-pin fragments have been found (Thunmark-Nylén 1984, 5). Ring-pins must be distinguished from the two types of ring-brooches –
penannular and pseudo-penannular or annular brooches – which are not exactly the same in appearance or function but are closely related. Ring-pins can be described as a type of cloak-pin, the head of which is a ring that lies over and rests on the pin. In contrast to the ring-brooches, the pin does not go through the ring to fasten it. With its weight the ring pushes the pin down in the cloak, fastening it. Some types of ring-pins also have a small loop at the back of the ring to rest the ring on, or to attach a chain or thread possibly for fastening or as suspension loop. The pin usually is more than twice as long as the ring itself (Thunmark-Nylén 1984, 5). This too is in contrast with some of the ring-brooches, where the pin may be much shorter, measuring just over the diameter of the ring.

Object 1.6 Penannular brooch fragment
From Hallumerhoek near Hallum in Friesland, there is a copper-alloy fragment which represents the terminal of a penannular brooch. The fragment (Cat. 1.6; Fig. 5.12) is part of the collection Zijlstra and has to date only been published by Zijlstra as the front logo of his *Friese Bodemvondsten* publications (1991-95).

The length of the entire fragment, from where it is broken off at the ring to the tip, is 33 mm. It is made of a copper alloy and weighs 5.59 grams. From the shape and size of the fragment and from the fact that it clearly is broken off of a ring, it can be inferred that it used to belong to a penannular brooch. The terminal is flat and undecorated on the back, but on the end where it is broken off it is rounded as it turns into a ring.

Fig. 5.12 Penannular brooch terminal fragment. Cat. 1.6. Photo: Johan Koning, Fries Museum.

Zijlstra himself also identifies it as a fragment of a ring-brooch (personal communication, Nov. 2013).
The front of the sub-triangular terminal represents a dragon-like animal head with a gaping mouth and a tongue which wraps around the typically elongated snout. There are also two teeth. The head is represented in profile and the eye is suggested by a ring-dot. On the triangular-shaped head there is a recessed panel, in the cheek area, with three further ring-dots and one dot. On the rim, where the terminal is turning into the ring, we find four smaller dots. On the back of the head there are ‘spikes’ or manes. On the junction of the hoop with the terminal, there is a double marking.

As Zijlstra rightly points out, this fragment is almost identical to – or at least closely resembling as there are some clear differences in detail – the terminals of a ring on a penannular brooch from Norway as depicted by Wamers (1985) (Fig. 5.13). This brooch (St1052 or S1052 Arkeologisk Museum Stavanger; Graham-Campbell 2011, 99-100; Wamers 1985, 111, list 1.15, pl. 36.2; Petersen 1928, 180) is found in Ferkingstad, on Karmøy, in Norway. As we can see, it does resemble the fragment from Hallumerhoek, including the ring-dot pattern. Here, there are six ring-dots present. Also in measurement, they seem very comparable.

In the Kaupang excavations, a terminal fragment of a penannular brooch was discovered which also bears a great resemblance to our brooch fragment (Graham-Campbell 2011, 99-100). This fragment (C52519/19674 KHM) of 48 mm, which still has part of the ring attached to it, is probably chopped off the brooch, and is in worse condition than the Hallumerhoek fragment due to corrosion. Graham-Campbell classifies it as group I,E (Graham-Campbell 2011, 99; 1987, 237), a type of penannular brooch with animal heads in profile as terminals, which copies a Pictish-type animal-head brooch as known from St Ninnian’s Isle and Freswick, and with the addition of stamped ornamentation (Graham-Campbell 2011, 99; 1987, 237). Like the Ferkingstad and Hallumerhoek examples which can also be considered of this type, ring-dots were present but these – and there are four of them – were only seen with X-ray examination.
Besides the Kaupang, Ferkingstad and the Hallumerhoek pieces, four other brooches of this type are known (Graham-Campbell 2011, 99-100). One is from Denmark, the others from Western Norway. The Danish piece is from Neder Hornbæk Enge in Jutland (NM I 6729/88). From Norway, there is one from Spissøy, Bømlo, Hordaland (B11377), one from Sognfell, Luster, Sogn og Fjordane (B11224) which is regarded as the finest example, and one from Brekke, Høyanger, also in Sogn og Fjordane (B8436).

Wamers (1985, 111) classifies the penannular brooch as having an Insular provenance in general, but most authors agree that the type presented here is a Scandinavian brooch made after Insular examples. And this is also true for other types, like the ring-pin discussed earlier. Petersen (1928, 180) mentions that some of these types of brooches may be made in an Insular context, but that they do show signs of being made by people from Scandinavia. An example of such a brooch is the Ferkingstad brooch, according to Petersen. Graham-Campbell (2011, 99-100) suggests that the brooches display ‘Insular’ characteristics but most likely they were manufactured in Norway and are not direct imports. For the Kaupang-fragment, it is suggested that it came as a complete brooch from Western Norway, where it was manufactured. Here examples of Pictish brooches are also found, from which this type of brooch may have been copied (Tsigaridas Glørstad 2012; Graham-Campbell 1987). We may suspect a similar origin for the Hallumerhoek find, and thus a Viking origin.

The Kaupang-fragment is considered to have come from a ninth-century brooch, and it thus appears we can date these types of brooches to the ninth century in general. As Tsigaridas Glørstad (2012) has argued, penannular brooches were introduced to Norway from the Insular world in the early ninth century and appear mostly in female graves. Later in the ninth century and particularly in the latter half, local copies of these types of brooches were made, which are mostly found in male graves. So, there was a tradition of making brooches in Western Norway based on Insular examples, as we have also seen in the discussion of the ring-pin. One of these found its way to Kaupang, one to Jutland, and one to Westergo in former Frisia. With a well-established and researched type, but only a few examples – seven in total including Hallumerhoek – this find adds a new spot to the map (Fig. 5.14).

It appears that penannular and related brooches, of which quite a few have been found in Scandinavia, were not without connotations of power. In the Insular context, the brooches can be regarded as related to the elite. They were probably a sign of status, and may have been related to both the secular as well as ecclesiastical elite. References to the brooches in Irish law tracts further imply that different types of penannular brooches were assigned to people of different social (or hierarchical) stature (Tsigaridas Glørstad 2012, 33). This may have been an important factor in the context of cultural contact that has led these brooches to Western Norway, and their subsequent role as examples for copying as well as their transformation. According to Tsigaridas Glørstad (2012, 43) the brooches in their Scandinavian context should be seen as associated with internal political processes
and authority in the period between AD 850 and 950, a period of political centralisation in Norway.

Fig. 5.14. Find-spots of the penannular brooches and fragments of Type I,E.

Object 1.7: Ring-pin
The above-discussed fragment made us question if there are any other penannular brooches or related ring-pins from former Frisia, which could be drawn into the discussion of this object category. This drew our attention to two older finds.

A decorated silver ring-pin is known from the collections of the National Museum of Antiquities (Cat. 1.7; Fig. 5.15). According to the museum inventory, the ring-pin is said to have come from Wijk bij Duurstede, the site of Dorestad. However, the object is not from one of the excavations, but was acquired as a gift through an art trader in Amsterdam, in December 1940 (Inventory RMO), and the provenance in Wijk bij Duurstede cannot be established with certainty. For practical reasons I shall refer to it as the Dorestad-example here.

The ring-pin best fits the Petersen type 215 ring-pin (Fig. 5.17), with the lower part of the ring being a flat, sub-triangular shape that is decorated with interwoven animal motifs. Two animals with gaping heads face each other in profile. On the tip of the ring’s sub-triangular plate, there is another animal snout. In the centre of the triangular plate there is a three-lobbed knot of ribbons, and on the two sides there are small masks facing the gaping animals. On the point of the triangular
shape, the bottom of the plate, there is another slightly bigger mask. All masks have pronounced eyes and snout. Additionally, the animals have pronounced ears. Along the sides of the plate, between the animals and the lower mask, there is a rim of the double-lined ribbon. The back is undecorated, but shows a loop on which the pin can rest and a possible extra loop or thickened patch.

Fig. 5.15 Back of the silver ring-pin RMO f1940/12.2. Photo: author.

Fig. 5.16 Silver ring-pin. Cat. 1.7. Collection RMO f1940/12.2. Photo: National Museum of Antiquities, Leiden.
There are two other ring-pins of Petersen’s type 215 known, both from Norway. One is from Skot, Øvre Eiker in the ‘fylke’, or province, of Buskerud. It is kept in the Kulturhistorisk Museum in Oslo (museumsnummer C21730) and is the object depicted and described by Petersen as type 215 (Petersen 1928, 179-80). The second one was found between Bondestuen and Vårstad, Våga in the ‘fylke’ of Oppland and is currently in the British Museum (registration no. 1891,1021.100). This example is missing part of its pin. For both objects, however, it is stated that they are local, that is Norwegian, products of Viking manufacture. Ring-pins like these are thus Viking and most likely manufactured in Scandinavia, but they are based on or developed from Irish prototypes. According to Petersen (1928, 179-80), ring-pins depicting animal heads with open mouths on usually triangular rings have developed from ring-brooches of an Irish type with triangular ends instead of circular ones. Petersen considers it possible that some of these ring-pins with animal heads were made in the British Isles, but then very much showing influence from Scandinavia and Scandinavians; it is most likely, however, that they were made in Scandinavia, Norway in particular. The style of decoration of this ninth-century pin-type, with animals having pronounced eyes, snouts and in some cases ears, is typical. Stylistically, the penannular brooches of group I, E (to which the Hallumerhoek-fragment belongs) and the ring-pins of Petersen’s type 215 (to which the Dorestad finds belong) are related. They both represent types inspired by Insular objects, and are decorated with gaping animal heads that face each other. According to Petersen (1928, 178-81), both types are seen in relation to the Irish material and to the development of pins and brooches with gaping animal heads, which means that they can be placed in the same tradition.

There are other typologies of ring-pins and related objects from different contexts besides Petersen’s (see for instance Laing 1993, Thunmark-Nylén 1984). For the Birka material, five types (I-V) are distinguished by Thunmark-Nylén, based on decoration and form. A further distinction can be made between ring-pins of

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66 See www.britishmuseum.org under the registration number 1891,1021.100.
silver, bronze and iron, from which only types I and V are found in silver. The ring-pin under discussion here could best be compared to type V: ‘Ringnadeln mit geschlussem, nicht verschiebbarem Ring mit reicher Band- und Tierornamentik’ (Thunmark-Nylén 1984, 9). This type is found in both silver and bronze, and may have been gilded or inlaid with niello. However, it does miss the characteristic of ornament on the top of the pin, which is either attached to the pin or to the ring. What is characteristic is the decoration on the ring, with animal and interwoven patterns, ending in an animal head as seen from above. Sometimes there may be an attachment for an extra ring on the back, vertically placed (Thunmark-Nylén 1984, 9–10). As we can see, our ring-pin of type 215 fits this part of the description.

Fig. 5.18 Find-spots of the Petersen’s type 215 with the example from Dorestad indicated, which possibly represents two examples.

It has been argued or assumed that this object, which is rather untypical object in a Frisian context, was a local Frisian copy or modification of a Scandinavian object. This is based on the argument that the pin could not function in the same way as the penannular brooches, in which the pin goes into the ring to fasten it, and thus must be a misunderstood copy of a ring-brooch (Willemsen 2009, 165). But in fact, as we have seen, it is a standard type of ring-pin, and ring-pins are indeed intended to function differently with the ring resting on the pin, and must thus not be mistaken for a ring-brooch or penannular brooch, from which they do get the inspiration originally. This is fittingly summarised by Thunmark-Nylén (1984, 5):


As such, there is no need to assume the item in question is a copy, it is just a different type of object, functioning differently. However, detailed study of the Dorestad ring-pin in relation to its parallels shows that there are other aspects in the detailing, execution and background of the object that do nonetheless make it probable that it is a copy.

