Summary

1.

This book is concerned with landing places, i.e., sites which provide a physical link between seafaring activities and settlements on land, and which have hitherto been a relatively disregarded area of Danish archaeology. Not until the 1980's did interest in this area of research begin to dawn in Denmark, partly due to the systematic excavation of trade and craft sites in Ribe and near Lundeborg, and partly because the use of metal detectors turned up an increasing number of metal objects from the Late Iron Age on beaches where agrarian settlements were not normally sited (e.g. Rindel 1992:142; Christoffersen 1996, fig. 12 and 13). Since 1990 more and more sites have been found near the coast, but though the material continues to pile up, the lack of well-founded models of interpretation for this kind of locality, seen in relation to shipping and trade as well as societal and power structures, becomes increasingly evident. Such sites are frequently discovered, but only rarely is any attempt made to assign a clearly defined role to them in a particular period, and there is a tendency to link places where a lot of metal has been found to shipping and trade if they are near any kind of waterway, however small. In other words, the factor of access by sea has, almost unnoticed, come to play a central role in the interpretation of many more or less significant archaeological sites.

2.

This investigation is centred on Roskilde Fjord. This is a well-defined stretch of water, characterised by a long and narrow tongue reaching deep into Zealand. In terms of navigation, the fjord comprises a strategically important point at its outlet close to the Kattegat, as well as a 'blind alley', that is to say, that the landing places along its coasts must in all probability be presumed to represent the needs of the hinterland.

A number of sites from the rest of Denmark as well as in Scania and Schleswig-Holstein have been chosen as comparative material. The examples adduced cover as wide a spectrum of types of site as possible, and are used partly to provide a basis of comparison for the primary focus of investigation, and partly to illustrate the breadth of variation in the structure, topography and function, etc., of sites.

Any investigation of a specific type of site and its development must necessarily be viewed over a long period of time. For this reason the chronological framework covers the period from the year 200 to the year 1100 AD. Landing places do not become clearly evident in the archaeological material before the 6th century AD, but in my opinion the conditions necessary for increased maritime interests in the 6th to 7th centuries must have their roots in a development that revealed itself at the beginning of the 3rd century. The necessity of including the 2nd to 5th centuries AD when investigating shipping and trade is in no small measure due to the excavation of trade and craft sites at Lundeborg (Thomsen, in print).

The choice of 'the year 1100' as the terminal point of the investigation is due to the fact that the traces of landing places as they appeared over a period of more than 500 years do not begin to thin out until about the beginning of the 12th century at the latest. In this phase, radical changes in building, economic structures and the organisation of society can also be identified, and there is no doubt that there is a connection between these factors.

3.

Landing place
A 'landing place' is a functionally neutral term for a site that has been directly related to seafaring, in other words, *a site oriented to maritime activities*. The definition of the term, 'landing place', is found in the etymology of the words: a place where ships make land. Objectively speaking, there are thousands of suitable landing places along the coasts of Denmark for clinker-built vessels with a shallow draught and great manoeuvrability, popularly called 'Viking ships', or collected under the heading 'the Scandinavian type of ship'. However, only a smaller number of the possible landing places have been archeologically identified as actual landing places.

In some cases, landing places can be identified in terms of their function, as a boatyard or trading site, for example, but apart from this, we shall refer to two main groups. One group

is *the specialised landing places*, the structure of which reveals no special connection to an agrarian economy, and which may therefore reasonably be presumed to have had a primary function other than agriculture. The second group, *agrarian landing places*, refers to settlements or farms mostly based on agriculture, but which have also served as landing places.

Central site

In this connection, a 'central site' is one that possessed a number of functions of central importance for a given area. In the widest sense these might also have been centres of civil power and control, just as religious rites might have been associated with them. Our ability to identify central sites is principally based on archaeological investigations, but cultic place names, such as 'Gudme', or 'Odense', are frequently used as indicators. The most important factor, however, is the special structure and size of the site, and not least the presence of significant buildings, as is the case in Gudme (P.Ø. Sørensen 1994b) and Lejre (T. Christensen 1993). Factors which help to underline the importance of a settlement are graves or burial sites containing extraordinary artefacts, and a trading or craft site linked to it on the coast. In the same way, large quantities of objects made of rare metals, imported goods, or objects indicating a special status, can very often be related to a central site.

Proximity to the coast

No place in Denmark is more than about 65 km. from the nearest coast. In relation to continental Europe, the whole country may be said to be connected to the 'coastal zone', in other words, an area characterised by traits typically related to seafaring and the use of maritime resources.

Nevertheless, it is clear that in Denmark in the 6th to 11th centuries there were sites which were structurally different from most settlements of the time, and that typical of many of these places was their proximity to the coast.

With a view to a closer analysis of the presumed special character of sites near the coast in contrast to settlements in the hinterland, the term 'proximity to the coast' has to be narrowly defined. What we are speaking of here is an artificial boundary, to be used exclusively to provide a framework for the investigation. On the basis of previous investigations (Ulriksen 1994), an evaluation of the position of villages around Roskilde Fjord, and information about changes in the level of the sea, the choice has been made of a zone stretching 500m. from the present-day sea level.

Chronology

The chronological framework stretches from about the year 200 AD to about 1100 AD. This period as a whole is regarded as the 'Late Iron Age', since the development of society may be regarded as one continuous movement, which can be distinguished in a number of ways from both the Pre-Roman and Early Roman Iron Age on the one hand, and from the Early Middle Ages on the other.

The chronology of the Late Roman Iron Age has been treated in a large number of works, most recently in a thesis by Ulla Lund Hansen (Lund Hansen 1987). In this work she presents a readjustment of the phases normally used, so that the Late Roman period covers the time from about the year 150/160 AD to the year 400 AD. She has since suggested that the transition to the Early Germanic period should be placed a little earlier, around 375 AD (Lund Hansen 1988c:25 and 1993:169).

The Early Germanic period has now been limited to the period from about 375 AD to 520/530 AD, principally defined by styles of ornamentation, but also characterised by some spectacular hoards. As regards settlements, a large number of finds have been broadly dated to the 4th and 5th centuries, but the objects related to this period seem in general to be less typical that those of both the preceding and succeeding periods. Pottery looses such characteristics as ornamentation and handles (S. Jensen 1986a), jewellery is less frequent and the number of different types fewer than in the Late Germanic period.

The Late Germanic period has been the object of several detailed studies in the last 30 years, in all cases concentrating on jewellery or weapons (Ørsnes 1966; Højlund Nielsen 1987 and 1991: L. Jørgensen 1988; Nørgård Jørgensen 1992; Jørgensen and Nørgård Jørgensen 1997). In this connection, Højlund Nielsen's classification based on jewellery has been used - objects found relatively often at landing places. As regards the length of this phase, in my opinion the archaeological material reflects contemporary and relatively significant changes that justify setting the limits to between about 520/530 and about 700 AD.

As a chronological phase, the 'Viking Age' is the most loosely defined phase in the whole of the Late Iron Age, both in terms of the general framework and the subdivision into periods. As a natural consequence of the delimitation of the Late Germanic period, the 'Viking Age' covers in the present connection the period from about 700 AD to about 1100/1150 AD.

Method and representativity

In terms of method, it is relevant to ask whether this investigation presents a real picture of the degree of maritime activity, or whether it only succeeds in illustrating some aspects of the maritime sphere. The method used to identify sites includes the use of metal detectors, which means that there is a greater chance of discovering sites containing metals than sites with only a few metal objects. The latter situation might be related both to chronology and function, but all in all this approach means that sites containing a lot of metal are over-represented. There is also a chronological bias, in that metal objects from the 6th to the 12th centuries occur with relatively greater frequency in comparison with the 2nd to 5th centuries.[2] The question arises whether one ought not to look for much weaker clues than those hitherto used as witnesses to landing places. More precisely, in the period 200-530/30 AD there would seem to be a discrepancy between the number of documented coast-related activities and secondary indicators of the extent of seafaring activities. By secondary indicators is

meant foreign objects found in graves, hoards, and sacrificial offerings (e.g. Lund Hansen 1987; Ilkjær *et al.* 1994), which for the most part were brought in by sea across the Baltic. To this should of course be added the boat finds at Nydam Mose (Engelhardt 1969; Rieck 1994), and the contacts which took place across the North Sea as a result of the Anglo-Saxon-Jute influence on Southeast England in the latter part of the period should not be forgotten either (Hines 1984 and 1996). Fishing and hunting at sea form part of the maritime milieu, and these activities were no doubt just as attractive in Roman times as in the Late Iron Age (Ringtved 1992). The scarcity of coastal sites from the 2nd to the 5th centuries must be seen in connection with the possibility that in Denmark, as in the lands immediately to the South, rivers and streams were used for sailing. It is therefore hypothetically possible that on the lower reaches of some Danish waterways sites may be found that used the waterway as a link to the coast, in the same way as rivers (and other similar waterways) were extensively used in the Northwest Germanic area.

Waterways were no doubt used as a connection to the sea, but there are certain problems: landing places on waterways are very difficult to distinguish from agrarian settlements, both in terms of structure and of the objects found, and on the other hand it is often very difficult to prove any direct connection with, or participation in, seafaring activities. Danish waterways today are generally of very modest size, and do not appear to be obviously suited to water traffic, especially to sea-going ships. On the other hand, the physical appearance of the waterways has been considerably changed in the course of the last few centuries, due to dramatic alterations in their course, and to canalisation and dredging. Experts in cultural history generally agree that before such changes were made to the waterways and their immediate surroundings it would in many cases have been possible to sail on them, though the nature of such activities has not been exactly defined. It is often taken for granted in the literature that the volume of water in the waterways in the Late Iron Age was so great that contact between inland dwellers twenty or more kilometres upstream and the coast could in many cases be maintained by ship. In my opinion, however, only rarely has it been shown to be even probable (and hardly ever proved), that any particular waterway was used for shipping, and I do not think one can reach the blanket conclusion that any waterway could have been sailed on, simply because its course or size was once different. In my opinion, documentation for the maritime nature of any given site close to a waterway must be of such a kind that there is a very high probability that the site was in fact of this nature. This point of departure is called for in the present "Stand der Forschung" because the maritime sphere is still inadequately defined in the archaeological literature. At the same time, this means that this group of landing places is very poorly represented in the present study.

The analysis of the hinterland, covering a zone about 10 km. wide around Roskilde Fjord, has been exclusively based on 'familiar' material. In other words, primary investigations of hinterland settlements have not been carried out in connection with the present study. The distribution of finds has therefore a certain haphazard quality, due to the fact that they have mostly turned up at random over a number of decades. Certain groups of finds must be regarded as better represented than others. For example, isolated finds of rare metal objects and bog finds from the Late Iron Age, as well as graves and burial places, have been the object of collection for a longer period of time than have buildings, due to technological developments within agriculture and archaeology. Most of the buildings investigated have been revealed within the last twenty years, and almost all of them in connection with building or construction projects where funds have been granted to carry out emergency excavations. This situation has meant that areas where a lot of money is being spent on construction work must generally be regarded as over-represented in terms of finds, not least if the local museum in the area in question has an archaeologist on the staff. At the same time, the probability of the under-representation of other areas can be shown, using secondary indications of settlements or buildings such as place names and pollen analysis.

4.

The primary investigations along Roskilde Fjord covered 16 areas, and even though the intention was to spread the work evenly around the fjord, most of them took place in the southern part (fig. xx). This was not by choice, but is due to the fact that only a few sites have turned up in the northern part. Moreover, as the following will show, there are no sites from the period 200- 520/30 AD, and none situated on waterways. The simple reason for this is that the material available offered no opportunity for a closer investigation of this type of area.

The selection process was based on a number of approaches to the localisation of these sites. The sum of indicators was not decisive for the choice made; instead, emphasis was placed on elucidating various kinds of information with the aim of providing a deeper knowledge of the traces landing places have left in the landscape.

A number of the localities have been known for several years, and some formed part of a pilot project which I carried out in 1988-89, and which has formed the basis for the present investigation. The majority of the sites contained one or more archaeological finds, but could also include secondary indicators supporting the suggestion of coastal activity. A number of places were chosen solely on the basis of place names, whilst others were chosen on topographical evidence.

Apart from the selected localities, there are several potential landing places along the coast of the fjord which have not been included in the investigation. The areas not selected were topographically speaking well suited, and might offer both primary and/or secondary indicators, but vari-

ous circumstances, such as consideration for agriculture or the presence of modern buildings, made a systematic reconnaissance along the lines of the other sites impracticable.

5.

Out of the some 140 sites in the listed parishes in the hinterland of Roskilde Fjord that can be dated to the period between the Roman period and the Early Middle Ages, about 25% were found in the coastal zone or in the fjord itself.[3] About half of these were found with the help of metal detectors in the middle of the 1970's.

The distribution of sites is uneven. Towards the North there is a concentration of localities around the mouth of the fjord, but most of the finds were made around the southern part of the area. The only exceptions are a few finds near Frederikssund (fig. 61).