First of all, the Dorestad ring-pin is made of silver, whilst the parallels are of bronze or copper alloy. Naturally, this may be a choice, and we read that some ring-pins of certain types can be of silver as well as bronze. Secondly, the pin on the Dorestad-example is shorter than the parallels’ pins, although for the ring-pin in the British Museum this is an estimation, as it is broken off. The description of ring-pins as a type given above by Thunmakr-Nylén includes the remark that as a rule, the pins are twice as long as the diameter of the ring. This clearly is the case of the whole ring-pin in Oslo, where the diameter of the ring is 45 mm and the pin measures 103 mm in length. The example from Dorestad has a ring of 40 mm in diameter and a 68 mm long pin, which does not fit the standard of ring-pins from the Viking Age. Thirdly, of the three known ring-pins of this type, the Dorestad object is the only one that has a loop attached to the back. Both of the other specimens have a completely flat back without any traces of loop attachment, even though this was listed as a possible feature on Scandinavian ring-pins. Finally, if we look at the detailing and execution of the decoration, we notice many differences, which can be summarised as follows:
- the lines on the Norwegian examples are sharper and the figures more geometrical
- the infill of the figures is with geometrical lines on the Norwegian pins, whereas the Dorestad pin has a smooth surface and much rounder lines
- the decoration is framed by a double line on the Norwegian pins, but a triple line on the Dorestad pin
- on the Norwegian examples, there is some room between the lobes of the central
knot, whilst this is missing on the Dorestad object
- the small faces on the two sides of the knot are not attached to the actual knot on the Norwegian ones, whilst they protrude clearly from the knot on the Dorestad one
- the Norwegian pins have a more pronounced and slimmer snout on the lower end of the sub-triangular plate
- the gaping animals on the Norwegian objects have a distinct tongue and tooth, and the lower neb or lip protrudes from beyond them; the animals on the Dorestad pin have a tooth and tongue almost merging into one
- the shape of the animal heads on the Norwegian pins is very typical of ninth-century Viking decoration with an elongated and protruding snout, a long, narrow eye and an elongated ear, and the eye and ear are both placed outside the lines of the snout; the Dorestad pin has a much rounder animal head which more resembles a sock puppet with round eyes, a round but short and straight snout and a smaller, round ear
- the way the animal heads open up from the ring is round on the Dorestad object, but triangular on the Norwegian ones

As can be seen, there are many differences in detail and execution between the Norwegian and Frisian finds. Naturally, there may be differences between objects of the same type to some extent, as is also the case with the Hallumerhoek fragment, and this can be due to copying, remaking, the skills of the craftsmen or choice. But here it is striking that they differ in what can be seen as specific ninth-century Viking characteristics of design, especially the whole appearance of the beast with the typical features.

What makes the find even more suspicious is the fact that – with all its deviations from the standard type – it has an exact parallel in terms of decoration and size, as well as in the presence of the small loop at the back, in the former J.W. Frederiks collection now in Museum Boymans van Beuningen in Rotterdam (Cat. REL 1.2.6). What is interesting is that Ypey, in his discussion of the example in the collection of Boymans van Beuningen, does refer to Petersen’s example, but only as it appears in his 1955 publication, which contains less information than does his 1928 publication (Ypey 1967, 124-125). According to Ypey, it is an Irish object of an earlier date, mistakenly seen as a Viking ring-pin. He writes this in reference to the publication Wat de aarde bewaarde (Van Heemskerck-Düker and Felix, 1941), in which the ring-pin is depicted as Viking art. But this publication explicitly mentions that it is depicting a silver ring-pin from Dorestad, and therefore must be describing the example from the RMO. There are more grounds for assuming this, which we will turn to below. Ypey believes the object belongs to the late sixth century and refers, for the gaping animal head, to a head type for the Animal Style I as depicted by Salin (1935, 222 fig. 515 b) for this dating, but clearly this is not the same style as on the ring-pin.

67 With many thanks to the museum for kindly granting me access to their collections, and to Nora Leijten for assisting me during my visit. Thanks to Annemarieke Willemse for pointing out these objects in publication, and for discussing the objects, their possible provenance and relation, as well as the possibility of analysing them in the future.
Even more striking is the fact that the silver ring-pin from Dorestad came to the museum together with two other silver objects from the same alleged find location (f1940/12.1 and 12.3) through the same person, and that these two objects have copper-alloy parallels in the former Frederiks collection in Rotterdam (Q18 and Q19).\textsuperscript{68} They concern a Tassilo-style strap-end, of which another example in bone is also known from the Scheldt, next to possibly another silver example,\textsuperscript{69} and a decorated buckle (Ypey 1960–61, 576–7). It is striking that these three objects appear in both these collections, and even more striking is that the silver ones are depicted as a trio in the mentioned book Wat de aarde bewaarde (Van Heemskerck-Düker and Felix, 1941). This publication is from the ‘Volksche Werkgemeenschap’, a cultural-political organisation linked to the Dutch SS and published by ‘Hamer’, a national-socialist publisher who mainly published Dutch SS-related items during the second World War. The title of the book also refers to an exhibition that was curated on the archaeology and history of the Netherlands in the 1940s, which was initiated by the then curator of the National Museum of Antiquities. The appearance of the three objects as a trio in this publication, the fact that the items are gifted and registered to the museum in the same year (1941) and the fact that precisely these three items occur as exact parallels in the Boymans-van Beuningen collection Frederiks, makes the case of these objects including the Dorestad ring-pin even more striking and difficult to grasp.

Altogether these coincidences make us question how the collections and the individual objects relate to each other, and whether all these objects are from the Viking Age, and are perhaps Viking Age copies, as was thought up to now, or if they could also be more modern copies. These questions can only be answered through a separate research project that needs to include metallurgic analysis.\textsuperscript{70} Unfortunately, such a project is not possible in the context of the present PhD thesis. Until metallurgic and comparative research is completed, however, we must be careful about the Dorestad ring-pin and the related finds. Although its parallels are Norwegian examples with prototypes in Ireland, which would, with an already established connection to a wider Viking world and particularly in an internationally oriented place like Dorestad, not be impossible, we must keep in mind the possibilities of it either being a contemporary or a later copy of an original object.

\textsuperscript{68} As is the case for a number of other objects in both collections that are said to have come from Dorestad.
\textsuperscript{69} Haseloff 1951, p. 39 and taf. 15.4. It is listed as a silver strap-end from possibly Dorestad in private possession. According to Ypey this is the one in the RMO, but this cannot be the case as in 1951 it was not in private possession anymore. It appears from the photo that the object is indeed different, as the attachment that is present on the Dorestad object is missing on Haseloff’s. In addition, the object in the RMO is 85 mm long and the one depicted by Haseloff about 62 mm.
\textsuperscript{70} This research project would need to look into the provenance of the objects and include metallurgic research to determine the composition of each object in order to better understand the objects. Ypey, who has examined several of the objects mentioned here and who has never indicated a suspicion of any object being a falsification, does mention that the objects in the Frederiks collection are all referred to as of bronze, but that in fact they may be of a different material, which can only be established through metallurgic analyses: ‘The same goes for this, as for the objects listed as bronze, that the real alloy used cannot be determined from the outlook. They are all copper alloys, that usually do not fit the general composition of bronze. Besides tin they usually contain lead. Other pieces can have a much higher percentage of zinc than tin and should therefore actually be called messing. Without metallurgical analysis no definite outcome can be given.’ (J. Ypey 1967, 120; trans. auth.)
5.2 Case study 2: The Viking silver sphere: hack-silver, weights and related coins

A rather clear characteristic of the Viking world, or the cultural and economic sphere of the Vikings, is the bullion economy, which was dominated by silver (cf. Besteman 2004, 24–6; Hårdh 1996). In contrast to a coin-based economy, the bullion economy, which particularly flourished from the second half of the ninth century onwards, relied on the weight and quality of silver in any form as a means of exchange. This Viking economy was largely fuelled by a stream of Arabic dirhams of rather high silver content, which came from the Caliphate via Eastern Scandinavia into the Viking world. Dirhams are found throughout the Viking world in complete, fragmented and reworked form, mostly turned into jewellery. In addition, other fragmented types of silver characterise this ‘silver sphere’: ingots, artefacts made from ingots, and cut-up coins or jewellery as hack-silver were distributed throughout the Viking world and have ended up in hoards and as single finds. The famous Westerklief hoards contain both hack-silver and ingots, as well as coins, and therefore have been very important in the discussion of bullion economy in the Netherlands. The study of other hoards and finds have had a similar impact, in particular the work of Jan Besteman, who published an overview of the evidence for bullion economy in the Netherlands in 2004, and largely draws on the Westerklief hoards. Since these hoards are so well studied, they will not be a focus of the case study, but will be named as contextual material. This case study, instead, focusses on new or less well-known finds and material evidence for the relation of Frisia to this sphere of exchange, or sphere of silver, of the Vikings. In addition, it connects these finds to new and long-standing insights from other research.

Viking bullion economy in the Netherlands, particularly Frisia

In his 2004 publication, Besteman discusses the evidence for the Viking bullion economy in the Netherlands and its potential for the study of Viking activity, taking the Westerklief hoards as a starting point. Besteman (2004, 21) states: ‘The importance of archaeological finds for the knowledge of Scandinavian–Frisian relations has only recently increased.’ In order to see what evidence there is thirteen years later and how this relates to the earlier discussions, it is necessary to look at the status quo as sketched by Besteman.

The Westerklief hoards are important finds not only because they are the first tangible evidence of Viking presence in Frisia and the Netherlands, but also because they can clearly be connected to information from the historical sources, can be dated quite precisely and can be tied in with the bullion economy and its developments (Besteman 2004, 21–6). The presence of the hoards subsequently led to the question of other evidence of the Viking bullion economy in the Netherlands, notably Frisia. Besteman approaches this question by discussing all the possible find categories: hack-silver, dirhams, silver with test-marks, balances, weights and

71 ‘Het belang van archeologische vondsten voor de kennis van de Scandinavisch-Friese relaties is pas sinds kort sterk toegenomen.’
crucibles. Where it concerns the weights and balances, it is stated that they are – as far as they are dateable – not earlier than eleventh century and therefore not relevant for the study of the Viking period in the Netherlands (Besteman 2004, 27-8). The silver ingot from Warffum, for instance, and two crucibles from Dorestad and Tiel can be used for the study of the Viking Age as the first matches the Viking weight standards (26 g) and the latter are of steatite (Besteman 2004, 28-30). However, the most certain category of finds that relate to the Viking metal-weight economy are the Arabic coins: the dirhams. Apart from two or three, they all are from the Near East and came to Frisia via Scandinavia (Besteman 2004, 30-3). Important is the observation that the dirhams are spread over the coastal provinces, i.e. former Frisia, and, apart from two finds from Dorestad, do not seem to relate to the trading centres and the long-distance trading network in terms of the find-spots, but are more scattered. According to Besteman (2004, 33), there are two possible explanations for this: the trading centres and long distance trade played no role whatsoever in the distribution of dirhams, or they reflect a later stage of trading where trade had decentralised to Walcheren and the northern coastal area (i.e. Central Frisia).