There is good reason to question whether this actually gives us a real picture of coastal activities, though in the case of some stretches of coast there is a high probability that it does, for example, in the case of such areas as Halsnæs, the northern part of Hornsherred, and the east coast of Selsøland, which are presumed to have been 'deserted'. Despite the existence of numerous favourable landing places, sites would only have been established in these areas in connection with specific strategic or other special needs.

The stretch of coast between Frederiksværk and Frederikssund is quite a different matter. 5-6 kilometres of the northernmost part are characterised by steep slopes or cliffs, and there are only a few places where natural gaps provide access to the beach. South of this the coast is flatter, but partly characterised by wetlands and salt meadows around the mouths of the rivers Havelse Å and Græse Å. Along the whole of this stretch of coast not one single coastal find has been made which can be dated with certainty to the Late Iron Age. On the other hand, there have been a relatively large number of sporadic finds in all the parishes along this coast, as well as traces of settlements, such as Birkely in Kregme (Bodilsen 1993), in the triangle formed by the villages of Ølsted, St. Havelse and Lille Havelse, as well as Græse in the South. One might object that a large part of the coastal area today is heavily built-up with summer cottages, that a systematic search for landing places is therefore impossible, and that possible finds may have been destroyed in the building process. On the other hand, the natural access paths to the coast have been largely kept free of buildings, as may be seen from enclosure maps from about 1800, and yet it has not been possible to demonstrate the existence of coastal activities here. As regards the northern part of the fjord, it is important to note that the water is shallow up to several hundred metres from the coast. This is not the only factor that makes landing conditions difficult, however; large numbers of boulders have been washed down from the cliffs by erosion and form an underwater 'reef' in front of the beach.

In many ways, the narrow stretch of the fjord from Frederikssund to Eskilsø presents something of a paradox. There are many suitable landing places here, but so far only a relatively few finds have been made on and behind the coast. Neither are any of the other indicators we have used found to a degree that would warrant closer investigation, with the exception of Jyllinge and Frederikssund, which both contain archaeological and other indications of activity.

The southern part of the fjord distinguishes itself naturally from the two northern areas by its heavily indented coastline and generally greater water depth, and in fact most of the coastal finds have been retrieved in the South.

The relative distribution of coastal finds between the three areas of Roskilde Fjord maintains the same pattern throughout the Roman, Germanic and Viking periods, a pattern which is not changed even though finds are included which in local records have been loosely dated to the 'Iron Age'. Despite the fact that investigations using metal detectors have revealed that a few days' detecting can put on the archaeological map places where no previous finds have been recorded, in my view the distribution of coastal finds along Roskilde Fjord expresses a real tendency. It is, for example, characteristic that such a secondary site indicator as the presence of Romanesque churches near the coast is found in the southern part of the fjord, which is rich in finds, and that this rule is broken, significantly enough, only by Frederikssund and Jyllinge. Nor is it possible to maintain that the reason for the unequal distribution of finds is due to a concentration of construction projects, with the attendant archaeological activities under the Museum Act, since none of the coastal finds have come to light in this manner.

The investigations around Roskilde Fjord have revealed that a typical landing place covers a small area of the beach (between 1 and 5 hectares), and traces of activity are characteristically spread along the coast rather than inland. The seabed is of sand, and may consist of a relatively broad and shallow littoral berm. The landing place was typically on a beach ridge in a coastal indentation with one or more cliffs or low hills on one side, or on both sides, which also contain traces of activity. It is not uncommon to find a spring or stream on or near the site. The buildings consisted of pit houses or small to medium long 3-aisled houses, though generally there were not many of them. The sites were not divided up into separate plots or areas reserved for special activities, and the boundaries of the site were not marked off in relation to the land behind.

The number of archaeological specimens is not generally large; the usual finds are various pieces of bronze jewellery and other metal objects, glass beads, pottery and bones - in other words, typical material from a settlement, similar to that found at farms and villages inland. However, traces of craft activity are sometimes more numerous at the coastal sites. Graves and burial places have not been found in connection with the sites investigated along Roskilde Fjord.

The activities began in the 6th to 8th centuries, and apparently continued uninterrupted until the 11th to 12th centuries. After this, some of the sites became villages, often with a Romanesque church, whilst others remained deserted, in archaeological terms, as meadows, fields or common land. Whether there was a marked discontinuity between the landing place and the later village or major farm cannot be determined with certainty on the evidence available. Only the area of Selsø-Vestby has contributed significant archaeological material in this respect, and there is no doubt that here there was a break between the pit house settlement and the medieval farms. However, it is still an open question whether or not a major farm was situated near Selsø church in the Late Viking Age.

Typical of the activities that went on at the specialised landing places were the 'fire' crafts such as metalwork, in the form of bronze casting or the working of iron, as well as the production of glass beads. To these must be added the making of textiles, fishery and ship repairs, though the two last crafts are only sporadically represented. As regards fishery, the only evidence is bones, while tackle cannot be identified with certainty. Taking into consideration the topographical position of these sites, however, it would be against the nature of things if fish bones were not found, not least in view of finds of marine species in inland settlements such as Lejre and Gårdstånga in Scania.[4]

Apart from this, the objects found (depending on the method of investigation) are typically metal objects and/or pottery. There are no significant signs of external contacts in the form of foreign objects, and other traces of trade or barter are very rare. Nor did attempts to identify foreign objects among the finds by an indirect method, such as the analysis of charcoal from Lynæs and Selsø-Vestby, yield any results.

Landing places of the type shown to have existed in Roskilde Fjord would at first sight seem to have a number of common characteristics which should be found in many places. A closer analysis of the material, however, reveals that we are looking at variations on a theme, and that the question of localisation does not revolve round one single decisive factor.

The *topographical characteristics*, the combination of steep and flat coast, offer certain possibilities as a basis for investigation, but there are numerous examples of this type of coast where a landing place cannot be identified. Moreover, topographical traits are not uniformly clear in connection with all the located sites, and even flatter stretches of coast contain objects of interest.

Archaeological finds along the coasts have in many cases been followed up by further investigations, and have - not surprisingly - proved to be a viable approach. However, to carry out exploratory digs in connection with all coastal finds has been outside the scope of this investigation, so it is impossible to say to what extent they would in all cases point to more comprehensive activities and are not just casual, lost objects.

Strikingly enough, a third factor is that of *Romanesque churches near the coast*. There is no direct, functional connection between these church buildings and the activities that went on at the beach several centuries before they were built, but it is noteworthy that in four out of five cases the existence of a Romanesque church coincides with finds from the Late Iron Age in the southern part of the fjord. In addition there are three other Romanesque churches near the coast, the existence of which can be combined with other indicators to support the presumption that there was a landing place in the area.

Landing places not connected to Romanesque churches can be exemplified at Sønderø and localities around the mouth of the fjord. There is a natural explanation in the latter cases, in that they are situated in predominantly deserted landscapes, where 'colonisation' only began in the Early Middle Ages. Sønderø distinguishes itself from the other sites by not only being situated in a densely populated area and lacking the Romanesque church, but in addition by being situated close to the existing village of Veddelev, with a place name belonging to one of the oldest types.[5]

Place names have otherwise not proved to be useful. Only in a single case has a place name been the direct cause of the investigation of a landing place, and that is in connection with 'Snæk Agre' on the western side of Lake Selsø. However, the exploratory dig was negative, and the name probably refers to a settlement on the opposite side of the enclosed cove, Selsø-Vestby.

Settlements in the hinterland have proved to be of little use as clues to coastal activities. In terms of the archaeological material, a weakness of the hinterland analysis is that it has not been possible to carry out a systematic control of selected areas with the aim of confirming or rejecting suppositions about gaps in the building patterns. The area between Frederikssund and the river Hove Å is a good example of this, as it mostly comprises finds in wet soils in the many streams and marshes. The conditions at Halsnæs also deserve closer investigation in the light of the interpretation of Lynæs, which to some extent is based on the lack of finds in the hinterland.

Neither have presumed or identified buildings of central importance been related with any certainty to actual activities on the nearest stretch of coast.

6.

The most common type of coastland in Denmark is characterised by a relatively flat transition between sea and land, and there are many coves and headlands that offer shelter. Such a coast offers numerous natural landing places that could have been used from the Late Iron Age onwards. However, this potential is inversely proportional to the number of landing places demonstrated by archaeological evidence, and in the country as a whole fewer than 40 localities have been investigated to a degree that allows for a detailed outline of their structure and function. The degree

of documentation regarding the majority of those sites which in virtue of their topographical position and the type of finds can be compared to conditions along Roskilde Fjord is very uneven indeed. In addition, only a few of them have been the object of thorough, major archaeological investigations, a fact which must be taken into account in the study of landing places in Denmark. Typical of the whole picture is the fact that medieval towns and the major trading and craft centres, revealing special cases of building construction and a large corpus of finds, have for years been the preferred object of archaeological investigations directed at sites with a maritime connection. The results have been published to a greater or lesser extent, and have for a long time formed the basis of discussions about trade and the formation of towns in Scandinavia. Here we are thinking of Hedeby, Ribe, Århus, Löddeköpinge and Åhus, which were basically landing places, but which clearly stand out in relation to the majority of similar localities.

It must be stressed that this chapter does not offer a complete summary of known and putative coastal localities in the Danish region as of 1997. On the contrary, the aim has been to include sites from different parts of the country, in order to bring out variations in topography, dating, size, structure and the type of material found.

7.

Archaeological data from landing places in Denmark is seldom unequivocal, and a very detailed classification of sites is not possible on the evidence available. In other words, localities can only rarely be identified as having been oriented towards specific goals. It would, however, seem to be a general trait that landing places were *multi-functional*, that is, carried out or were the basis for several different tasks related to seafaring.

It must be the case that a specialised landing place will be distinguishable from agrarian settlements by its topographical location, its internal structure and/or the material found there. This broad definition explains why such different locations as pre-urban structures and very modest sites without any trace of buildings can be put in the same category. The usefulness of allowing such great diversity can clearly be seen from the fact that when attempting to determine the functions of sites one finds that nearly all of them possess *multi-functional traits*, whereas examples of what one could call *mono-functional* sites are few. One could make a more detailed classification of sites, but the majority of cases would be 'exceptions from the rule', and the broad parameters would lose their justification.

In the following are defined a number of functions which, on the basis of finds, can be linked to the specialised landing places.

Settlement harbours

A location which in terms of access from the sea is situated off what we might call the main sailing routes, e.g., at the head of a fjord with an inhabited hinterland, and offering finds which indicate functional variety can be categorised under the very broad heading of 'settlement harbour'. This indicates that the site has catered to the needs of the hinterland population in terms of shipping and fishery. At the same time it means that there will often be traces of a number of different activities involving local men and women, and there will usually also be traces of organised crafts, probably carried out by specialists from outside the area. A certain amount of trading might also have taken place.

In my opinion, the term 'settlement harbour' covers the specialised landing places, which were the home ports for both local chieftains and people of a lower social order from the hinterland.

Boatyard

Archaeological traces of boatyards can only be described as elusive, and parts of boats can only be found in specially favourable circumstances. It has been possible to show that boat repairs were carried out on the bank in the centre of Hedeby (Crumlin-Pedersen 1997) and at a yard by the river at Fribrødre (Skamby Madsen 1991). This latter site is special because of its dating (11th - 12th century), its situation (hidden away by a waterway), and by the fact that it is a mono-functional locality. At least, no finds have been made to date that indicate other activities.

In other places, too, traces of boat building have been found, at Lundeborg and Selsø, for example, whilst the argument in favour of Selsø-Vestby as a boat and rigging yard is based on circumstantial evidence alone. The archaeological material reveals that boatbuilders have worked at different types of sites, which furthermore show considerable variations as regards their topographical situation.

Lookout post

It is important for a lookout post to have a strategically advantageous position, at a site which also offers shelter to ships and their crews. In Roskilde Fjord, Lynæs is a good example of such a site, but it is to be expected that further sites will turn up at the mouths of other fjords and in areas where shipping has always been concentrated, such as at Storstrøm and the neighbouring sounds, at the Great and Little Belts, the Sound, etc. In the event that the archaeological indicators at Lynæs should prove to be the general pattern for such sites, it will be difficult to find them without systematic exploratory digs for topographical criteria. In this connection, a closer examination of Gedehaven near Skælskør, Lodshusene on Odense Fjord and Skibsted Fjord would be interesting.

Transhipment site

In this connection, transhipment is defined as the transfer of goods from one ship to another. Strictly speaking, of course, transhipment could have taken place at any place near the coast if we include the movement of goods from ships to wagons, and this is a useful piece of information to keep in mind, but as a preliminary manoeuvre I have cho-

sen a more narrow definition of a transhipment site. However, at the level of principle, there is another problem regarding a possible conceptual distinction between 'transhipment' and 'trading'. If goods are moved from one ship to another, and at the same time change hands, then in reality we are talking about a trading transaction.

In reality, transhipment sites cannot be documented archeologically, in that the goods were of course shipped away. Neither can it be determined whether the transfer meant a change of ownership. The interpretation of Lynæs as a place where goods were off loaded from cargo ships to smaller vessels is based on the situation of this locality at the mouth of Roskilde Fjord, which is difficult to navigate.

The Lynæs wreck from the 1140's was, in its prime, a vessel of considerable dimensions, and in my opinion its size, along with the place it was found, supports the above interpretation.

One can also presume that transhipment also formed an important part of the function of major trade and craft sites, but, as has been said, this activity should rather be defined as trading.

Resting places
In connection with the type of seafaring activities generally engaged in, at least in some Danish waters, resting places were required along the coast which could be used to spend the night or to lie over to wait for better weather (Lund 1983). The most important facility at such a site was a natural harbour that offered shelter, whilst the availability of fresh water was not necessarily decisive. Another advantage might well have been that the hinterland was deserted, or at least thinly populated, so that the risk of an attack by the local population was limited. Taking all this into account, we might well presume that small islands in Danish inland waters might often have been used as resting places by visiting ships, not least in cases where there was only one ship, or a few ships with only a small crew to defend them.

The question is whether we should operate on the assumption that there was a well-known network of resting places that were used again and again, for if this was not the case, we must conclude that it will be very difficult to trace this sort of locality. In the case of resting places chosen in a more or less casual manner, the material remains after a single visit, or just a few visits, of this kind will in terms of type and number be too few to document the use of the place.

In the case of familiar and much-used sites located at the transition between to types of waters, the situation is in many cases different. As examples could be named Lynæs and Alholm at the mouth of Roskilde Fjord, and Baes Banke at the top of Fyns Hoved, which are all characterised by a deserted hinterland, and lack the otherwise typical women's ornaments, which indicates that the site was only used in connection with seafaring activities.

Fishing sites
Throughout history people have made use of the resources of the sea, and the Late Iron Age is no exception. This is clearly revealed by finds of bones of salt-water fish both at coastal and inland sites. For this reason, the paucity of finds of fishing tackle at both coastal and inland sites offers food for thought. Hooks and eel spear points of iron appear sporadically, and never in large numbers, just as stone weights for nets and lines are also found, but in small quantities. In situations well suited to the preservation of finds, net floats of bark may be found in relatively large numbers, which points to the widespread use of nets.[6]

With regard to the island of Funen, a recently-published book suggests that permanent fishing *hamlets* were to be found in the 1st to 2nd centuries, but that by the Late Iron Age these had been abandoned in favour of fishing *sites*, which were used on a seasonal basis (Christoffersen & Porsmose 1996). Whether this theory holds water is a matter for discussion; at all events it cannot apply to Roskilde Fjord. Fishery and hunting may have been engaged in by farmers at particular times of the year with the aim of providing for their own households, just as would have been natural for people to 'harvest the rich resources of the sea' if they were staying near the coast. This does not mean, however, that in the Late Iron Age fishery already played the important economic role which it did in connection with the herring glut of the Middle Ages, and there is no decisive evidence for such a supposition. Trading in fish naturally called for some method of preservation. The suggestion has been made in connection with a surfeit of finds of fish bones at Hedeby and Ystad-Tankbåten that these were salted herrings, and that the salt has preserved the bones so well that they are in better condition than they otherwise would have been (Lepiksaar & Heinrich 1977; Strömberg 1978). However, a surfeit of bones may also occur without salting, as is the case in connection with the medieval herring industry at Selsø-Vestby. The gutting of fish that can be shown to have taken place here took place before salting, and the remains left over from this process were fresh (Enghoff, in print).

Ferry sites
Large numbers of places of transport between different parts of Denmark are known to have existed in historical times (e.g., O. Jørgensen 1986; Crumlin-Pedersen 1996:15), and the probability of their existence in earlier times can be shown. A large number of the coastal landing places dealt with in the present thesis may well have functioned as ferry sites, on the simple assumption that at places where there were small boats people might well have paid to be ferried over. On the other hand, the establishment of ferry sites for this purpose alone must be regarded as a much later arrangement, which in the Middle Ages was connected with the country's (read, 'the King's') need for transport,[7] and only much later with more general, public reasons.

However, it is difficult to see how ferry traffic could be documented archeologically.

Trade and craft sites
As I see it, trade and crafts could have been practised to a greater or lesser extent in a variety of circumstances - at

landing places or in villages - but on the basis of the archaeological material a particular type of locality can be defined where precisely these activities were the primary functions of the site. In the Danish area, Hedeby, Ribe, Åhus I and Åhus II belong to this category, whilst Århus, Sebbersund and Löddeköpinge are less clearly documented.

While the actual transaction or selling of goods is almost impossible to see from the material remains left at the site, some sites contain such a large amount of rubbish from craft activity that we must be looking at a production process that far exceeded the needs of those who worked there.[8]

In addition, remains have also been found of a relatively large number of foreign articles of everyday use such as drinking glasses, grinding slabs and pottery, as well as raw materials brought in to be worked. Now and then imported semi-finished goods are found, which were certainly not used at the site in question, but which were to be finished and then sold (Steuer 1987a).

At the type of locality we are referring to here, not only are there larger quantities of foreign objects and craft refuse, but the number of crafts engaged in is larger than other places, and it would appear that there were a number of craftsmen who primarily worked at these trade and craft sites. These included amber grinders, makers of glass pearls and comb-makers,[9] as well as goldsmiths and silversmiths.

The internal structure of trade and craft sites cannot be said to follow any particular pattern in relation to the craft carried on there, but the sporadic excavations made offer little evidence on which to base any final conclusion. However, the information available does allow for reflection on the differences and similarities between several of the major trade and craft sites of the time.

It is, for example, noteworthy that Ribe was organised around a long street, just like the Frankish and Friesian sites (Brandt 1985), whilst Hedeby seems to have grown up around a central section near the water. Ribe must be regarded as belonging to the North Sea trading region, and one is tempted to suggest that a contingent of Friesian traders were behind the practical arrangement of the site.[10] Foreign elements would also appear to be present at Hedeby. The rectangular houses with roofs supported on the walls are foreign to Danish building methods, and the wharves at the harbour are somewhat reminiscent of Dorestad (van Es & Verwers 1980). In addition, the site is divided into small lots, and it has been pointed out several times that there are clear Friesian elements in the finds at Hedeby, not least in the 8th and 9th centuries (Steuer 1974; Jankuhn 1976). There are however several indications that Hedeby was not an area especially under Friesian influence. It is not organised around one transverse street, and the buildings are not like those at the Frankish/Friesian trading sites.

In the case of the Danish trade and craft sites outside the area of Friesian influence in Schleswig-Holstein and South Jutland, no proper division into lots has been registered. However, it is worth noting that investigations of 9th to 10th century Århus have taken place on the periphery of the landing place, and that the pit houses at Søndervold are sited within the semicircular rampart, in a manner similar to the pit houses in Hedeby's chamber tomb area, that is, peripheral to the settlement's primary area of activity at the beach. As things stand at the moment, investigations of the 'harbour area' at Århus have been confined to excavations at the Cathedral School (Andersen & Madsen 1985), where small pit houses were revealed, though it was not possible to find evidence of any possible organisation into lots, etc. Clearly, renewed investigations of what must have been the central part of the site might possibly provide evidence of a division into lots as at Hedeby, but on the information available at the moment the pit houses near the shore indicate the dominance of another type of building in Århus in the 10th century.

Military sites
Emplacements for the defence of particular localities are not unknown in southern Scandinavia in the Viking Age, but it is characteristic that they are never found together with agrarian villages, but can be shown to have been connected with a handful of landing places. One type of construction is the semicircular emplacement, which belongs to the 10th century, and which has been shown to exist in connection with Hedeby, Ribe, Århus and possibly Lödeköpinge I, though in the latter case the emplacement has not been dated. The other type is the circular emplacement, monumental in size at Aggersborg and smaller at Trelleborg in Scania. The defended sites are evenly distributed along coasts and waterways, but geographically they seem to be linked to Jutland and West Scania.[11]

There is a clear connection between the semicircular emplacements and the trade and craft sites, and this combination may be seen as an expression of the presence and control exercised by royal power at these places. The defence emplacements may be seen as proof of the considerable economic interests that were connected with the trade and craft centres and the importance of defending them against attacks from rival potentates or common pirates. The economic aspect was undoubtedly of vital importance, but at the same time these sites would seem to have been important in terms of organisation, as the king's administrative centres with an official representative, *comes vici*, possibly a residence, and as mustering places for the king, his court and probably also his army.[12] In this way, the trade and craft sites played a political and military role which was important in the 9th century, and was given a physical expression in the 10th century in the form of defence emplacements.

Hedeby was situated in a border area, facing the Saxons in the South, and perhaps to an even greater degree the Franks and their sphere of influence, which from a vantage point north of Danevirke became increasingly close and threatening in the 10th century. The physical connection between the monumental defence emplacements and the settlement of Hedeby in the 10th century was no coincidence, and the security offered by this military protection provided good conditions for trade, and made the place an

important outpost in the southwest corner of the Baltic. The harbour was fortified, and out in the Schlei has been found a wooden framework of the same type that forms the foundation of the main rampart at Danevirke, which dendrochronology dates to 737 AD (Andersen, Madsen & Voss 1976:57f).

Ribe possessed the same characteristics as Hedeby: situated in a border zone facing Friesian/Frankish territory, with access to the North Sea and the trading and military opportunities offered here. The first fortification in Ribe was a semicircular emplacement, but in the 11th century the defence works consisted of an almost straight line across the sharply pointed promontory between the River Ribe and the River Tved, though we do not know how the site was defended on the side facing the river. It seems reasonable to suppose that a barrier was erected somewhere on the river between Ribe and the sea, forcing potential invaders to go ashore on the opposite side of the river to the trade and craft side. Any conclusions relating to Ribe in the 10th century have naturally to be tentative, since the structure, function, and size of the site as well as other details cannot as yet be determined on archaeological data after the middle of the 9th century. However, the very existence of the defensive emplacement and the episcopal see indicate that the site did not lose its importance, but continued to be an important pawn in the political and economic chess game of the time. This would seem to be emphasised by the large platform, built of turf and covering 5,000m^2, which excavators have interpreted to be a possible royal residence (Feveile 1994). The newly-discovered, almost rectangular moat in the southeast corner of the area divided into lots must also be taken into consideration, despite a very wide dating margin.

Århus differs topographically from the other semicircular emplacements by being exposed to open water, and could not be defended by fixed barriers. It is therefore reasonable to suppose that there must have been some sort of fortification at the site on or near the beach as a supplement to the semicircular emplacement. In relation to several places a few nautical miles to the North in Kalø Vig, which in natural terms were much more suited to landing places, there must have been weighty reasons to place Århus on low sandbanks surrounded by a river, water meadows and wetlands. Århus Bay, which is part of the Kattegat, is deep, bounded by Djursland in the North, Zealand in the East, Jutland in the West and Funen in the South, with the island of Samsø lying relatively sheltered off the coast. The Bay was important as the route between the northern part of Kattegat and the Belts around Funen, and thereby also the passage to the southwest Baltic. In this same area, Stavns Fjord on Samsø is generally recognised to have been 'a base for the fleet', which, at all events by the 8th century, was linked via the Kanhave canal to the waters to the West (K. Christensen 1995). It is possible that warships were permanently stationed at Århus.[13] If this was the case, and Århus Bay was under constant surveillance, this *can* be the reason why the trade and craft site was established and fortified

with earthworks and moat as early as the 10th century. In other words, what we are looking at is a military camp that protected those civilian activities which in time became so extensive that Århus later became one of the leading episcopal sees in the country, comparable to Ribe.

In contrast to the other fortified sites, the remaining defensive fortifications, the circular emplacements at Aggersborg and Trelleborg in Scania, are not mentioned in the written sources and did not become episcopal sees. Archaeological finds from these two sites do not seem to represent a high level of trading or craft activities, but are more on a level with places such as Selsø-Vestby. Aggersborg is mentioned as a royal estate in the 11th century, and has remained a small estate, whereas by the 13th century Trelleborg had developed into a market town. Both localities were placed at centres of traffic in the Later Germanic and Viking periods, and Aggersborg had acquired a dominating position with regard to shipping in Limfjorden, but at neither place did these fortifications lead to the growth of civilian activities. In the case of Aggersborg, this could be connected with the fact that the fortification, if it ever was finished, was only in use for a very short period of time.[14] Moreover, changes in conditions affecting navigation in Limfjorden, such as the silting up at Thyborøn and of the putative connection to the Skagerak at Sløjen, reduced the importance of the surveillance function at this point.

Agrarian landing places

Amongst the partially investigated coastal localities presented in Chapters 5 and 6, there are several which in virtue of their structure and the type of buildings must be presumed to have functioned as a combination of an agrarian settlement and a landing place. This idea is exclusively based on the situation of these localities near the coast and the presumption that they naturally made use of the opportunities offered by shipping.