With all this in mind, below we will consider some more recent and rediscovered finds which can be related to the sphere of the Viking bullion economy, to see if we can say something about the extent to which Frisia can be shown to interconnect with this Viking silver sphere.

5.2.1 Hack-silver

Object 2.1: A Hiberno-Scandinavian piece of hack-silver

In 2015, a hacked-up silver strip (Cat. 2.1; Fig. 5.19 and 5.20) was discovered on the isle of Texel, 1.6 km south-west of Den Burg near Driehuizen, by a metal detectorist (IJssennagger 2015a and 2015b). It was bent and when the detectorist picked it up, the narrow tip broke off. The silver strip is tapered, and on the broadest and thickest end, it measures 13 mm in width by 2.5 mm in thickness. At the narrowest end it is 5 mm wide and 1 mm thick. If the bent strip was rolled out, its total length would be 103 mm (86 mm plus the 17 mm of the broken-off fragment). The quality of the silver is uncertain, but it is clearly silver. One can see that on the broader end the fragment is cut off and, additionally, there are small test marks on the rim of the fragment. Taken together, the facts indicate that this item is a piece of hack-silver (IJssennagger 2015a, 128-9). It can be dated to the late ninth or early tenth century.

The hack-silver originated in a Hiberno-Scandinavian broad-band arm-ring, as is clearly recognisable from its size, shape, weight and decoration. First, we can consider the size and weight. It is half of an arm-ring, which would have been penannular, as can be seen from where it is cut off and from its weight. The frag-

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72 With many thanks to the late Jan Jaap Waverijn for reporting his find and allowing me to study it. The find and its analysis was initially published in 2015 as ‘A Viking Find from the Isle of Texel (Netherlands) and its Implications’, Viking and Medieval Scandinavia, vol. 11, 127-42 (2015a) and a shorter version of the story also as 2015, ‘Een bijzondere Vikingvondst van Texel’, Paleo-aktueel, vol. 26, 81-87 (2015b). The drawing made for Paleoaktueel is published with permission.
ment weighs 13 grams, whilst standard arm-rings weigh about 26.15 grams. This is related to the process of manufacture of these arm-rings, which are typically made from a hammered-out silver ingot with a standardised weight of about 26 grams. By hammering out the ingots, the arm-rings automatically get a tapered form and rounded terminals (Graham-Campbell 2011a, 141; Sheehan 2011, 94; IJssennagger 2015a, 129). After the strip is formed from the ingot, it is decorated with a stamped pattern and subsequently bent into shape. The fragment from Texel is decorated with a stamped pattern of bar-shapes with pellets in relief on the outside (Graham-Campbell 2011a, 142; IJssennagger 2015a, 129). On the expanded centre, there is a cross-shape made by crossing the bar-stamps. This type of decoration is a typical feature of the Hiberno-Scandinavian arm-rings (Sheehan 2011, 94-5; Graham-Campbell 1976, 51). The decoration on our fragment has close parallels on arm-rings in Ireland, Britain and Scandinavia. It has been argued that the cross-shape, of which there can be up to three on the arm-rings, may in some way be related to a standardised weight, but this remains uncertain (Kilger 2007, 286). Generally, the Hiberno-Scandinavian broad-band arm-rings are dated to c. 850–950, but the majority must have been produced between 880 and 930, according to Sheehan (2011, 100; IJssennagger 2015a, 130).

Having established that it consists of half a Hiberno-Scandinavian broad-band arm-ring, we can state that it is not only the first find of this type in Frisia, but also the first outside of Scandinavia and the British Isles (IJssennagger 2015a, 128). As such, it is an important and remarkable find. It points out the geographical

Fig. 5.19 The Texel silver fragment (Cat. 2.1). Photo: Albert Allersma, Fries Museum.
relevance of Frisia in the Viking Age, and it can help us study the relations between Frisia and the wider Viking world, as well as Frisia’s relation to the Viking sphere of silver.

Hiberno-Scandinavian arm-rings are related to the Viking sphere in Ireland, and to an Irish-Scandinavian background. As has been argued by Sheehan (2011, 98), the prototypes of the arm-ring are from southern Scandinavia, but the Hiberno-Scandinavian arm-rings proper were probably made in Ireland or the Irish Sea region from the ninth century, where they developed based on the inspiration from south Scandinavia (Sheehan, 98–100; 2001, 51). It has been suggested that the transfer of prototypes to Ireland could be connected to the movement of the Great Heathen Army, which was active in England between 865 and 878 and had one Irish Viking leader: King Ívarr of Dublin (Downham 2008, 64–5). A provenance in the Irish Sea region is also postulated for the find from Texel (IJssennagger 2015a,130).

In terms of distribution, the Frisian find is, as we have said, remarkable. Finds are known from Scandinavia, especially coastal Norway, Denmark and one in Uppåkra in Sweden, and from the British Isles. Here, they are concentrated in Ireland and in mid-west England, that is, around the Irish Sea. In Ireland and England together, more than 350 finds are known, both in hoards and as single finds, both complete and fragmented (Sheehan 2011, 94; 2000; 1998). Quite a number of them are from one single hoard, the Cuerdale hoard (c. 905) (Graham-Campbell 2011a, 93–4).

Despite its being a single, metal-detected find, we can give some context to this find (for a historical context see IJssennagger 2015a and Chapters 2 and 4). Approximately 52 metres from the arm-ring fragment, the same metal detectorist had found a fragmented dirham some years earlier (Cat. REL 2.1.1) (IJssennagger 2015a, 131). It was an Abbasid silver dirham minted during the caliphate of Harun al Mansur (136–38 AH / AD 754–74). This dirham, which was fragmented, bent and also displaying test marks, can also be seen as hack-silver. As the two objects were found on either side of a road which was constructed in the ‘60s or ‘70s and runs between two recently ploughed fields, it seems plausible that they could have belonged to an assemblage (IJssennagger 2015a, 131; 2105b, 83–4).
Texel, which was known as the *pagus Texla* in the ninth century, is just across the water from Wieringen, the *pagus* known as *Wiron*, where of course the three famous hoards from Westerkliif have been found, which include hack-silver, dirhams and ingots (Woltering 2000: 341; IJssennagger 2015a; 2015b) that provide some context (Besteman, 2001). These hoards are thought to have been buried on the former island by Danish Vikings who temporarily dwelled there in the time that Wieringen was one of the Danish loan areas (Besteman 2006/07, 68–9; 2004, 21–5). Something similar can perhaps be postulated for the finds on Texel, although they most likely date from after the time of fiefdom.

Other finds that can provide some context to this item are not as close geographically. Although it cannot be classified as hack-silver, an arm-ring found in
Callantsoog – or retrieved from the sea off the coast near Huisduinen – in North Holland certainly could be turned into hack-silver and potentially was even meant to be. The find is a large silver arm-ring with five smaller rings attached to it, which could be hacked off to use for transactions (Besteman 2006/7, 72-4; Willemsen 2004). Callantsoog or the former island of Huisduinen is also the find location of an Omayyad dirham (NUMISno. 1006428) minted under Abd al-Rahman II (207-39 AH/832-53 AD) which is dated to AD 832-3 and was minted in Al-Andalus (Cordoba), and two Anglo-Saxon pennies (Aethelred 1, 865-71 and Ceolnoth, 833-70; NUMISnrs. 1006434 and 1006433). Like the arm-ring, they were retrieved from the sea off the coast here and could possibly represent a hoard (Besteman 2004, 36). Interestingly, there is also a Scandinavian copy of an Edward the Confessor coin, which is dated to 1050-53 (NUMISnr. 1006429) and was found at the same time as the arm-ring and dirham. In addition, as was mentioned above, a Viking silver ingot is known from Warffum, Groningen. The standard weight of 26 grams, which also was the standard for the broad-band arm-rings, and the test marks both indicate that this particular ingot was circulating within the Viking silver sphere (Besteman 2004, 28; Knol 1999; IJssennagger 2015a, 135).

5.2.2 Weights

Objects 2.2 and 2.3: Viking weights from a Frisian field

One of the most prominent types of Viking Age weights is the so-called cubo-octahedral weight that is related to the bullion economy of the Viking world. This small copper-alloy object, cubical in form, with faceted corners, is one of the two most standardised types of weights for this period and was important in the northern metal-weight economy. Whilst they are frequently found in Scandinavia, the Danelaw, the Baltic area and Russia between the tenth and eleventh centuries, the finds outside this area, including along the Frisian coast of the Netherlands, traditionally are dated to the eleventh to thirteenth centuries (Besteman 2004, 27-38, Steuer 1997). Therefore, it has been stated that these weights may not be used in the study of the Viking Age economic sphere. However, their suggested dating may prove difficult in some cases, as they are metal-detected single finds with no context, which rely solely on the dating of parallels. A recent find of a cubo-octahedral weight next to another, clearly Viking Age weight in a field in Frisia provides the opportunity to re-evaluate the corpus of cubo-octahedral weights and their dating in this region.

Viking Age weights and the metal-weight economy

The bullion or metal-weight economy is dependent on the weight and quality of the exchanged metal, not on the form. In order to determine the weight of primarily hack-silver, weights and balances were necessary. Although the precise weight system underlying the exchange in the Viking Age is not entirely clear, partly because of the lack of sources and corrosion of finds, some observations and calculations have been made (Kruse 1988, 286-7).

From the eighth century onwards, the use of lead weights of all shapes and
sizes becomes increasingly common in the regions around the North Sea (Steuer 1984, 275; 1987, 460; Veenstra 2009, 85). In Kaupang, for instance, the Viking lead weights first appear in the second quarter of the ninth century, simultaneously with the first occurrence of hack-silver as currency here (Pedersen 2007, 119). It seems the lead weights may have been used in a range of different systems, as well as in relation to metal-casting, and in contrast to the bronze cubo-octahedral weights, the lead weights do not seem to be standardised and uniform (Steuer 1987, 460-1; Pedersen 2007, 136; 166).

In the ninth century, an increasing dominance of the copper-alloy weights like the cubo-octahedral ones is assumed. This is connected to the rise of the bullion economy in the north of Europe and the import of the dirhams. The cubo-octahedral weights, in particular, are thought to be related to the weight of dirhams (Pedersen 2007, 119). Like the dirhams, most of the weight types – certainly the cubo-octahedral ones – and the folding balances are thought to have been introduced from the Islamic world (Pedersen 2007, 121; Besteman 2005, 27; Steuer 1987, 459-60). It is after and through their introduction and incorporation in the Scandinavian area, that they are spread to other areas touched by the Viking economic sphere.

Recovered weights are particularly clustered in trading sites like Kaupang, Birka, Haithabu or Hedeby, Dublin (Pedersen 2007, 133) and from the Torksey winter-camp site in England, as well as many single, metal-detected finds throughout the Viking sphere of influence. Although they are sometimes found in graves, most of them are settlement finds or single finds. Overall, find-locations of the cubo-octahedral weights – which are most deterministic of the Viking metal-weight economy – range from Ireland in the west to Russia in the east. Strikingly, on the distribution maps the southern North Sea coast is a blank spot, even though weights have been found. According to Besteman and based on the work of Steuer (2005, 27-8 and note 21), as far as they can be dated, the weights of cubo-octahedral and related types, as well as the folding balances, do not go back further than the eleventh century in the Netherlands. Unfortunately, it is not recorded how many of these finds are known. The mentioned types became commonly used in Central Europe in the eleventh century and stayed in use into the thirteenth. Based on both these observations, it is stated that the cubo-octahedral weights, related weights and folding balances cannot be used for the study of the Viking period in the Netherlands. Even if we take this scenario to be true, it does not mean that no finds can be dated to the Viking Age, and on the basis of the finds and further evidence presented here we can sketch a very different scenario, as will be done below.

The ‘Frisian’ finds
In a Frisian field in the small village of Dongjum (just north of Franeker, province Friesland) where formerly a terp had been, metal detectorist Ido Boonstra came

73 Although Besteman (2004) lists 6 different folding balances from various sites in the Netherlands (of which only 3 in former Frisia, and only West Frisia). Recently, I have seen a picture of a proper Viking Age folding balance, shown to me by a metal detectorist; this example, too, was from West-Frisia.

74 ‘IJsbaanterp’ or Dongjum-Heringa (5G-60-61). Thanks to Ido Boonstra for allowing me to study his finds and for providing me with this information. See for the terp-cluster, locations and history of research De Langen et al. 1997.
Fig. 5.22 The Viking weights from Dongjum (Cat. 2.2 and 2.3). Photo: author.

The first weight (Cat. 2.2; Fig. 5.22) is a copper-alloy cube of about 9 mm by 8 mm, weighing about 4.5 grams. It is well preserved and displays six punched dots on each of the six main sides, in two rows of three, while each of the eight facetted sides bears a single dot. The six punched dots are placed in a beaded border, which goes around the four sides, as well as between the two rows of three punch-dots. There is no beaded border on the triangular, facetted sides. Cubo-octahedral weights come in different weights and with some variety in the number of punched dots. There are examples with one, two, three, four or six punched dots on the main sides, and it is believed that the number of dots may refer to the standardised weight, where 0.75 g is the weight per dot (Geake 2010, 395; Pedersen 2007, 148-55; with the remark that the degree of preservation may cause deviation). This is a regulation and an observed pattern, but not at all a strict rule as the Kaupang finds show (here four weights with six dots were 3.5 g but these were sometimes lacking the single dot on the facetted sides; Pedersen 2007, 149-50) and may vary in different regions as well. Such a rule would indeed fit well for the one from Dongjum, which is 6 x 0.75 g = 4.5 g in weight. According to Steuer's analysis (1987, 466-71), weights typically range up to about 4.266 grams in the ninth and tenth centuries, with heavier weights being deemed later and mostly occurring in the Baltic Sea region. However, since Steuer's research many new weights have been found and they have altered the distribution pattern, as shown by Kershaw and Helen Geake (2010) for the British Isles in particular due to the Portable Antiquities Scheme (PAS). We will return to this later, but it suffices here to say that in England cubo-

75 http://vikingmetalwork.blogspot.nl/2013/07/standardised-viking-weights-part-2-cubo.html
octahedral weights with a slightly higher weight (than 4.26 g) have been found as well (Geake 2010, 394–5). In addition, if indeed the 0.75 g per dot is suspected as weight unit, then the ones with six punch-dots must be 4.5 g nonetheless. It appears that the weight in Frisia is more related to the English weights than to the Haithabu and Kaupang examples (cf. Geake 2010 and Pedersen).

The second weight (Cat. 2.3; Fig. 5.22) is a cylindrical disc of lead with a presumably bronze or copper-alloy core and a piece of decorated metalwork imbedded on the top. It is 25 mm in diameter. The inlaid metalwork is not entirely circular, as it is roughly cut, and only covers about half of the actual weight surface. Around this metalwork, the rim is decorated with dots in relief and on one side there is a depression in the rim. The piece of metalwork is decorated with a spiral motif ending in three strands which cross the spiral and are extended in the middle, all in relief. Based on the photograph presented here, John Sheehan and Griffin Murray at UCC have suggested it is a zoomorphic motif that represents a running spiral ornament with an animal’s back legs and tail. This type of weight too is well known as a Viking Age type, which is often decorated with either Insular metalwork or a coin, although no exact parallel for our weight has so far been seen. Lead weights with the incorporated (Insular) metalwork are predominantly dated to the ninth and tenth centuries (Pedersen 2007, 131), whilst the particular decorated metalwork used as inlay has mid-eight/ninth-century parallels in terms of the motif. This concerns the motif on a sprinkler from Vinjum (deposited c. 850) and a bucket from Birka (Graham-Campbell 1980, 85, 91; Bakka 1984, 233–5), which both are also compared to a bucket from Hoppestad and Skei in terms of decoration (Sørheim 2011, 37). The most important difference, however, between these objects and the metalwork in the weight is that they are engraved or incised, whilst the metalwork-piece in our weight is decorated in relief, smaller and probably cast. Nonetheless, it may provide us with an idea of the type of decoration, in various degrees of stylisation, in the form of spiral and zoomorphic motifs, some of which are classified as ‘scroll and trumpet’ motifs. (cf. Baastrup 2012, 22, and cat.no. 268 dated ninth century). According to Graham-Campbell (1980, 91) it is usually referred to as the ‘inhabited-vine’ motif from Insular art, and he as well as others consider it most likely that within the area of Insular art, it would probably originate in Northumbria. This is the case for the incised decorations, however, and the question remains whether our metalwork-fragment would belong more to this sub-style, the Pictish style as it is known from stone monuments in relief, or the ninth-century plant ornaments from Ireland, although this may be less easy to demonstrate (Bakka 1984). So the Birka bucket is from Sweden, but the other finds with which the decoration compares are from graves in Norway, particularly ninth-century female graves, and all from vessels (i.e. buckets or a sprinkler) (Bakka 1984, 234; Sørheim 2011). The parallels in motif help to date the decorative fragment in the weight to

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76 Personal communication 21/12/2016. With many thanks to Dr. John Sheehan and Dr. Griffin Murray for their expertise and for taking the time to assist with the identification of the metalwork.

77 Personal communication J. Sheehan and G. Murray 21/12/2016; for which they are kindly thanked.
the eighth or ninth century, creating a *terminus post quem* and an indication of dating for the weight itself.

For the lead weights, it is suggested that the number of dots is in some way related to their weight, just as for the copper-alloy weights. For Kaupang, a unit of one dot equalling 4 g has been postulated (Pedersen 2007, 152). Unfortunately, the surface of the lead weight from Dongjum is somewhat corroded and it is not possible to establish the exact number of dots. It is, however, clear that there must have been more than ten, and if one were to extrapolate from the visible dots then one would expect there to be about 16 dots. Related to the postulated unit of 4 g, this would mean the weight is about 64 g, and the current weight of between 62 and 65.25 grams would, in fact, fit quite well. Nevertheless, there are also weights that seem to be multiples of different units and possibly individual units, ranging from 1.48 to 10.70 g according to Pedersen (2008, 153). She suggests that the type of punchmark – hollow punch, a closed punch or a double circle – may be referring to the system of weight units for which the weight is used, as varying systems have existed simultaneously and through time (Pedersen 2007, 152-5). Also, it has been suggested that the type of appliqué, such as silver or a specific coin to name just two, referred to the type of material the weight could be used against, apart from having a decorative function (Pedersen 2007, 168-9). The find from Dongjum has both punchmarks and an inlay, and this is also the case on one of the cylindrical lead weights from Kaupang, which unfortunately is in poor condition (Pedersen 2007, 170). It is often suggested that the weights decorated with Insular metalwork, which are found along the western coast of Norway and in Insular contexts, were manufactured within Scandinavian contexts in the Insular world. At least this is true for the metalwork itself, and it is most often reworked into weight-appliqués.

**Related finds**

Interesting in relation to the two weights is the fact that a folding balance (Cat. REL 2.2/3.1) and a fragmented dirham (Cat. REL 2.2/3.2) were found at Dongjum as well. Both finds have been dated to the late ninth century, although this is debatable for the balance, and possibly were deposited in the late ninth or tenth century. Both are related to the sphere of the Viking metal-weight economy and as such, they provide on-site context for the weights.

The small, fragmented piece of an Abbasid dirham from the ninth century was found, strikingly, on the same former terp-site as where the weights were found. It was found in 1998 during excavations at the terp-remnants as part of the ‘Frisia-project’, and most recently studied in a synthesis on the Dongjum-excavation in a master’s thesis (Azier 2010). According NUMIS, the coin is officially dated between 821 and 892. Because of the high degree of fragmentation it is partly unreadable, and therefore other sources have slightly varying dates. However, having been found

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78 See Bazelmans et al. 1999

79 For instance, Azier dates the dirham to Harun al-Rashid 786-809, whilst the NAD says post-Harun al-Rashid like the NUMIS database. I will follow the determination in NUMIS.
in the context of the excavations, it is at least safe to say that it belonged to the Carolingian layer of material and, on the basis of the fragment, that it belonged to the (late) ninth century. Because the dirham is deliberately fragmented, it can be classified as hack-silver. Both hack-silver and the occurrence of Arabic silver coins in general are related to the Viking economic sphere of exchange based on the weight of metal as mentioned above.

The folding balance is a copper-alloy one, with decorated arms. A wire is attached and knotted to the short tongue. The balance, of 170 mm in length, was acquired by the NAD from the private collection of Jan Zijlstra. Unfortunately, it is not known where exactly in Dongjum it was found, making it difficult to relate it to the other finds discussed here. As mentioned by Veenstra in an article on balances from the Province of Friesland, this particular example seems very well preserved (Veenstra 2009, 88). Zijlstra indicates that he cleaned and conserved the find, making it difficult to say anything of the original state of the object.80

Folding balances are a phenomenon that first occurred in the late ninth century and that are related to the metal-weight economies of northern and eastern Europe (Steuer 1984, 275; 1987, 459-60). On the basis of some characteristics, like the short and wide tongue, Veenstra (2008, 86-89) dates the Dongjum balance to 850-900 and places the occurrence of this balance in the context of northern- and eastern-European trade based on silver. If one considers that the folding balances only appeared in the north somewhere in the decades before 890, this seems a very early dating, and one that we may need to reconsider. The earliest folding balances have a length of about 11 cm (Steuer Typ 3), which by the tenth century has become 18 cm (Steuer Typ 2) (Steuer 1987, 462-3; 1984, 276-8), although arms of 18 cm are known from the ninth century as well. Subsequently, in the eleventh and later centuries, the arm-length becomes even longer. Taking this postulated chronology into consideration, we may hypothesise that the balance is possibly early tenth century. According to specialist R. Holtman, however, the folding balance is a Steuer Typ 7, which is dated between 1000 and 1300. As to the exact type of balance, it appears different from the ones listed by Steuer in terms of decoration, so it is difficult to ascertain. It can be stated that in terms of decoration and form, the balance is clearly deviant from other folding balances from Scandinavia and from the other finds known from former Frisia. Two other folding balances that do indeed stem from the mid-eleventh to thirteenth centuries were found in the province of North Holland,81 indicating that across the Vlie there are comparable finds that could provide context. In all cases, the balances have a rather wide dating, making it hard to pinpoint the exact date and context. In addition, a typical and clearly tenth-century (Steuer Typ 3.1) folding balance fragment in bronze was found in the 2010 excavations in Domburg (Daleman and Koopstra 2011, 127), as will be discussed further below.

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80 Personal comment 26/09/2016. With many thanks to Jan Zijlstra for sharing this information.
81 Personal communication 12/2016, for which R. Holtman is kindly thanked.
82 Personal communication with L. Witbraad, J. Koning and R. Holtman, 12/2016, for which they have my gratitude.
Whilst the dirham is ninth century in production date, it is likely to have been deposited slightly later. Being an Arabic silver coin, the coin had, after production and possibly circulation, to travel via Scandinavia to Frisia. This journey may have taken a number of decades, although it need not have as the travelling time in other contexts has been proven to be about six to seven years (Deckers et al. in prep.). So for the dirham fragment too, a deposition date in the late ninth to the tenth century is quite possible.