However, there are a number of central problems connected with the interpretation of these sites. On the one hand, excavations have been too limited to allow for definitive conclusions about what the buildings looked like, and on the other hand we have to take account of possible developments over a period of time, such as has been suggested in connection with Gershøj in Roskilde Fjord. Whether a site developed from a specialised to an agrarian landing place can only be determined by well-dated finds in connection with relevant structures, and these are unfortunately few and far between. Moreover, the pattern of finds does not differ from that of villages in the hinterland, as in the case of the majority of the specialised landing places.

At typical trait is that the agrarian landing places do not seem to appear on the scene until as late as the second half of the 8th century, and these early examples are all to be found on islands in Limfjorden. In the Late Viking period they are also to be found in other places, and in the Early Middle Ages they became more frequent, at least in certain places such as Roskilde Fjord. In other areas they are rare or non-existent, as would seem to have been shown for Funen

(Christoffersen & Porsmose 1996). There were perhaps special conditions in the western part of Limfjorden that influenced the siting of buildings in relation to the sea. If one looks at the distribution of coastal finds in the area, they are more or less evenly spread from Ålborg in the East to Thyholm in the West (fig. 96). It is typical that nearly all the small islands in the western part of Limfjorden have revealed coastal finds. The island of Mors is especially rich in this type of find, and in general has also many finds from the Viking Age. It is an open question to what extent the coastal finds are an expression of maritime contacts, or rather of the inclusion of marginal coastal areas already in the Late Germanic and Viking periods. Throughout the centuries special methods of fertilisation added large quantities of mixed fertiliser to the inner village fields. These layers are not infrequently 1.5 metres thick, but larger deposits are known - at Karby, for example - and at Lødderup the layer is 2.5 metres thick (Aaby & Vegger 1997). No exact date can be put on the introduction of this type of fertilisation, but it does not appear to be older than the Middle Ages. Objects found in these layers may show a wide chronological variation, since the mixed fertiliser consisted of manure mixed with everything from old clay walls, roofing materials and burial mounds to turf from the outer fields. Finds from graves and settlements turned up in this connection are therefore secondary elements in later soil samples (Aaby & Vegger 1997). Of necessity, archaeological activity in connection with inner village fields must consist of excavations that remove the thick, later layers that cover the older surface. For this reason, investigations of buildings in these areas do not resemble excavations at most other places in the country, since the original land surfaces, for example from the Late Iron Age, are found intact. This means that excavations take the form of exploratory ditches, whilst it is only rarely possible to reveal large areas of the surface, unless later cultural levels are removed by machines.

These special conditions form part of the reason why the majority of finds on Mors from the Late Germanic Iron Age and the Viking period only comprise a few identified structures. This obviously poses a problem in connection with an assessment of whether a particular place was a specialised or agrarian landing place, since this judgement is mainly based on the type and quantity of buildings. This is evident in the discussion about Karby and Dalgård, and the thick layer of soil (up to 0.6 metres) at Nederby on Fur has also been mentioned as a possible example of this same tradition of fertilisation (Bertelsen 1993)

8.

Several of the places presented in Chapter 6 have elsewhere been publicised as 'trading sites' or 'market places', or have in other ways been related to 'trade' and 'barter'. As a justification for using these terms is often named the presence of foreign objects, as well as scrap silver, scales, weights and refuse from craft activities, but it is clear that there is no generally accepted definition or set of rules for the connotation of these terms. In this connection, therefore, it is clear that we have to discuss these terms as far as the Late Iron Age is concerned, and consider whether one in fact can identify trading or selling activities from the archaeological material. It is also important to discover the importance attached to trade and barter.

Basically, I am of the opinion that the point of departure for any synthesis or the creation of theoretical models should be archaeological materials, no matter what the topic. However, it would be very narrow-minded to dismiss the use of modified social anthropological models out of hand. As the basis for a discussion these can provide a fruitful starting point, as many publications have shown, though one should be aware of the problems clearly associated with this approach. The main obvious weakness is the high degree of generalisation used in such models, and the extent to which archaeological evidence is 'pressed' or sifted to suit the theory. This process calls to a high degree for a thoroughly investigated and representative body of finds that can be narrowly delineated both in chronological and spatial terms. In particular, the complex nature of transport and trading systems makes them very difficult to document on the basis of archaeological evidence gathered at just a few sites, which is the reason why central portions of the argument have to be found in social anthropological studies. In many cases, differences in the natural resources available form the basis of barter models (Brumfiel & Earle 1987:2), and quite clearly if this is the point of departure certain aspects of the theory will not be reflected in archaeological finds from an area that is geographically narrow and uniform in terms of resources.

It should be stressed that there has been a tendency in archaeology in northwest Europe to focus on the main lines of trade and barter in the period after the fall of the Roman Empire. Contemporary written sources are often used to support models and theories, but it is important to note that the source material used concerns matters related to the elite of society: king, church and nobility, and that these same persons must be seen as being behind many of the trading sites investigated. The 'undergrowth' of minor sites that formed part of the transport system are only represented to a much less degree in models and written sources. It is therefore important to include these multifunctional sites that were involved in trade and barter at various levels, or which served as bases for sea transport.

If we regard the period from the 3rd century until at least the 10th century as a single whole, there is a marked degree of continuity in the trade and barter system. From the point of view of the elite, the goal of these external contacts did not undergo drastic changes in this period, but was always aimed at acquiring prestige objects and controlling their further distribution. At the end of the 10th century,

however, there occurred a decisive break with the traditional conception of the basis of power, connected with the entry of the country into the group of Christian kingdoms, and powerful influences from western Europe in terms of religion, politics and the economy. However, the socially conditioned gift economy did not disappear overnight, but left echoes far into the Middle Ages. In the sphere of consumer goods, a new element was the introduction of practical daily objects into the range of imports in the 8th to 9th centuries, and in the course of the following centuries mass-produced objects such as bronze jewellery, glass beads and combs of bone were an important part of the turnover. However, the decisive turning point did not come until what was previously the subordinate system was converted on royal initiative into the dominant one at the end of the 10th century and the beginning of the 11th, when the traditional functions of the trading sites and the central sites were fused into one in one place - the town. This institution is seen by a number of researchers as the expression of a feudal manoeuvre by the kings to levy taxes on the sale of goods and services (Brendalsmo 1994; Saunders 1995). Towns were situated on royal property, and a permanent settlement involved taxes to the crown in the form of rent paid on lots, and dues to be paid on the income of free craftsmen and merchants.

Objects related to trade

The literature lists scales, weights, foreign objects, coins, and scrap silver and gold as categories of finds connected with trade. A common trait is that a single find seldom leads to speculation about trade, but just as typically a locality with only a couple of finds of this type represented will be related to trade. This type of presumption can hardly be regarded as reasonable, on the basis that the type of objects mentioned can very easily be related to situations of quite a different type.

On the basis of the very common idea that objects were valued in relation to precious metals, two of the objects most widely used archeologically to indicate trade are scales and weights. However, these instruments were not only the tools of the merchant, but were also used in other connections. For example, scales could have been used in connection with the payment of fines or dowries in precious metals, and craftsmen also used them when weighing metals for making alloys, etc. (Hedegaard 1992). Scales and weights can thus be associated with a variety of different activities. In consequence, a grave containing such objects cannot be said beyond doubt to be that of a merchant, just as finds of the same type in a building do not justify the conclusion that trade went on there, nor that the place was a trading site. Taking into account the use of precious metals in connection with fines, a rich grave containing scales and/or weights could be the physical symbols of the dead man's function as an arbitrator (or judge, if you will), which must have been a position of trust.

If we ignore the methods used by metalworkers, then coins as well as scrap silver and gold form the next obvious link in the chain of associations aroused when scales and weights are mentioned. As weighing instruments, however, cannot be unequivocally connected with trade, no more than silver and gold can, whatever form they take. The payment of large sums of money in connection with marriage by purchase, fines, tributes, etc., might certainly have involved precious metals, and as regards the later part of the period a relatively detailed amount of information is available concerning the use of silver rings in this connection (e.g., Gaimster 1991). On the basis of analyses of deposits of silver from the Viking Age in southern Sweden, Birgitta Hårdh has concluded that the much fragmented pieces of silver found in treasure trove from the last decades of the 10th century and the beginning of the 11th indicate that silver was used as a means of payment in day-to-day trading (Hårdh 1992:141). Large quantities of coins and small silver cuttings (1-2 gr.) found spread a round a settlement, so that there is clearly no question of a single treasure trove that has been ploughed up, must probably be regarded as an indication that market trading using silver as a means of payment went on there.

The interpretation of the presence of so-called 'foreign objects' is equally equivocal, and cannot be used in isolation as an indication of trade. There are many examples of very different judgements as to what type of 'foreign objects', and in what quantity, would be required to link an area with trade. One of the most well-founded approaches has been proposed by Nils Ringstedt, who has identified such factors as: scales, weights and coins, perhaps together with imported objects; raw materials and semi-finished goods in foreign surroundings; bronze, glass and weapons in or around a settlement; a large distance between place of origin and place of finding in relation to "everyday articles of special importance", and; foreign pottery which might have been used as packaging. On the other hand he does not necessarily see a lack of systematic distribution or finds of individual imported objects as evidence of trade (Ringstedt 1989:82). Ringstedt's definition summarises the elements most often connected with trade, some of which are better justified as indicators than others. Moreover, his definition is sufficiently broad and without any reference to actual conditions, such as structures, combinations of finds, or quality and quantity - all of which of course makes it very flexible. Using a less traditional approach, Herbert Jankuhn has chosen to concentrate on objects, which on account of the materials they are made of are not considered to have been attractive as plunder or gifts, so that their presence alone must be regarded as being connected with the requirements of trade. On the basis of the presence of large quantities of basalt grinding stones at settlements in North Germany and South Jutland, Jankuhn has suggested that the existence of articles of everyday use over several generations and in fairly constant and numerous quantities, in cases where the raw materials and production processes are not local, can be defined as indicating trade. The same applies to raw materials from distant places of origin, imported for production purposes over a longer period,

and worked on the spot (Jankuhn 1987). Jankuhn's approach differs from most by concentrating exclusively on objects that were not potential plunder, and the origin of which can be determined with some certainty. This offers good opportunities for determining areas of contact and perhaps even transport routes for such goods as iron, steatite, slate, basalt, etc., but at the same time the approach is limited to the 8th century or later.

A comprehensive overview of trade cannot of course be gained by using everyday goods alone, as this mostly includes objects which are not found in Denmark before the 8th to 9th centuries at the earliest. Moreover, apart from a number of regional peculiarities, we are talking about objects and materials that are pretty evenly distributed among the settlements, and which largely represent the last stage in the trading process, namely, the place where things were used.[15]

It is not entirely certain that finds of the type mentioned can, in isolation, be used as an indication of trading places or trade. The identification of the transaction itself, for example, is impossible, for what clues remain that can really document this event? In all probability, trade can have taken place in connection with all types of settlement and localities - in fact, at any place where two parties met.

9.

Landing places - specialised as well as agrarian - form a clearly visible part of the pattern of settlements in the period between the 6th and 12th centuries. At several places indications have been found that they already played a role in the Roman Iron Age, but the degree - and presumably the type - of activity at the coast was considerably different than in the following centuries. In general, specialised landing places were established, or those already established changed character, from the middle of the 6th century, but what was behind this development is a central question which has yet to be cleared up.

The central problem is whether one should regard the specialised landing places as an isolated expression of the needs of the elite with regard to the use of the sea. In other words, did the specialised landing places appear on the scene in response to specific demands by the highest ranks of society, or are we looking at "natural growths" - places situated for centuries at the best natural sites suited to the maritime activities of the hinterland? Or is there perhaps a third possibility: that the elite did not intervene until some later point in history, changing the character of places that already existed?

If we compare the development of society from the Late Roman period to the Early Middle Ages with the development of the landing places, we find a remarkable fit as regards the times of the changes that can be registered archeologically.

1) In the 2nd to 3rd centuries we see changes in the structure of villages, in technology and in the nature of external contacts, at the same time as the first specialised trade and craft site, Lundeborg, was established in connection with the Gudme settlement.
2) In the 6th to 7th centuries the whole of northwest Europe was much influenced by developments in the Frankish kingdom. At the same time we see the appearance of a new type of coastal activity, the specialised landing places primarily connected with seafaring activities.
3) At the transition between the 7th and 8th centuries, it appears that a royal power based on Jutland possessed a degree of control over high and low in society alike previously quite unknown in this part of the world. Village settlements were reorganised, and major building projects were started. At this point, large trade and craft centres of a maritime nature were set up to promote international contacts.
4) In the 11th to 12th centuries Denmark was, in principle, gathered together as one kingdom,[16] and the Church had gained a central position in relation to the Crown. The redistribution of land and the breaking of new land, together with the abandonment of the old 'central' settlements in favour of new towns, changed the conditions of life of the population. At the same time, the specialised landing places ceased to function as they had done for hundreds of years, being either reorganised as villages or regressing to be harbours for small ships or fishing hamlets with a low level of activity, as they must have been before the 6th century AD. Eventually, they could be abandoned completely.