Metal-detecting at the excavation sites in Dongjum has revealed some more portable metal objects that are of interest to us. In general, there is a vast amount of ninth- and tenth-century material, including a considerable number of Continental disc brooches. Moreover, there are two crucifixes dated to the ninth or tenth century which will be discussed a bit more below as a category of material (3.3.1 and Cat. 3.5). As they were identified in Haithabu and published by Capelle (1968, 88; Taf. 30), they are referred to as a ‘Haithabu type’ in the Dutch material (De Langen and Hommes 1998, 97), possibly following Zijlstra (1995). The same metal-detecting campaign that yielded these finds also yielded a piece of hack-silver (Cat. REL 2.2/3.3) and a Late Saxon or Anglo-Scandinavian stirrup-strap mount (Cat. REL 2.2/3.4; Fig. 5.26). The hack-silver is a silver thread, which is bent and tapered, ending in a loop. Originally, it was identified as possibly eighth or ninth century, but with questions remaining, and the function could not be determined. Moreover, the description indicated that there are marks on it that could look like stylised faces (De Langen and Hommes 1998, 107). There are indeed markings on the silver, but it is hard to discern faces in them. The initial function remains unclear, although it was clearly turned into hack-silver by being chopped off. As the fragment resembles the ends of silver arm-rings, it could possibly be identified as originating in a silver arm-ring from the ninth century. The horse harness mount should be dated to the eleventh century, and represents a Late Saxon or Anglo-Scandinavian type as classified by Williams (1997; 2007). It belongs to the Class B, Type 2 group of mounts (Williams 1997, 89-91) and seems to have a good parallel in an English find from Suffolk, reported by the PAS (SF-17BFCC). This Anglo-Scandinavian horse harness material as a find category will, like the crucifixes, also be further explored below.

The excavations of the Dongjum terp-remnants in 1998 and the subsequent analysis of the material have provided a history of habitation of this particular site, which we can use to contextualise our finds. It appears that habitation starts in the early Roman period, with the building of a dyke and a house platform. After a period of heavily decreasing population and use of the terp as field, the site is inhabited again after the fifth century. According to both Azier (2010, 104) and Bazelmans et al. (1999, 26-7), the terp is probably abandoned in the eleventh century, but the twelfth century at the latest. This means that it is most likely that the finds from this site date prior to the eleventh century, or 1100 in any case. Putting this together, the contextual evidence from the find location allows us to sketch

83 The much-discussed habitation hiatus cannot be proved here, but abandonment of the site for habitation does seem likely according to Azier (2010, 99).
the scenario that the two weights we started with were deposited on the terp in Dongjum during the late ninth, the tenth or, at the latest, the eleventh century.

**Objects 2.4-2.6: Cubo-octahedral weights from Frisia and their parallels**

The NAD has another cubo-octahedral copper-alloy weight in its collections (Cat. 2.4). It is dated between the ninth and eleventh centuries and is slightly worn. There are three punched dots on each of the main surfaces, which correspond with the weight of almost 2.3 g Although recorded under the name cubo-octahedral weight of copper alloy, the accompanying description mentions that it was originally considered a weight, but perhaps should be seen as the head of a pin. Indeed, we do see cubo-octahedral pinheads throughout Frisia in this period, and this does not make the identification of the weights easier. However, where the cubic objects are former pinheads, we can usually see traces of attachment to the pin and we would not expect the punched dots to cover the entire cube and relate so neatly to the standardised weights. This particular find, which is from an unknown find-spot in the province of Friesland, has no such traces, punch-dots on each side and does fit with the standardised weights. Therefore, there is no doubt that this is indeed a cubo-octahedral weight.

Two similar weights have recently been identified in the collections of the Zeeuws Genootschap in Zeeland, former Frisia (Deckers et al. forthcoming). One (Cat. 2.4) was found on Schouwen and the other (Cat. 2.6) was found in Domburg-Oostkappele, the site of the trading town of Walichrum (Fig. 5.23). The first one has four dots in a stamped, beaded border on the main sides and none on the facetted sides, and weighs 3.23 grams. It measures 78 mm. The second one is 8.15 mm, bears six dots in a beaded rim on the main sides and a single one on the facetted sides, apart from one which is empty. It weighs 3.28 grams. Besides these weights,

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84 With many thanks to Pieterjan Deckers and Aagje Feldbrugge for informing me of these finds.
which are from old collections, Deckers, Feldbrugge and Christiansen (in prep.) have found further evidence of a bullion economy for Domburg, which includes two dirhams (NUMISnr.1008707 and 1008681), a dirham in fitting (NUMISnr 1008709) and various pieces of hack-silver (Deckers et al. in prep).

The folding balance from Domburg that was found during the excavations in 2010 can probably be added to this list. The balance in question, which is missing one arm, fits Steuer’s type 3.1. It is dated to the tenth century. The balance arm is 45 mm long and part of it, as well as the centre piece, is facetted and decorated (Daleman and Koopstra 2011, 126).

One further find of a well-preserved cubo-octahedral weight has been spotted on a detectorists forum, and the owner has provided the find location as Gorinchem/Arkel, located in the river slightly south-west of Tiel, which was a trading site in the late Viking Age. Although this find is not studied, it does remind us that there may be more metal-detected finds of this type that have not been recognised or are not published.

This increase of finds and the recognition of finds in areas where the cubo-octahedral type of the Viking Age had not been identified before, has also occurred in England, as mentioned above. As indicated by Geake (2010, 393), in 2009 the PAS had recorded no less than 54 cubo-octahedral weights from the Viking Age, most in copper alloy but some in lead. The largest group is of about 20 from the Viking

Fig. 5.24 Distribution map of the cubo-octahedral weights (up to 2013 based on Kershaw) with the Frisian finds studied here added. The larger dots represent multiple examples.

85 With thanks to Simon Coupland for acquiring these details.
winter-camp site at Torksey. To compare, Kaupang had a series of 28 weights (see Pedersen 2007). As the standardisation of the weights in the Viking Age here too seems to be confined to a multiple of 0.75 g, the finds along the former Frisian coast should be included in this North Sea context of the Viking Age. This is particularly visible on the distribution map of the cubo-octahedral weights (Fig. 5.24). The most recent map, drawn by Jane Kershaw, includes finds up to 2013 and was used as the basis here.46 To these, the Frisian finds discussed here have been added.47 As can be seen, these change the outlook of the distribution map quite strongly, by filling in part of a blank spot. Moreover, this map shows the context for the finds in Frisia: the North Sea Viking sphere.

**General remarks and recent insights on the Viking silver sphere**

Within the Netherlands, the distribution of Arabic coins is restricted to the modern provinces of North Holland, Friesland, Groningen and Drenthe in the north, and Zeeland in the south-west, aside from two dirhams from Dorestad in the province of Utrecht. These coins can be dated up to the end of the ninth century (Besteman 2004, 30–4; 2006/07, 72–4). This has been noted and discussed by, most prominently, Besteman and Coupland. Since Besteman’s latest published overview in 2007, quite a number of dirhams have been added to the list, but they have not changed the overall distribution pattern. The dirhams from the Viking Age can be divided into several groups: those in hoards versus those in single finds, complete coins versus fragmented examples, and then those reworked into jewellery. Naturally, other dirhams would have been recognised as a high-quality source of silver and thus melted and re-used in objects, consequently disappearing from the radar and radar image.

On 1 December 2016, NUMIS, the national database for coin finds, indexed 131 individual dirhams – whether fragmented, complete or reworked into jewellery – which were either found as single finds or in a hoard. An additional handful of dirhams from old museum collections or metal detectorists can be added, most of which are from the Viking Age. The majority of the Viking Age dirhams that can be identified were minted under the Abbasid caliphate and are dated between the very end of the eighth to the late ninth century. The group of dirhams from the Umayyad caliphate are mostly dated to the eighth century.

As noted by Simon Coupland and Jan Besteman, amongst others, the imitation gold solidi of Louis the Pious and Lothar I were very popular in Frisia, as well as along coasts from the Loire to the Oslofjord, and are thought to have probably been minted in Frisia (Besteman 2004, 34-5). It was already suggested that this could have been under the influence of Vikings, by Vikings or by Frisians. It appears that at least within the Frankish realm, Frisians had a different relation to Frankish coinage and other economic systems, which is why we see so many imitations and

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46 With many thanks to Jane Kershaw for generously sharing the map and the map-data with me, in order to add the Frisian finds to them. The map does not include the Torksey finds.

47 The map does not include the river area find since it has not been studied, but it must be noted that this find and presumably more finds of this type can be added soon after the instalment of the PAN.
also mixed silver hoards, and possibly why we see the acceptance of hack-silver (Coupland 2006, Besteman 2004, 35; Knol 2005; 2010). Recent research by Coupland (2016) has led him to suggest that the imitation Frankish coins, which he earlier believed to be Frisian imitations, were indeed minted by Vikings. This is based not only on the fact that the imitations are mostly found within the Viking-influenced areas of Frisia on the Continent, but also in Viking areas across the sea. Particularly notable is a trial piece amongst the material of the winter camp at Torksey, which was clearly struck by Vikings. As such, the distribution map largely coincides with the one for the other find categories discussed in this chapter. Therefore, it appears as a very clear case of Frisian-Viking connectivity and more evidence of the degree to which the Frisian and Viking worlds were interwoven when it comes to the sphere of silver use. Coin hoards and mixed hoards, which are neither Scandinavian nor typically Continental in composition, also confirm to this image and have been convincingly shown to relate to periods of Viking activity (Coupland, 2006).

Thus in the Viking Age, as Besteman has argued (2004), there was an interesting situation in Frisia which can be seen as a form of dual economy. On the one hand, Frisia took part in the coin economy of the Continent – basically the Carolingian coin economy that had replaced the sceatta-economy. On the other hand, Frisia took part in the bullion economy of the northern or Viking world, whether this occurred through the Vikings who were present in Frisia or Frisians themselves. Neither currency was exclusive here. However, we need to stress that the traces of bullion practice are mostly from the ninth and tenth centuries, and the dirhams most likely from the ninth century, whilst the Carolingian coinage dates up to the ninth century and does not continue into the tenth. Nevertheless, it is clear that the practice of the bullion economy already reached the Frisian coastal area in one way or another in the third quarter of the ninth century (Besteman 2004, 25). The continuing link with the North Sea sphere in terms of dealing with silver, however, has also been used as an explanation for the continued use of a weighing standard of 1.3 grams (like a tremissis or a sceatta), even after the acceptance of new Carolingian standards following reforms by Charlemagne (Besteman 2004, 34-5; Henstra 2000, 45-79). The bullion continuing link with the North Sea silver sphere has also been connected to the importance of ongoing North Sea trade. Recently, Kershaw (2017) has highlighted the dual-currency economy of the Danelaw on the basis of new metal-detected finds and discussed the dual-currency economy as a feature of the Viking diaspora. Notably, the characteristics of the Danelaw situation are very similar to those of Frisia, albeit on a much smaller scale here, including the dates and types of dirhams as well as the same range of object types. As stated by Kershaw (2017, 177), ‘Bullion assemblages from Viking-period contexts within Scandinavia comprise four main elements: ingots, ornaments, foreign coins (notably dirhams) and standardised weights. All of these are prominent as single finds from the Danelaw’. Although they are not found in large numbers in Frisia – nor often as assemblages, so we cannot deduce an actual dual-currency economy from it – we can safely state that these four categories are definitely increasingly present as single
finds and sometimes as possible assemblages. The relatively new finds and re-discovered old finds discussed here confirm the picture that is sketched by Kershaw and by Besteman. As with the other material, we can only expect that it will be further enhanced in the future through metal detecting and registration schemes, and that it will add new insights into Viking Age Frisia by being closely studied as a group. Numismatics and new finds of coins seem to be able to add to the general picture in their own right. A case in point is the recent find from Jonkersvaart, which adds another set of (imitation) coin-based jewellery to the map of Central Frisia (Groenendijk and Van Den Bosch 2015), and other coin brooches that are less well published but appear to build on this tradition of coin-jewels using imitation coins of Louis the Pious. The evidence makes it abundantly clear that Frisia and the Viking world, the Danelaw in particular, share a silver sphere and transactional practices. This very much reinforces Coupland’s ideas about the minting of pseudo-coinage in Frisia within a Viking framework, whether indeed by Scandinavians or by Frisians who belonged to the same sphere.

5.3 Case study 3: Other and Future Finds
Besides the two case studies presented above, other new finds and insights can be discussed. Simultaneously, we must also consider the possibility of future finds. This will be discussed on the basis of two broad categories of finds: for jewellery, they are the finger rings and crucifix-pendants, and for dress accessories and related gear such as horse harnesses, mounts and buckles. These categories have in the last few years grown in number and yielded new interpretations through recent research into them, indicating that these categories are also the categories that promise most with regard to new finds and insights for the near future. As this is only an initial signalling and discussion of these types, they are not plotted on distribution maps, and only some exemplary items are taken up in the catalogue where possible, when enough details are available. The objects that are well published, such as the ones from the 2010 Domburg excavations, will not be taken up in the catalogue.

5.3.1 Rings and pendants
Finger rings
A ‘Viking finger ring’ in gold and with stamped decoration was among the antiquarian collections of Dorestad, but otherwise, the Viking ring was a rather obscure category of finds earlier. In recent years, however, many have been reported by metal detectorists. Not all have been studied and most are only known from photos and descriptions, but the general fact that the finger rings are being uncovered more and recognised better is worth discussing.

In 2009, a golden finger ring made of twisted rods was found in Gaasterland, Friesland, by a metal detectorist and reported to the Fries Museum, which acquired it (Besteman, Kramer, Leenheer 2009; IJssennagger 2013b) (Cat. 3.1). The four twisted rods can be divided into two thicker ones and two thinner threads. The

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88 Personal information from Bouke-Jan van der Veer, for which I thank him.
ring, weighing 4.96 g and having a diameter of 24 mm, is generally dated between the ninth and eleventh centuries. Being a golden Viking find, the ring attracted quite a lot of media attention. Therefore, it may not come as a surprise that since its discovery, more similar rings, but then usually of silver, have been reported. Without discussing each individually, for the above-mentioned reasons, it is interesting to note that these finger rings of the twisted type are found in Groningen (one example, Solwerd, which is sometimes also identified as a later medieval ring, fig. 5.25) through Friesland (five examples including the Gaasterland find, Tirns, Ruigahuizen, Franeker, Westergo) towards the Vlie. Naturally, these are only the finds we know so far, so this is not the ultimate image. One of the finds was accompanied by a filigree-decorated pinhead, which is similar to finds in Dorestad and Domburg.

Fig. 5.25  The Solwerd finger ring (inv. 0000.0906). Photo: Groninger Museum, Marten de Leeuw.

Of the flat, stamped type of finger ring, two finds have been reported, one of gold and one of silver. The gold fragment was from Huizen, and the silver-stamped finger ring from Buren, both reported by metal detectorists (Cruysheer and Van der Tuuk 2014). These two finds are from south of the former Vlie and into the river area. Two earlier silver-stamped finger rings were found in Friesland and are in the old collections of the Fries Genootschap in the Fries Museum (Cat. 3.2 and 3.3). The second one is from the terp Klaverbloem near Tzum and consists of a large, oval shape decorated with stamped triangles with six dots in relief, which runs into silver threads that are knotted at the back. The first one was found in the terp Middelstein near Midlum, and is decorated with four stamped triangular shapes, each carrying six raised dots or relieved pellets. The triangular shapes are pointed inwards, making a cross-shaped pattern. Around the bezel and between the triangles, there is a stamped decoration of a double row of small triangles. In the centre of the ring, these lines cross each other. The ends seem to be straight and flat, but unfortunately part is missing. From the drawings made in 1915 by Boeles, former curator of the museum, however, we may conclude that the part still existed then, and it appears that one end goes through a loop in the other end (Boeles 1915).
ring is now described in the inventories as a ‘Viking ring’, but was long labelled Carolingian, and upon arrival at the museum was separated from the 193 denari with which it formed a hoard. Thus the coin hoard has often been studied without the ring, whilst the ring adds a probable cross-North Sea link to an otherwise continental hoard and therefore makes us rethink its status as a Carolingian hoard. Two alternative options are that it is a Scandinavian hoard or a Frisian hoard, or something in between. It is clear that it is not a hoard of savings acquired over a long time, as the coins all fall within the relatively short period of 899–911. Rather, it looks like a large sum of silver obtained in a short period of time.

Apart from these types, there are two finger rings of gold in the private collection of Zijlstra that have been deemed Viking. The first is of an elaborately filigree-decorated type, which is difficult to give a precise type or reference for. It was found in Miedum, a province of Friesland, in 1990 together with two Roman coins. The diameter is 23 mm and it weighs 7.1 grams. The other ring (Cat. 3.4; Fig. 5.25) is from Wijns, just north of modern-day Leeuwarden. It is published with a drawing by Zijlstra (1990-95), and listed as ‘a heavy golden ring dated probably ninth-tenth century and originating in Scandinavia (Gotland)’. Stylistic resemblance to the arm-rings as depicted by Graham-Campbell 1980’ (Zijlstra 1995, vol. 5 pp. IX-X, trans. author). The ring is currently in the Fries Museum and it has been established that it is a solid gold ring of 10.45 grams. The inner diameter of the ring is 16.3 mm and the bezel is 16 by 40 mm. Originally, the bezel of the ring was slightly bent inwards, and Zijlstra had put it back into shape. The bezel, which is shaped a bit like a butterfly, tapers into a gold thread at the back, where it is tied together. The decoration on the arm-ring depicted by Graham-Campbell (1980, 31) is described as ‘ornamented with transverse wavy grooves and stamping’, and this description would also fit the ring from Wijns.

A copper-alloy arm-ring fragment with similar decoration and of similar type is depicted by Schokker (2008, 172). Schokker’s fragment is a metal-detected find from Blije, Friesland, that was reported to him by the finder. This means that two items of this decoration type are now known from the northern coastal area of the Netherlands, one gold and one copper alloy.

The distribution of Viking finger rings is much wider than that of the disc brooches, for instance, as the finger rings are also quite frequently found in Eastern Europe. A good case in point is a silver finger ring from Truso. Nonetheless, within the Netherlands, the Viking rings that have been found so far have an interesting distribution that also conforms to the distribution of other object types.

**Crucifix-pendants**

In the discussion of finds from Wijnaldum and Dongjum, the crucifixes of ‘Haithabu type’ have already been mentioned. This is an interesting, yet enigmatic category of

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89 Personal information from Jappie Henstra, finder, 28/4/2013, with thanks.
90 Information that Zijlstra retrieved from British Museum curator. Personal comment 9/1/2017, with thanks.
92 With gratitude to Prof. Sebastian Brather for informing me on this find and discussing the distribution of finger rings with me.
finds. It concerns at present a corpus of 23 comparable crucifixes from the northern Netherlands, some clearly pendants, of different subtypes. Apart from the ones published for Haithabu, and three possibly similar or related finds in the PAS dated between 950 and 1125 (NLM-AD60CD; NMS-35E3A5; IOW-A9CF01), so far we have only been able to find them in the northern Dutch coastal area, and strikingly, particularly in Friesland. They have not been widely published, or published as a corpus before, but were brought to the attention of the public by Jan Zijlstra in a detectorist magazine in 2004 (Zijlstra 2004).

Zijlstra establishes that in total, about 50 small crucifixes are known, mostly in Northern Germany and Denmark where they are sometimes made in silver or gold, but he does not list them or give references for them. The bronze crucifixes were not really known in the Netherlands before metal detecting, but in 2004 a couple were present and since then a number have been added. Zijlstra distinguishes three types: crucifix-pendants with a detailed Christ on both front and back; those with Christ only on the front but still detailed; and a group of very small ones with only the suggestion of a Christ figure (Zijlstra 2003, 9-10). It is particularly this last category, where Christ is reduced to the suggestion of a head by a protruding triangular shape, that is meant by the ‘Haithabu type’ (Cat. 3.5 for an example). Only two of the double-sided ones are known, thus the majority of the crucifix-pendants belong to the single-sided types. The dating of these types to the ninth and tenth centuries appears firmly based on the publication of an example by Capelle (1968, 88 and taf. 30), although Capelle actually mentions that he cannot give a precise date for the type. The material in general, however, is again dated between the ninth and eleventh or twelfth centuries, making a date in this range a safe suggestion, also in comparison to the English finds. As such, they are Viking Age crucifixes, in one case found at the same site as the possible Thor’s hammer fragment, for which the context and origin must still be determined’. Since the publication of the specimen from Haithabu, an origin in the north has sometimes been suggested but considering the distribution in Frisia and the few examples in England, we may have to rethink this hypothesis. At present, we have little further data to come up with a new hypothesis, but certainly, it is an intriguing category of finds that we have to take into account in future studies of the Viking Age and Frisia and Christianisation in the North Sea area.

5.3.2 Mounts and buckles

Borre-style buckle

A D-shaped buckle of copper alloy, decorated in (early) Borre style and measuring 34 x 28 mm (vnr. 322 – SCEZ 0025-150) was found in excavations in Domburg, on Walcheren, in 2010. It was uncovered in the living- or work area of a house structure, which is dated to the late ninth century (Ufkes et al. 2011, 52). On the

93 Many thanks to Henk Hendriks, SCEZ. The context of the 2010 Domburg excavation in general is very interesting. In the same excavation, oak planks of a clinker-built ship were recovered near a house structure. It is readily datable to felling in 769, and it is established that the wood is derived from the Anglo-Saxon settlement of Hamwic (Southampton). (ARC rapport p. 3; 93) The re-used fragments of wood from a ship was found on several locations, including a river-going vessel dating to 677-830, a fragment of worked wood felled between 878 and 903 and oak re-used as a burial chest dated to the last quarter of the ninth century.
buckle, there is a pattern of ribbons, typical of the Borre style. The pin is missing, and the right side of the buckle is slightly more worn or damaged than the left. On the left side, there is a clear feature also seen on other Borre-style objects. The ribbon pattern has small planes, one of which ends in a small hand or claw with three fingers, grasping the ribbon.

The Domburg buckle has great similarities to the belt-buckle from the Norwegian Gokstad burial (C10437 kult.hist.museum Oslo). According to the excavator’s report, experts from Scandinavia and Britain have suggested that because the buckle is smaller than the Gokstad example, it may have been locally made based on Scandinavian examples. Nevertheless, the excavators also list parallels besides the buckle from Gokstad, namely from Randlev and Lejre in Denmark, Borre and Hedrum in Norway, and Birka in Sweden, of which two are also smaller examples (Ufkes et al. 2011, 122-3).