Those who took the initiative and were behind the changes mentioned above must at all events have been leading personages in society. Since general developments in society can be read off, almost item for item, in changes to maritime sites, there is a very high probability that the interests of the leading nobility are expressed here. However, this does not mean that it was only the elite who could use the specialised landing places.

There are several senses of the term 'noble' - as reflected in grave finds and the size of farms - and it is certain that such ranks as 'kings', 'chieftains' and 'princes' included wealthy persons who were in a position to build and fit out ships. However, we are faced with a problem when trying to determine with any certainty to what extent less powerful nobles - or rich farmers - were involved in seafaring activities, as the motives behind any participation on their part are not clear. We may certainly reject the idea that it was only a question of fishery or hunting, and even if we let our imagination roam, the only incentives that seem plausible are various kinds of plunder or trade. In general, the development of the specialised landing places and the nature of the materials found there reveal that seafaring activities became important from the 6th and 7th centuries, not least from the end of the 600's onwards, not just for the elite, but also for persons of lower rank.

'The early phase', 200-520/30 AD

In the 'early phase' there is only a very modest number of coastal sites, despite many indications that there were a lot of overseas connections. It is evident that this is connected with the fact that seafaring activities at this time did not leave the traces they did later. For this reason we only have a superficial knowledge of them, and experts disagree, for example, as to who transported Roman luxury goods over the sea to their destinations in southern Scandinavia. Written sources have passed on to us that the 'Saxons' attacked the English coasts in the 4th century, evidence of the fact that neighbouring peoples did not hesitate to cross the southern part of the North Sea in their oared vessels.[17] There is therefore no reason to doubt that Scandinavian boats, such as those known from Nydam bog, crossed open water carrying people and 'goods'. The only question is the extent of these activities. The extent and nature of warlike raids across the seas cannot be determined with any real certainty, though it can be shown that from time to time small bands of warriors landed on foreign soil (e.g., Ilkjær, Jouttijärvi & Andresen 1991). Whether the aim was simple plunder or, as has been suggested, to win more "lebensraum", cannot be determined in all cases, but it is certain that the enshipment of what were probably quite modest fleets has not left many archeologically recognisable clues as to what went on at the coast.

In the context of the present state of knowledge, the overwhelming traces of trade and craft activity found at Lundeborg represent a new departure in Denmark, the inspiration for which must be found in the Germanic areas to the South. Using Ulla Lund Hansen's theory about the connection between Scandinavia and the Roman Empire (Lund Hansen 1987), it would be natural to conclude that parallels to Lundeborg must be sought along the waterways and coasts north of the Rhine estuary. Even so, it is clear that the sites in this area which were connected with trade and craft activities were of a different nature than Lundeborg. We could mention the salt-marsh areas of Bentumersiel and Jegumkloster near the River Ems, which must be defined as transhipment sites. They are situated on navigable, natural drainage channels connected with a river, and were apparently used as depots for agricultural products such as grain and cattle that were to be sold to the Romans. The excavations at Bentumersiel showed that the area was divided into lots, and that there cannot have been an ordinary agrarian settlement at the site.

Only a single long house without a stable was found, whilst several stack sheds and similar buildings were revealed, as well as traces of the working of metals (Brandt 1977; Schmid 1984:202ff). Another salt-marsh locality with many traces of craft activity is Feddersen Wierde near Bremerhaven, which at the time we are referring to was a 'wurt' village with about a score of farms, including a 'chieftain' farm, situated radially from the centre on an artificial mound near a navigable system of drainage channels (Haarnagel 1979).

Nor as yet have places comparable to Lundeborg been found along the south coast of the Baltic, but the craft activity site at Jakuszowice near Krakow in southern Poland offers certain interesting similarities. No dwellings have been found, and the materials recovered, which include refuse from craft activities, were discovered in the same sort of cultural stratum as at Lundeborg. However, this site does not lie near a navigable waterway, and has only been investigated to a limited extent.

The conclusions that have been arrived at regarding maritime sites in the 2nd to 5th centuries rest on a very shaky foundation, also as regards the development of seafaring activities and the related sites. However, it is clear that the seaworthiness of ships, which made them able to cross the North Sea, and their increased importance (including the military purpose of 'troop transportation') express the central role these vessels must have played seen through the eyes of the elite. That the threat from the sea was very real can be seen from the two systems of barrages in Haderslev Fjord from the first decade of the 5th century (Rieck 1991), and what is presumed to have been a barrage near Frederikssund in Roskilde Fjord from the same period. The use of ships was natural in a geographical area like Denmark, with its long stretches of coast and numerous islands. The development of clinker-built rowing boats, however, was to meet the need to sail further afield than the protected areas near the coast, in more tempestuous seas where the waves could be broken by the high, curving stem. Those who built these boats were thinking beyond fishery. To be able to transport oneself across the sea was important for the elite, not least in military terms, and indeed the use of them must have been reserved to the top echelons of society, who had the means to build them and collect crews. The number of vessels was probably not very large, at least as regards the large ships that could cross the Baltic and sail the Skagerak and the North Sea.[18] At the same time, this means that the number of sailings was limited, and therefore the specialised landing places, which were only used sporadically, yield very little archaeological material. The use to which ships were put by the nobility is very clearly expressed in the connection between Gudme and Lundeborg. The first of these places could undoubtedly have survived without the existence of a trade and craft site at the beach a few kilometres away, while the reverse would appear to be very unlikely. The reason for Lundeborg was not that it functioned as an 'import' harbour for prestige objects. The import of such goods was very limited, and it would be unreasonable to presume that such traffic could have produced the massive cultural stratum found at several places on the beach at Lundeborg. The reason for the establishment and function of this site must rather be found in the regular events that took place in connection with the 'royal seat' at Gudme, which attracted a large number of people, many of whom came by boat. The nobility might have been accompanied by their personal retinue, but there must also have been a crew to sail the ship. Among this crowd of people there

would have been customers eager to buy the variety of objects which, at least in part, were made on the spot by travelling craftsmen. It is tempting to suppose that if such commerce could take place in connection with the estate of one noble, other nobles would not have been slow to create conditions for a similar site on their respective domains, especially if one accepts Lars Jørgensen's thesis about the levying of dues and the opportunity for other sources of income offered by trade and craft activities (L. Jørgensen 1995a). The question is whether others were able to guarantee safety for foreigners within a sufficiently large area, thus ensuring the presence of sufficient people willing and able to buy to attract craftsmen to the place. The investigation of such sites near other rich settlements of the period would be a very worthwhile project.

'The middle phase' 520/30 - 680/700 AD

From the 6th and 7th centuries, maritime activities become more clearly evident in the archaeological materials, not least on account of the women's jewellery often found at the sites. In addition, the presence of a number of houses and cultural strata also reveals that activities were more enterprising and of a different nature than previously.

One probable explanation for this development was the introduction of sails on ships of the Scandinavian type. Visible documentation in the form of the remains of ships with uncontrovertible traces of masts and rigging is lacking, though on the basis of a few remains Crumlin-Pedersen does consider that the Gredstedbro ship from the 7th to 8th centuries did carry sail (Crumlin-Pedersen 1997). Apart from this, finds of sail-bearing ships cannot be referred to in the plural before the 9th to 10th centuries. There must have been a period when the construction of ships was being adapted to carry sail, but how long this period was we do not know. It is reasonable to suppose that it was at least a hundred years (Crumlin-Pedersen 1991a), and the sudden appearance of more landing places supports the idea of sailing ships in Scandinavia at the beginning of the Late Germanic Iron Age.

The acquaintance with the customs, manners and forms of organisation of Frankish society demonstrated by the Danish elite in the 6th century must have included a knowledge of the many connections that existed between the Franks and southeast England at this time (Hodges 1892a and 1989). There is no doubt that Danish nobles must have been in contact with these cultures, though the nature and extent of that contact is uncertain. The connections could have been direct, in the form of family relations or other alliances, or indirectly through the Friesians, whose position as the dominant traders and sailors in the southern part of the North Sea is clear as early as the 6th century (Ellmers 1985:9). There is a lot of evidence to show that the Friesians mediated a large part of the contacts between the Continent and England, and this role, together with the situation of their homeland at the back door of Jutland, must surely have brought them into close contact with the western part of Danish territory at least.

Family ties and dynastic links to England might well have provided access to the network of routes in the 5th and 6th centuries, which - as John Hines describes the situation - were used in connection with "migration, trade, and the diffusion of craftsmen's skills" (Hines 1984:278). The importance of the written tradition relating to emigration Anglo-Saxon areas and Jutland to southern England in the 5th century has been played down a great deal in recent years, especially by British researchers (e.g., Hodges 1989:25ff). It is suggested instead that there was a limited immigration by persons of high social rank, whose influence was so marked that they were able to influence the taste and burial customs of the native population (Hines 1984).[20] Without going deeper into the discussion of the extent of emigration, we may simply note that an emigration of noble families from Scandinavia to England would harmonise well with the idea that the contacts between the two areas were based on kinship. This assumption also fits in well with the fact that 6th to 7th century glass beakers made in England, which have been found in Scandinavia (Näsman 1986:84ff), were part of an exchange of gifts to seal an alliance, a dowry, or something of that kind. Luxury objects from the Frankish kingdom are also known from settlements and graves of the period over the whole of Scandinavia, but whether kinship relations also played a part here is by no means as probable as it is in the case of England.

The trading connections that existed in this phase called for the use of special sites in the North Sea area where transactions could take place. These places were few, but strategically well situated and well guarded. It is characteristic that they continued into the following phase; the period in which they flourished began about 680 AD and continued into the 8th century, a period marked by trading in mass goods and the establishment of large emporias. This development is presumably the reason why information about finds from the 6th and 7th centuries is so sparse, partly because they may have been moved around in connection with later activities - which of course obliterated details of what the site previously looked like - and partly because the functions of the site in the earlier period did not lead to such a volume of refuse and traces of settlement as was the case in the 8th and 9th centuries.

Several localities can be mentioned: Quentovic was founded in the 6th century a few kilometres up the River Canche south of Calais (Hill et al. 1990), and was originally, according to Richard Hodges, presumably a modest Gateway Type A (Hodges 1989:55). Domburg at the mouth of the Schelde was founded in the 6th century (Capelle 1976; Jankuhn 1976), whilst the foundation of Dorestad is dated to the second half of the 7th century (van Es 1969 and 1990).[21]

In the first phase, landing places in the North Friesian area were connected with an agrarian unit, a 'wurt', surrounded by wetlands and with access to the sea via natural drainage channels. One of the few, well-documented examples from the 7th century is Wurt Hessens near Wilhelmshaven, where four three-aisled long houses were found with living quarters and stables at each end, as well as

an open shed used as a boathouse. Among the finds were many pieces of cloth, very well preserved, and the remains of ships, and for this reason the site has been interpreted as the dwelling of a 'landsässige Wanderhändler' (Haarnagel 1951; Schmid 1984:214).

This last example clearly differs from the specialised landing places found in Denmark, but part of the explanation must be sought in the special topographical conditions which existed in the North Friesian area at that time, and which are still found today. A combination of the flat salt-marshes, the tides and changes in the level of the sea offered restricted opportunities for settlements and agriculture, whereas the sea route ran literally just outside their door.

In contrast to the Continent, English sites from the 6th and 7th centuries have chiefly been presented in connection with excavations in existing towns, and the general impression remains vague. Ipswich on the River Orwell contains an old centre from the 7th century covering some 6 hectares. Rubbish pits have been found here containing local, handmade pottery and assorted, imported Frankish items, as well as a grave site (Wade 1988 and 1993). About 200 m. West of the site have been found field boundaries that would indicate that the economy of the place was partly based on farming (Wade 1993), but in all truth it is not possible to determine the nature of the settlement more exactly. Anglo-Saxon London is presumed to have arisen in the 7th century around the The Strand, west of the Roman city wall, in the form of a modest Type A Gateway locality (Cowie and Whytehead 1989). The archaeological data from this period, however, is very thin, and is registered as local pottery and animal bones. In addition, an interment grave is mentioned, C^{14} dated to the period 630-675 AD (calib.).

Maritime sites in Northwest Europe in this phase are in general weakly documented, but can be characterised as sites of modest size, offering limited archaeological material. Described in this way they show a striking likeness to Danish localities from the 6th and 7th centuries, but more detailed studies reveal a large number of exceptions to this picture. The fact that there are several sites along Roskilde Fjord with finds from this phase is enough to indicate that - at least in some cases - these sites must have had other functions than simply being the controlled port of entry for prestige objects for the nobility.