Another parallel may be seen in a Borre-style buckle of slightly smaller proportions (32 x 25 mm) from Aldeby in Norfolk, England (NMS-D68C64). It is a detector find dated to the tenth century. Again it is a D-shaped buckle, with the pin still in place but incomplete, and with a decoration of double-strand knots and ribbons. Like with the other parallels, the decoration is not a hundred percent identical, nor is the size. A buckle from Bawsey in Norfolk should be almost identical to the one from Aldeby, but unfortunately this find is not recorded in the PAS-database.

Based on these differences, and since these buckles do not appear to be mass-produced, we cannot rule out the possibility that it is a Viking buckle made in Scandinavia or by a Scandinavian craftsman on Walcheren. Especially since it has clear Borre-style features that are not directly known from its parallels, and that seem unlikely to have been added by a Frisian or Frankish manufacturer.

**Horse harness mounts**

The Domburg excavations have yielded more interesting finds related to the Viking sphere and in a style of decoration very reminiscent of the Borre style, if not the Borre style proper, such as horse harness material. A fragment of an earlier unidentified copper-alloy object of roughly triangular shape, decorated with typical Borre-style aspects including an en face animal head or mask (vnr. 13/4 – SCEZ 0025-79), was found in the piled earth at the excavation in Domburg (Daleman and Koopstra 2011). One of the three arms is broken off, as is part of the top. In the publication of the report, the object is turned about 45 degrees to the left, and in fact should be placed with the head upright. Besides this animal head, there is another animal head to the lower right and the terminal may also be regarded as a stylised animal. In the middle of the fragmented object, there is a hole which is supposed to be D-shaped. The animal head above the hole is a typical Borre animal head with round eyes and long ears. It is the bat- or mouse-like mask, as it is often described. The head on the right side, also en face, is harder to recognise. Above and on the sides of the head are grooved lines, which are probably meant to represent fur. This piece can be identified as a Borre-style or Borre-style-related harness mount or cheek piece, and is thus part of horse riding gear. To give an idea
of the type of object, we can look to some parallels in England. A cast copper-alloy harness mount (PAS-number GLO-9628F0) of reversed T-shape with a central hole, quite similar to the one from Domburg, was found in Gloucestershire, England. It is 4 cm in height, decorated in the Borre style and therefore dated between 830 and 970 AD. The Domburg example, of which the upper arm is broken off, is 37 mm in height. The English mount is 50 mm in length, the Domburg mount should have been about 60 mm in length, and both have a thickness of 9 mm. The English and Domburg examples thus seem comparable in size. Similarly, they are very comparable in layout, as both of the mounts have one en face animal mask in relief above the hole, two en face masks in relief on either side of the hole, and the end-pieces all end in a stylised animal head in-profile, even though the animals are slightly different. For this find we can probably suggest a (late) ninth- or tenth-century date.

Besides animal heads and zoomorphic and anthropomorphic masks on metal items, a number of objects consisting of a mask or head alone are amongst the metal finds from the southern North Sea coast. An interesting mount is the copper-alloy lynx head (vnr. 13/1, SCEZ 0025-76). Unfortunately, it was found in the loose excavated and deposited soil, so a context is lacking. The excavators, however, suggest that because lynx live in Scandinavia, it might be produced there (Daleman and Koopstra 2011). Animal heads and lynx in particular are a motif known in Viking art, which makes this suggestion acceptable. The back of the mount is u-shaped, with upstanding sides. This mount has parallels in the Frisian terp area, particularly in regard to the shape, but with different types of faces. For example, two mounts, one 28 mm high and of bronze and one no higher than 16 mm and apparently made of bronze and iron, were found in Pingjum (Cat. 3.6 and 3.7) The smaller one is most closely related to the lynx mount. Whilst it is described as a human mask, it may just as easily be an animal mask and it indeed resembles the lynx with the pointy ears. However, with this mask the nose is more pronounced. Another mount was found near Westerwijnwierd in Groningen (Cat. 3.8). This mount, which is slightly damaged, may have originally been bigger. Again, we see a stylised animal in a Borre-style-related style. The larger Pingjum mount deviates from the other mounts, as it appears broken off at the top where part of an extension can still be seen. In addition, the back side is not u-shaped with those upstanding sides, but triangular. This seems to be a different type of mount, although the use of a mask or head is similar. This head, however, is more closely related to the heads on the small, long mounts described below. Single animal-head mounts and sometimes even ones featuring human heads have been found in Zeeland, Friesland and Groningen. Clearly, these can also be related to horse harness equipment, and represent Viking Age stirrup mounts and terminals (Williams 1997, 7).

From Pingjum there are two fragmentary bronze mounts, and similarly there is one from an unknown find-spot in the province of Friesland, which could also be equestrian items related to the Anglo-Scandinavian styles. All come from the former collection Zijlstra. Although all three differ in type, form and execution, each mount consists of open-worked interlace patterns, which in two cases terminate
in an animal-head (Cat. 3.9 – 3.11). Being so fragmented, it is at present hard to establish the original function and outlook, but we can make some tentative suggestions. Cat. 3.11 could perhaps derive from a cheek piece, and represent one side of it with the animal head facing inward. The other two fragments could represent mounts, but they could just as well represent open-worked Viking strap-ends in the Urness style, as are known from England. For an example see PAS recordno. NLM4292, which is dated to the eleventh century.

On the whole, in recent years there is a striking increase in the number of horse harness mounts from the ninth well into the eleventh or even twelfth century in Zeeland, Friesland and Groningen, as well as along the coast of Flanders, which are the topic of ongoing research. Again, this concerns new metal-detected finds, as well as objects in old collections that are being revisited. Most of these mounts belong to the later Viking Age and can be compared to the Anglo-Scandinavian horse harness mounts known from Eastern and Southern England in particular (Williams 1997; 2007). Most of the horse-harness mounts of these Anglo-Scandinavian types are dated to the eleventh century (Williams 1997). Besides the terminals/mounts in the shape of a face and the harness cheek-pieces and fittings, this group typically includes copper-alloy stirrup strap mounts. According to Williams’ classification, it is mainly his Class B mounts that are being found. These are trapezoidal and openwork, with projecting animal heads (Williams 1997, 2-3). According to Williams, there is a relatively small number of the Class B-types compared to Class A, and the Class B-type has parallels on the Continent (Williams 1997, 13). Williams (1997, 107) lists six examples from the Netherlands, five from Zeeland and one from the Hague. In the last twenty years, quite a number have been added, including a number of items from the northern coastal area, where at least four clear examples are known. A case in point is a mount from Joeswerd, Groningen, in the collection of the Groninger Museum (inv.nr. GM 1985-12-003). Another one is the find from Dongjum, which was mentioned above (Cat. REL 2.2/3.4; Fig. 5.26). Two other finds are in metal-detectorist collections, one from Delfzijl in Groningen, which is a Williams Class B Type 3 mount, and one from Westerwijtwerd in Groningen. As the place-name suggests, this is quite close to Oosterwijtwerd, where the Borre-style disc brooch was found. The mount from Westerwijtwerd is one of the first recorded objects in PAN (PAN-00004597) and can only be identified as a Williams Class B mount. Due to corrosion, it is impossible to discern the number of heads and, therefore, the type. From the western coastal area and south into Belgium, new finds of different types have also been reported (Webley forthcoming; Deckers 2014, 24). All types up to now, however, belong to Williams Class B, whilst in Domburg and the northern Netherlands and Germany the mounts that were known earlier seemed to be of a different form (Webley forthcoming). They all seem to belong to the late tenth or early eleventh century,
and appear to have the most parallels in England, but some from Viking Age Scandinavia as well.

As Williams (1997, 105) stated twenty years ago, ‘those from Domburg were all found more than forty years ago and it is hard to believe that others have not been found subsequently. The Domburg mounts can all be grouped in Class B and The Netherlands could well be a source of origin for these mounts which seem to have spread out westward from the English east coast.’ The increasing number of finds along the former Frisian coast, including the northern Dutch coast, as well as the fact that a small number have also been found in southern Scandinavia and the German coast (Oldenburg and Hedeby) indeed make us rethink the status and provenance of these finds. Perhaps Anglo-Scandinavian is not the right term for these finds if they appear to be so connected to the Zeeland coast in particular and the Frisian coast in general, and perhaps the word Frisian or Continental should be added to it. However, this is a topic that, while it seems to be promising, would require much more research to understand the relation between the various groups of finds and areas.

A further category of mounts that often is related to horse harnesses is that of small mounts with zoomorphic and sometimes anthropomorphic designs. Some have been discovered in Domburg in the 2010 excavations, but they are the most well-known from the many pieces amongst old finds material in Domburg, and on Schouwen and in Oost-Souburg in Zeeland, as published by Torsten Capelle (1986, taf. 20-2; Capelle 1976) and Anna Roes (1955). Roes published them as Scandinavian mounts or local mounts inspired by Viking art, whilst the precise function remained uncertain, and it has been speculated that they represent furniture, box or drinking horn mounts. Similarly, they could have been horse harness mounts.

More recently, objects have also been reported as metal-detector finds from the northern Nether-
lands (former collections Zijlstra and Regtop). Presently, there are thirteen small mounts identified from these collections, in differing sizes and shapes (see Cat 3.12 for example). A small research project into the Zeeland mounts revealed that there are further parallels in Flanders as well as in Norfolk and Suffolk, in England, but not in Scandinavia (Roxburgh et al. forthcoming), and the most recent study of Robert Webley has identified and discussed even more examples from a wide area in England (Webley forthcoming). The Walcheren corpus still remains the largest. Although the mounts from all the regions mentioned here are similar in type and belong to the same object group, they are not all equal. Some are significantly smaller than others, some are delicate and some are not, and some have masks or animals heads whilst others do not. The English examples, as recorded in the PAS, are classified as Middle to Late Saxon, ninth-century strap fittings, whilst some are still described as box fittings (Roxburgh et forthcoming).

Compositional analysis of the mounts from Walcheren compared to the composition of the stirrup-strap mounts from the same area (both with XRF), have shown that they are compositionally similar, which would suggest that they may have had similar applications. Especially since their composition deviates from that of other copper-alloy objects, like disc brooches and ring-pins (Roxburgh et al. forthcoming). Of all the finds from Zeeland, the small mounts are the only ones that by their composition – namely with a higher level of zinc – may be called Scandinavian. However, the small zoomorphic mounts are perhaps too small to actually function on a horse harness, or at least are much smaller than their parallels, and perhaps should be seen as personal decoration of a rider instead of a horse (Roxburgh et al. forthcoming). This would particularly apply to the strap-link mounts. Overall, the different types of mounts are morphologically and compositionally similar to the known horse harness items as displayed by Williams, apart from the fact that they are smaller and possibly, in some cases, a bit earlier. Based on all the evidence together, it is suggested that the Walcheren group represents a subgroup in the material that is closely related to the ninth- to eleventh-century finds from Zeeland and other areas, both in Frisia and in England. Probably, it should be dated to the tenth or even eleventh century. It can most likely be related to a cultural group in Walcheren in the Viking Age that expressed their visual identity with these mounts and related horse harness gear (Roxburgh et al. forthcoming). Broadly speaking, it must be noted that most of the metal finds from Domburg are dated between the eighth and eleventh centuries, and that recent and ongoing research is greatly enhancing the image of Viking Age Walcheren.