Our analysis of the internal and external factors that are thought to have influenced the development of Danish society in general and the maritime sphere in particular have not revealed one single, decisive factor. As regards activities at the specialised landing places in the 6th and 7th centuries, the changes from the 'early phase' to the 'middle phase' must apparently be related to developments in Northwest Europe, which as far as we can see have been followed from the front rows of the stalls in the Danish area. The specialised landing places must be seen as the expression of the much increased importance attached to travelling by

sea to more or less distant shores, and the gradual introduction of the use of sail supports this view. The reason for this increased importance of sailing must be found in the political interests of the elite.

However, changes in patterns of behaviour along the coasts cannot be ascribed to increased trade and barter. Prestige goods were still of extreme importance, but the import of foreign articles probably did not exceed the level of the 2nd to 5th centuries. Moreover, the basic reason for the exchange of prestige articles, namely, that they were reserved for the select few, does not fit in with the existence of many, relatively similar specialised landing places. Nor can a regional exchange of goods be supported by the archaeological evidence.

In my opinion, the reason for changes in conditions at coastal sites must be found in the opportunities offered for jumping into the cultural crucible of Northwest Europe. England at this time was dominated by a struggle for power between rival minor kingdoms, and in Southeast England previously independent kingdoms were being amalgamated into larger units, a process in which those regions that enjoyed close links with the Frankish kingdom were especially successful (Arnold 1988:184ff; Welch 1992). That Danish relatives were directly involved in these conflicts is hypothetically possible, but on the other hand regular expeditions for plunder to regions weakened by internal strife has always been a profitable enterprise. It would appear to be very likely that expeditions of plunder did set out from the Danish area at this time, and this can be related to the regional struggles for power going on here, which just as in the 9th and 10th century called for considerable resources, and meant that pretenders to various thrones were forced to flee abroad for shorter or longer periods. This presumed increase in exploratory activities had its effect on coastal areas at home. We must presume that at some periods of the year a small part of the population lived at the specialised landing places. These were the places where ships' crews mustered, and where boatbuilders built and repaired vessels. It is not clear what function women had, but finds of jewellery show unmistakably that they lived or worked at these sites. The making of textile products is an obvious possibility, but loom weights are rarely found in pit houses dated with certainty to the 6th and 7th centuries.

'The later phase' (680/700-1100 AD)

Most of the specialised landing places which were in use in the previous phase continued their activities in the 'later phase', but a new variation appeared on the scene in the form of a number of large trade and craft sites.

In relation to the general picture of Northwest Europe the decades either side of the year 700 were the period when those tendencies towards radical economic and political changes that had begun in the 7th century began to be more clearly visible. The increased importance given to foreign trade can be seen in the introduction of local silver coins, in the 680's in the Frankish kingdom, and from about

700 in Southeast England (Hodges 1982a), and at the same time the traditional trade in prestige goods gave way to trading in more ordinary categories of goods. The economic potential of various kinds of dues and taxes became of greater importance to the elite than the strictly controlled barter in luxury objects. This change was expressed in the establishment of organised, physically delimited trade and craft sites. Already existing localities based on barter, such as Dorestad, Ipswich, Quentovic, London, and so on, were reorganised and much expanded from the beginning of the 8th century, and Hamwih (Southampton) was founded by the King of Wessex around the year 690 AD (Morton 1994). Norwich also offers finds from the 8th century, but we lack any exact knowledge of the function and size of the site at that time (Hodges 1982a:73; Ayers 1994). Several new trading and craft sites from the end of the 7th century and the beginning of the 8th have been discovered along the rivers in present-day Holland. Amongst these are Medemblik on the little River Middenleek, which flows out into the Ijsselmeer (Besteman 1974), Westenschouwen, situated like Domburg on the North Sea (Hodges 1982a:74), and Rijnsburg on the Rhine. Characteristic of several of these sites is a division into lots along both sides of a transverse street parallel to the shore - an arrangement documented in Dorested and Medemblik, as well as at Tiel on the Linge, a tributary of the Waal.[22] This internal structure is found again in the North Friesian area in the so-called 'langwurt' settlements, typical of the salt-marshes. They are always situated at the mouth of a system of drainage channels with direct access to a major waterway. Many of them differ from the agrarian 'wurt' villages, which are normally round or oval, in that they are stretched out along a transverse street, and their activities were primarily non-agrarian. If there were farms, they were on the periphery of the 'wurt' (Brandt 1985). Hatzum and Groothusen are the oldest investigated sites of this type, perhaps established as early as the end of the 7th century, but at least in existence at the beginning of the 8th. They are seen by Brandt as places of transhipment for trade controlled by the nobility, and the inhabitants of the 'langwurt' localities made no great profits on the trade in which they took part in some form or other. The nobility themselves lived on farms further inland (Brandt 1985:305). The 'langwurt' settlements were able to expand continually in the following centuries, and in the Late Middle Ages several localities were entitled to the status of 'Flecken', that is, something between a village and a town. Moreover, in this later period all the 'langwurts' included a 'chieftain's manor', which was an important element in the political structure of East Friesland (Brandt 1985:299).

The central importance of trade in the Frankish kingdom in the 8th century is underlined by royal control of many of the localities connected with the trading system. The levying of dues and taxes was a considerable source of income for the Frankish kings, as well as for the Church, which in the Rhineland area was privileged to receive a tithe of the crown income from places like Dorestad and Medemblik. The Church in England, too, is also known to have had privileges connected with trade, and the dues related to it (Kelly 1992).

There can be no doubt that these developments had an effect on the Danish area. The royal power based on Jutland that manifested itself in the 7th and 8th centuries established at Ribe a trade and craft site with access to the lucrative North Sea trade. The internal structure of this site can only be described as a copy of similar localities in Frankish dominated territory, and the local coining of sceattas, which has been shown to be probable, strengthens this impression. It must, however, be admitted that as far as we can judge, structural characteristics from the North Sea area were not transferred to inland Danish waters and the western Baltic. In these places, the 'South Scandinavian' model dominated, characterised by pit houses placed almost haphazardly in areas near the shore. Hedeby South was such a place, and when it was abandoned for a site near the stream running a little further north it was indeed divided into lots, but with a compact centre in contrast to the transverse streets of the North Sea sites. In my opinion, both Åhus I and Åhus II were also sites centrally structured in this way around a core, and in the following century this pattern was followed by Århus, at the latest around 900, and Sebbersund.[23] Specialised landing places of more modest proportions, and with a less organised inner structure, such as Strandby-Gammeltoft on South Funen, Aggersborg on Limfjorden and Selsø-Vestby on Roskilde Fjord are too small to be categorised in a similar manner.

If we disregard those maritime trade and craft sites where a lot of articles were produced, and which at the same time reveal some sort of overall planning structure, there would seem to have been no developments in trade which would have been decisive for the existence of the small specialised or agrarian landing places. There are also a number of other tendencies which are not clearly reflected in sites other than those most important in political and economic terms: the political development characterised by a constant struggle for power between the contenders for various thrones in the 9th century; the effects of the cessation of the flow of silver in the second half of the 9th century; and, the numerous expeditions of plunder that went on in western Europe in this same period. Not until the end of the period, that is, the 11th and 12th centuries, can changes be observed, when the specialised landing places either disappeared completely or were abandoned in favour of agrarian localities, which in many cases included a 'chieftain's farm'. The old trade and craft sites were shifted out of their previous context, either by moving the centre of the site to a place nearby, as in the case of Ribe and Århus, or by a more radical kind of move illustrated by Åhus II and Hedeby. They were, in effect, replaced by the early medieval towns. This development is apparently reflected in finds of ships of the Scandinavian type. At all events it is significant that remains of ships from the Late Iron Age until the 10th century are less frequent in comparison with finds from the 11th century and later (Crumlin-Pedersen 1997, table 5.1). Even at the port of

Hedeby, which was in use from the 8th century, there are finds of ships from the 11th century, and this tendency can be followed in the whole of Denmark, not least in the light of the new finds in the harbour at Roskilde.[24] The lack of ships from the 6th to the 10th centuries cannot be explained by a fall in sea level, which would have left them high and dry, so that they simply rotted away. On the contrary, the sea level in the 11th and 12th centuries seem to have been higher than today, and the remains of ships from this period are relatively frequent. This discrepancy might of course be due to pure chance, but another picture presents itself if we look at the development of society. Quite simply, the number of ships seems to have increased dramatically, following the introduction of medieval societal structures, including the widespread formation of coastal towns. The same period provides documentation for a variety of types of ships, revealing an increased specialisation of vessels for various purposes, a development born of the increased demand for sea transport. An intensification of shipping at this time provides food for thought in relation to the importance of sea transport before the 11th century. The picture of numerous cargo ships ploughing the seas around Denmark in the Late Iron Age will have to be revised, and estimations of the amount of cargo consequently reduced.

Organisation and politico-economic significance

A gradual intensification of the political and economic importance of the maritime sphere on Gotland in the Viking Age is held to be reflected in the fact that the number of harbours connected with trade falls off the closer we get to the Middle Ages, until finally only Visby remains (Carlsson 1991). A similar development has not been registered around Roskilde Fjord, a fact that will probably be shown to apply to the rest of Denmark. The number of specialised landing places does not fall off the closer we come to the year 1100, on the contrary, and there is a considerable degree of continuity in the use of the coastal sites from their appearance in the 6th to 7th centuries up to the 11th and 12th centuries. Their structure would appear to have been permanent, and might reflect a well-consolidated elite, whose domains had been relatively stable for centuries. An alternative explanation, however, is that the specialised landing places were not affected by changes in the balance of power in the top echelons of society, simply because this type of locality was unimportant in this connection. In the 6th and 7th centuries, the exchange of prestige goods was the reason for the connections established between areas widely separated geographically, and, as has been stressed several times above, the control of this traffic was of vital importance for the maintenance of power. I presume that it was not simply the arrival at the landing place of some noble of a vessel carrying prestige goods that was the occasion of people gathering from far and near. In other words, the import situation itself was not responsible for the lasting archaeological traces left on the beaches.[25]

From the 8th century, new patterns of trade radically altered the situation, and it is clear that in Northwest Europe the elite considered the dues payable on transactions more important than the acquisition of prestige goods. The more merchants and craftsmen one could attract, the more lucrative business would be. This philosophy was copied in the Danish area, but it is clear that only a few localities actually functioned in this way. In other words, it paid to concentrate activities on a few sites, to ensure the most effective control and offer the necessary protection.

These conditions, very similar to the medieval situation, did not apparently apply to the majority of the specialised landing places. This does not mean that they were not important as harbours for the ships of the elite, but rather that their political and economic importance was secondary in comparison with such trade and craft sites as Ribe and Hedeby, which were able to contribute massive incomes in the form of taxes, dues, etc. By far the great majority of the specialised landing places would have been able to function no matter which way the winds of power might blow. Even though a noble might not have been able to enforce his sovereignty over a large area, he could still benefit from the opportunities offered by shipping. To this must be added the other groups of wealthy farmers, who presumably could afford to run ships, and who therefore needed a landing place.

Any attempt to present a picture of the overall organisation behind the maritime sites must start with the societal structure that obtained in any given area at any given time. In other words, there must be a high probability that the maritime sphere was subject to higher level requirements and conditions of a kind that could have influenced the establishment, function and development of the specialised landing places. Such a situation was probably valid for much of the maritime sphere from the 2nd century AD onwards, but as regards the period 200-520/30 AD, the archaeological data is too weak to bear any discussion other than that which has been presented here.

In the 6th to the 12th centuries AD the data is somewhat broader, and will be able to provide a basis for the relationship of the specialised landing places to the dominant structure of power. I have previously suggested a classification of the specialised landing places into three groups according to complexity (Ulriksen 1990 and 1994). Naturally, such a classification is most uncertain, first and foremost because the source materials are thin, both as regards the number of known locations and the number of square metres investigated there. Part of the work, of course, consists in making a qualitative and quantitative assessment of these materials, but the evidence they provide varies widely, on account of the conditions under which they have been preserved, the size of the dig, etc. Undisturbed cultural strata low on oxygen provide the best level of detail. Such conditions are rare, but are in fact important if we are to determine the number of different crafts, since refuse from, for example, comb-making, shoemaking and woodwork is only found in favourable conditions. Moreover, it is very important that the material can be placed in a reliable chronological con-

text, so that it can be shown that a series of activities took place at the same time.

The internal structure of the maritime sites would seem to offer us the chance of identifying the overall control of individual sites as a possibility, but even in this connection our conclusions are hedged in with reservations. For example, to find out whether a site had an external physical boundary in the form of a ditch or fence excavations have to be spread over a wide area, and traces of such boundaries may have been destroyed in cultivated or otherwise disturbed areas. In the same way, documentation of the structure of a site, such as Sebbersund has presented, calls for a very thorough programme of excavation.

It is difficult to distinguish between places with or without buildings as long as ploughing and other forms of disturbance have removed the traces. Moreover, the difference between one single, or forty badly dated pit houses is almost irrelevant when we remember that many of the localities functioned for a long period of maybe 5-600 years. We can use Sønderø to exemplify this problem. A single pit house has been documented here, but even had it not been found, the site would not have made a radically different impression which would have altered our interpretation of its function. It is clear that the presence of buildings indicates that people lived at a site for a certain period of time, but it does not automatically follow that there was some sort of overall pattern of control.