5.4 General remarks: All finds considered
The first case study of brooches and ring-pins has provided clear evidence as to how the Frisian finds relate to the distribution pattern of the Viking Age parallels. The ring-pin and the penannular brooch fragment(s) should be placed in the context of west-Norwegian copies of Insular brooches if indeed the silver ring-pin can

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96 Pim van Tendeloo, personal comment, 11/2013, and Ady Roxburgh in 2016, with thanks.
be proven to be original and belonging to the Viking Age, which is debatable. In contrast, the disc brooches can be placed in the context of Anglo-Danish spheres, particularly the Danelaw and its close connections with southern Scandinavia, as can be seen on the distribution map (Fig. 5.27).

It appears that Frisia and the Frisian finds are centrally located between two different geographically distributed phenomena of the Viking Age. The disc brooches show a clear east-west distribution. With the Frisian ring-pin and fragment taken into account, the distribution of these types appears north-south. The clear Insular connection of ring-pins and ring-brooches through their prototypes is not visible on the map, but would be if the original examples were plotted. It must be kept in mind that for the ring-brooch, only the Type I,E, which is a Norwegian copy of an Insular type, is plotted. If different but related types were included, the distribution map might look different. Likewise, for the ring-pin only the exact parallels are listed, which are in Norway, and not the related types or prototypes. The oval brooch is harder to pinpoint as there are no direct parallels to be mentioned, so it is not presented on the map. The most likely is a relation to Norwegian oval brooches in the early Viking Age.

Fig. 5.27 The geographical distribution of the disc brooches in red and pins in green as mentioned in the text of case study 1.
The two groups of objects on the map, the pin-brooches and the disc brooches, should probably be seen as representing different social levels. The disc brooches are mass-produced items of rather affordable material and regarded as everyday dress items for women. The pin-brooches are far fewer in number and appear more precious (even if we do not include the silver-ring pin, for obvious reasons). They should not be seen as everyday dress items, but as dress pieces of higher status. If the silver ring-pin is indeed an original Viking Age object, it is perhaps not surprising that it was found on the site of the emporium Dorestad, where so many people and objects came together, whilst the other objects of less precious material were recovered in the northern coastal area. This would relate to theories of nodal points and central places. On the other hand, we must note that the fragment of the penannular brooch and all the disc brooches were found in the northern coastal or terp area. Apparently, the (types of) objects discussed here did find their way to the coastal area of Frisia, outside the trading centres. For both the disc brooches and the ring-brooches, there are arguments for regarding the objects as actively contributing to the display of cultural connections and identity. As was hinted to in the theoretical and methodological chapters, foreign objects therefore may have had great significance in political and ideological matters. Simultaneously, these objects are of the kind that are not necessarily traded, but rather are more personal possessions.

What both groups of objects have in common is that they were not only related to Viking Age Scandinavia, but also very much to the Viking Age Insular world. This, first of all, includes the Anglo-Scandinavian Danelaw, but also the Insular world beyond. It has been suggested that for Scandinavia and particularly Norway, in the processes of political centralisation and political change, these affinities with the Insular world may have been an essential network for the power of the elite (Tsigaridas Glørstad, 43). This may similarly be the case for Frisia, and it may have worked two ways. Scandinavians maintained the network with Frisia on the Continent as an important source of power, and Frisia maintained the network with Scandinavia and the Insular world as an important element for boosting their influence and trade, and stimulated by historic relations. This should then be placed in the context of the expanded Frankish realm. It is striking that for both the Scandinavian and Danelaw contexts of the disc brooches also found in Frisia, there is a clear indication of female ownership and agency. As we have seen from the work of Kershaw (2013; 2009), the Scandinavian and Anglo-Scandinavian disc brooches were worn by women. Kershaw suggests that by wearing these brooches, they actively displayed and formed their cultural identity and expressed their cultural affiliations. For the Danelaw material there is a strong case, but for Frisia, with only a few finds, we must recognise that this theory is just one of several possibilities. Similarly, this is suggested by Tsigaridas Glørstad (2012) for the ring-brooches of Insular type when they first arrive in Norway, but this gender connotation changes when local copies start being manufactured. Then, they appear to become a male dress item and symbol of rank. Due to lack of context, we cannot be entirely sure this is also true for the objects found in Frisia, but the parallels do make this a likely possibility.
If we take the different pins and brooches as objects through which a connection with a Viking cultural and political sphere is actively expressed, then we can question what this means. Does this mean that local Frisian rulers were expressing an affinity with Scandinavian and Insular Viking Age groups? Were there Scandinavian or Insular Viking Age rulers present in Frisia, and did they express their affinity through these objects? Or were there local Frisian men who had affinity with the Viking North Sea world through their women, who may have been of Scandinavian or Insular descent, or through their own travels and network? And how is this related to local Frisian politics and the Viking attacks?

The second case study has provided insight into how far the Viking sphere of silver exchange stretched, and to what degree it reached Frisia. It clearly shows the connectivity of Frisia with the Viking sphere of silver. It should not automatically be assumed that the finds in Frisia, even though they belong to the sphere of exchange, represent trade. Exchange comes in many shapes and sizes, only one of which is trade, which in itself can take many different forms and need not resemble the modern trade in commercial and non-personal objects. Other possible forms of exchange include gift-giving, raiding and the payment and receiving of taxes and diplomatic gifts. All of these could have taken place in Frisia, particularly in the areas that became Danish benefices or were paying tribute. However, that Frisia was either directly or indirectly touched by the Viking way of using silver in general
is clear from other finds as well. Probably the most clear material trace of the Frisian coastal area being partly in the Viking sphere is the amount and distribution of dirhams and the increasing evidence of hack-silver and weights related to the Viking bullion economy. It was noted above that finds from Domburg showed bullion economy-related activity. Like Dorestad, Domburg is a well-known site for both the number of finds and the references in the written sources. Strikingly, if we look at the hack-silver find deriving from the Hiberno-Scandinavian broad-band arm-ring, we see a pattern of distribution in a very similar area as to the disc-brooches. Together with accumulating evidence suggestive of the degree to which the Frisian coast was part of the Viking (silver) sphere in general, the finds discussed provide new insights into Viking Age Frisia and the possible place of the cubo-octahedral weights within it, even though it was previously believed that they should be later than Viking Age. Most finds are dated between the ninth and tenth centuries, but the folding balances (and horse harnesses, which are another category) are dated into the eleventh century and possibly beyond. What is very striking is that in most cases where we have a (single) find of an object that is connected to the Viking sphere, we also see that a dirham was found on the same find-spot or nearby.

The third case study, although discussing a range of different types of objects with the mounts and buckles, whether equestrian or not, finger rings and crucifix-pendants, reinforces and broadens the picture that is sketched by the first two case studies. This is true in terms of distributions and parallels, which again point to a North Sea-related focus and role in formation and expression of identity, as well as in the importance of metal-detecting and recording, and in the expectation for future finds. What the finds in this case study point out is the connectivity into the eleventh century and the complicated dynamics in the North Sea area throughout the period, which we do not yet have a firm grip on.

We must keep reminding ourselves that for some of the objects discussed in all three case studies, we only have one or a handful of examples, and are thus dealing with singularity to a certain degree. Likely this is partly due to the biased find recording, and the image will thus change in the future with additional finds. What may also be represented, to some extent, is the scale of and way in which there was connectivity. Whereas we have some clear clusters of certain objects in some areas, in other places, finds are scattered. According to Schokker (2008, 171), who analysed Scandinavian finds from the Viking period for his master’s thesis, the terp area of Frisia did not play a prominent role. Although in general the northern Netherlands did show finds, particularly in places that were readily accessible from the sea. In my opinion, however, the terp area did play an important role, as did the entire northern Dutch coastal area. However, this role was different – less centralised than in the well-known trading places that were mostly important up to about 850, such as Dorestad and Domburg. My analysis shows some core areas of activity and strong connectivity with the Viking world, which applies to Frisia in general. The core areas are from west to east the Walcheren/Domburg area, the tip of Kennemerland/Texel/Wieringen, and most prominently in my case studies, the area across the Vlie. This concerns the coastal region from Friesland to Groningen,
and in particular the Westergo region, in addition to the river area with Dorestad and Tiel. Within the Frisian coastal area in the north of the Netherlands, the terps as clear dwelling mounds are logical spots for finds to have been deposited and for metal detectorists and archaeologists to retrieve them. The Viking Age finds from a place like Dongjum, which has been extensively researched in general but not discussed in a Viking Age framework, show that Viking Age finds are also scattered within the existing research material, and that this could just as easily be the case for other terp sites as well. It can therefore be expected that other sites will reveal Viking objects in the future, and that hopefully it will become easier to recognise them. The fact that, in contrast to Domburg and Dorestad, the finds in the western and northern coastal areas are so scattered on the one hand, and from a number of well-researched clusters of terps on the other, can be explained by what Loveluck (2012, 123–66) has suggested, as mentioned above: metalwork is not necessarily—or perhaps not typically, as Wamers also argued—connected to trade. Trading sites usually have few items of metalwork, including dress accessories. It seems that in the coastal regions of the North Sea area, exchange was conducted directly with the seafaring traders like the Frisians, and was carried out by small coastal communities who had a lot of freedom to do so. This is a different mode of exchange than in the large and central trading settlements, and they existed side by side. As Theuws put it (2012), this is an eclectic economy. I believe that this difference in activity is reflected in the find material from Frisia.

Furthermore, an important observation from the type of material discussed here and its distribution is that the items show a connectivity with the Viking North Sea world at large, and not just Scandinavia. It becomes very clear from the material that the Viking sphere to which Frisia was interconnected stretched around the North Sea from Ireland in the west to east Sweden and beyond into the Baltics in the east, whilst reaching up into Norway. This is not to say that this was the Viking sphere, as there would have been many other regional spheres within the vast area that was influenced by the Viking phenomenon in one way or another, but this was the large North Sea Viking sphere that Frisia was in constant connection with, on differing levels. And be that as it may, some of the material can even be referred to as Anglo-Scandinavian, and date into the eleventh century. The fact that there was likely a group of people on Walcheren expressing their identity through small copper-alloy mounts related to horse harnesses could point in the same direction. Clearly, the Frisian coastal area was well tied-up with south Scandinavia, the Danelaw (particularly Norfolk and surrounding regions) and the areas that were covered by the Great Heathen Army. Moreover, some artefact types, their distribution and the spheres they relate to even suggest that the closest connection is, in fact, with the Danelaw. It has been argued by Kershaw (2017, 187) that the use of bullion may not have merely been an economic practice, but also a cultural one that may have reflected a collective identity. This would have been connected to a Scandinavian-controlled network and could be seen as a symbol of Scandinavian cultural values. In that case, the dual economy as displayed in the Danelaw could perhaps be framed as not Scandinavian, but ‘Viking’ in the wider sense, which
may have touched Frisia. Based on the material presented here, we can state that although the Netherlands (including the entire Frisian coastal area) was officially part of the Frankish realm, there was a more or less invisible boundary of the Viking North Sea world encompassing its cultural and transactional silver sphere which reached south/west of the Frisian coastal area. Simultaneously, the dynamic connectivity of Frisia with the Viking sphere stretched even into the eleventh century. This boundary of the Viking sphere is made visible by the distribution maps of the finds from Frisia in this chapter.

Fig. 5.29 The combined distribution of the plotted objects from case studies 1 (brooches and pins) and 2 (the broad-band arm-ring and the cubo-octahedral weights - the weights further to the east fall outside the scope of the map (see Fig. 5.24).