An attempt has been made below to classify the maritime sites on the basis of their internal structure. It is important to note that this classification only applies to the 'later phase'. In reality, the 6th and 7th centuries only offer sites in category 3.

1) Large, preferably physically delimited localities divided into lots, with massive traces of craft or trading activities, primarily oriented towards international contacts. These sites were situated at the borders of the area ruled by the 'lord of the city', i.e., the king, offering connections to foreign trade routes. Examples: Hedeby and Ribe.

2) Localities of regional importance possessing an internal structure that indicates some sort of overall control of the situation. These sites were situated at the intersections of major traffic routes that connected large land areas with each other. Example: Sebbersund.

3) The majority of the sites belong to this category, characterised by a few traces of craft activity, and now and then some modest buildings. Examples: Selsø-Vestby, Strandby-Gammeltoft.

4) Special places of strategic importance in the form of lookout posts or fleet harbours. Examples: Aggersborg, Lynæs.

Category 1) sites were established and controlled by a royal power of more than regional importance. Category 2) sites were probably carefully watched by such kings to avoid competition with the first category, but were very likely under the control of a powerful nobleman who could guarantee peace on behalf of the king. Category 3) sites were generally 'free' from royal interference. In the case of category 4), some royal personage was certainly involved at Aggersborg at the end of the 10th century, as was the case with the site which must exist in connection with the Kanhave Canal on Samsø. Lynæs, which was a transhipment site and a lookout post should rather be regarded as a local site, and might in principle have been controlled by a powerful noble.[26]

The obvious weakness of the above approach is that if the organisational characteristics are lacking we have problems assigning some sites to a particular category. For example, it is difficult to place Åhus I and II within this framework, as it is not quite clear to what extent they were organised according to a fixed plan. In terms of structure they should belong in category 2), but some will no doubt put them in category 1) because of the objects found there. In the case of Århus, the presence of a semicircular rampart means that the site belongs partly to category 1) and partly to category 4). However, only a small area has been investigated, and this means that as yet there are not enough finds to raise the site above lesser places such as Vester Egesborg or Selsø-Vestby. In category 2), Sebbersund is mentioned as a site of regional importance, but since the excavation results have not been fully analysed or published as yet, much that is new might turn up. For example, it will be interesting to see whether it can be determined whether the division of the site into a pit house area and a craft activity area can be maintained for the whole period in which it was active, or whether it only applies to its heyday in the 11th century. If the latter is true, then in reality the material available at the moment offers no documentation for this category of site before the 11th century. The majority of known sites belong to categories 3) and 4). If the organisational approach is supplemented by an evaluation of the significance of craft activities, this supports the chosen classification of sites, even taking into account that the category 1) sites, Ribe and Hedeby, both offer very good conditions for the presentation of data.

The development and use of landing places

The function and chronology of landing places has been discussed in detail in the previous chapters, and the following will draw attention to a number of problems connected with their use and development.

For the most part, landing places in Scandinavia present a fairly uniform picture from the 6th to the 11th centuries. Possible changes in the way they were used, or possible passive periods, can only be proved to a limited extent, and with a lot of uncertainty as regards dates. One of the main problems is that pottery from the 6th to the 10th century is of little chronological value, and only rarely do we find datable metal objects with a certifiable connection to buildings and other installations with a specific function. Improved chronological data would help to fix the internal development of sites in the form of changes in the areas

used for various activities, or possible time differences within a known craft activity. One example is the making of textiles, which can be documented at many of the specialised landing places. If we accept the interpretation that the existence of weavers' cottages indicates sailmaking, then with regard to the time when sails came into use on Scandinavian ships it would be interesting to determine whether such weaving activities took place as early as the 6th and 7th centuries. At all events this would offer a good explanation of the changes in archaeological finds at the coast in relation to the 'early phase'. On the other hand, if it can be shown that the weaving cottages are a phenomenon that first appear in the 8th century, then the transition already noted from the 'middle phase' to the 'late phase' will also apply to the small landing places, just as it can be demonstrated for the organised localities. In summary, then, it can be stated that in general archeologically demonstrable changes took place in the 6th to 7th centuries, when the small, specialised landing places appeared on the scene, and in the 11th to 12 centuries, when they were reorganised or abandoned.

An important question in the discussion about the use of the maritime sites is that of the numbers of people who lived there, and to what extent. In my opinion, they did not live there all year round, except in those cases where farms were linked to the site, or at the largest trade and craft sites in the 9th and 10th centuries, such as Hedeby. Nothing points to the fact that the pit houses were inhabited all year round, an impression supported by finds of fish bones, indicating activities in the spring and summer months. Finds from a majority of the coastal sites suggest that they were used for shorter or longer periods, presumably in connection with annual events. It is impossible to say whether this was a question of days, weeks or months, but it is unlikely that the building of pit houses at a site was just a temporary measure. The presence of grinding stones at certain sites indicates that at least at certain times people stayed there for longer periods of time, to the extent that it was not practicable to bring provisions with them.

I find it reasonable to presume that the sites were used regularly in the summer months, beginning when the ships were got ready for the new season, and ending when the rigging was removed and they were laid up for the winter. Whether people remained living at the coast for most of the summer between these seasonal limits cannot be definitively proved or disproved. The weaving cottages indicate this, whilst the presumed visits of wandering journeymen did not necessarily require the presence of a local population. More detailed studies of bones and the analysis of macrofossils will possibly provide us with more information in this regard.

The trading aspects of the specialised landing places are somewhat unclear. As it was pointed out in Chapter 8, it is extremely difficult to show the actual transaction with any certainty. We can identify the refuse from craft activity as well as certain categories of foreign objects, but trade and crafts are not necessarily two sides of the same case.

Craftsmen, especially the most specialised among them, were naturally connected with those groups in society that could pay for their special skills. They only functioned to a limited extent as independent producers of objects for sale. My main impression is that we should not overestimate the position of trade as the basis for the specialised landing sites, though as a final point it should be stressed that the difficulties connected with proving the fact of trade on the basis of the archaeological evidence makes it difficult to document this position.

Landing places and hinterland settlements

If we disregard the largest trade and craft sites, where the traces of craft production are very clear, what is found at the other sites does not differ in nature from what can be found in agrarian settlements in the hinterland. The same types of pottery, jewellery and craft products can be found at both places; only the buildings differ. Villages were generally situated back from the coast, not only in the 6th and 7th centuries, but also to a large degree in the Middle Ages (Porsmose 1996).[27] At the same time it is clear that maritime activities should not be regarded as separate from the agrarian community, but on the contrary as very much an integrated part of it. The majority of the specialised landing places functioned primarily for, and in virtue of, the villages, and only a special group of sites like Lynæs and Baes Banke functioned in physical isolation from a neighbouring agrarian hinterland. The agrarian landing places, that is, farms situated near a suitable landing site, can be found along waterways, and in special cases at the coast. The coastal farms were presumably only to be found where the seaward approaches were well defended, or where lack of resources forced the population to use coastal areas as well as the hinterland. Gershøj on Roskilde Fjord is an example of the first case, whilst the coastal siting of Dalgård and Nederby, on the islands of Mors and Fur respectively, is probably due to the fact that on small islands people had to use all the limited resources available.

Despite - or perhaps rather because of - the closely interwoven links between maritime and agrarian environments, for various reasons the hinterland analysis of the area around Roskilde Fjord was not able to provide a clear picture of the possible effects on hinterland settlements of the presence of a specialised landing place on the coast. Any hopes of finding limited concentrations of foreign objects and 'souvenirs' are doomed to be disappointed. The 'maritime' aspects of village finds are mostly in the form of the bones of marine fish, and this use of resources can be shown to be independent of the existence of a specialised landing place.

Using the Gudme-Lundeborg complex as a model, we can turn this argument 180°, and use the rich, central hinterland settlement as the starting point for the investigation of a coastal locality. There is, however, no natural law laying down that the distance between a central settlement and a landing place was the shortest possible. Transactions, especially those connected with the nobleman's household and his own needs, might easily have taken place at a certain

distance from his farm. Lynæs, for example, might well have served this purpose in relation to Lejre.

Effects of the formation of towns

The abandonment or reorganisation of the specialised landing places in the 11th and 12th centuries is connected with the general changes that can be traced in the structure of society at this time. It has been shown in the case of trade and craft sites that they were altered or moved, giving place to the early medieval towns.

It is interesting to note that while the most important trade and craft sites, such as Hedeby, Ribe and Århus in the 10th century were characterised by defensive fortifications, the towns that grew up in the 11th and 12th centuries were not protected. In most places it is difficult to determine what these settlements looked like, but in Hedeby there were small plots of land with small houses, whilst at Lund, which was a new foundation, and not a coastal one it should be noted, long houses were apparently built on larger plots of land more along the lines of a village (Andrén 1976). The early medieval towns were the expression of another form of organisation, and in part another function, than that of the trade and craft sites of the 8th to 10th centuries, which are frequently referred to in the literature as 'early towns', or 'pre-urban'. The difference consists in the fact that the oldest of the early medieval towns, as defined by Anders Andrén, were not a unity at the start, but consisted of several centres, identified from the number of churches (Andrén 1995). Anders Andrén has described these conditions as a village-like structure, even though the number of buildings was greater than in a village. (Andrén 1985:41ff). As regards differences in function, Erland Porsmose has pointed out that whilst the trade and craft sites of the 8th to 11th centuries primarily dealt with foreign connections, the towns of the High Middle Ages were based on local trade (Porsmose 1996). To what extent this was also true in the 11th and 12th centuries is, to put it mildly, unclear, but Anders Andrén has stressed that trade was of secondary importance for the early towns in comparison with their function as a gathering place for superfluous agricultural products. In principle, therefore, we are talking about 'depots', at least in the first half of the 11th century (Brumfiel & Earle 1987; Christophersen 1989). Andrén thinks he has discerned a change in the building patterns of towns from the second half of the 11th century, in the form of gabled houses along the streets and round the squares, which distinguishes them from villages. (Andrén 1985:77ff). A clear tendency, which helps to underline the new situation in this phase, is that the ships we find along the Danish coasts are from the Late Viking Age and the Middle Ages. Vessels from the Late Iron Age are rare, and moreover very fragmented when they are found.

This break with the structure of the 8th to 10th centuries also had consequences for the other specialised landing places. It is a striking fact that structurally simple localities with a variety of functions apparently had a mission for several centuries alongside places such as Ribe, Sebbersund and Hedeby, but as soon as the early medieval towns became established the basis of the smaller landing places, which were primarily of local importance, disappeared. The reason for this must be sought in the basic changes in the structure of power that occurred with the establishment of the rule of kings. Nobles placed themselves physically close to the royal administrative centre by building houses in the towns. This is not the same as saying that they exclusively ran their maritime connections from here, but rather that the coastal towns took over those functions that have left lasting archaeological traces. As has been shown, there is no reason to suppose that it was the towns' monopoly of trade that was the decisive factor at this early stage, a point that is supported by the fact that privileges and legal wrangles about this did not become common until the 14th century (Porsmose 1996:44). The truth of the matter is more likely that the new centres, with the united King, Church and the nobility, provided a market for a large number of craftsmen, who naturally saw an advantage in being at these places. In those cases where the nobleman's farm was moved out to the coast on the site of an older specialised landing place it is impossible to say whether the maritime function continued in the same way as before, because the corpus of objects found is more or less the same in the agrarian and maritime environments. It would however seem to be the case that the more delicate and specialised forms of craftsmanship had no future in the villages in the early Middle Ages, but were attracted by rich customers in the towns, where noblemen and merchants gathered. The nobility doubtless continued to use their own harbours to ship out agricultural products, but these activities apparently left no traces in the coastal landscape (Busck 1991).

10.

The study of places connected with seafaring is only in its infancy, and there are rich opportunities for future research in this area to find new angles of approach to the problems presented. As the above pages clearly show, the starting point for this investigation of landing places was on land, whilst the water has not been included in any systematic way. The remains of ships found off the coast, such as those found at Lynæs and Roskilde, for example, could have offered a main approach, but the systematic investigation of ships and other finds with a maritime connection at the bottom of the sea is complicated by the fact that they are - at the bottom of the sea! At the same time, we are looking at a very expensive form of archaeology, and a level of expenditure - covering diving expeditions and geotechnical soundings - which is normally way beyond the resources of a local museum. This does of course not mean that submarine finds should be ignored. There is naturally an interest in investigating the seabed off a landing place, but in the case of the majority of sites the beach will probably yield very

little evidence, since it is constantly being broken up and formed again. There are, for example, only a few tangible finds from the roads off Lundeborg, though there was a high level of activity there for hundreds of years. Conditions such as those at Hedeby were probably only found at sites of this type and age, whilst smaller sites did not have jetties where finds would be concentrated and found in intact strata.

New knowledge about the movement of ships and settlements must primarily be sought in the coastal landscape. Shipping routes and the nature of seafaring in general will be deduced from an investigation of landing places. Among the approaches that should be accorded a high priority is the carrying out of various kinds of scientific investigation. In connection with Selsø-Vestby and Lynæs an attempt was made to trace external contacts by identifying charcoal which in theory could have come from barrels or other objects of foreign woods. No positive results were arrived at, but the method offers interesting possibilities.

Another important question is that of changes in the level of the sea. There is nothing to indicate that in the course of the Late Iron Age the coastal landing places moved in tune with the advancing or receding line of the beach, but taking into account the type of ship used in Scandinavia a variation of one metre was very significant with regard to sailing conditions in the shallower sections of Danish inland waters. What the graph of shifts in the water line actually looked like in the period of time referred to is still an open question, and it is therefore very important when excavating landing places to investigate the question of changes in the water level at the place in question, be it at the coast or on a waterway. Even though the level of the sea at any given point cannot be read off directly, it may be possible to determine whether the wetlands in the neighbourhood, or - if one is lucky - the coastal section of the settlement, became a bog at some time.

The fact of the matter is that at the present time we find ourselves in the same situation as the archaeology of settlements was 25 years ago. Work has begun on the landing places, but as yet our knowledge of the variations, structure, number and internal connections is based on a very small number of excavations. Major excavations of a very thorough nature are called for if a wider store of knowledge is to be gained about this part of history. However, it would seem that archaeologists are beginning to be interested in coastal regions, and there is no doubt that in the coming years a number of hitherto unknown coastal sites from the Iron Age will be discovered, though in what way, time will show.

Up to now, a large number of the landing places have been found by chance. Strandby-Gammeltoft, for example, was discovered in connection with archaeological investigations of a Neolithic burial mound, Selsø-Vestby was a series of crop marks in a corn field, visible because of an extraordinarily dry early summer, and Sebbersund was found by some people with a metal detector who had decided to search a field at the foot of a hill called Skt. Nikolai Bjerg. The localisation procedure used in connection with this investigation will be of practical use in many cases, but even a single find in a field near the coast may prove to be a good starting point. The site at Næs in South Zealand was found in this way. Until 1996, a single fibulae from the Late Germanic period had been found, but a metal detector search revealed that there was much more to find. In 1997, a major excavation of the site was started, revealing amongst other things many pit houses and several small, three-aisled houses from the Late Germanic and Viking periods.

Just as important as finding new landing places is to increase our knowledge of the hinterland of any given locality. Hinterland analyses are very important for the interpretation of coastal activities, and as we have seen, even an area such as that around Roskilde Fjord our knowledge of settlements leaves much to be desired. For example, a more detailed description of the relationship between Lejre and the fjord cannot be made on the data available. In the first place, we need more information about the buildings around the 'royal mansion', and secondly, the neighbouring Isefjord has not been investigated to find out whether Lejre used both fjord systems, which is a distinct possibility. In relation to this narrow perspective the position of Roskilde in the 11th century is also one of the areas where new information is needed. So far, documentation for activities in the period in question have been provided by the 'high town' area near the Cathedral, whereas investigations in the area near the fjord are still very inconclusive. Excavations in the town park have not made a convincing case for a busy harbour visited by lots of ships, and there is very little chance of carrying out more systematic research today in an area as built up as that where the former harbour were situated. It should, however, be noted that in 1996-97 Roskilde Museum carried out, and will continue to carry out, excavations in the area by the shore, which will hopefully provide new information about the harbour area in the 11th and 12th centuries.

Future areas of investigation

The landing places around Roskilde Fjord have shown a surprising variation for so narrow a geographical area, but almost all the localities have parallels elsewhere in the country. At the same time, it cannot be said that all the various types of landing places that existed in the Late Iron Age have been described in this work. Obviously, sites on other types of coast than the relatively protected fjords may have been different, as regards topographical situation, structure, and the objects found there.

Suitable areas for new investigations of landing places are to be found more or less everywhere along the coasts of Denmark. A natural extension of the investigations around Roskilde Fjord would be to include Isefjord as well. This was within the sphere of interest of the 'Kings of Lejre', and offers numerous landing places along the indented coast and in the minor fjords, and sailing conditions are not as difficult as in Roskilde Fjord. In addition there is Orø, the

name of which indicates a lookout post, and even though we do not know how old this name is, investigations on the island would offer good prospects.

In addition, two areas at either end of the country can be mentioned, both very central in terms of sailing, and both well suited to thorough, long-term investigations. The Storstrøm Sound, and the adjoining passages between the islands of Zealand, Møn and Falster provide a corridor for connections from Scania and The Sound southwards to Germany. At several places in these areas, archaeological finds and place names indicate that this was also the case in the 6th to 12th centuries. Here I am referring not least to treasure trove and individual finds made along the north coast of Falster, the shipyard near the River Fribrødre, the place names Stege and Vordingborg, and a reference to Ulvshale on a runic stone from Sweden. In addition there are the landing places at Vester Egesborg and Næs, which though not directly connected with Storstrøm Sound, do have direct access to the waters south of Funen.

The other area is Limfjorden, characterised by two different types of sailing environment. To the East it is almost like a river, with a few small islands and islets, whereas to the West it has an indented coast with fjords, bays, capes, and both large and small islands. At the present time a number of coastal sites have been identified in the western part of the fjord, but new sites discovered east of Aggersborg offer the chance, if a concentrated effort is made, of gaining a clearer picture of the importance of these waters as an artery linking the North Sea and Danish domestic, inland waters.

One point that has not been fully treated above is landing places along Danish waterways. A serious problem here is how to reconstruct the natural course of a waterway, which is necessary in order to judge whether it was navigable or not. Climatic conditions are decisive for the volume of water, but rain and a higher sea level do not necessarily mean better conditions for navigation.[28] The marshy areas along the waterways will in many case become broader, especially if we take meandering into account, which has always been typical for waterways. Attempts to 'make the waterways navigable' by assuming that the sea level was 1-2 metres higher than it is today, and then concluding that this would have increased the depth and width of waterways correspondingly, are of no value in the wider context. There is evidence to indicate that neotectonics are a central factor in many local changes to the line of the beach, and the chronological horizon must certainly not be forgotten. A higher water level in the 11th century does not mean that it was just as high or higher in the 10th century, for example. The probability of conclusions based on sailing conditions other than those that apply today should be supported by scientific investigations.

Speculation about the navigability of waterways can be helped by investigating traces of settlements along the banks. One example is Toftegård in Valløby, which lies a little more than two kilometres up the River Tryggevælde

on East Zealand. Køge Museum has made an exploratory dig at this site, which has revealed fascines, wood shavings, Baltic pottery, etc. on the west bank, and on the field behind there are traces of buildings from the Late Iron Age (Tornbjerg 1996).

As always, a long-term goal and a correspondingly long period of work are of great importance for the results of investigations, and this is also true of landing places. A detailed programme of work, such as that carried out by the now defunct 'Settlement Committee' set up by State Research Council for the Humanities would be very welcome, but does not seem likely. The central archaeological authorities do not accord this area a very high priority, which may seem surprising at a time when public research funds to the tune of tens of millions of kroner are being spent on maritime archaeology. On the other hand, local museums are aware of the problem, and several investigations have been carried out in recent years, not least on Funen and Zealand. It would seem that if progress is to be made in the coming years, the initiative will come from this quarter.

Notes for Summary

1. In the following, areas in present-day Denmark, Scania and Schleswig will be referred to under one heading as 'Denmark' or 'Danish area'.
2. Cf. AUD 1984-95.
3. The lists contain finds around the mouth of Roskilde Fjord, whereas the coastal finds along the westcoast of Hornsherred have been omitted.
4. Fish bones from Lejre have been investigated by Inge Bødker Eng-hoff of the Zoological Museum.

   The distribution of species shows a majority of marine species, including the remains of a thornback.

   Gårdstånga is situated a few kilometres from Lund near the river Kävle Å, which runs into the Sound.

   In the Viking Age the settlement apparently consisted mainly of pit houses. An analysis of fish bones from this site reveals a clear majority of marine species (herring and flatfish), whilst fresh-water fish are hardly found at all (Söderberg, 1995).
5. Veddelev has no church, but belongs to the parish of Himmelev.
6. Net floats of pine bark have been found in surprisingly large numbers in connection with investigations of the 11th-13th centuries harbour area of Roskilde at Skt. Ibsvej. Roskilde Museum j.nr. 1813.
7. The duty of transporting the King is mentioned, for example, in Valdemar's cadastral role.
8. At the present moment, there are no normative quantities or measurements for the amount of rubbish, for example, or the number of crafts required to meet the definition of a trade and craft site. The material excavated, and the small number of places which could fit into this category, are insufficient for this purpose.
9. The comb-maker was generally regarded as a highly-specialised craftsman, and we may presume he worked at places that offered a quick turnover. However, traces of comb-making can only be found under favourable circumstances, and it is noteworthy that for the most part comb-making is documented at localities with well-preserved cultural strata or in the material that fills up pit houses. The large quantities of refuse found, for example, at Ribe and Hedeby put the presence of the comb-maker beyond doubt. It is more difficult to interpret finds of individual sawn-off pieces of antler which have been found at places like Vester Egesborg, Selsø-Vestby and Baes Banke, or for that matter at Lejre. There is no doubt that these are craft products, but are we looking at comb production such as we know from Ribe?
10. The discussion about whether the population of parts of South Jutland and Schleswig-Holstein contained a Friesian element in the 8th to 9th centuries, or whether the Friesian centres in Northwest Germany and northern Holland simply exercised an influence on the above areas is too comprehensive to enter into here. However, Hans Jørgen Madsen's studies of Viking Age pottery indicate that there have been close connections between these areas (H.J. Madsen 1991), which to a certain extent is also supported by the distribution of place names.
11. The circular stronghold of Nonnebakken in Odense is situated near the River Odense, slightly south of the medieval town centre. In 988, Odense was an episcopal see, and must therefore be regarded as an important place at the time, but archaeological sources cannot provide evidence of the type and actual position of buildings, either with regard to the medieval town or the stronghold itself. The only indication that the place was of sacral importance before the advent of Christianity is the name, which is interpreted to mean 'Odin's Temple' (B. Jørgensen 1994).
12. The annals of the Frankish kingdom state that in the year 804, "..Gotfred King of the Danes came with his fleet and all the knights of the kingdom (...) to Sliesthorp on the border between his area and that of the Saxons. He promised to meet for negotiations..." (E. Kroman 1976:57ff).
13. Cf., for example, H.H. Andersen 1988.
14. No signs have been revealed of new buildings, or repairs to existing buildings and the earthworks, and the existence of the last two blocks of buildings has not been proved. In this area the triangular ditch is only between 0.4 and 1 metre deep, and all the signs indicate that the emplacement was never finished.
15. One exception is the find of half-finished grinding stones in Hedeby, which would have been fin-

ished there and then distributed to other places (Steuer 1987a).

16. Several times in the course of the Middle Ages Danish territory was divided on account of regional interests, and in the 12th century the kingdom was for a short while divided into three under Kings Svend, Knud and Valdemar (Fenger 1989).

17. For example, the attack by 'Saxon pirates' on England in the 4th century, and later the shipping over of auxiliary troops from the Friesian, Saxon and South Jutland areas to support the minor English kings in the 5th century (Hodges 1989; Kramer & Taayke 1996).

18. The dugout boats from the grave site, Slusegård, on Bornholm are examples of relatively small craft which in the nature of things were used in the Baltic (Crumlin-Pedersen 1991b).

19. The close cultural connections between Denmark and northwest Germany and Holland are also clearly shown by the general structure of agrarian settlements and the building styles (Haarnagel 1984b: Scmid 1984).

20. However, it should not be forgotten that continental influence was of such a calibre that it led to a change of name for the places where the strangers settled: Essex, Wessex, Middlesex and Anglia.

21. The name 'Dorestad' is found inscribed on coins from 630 AD, but the traces of buildings revealed by the excavation of the site cannot be placed further back than about the year 675 AD (van Es 1990: 162).

22. Tiel is a little younger than Dorestad, and reckoned to have replaced the latter about the middle of the 9th century.

23. Birka possessed a similar internal settlement structure (Ambrosiani 1973; Ambrosiani & Clarke 1992), but it is interesting that its successor from the end of the 10th century, Sigtuna, was clearly built up around a street parallel to the shore (Tesch 1990).

24. In the winter of 1996/97 and in the spring of 1997, Roskilde Museum, in cooperation with the National Museum, investigated in the harbour at Roskilde the remains of 5 ships of the Scandinavian type, of varying size and form. Dated to the 11th and 12th centuries. Roskilde Museum archive no. 1855.

25. A comparison between the early trading sites in Northwest Europe of Hodges Gateway Type A and the majority of the Danish landing places from the 6th and 7th centuries leaves the same modest impression.

26. In this particular situation, however, it is reasonable to suppose that this person was the King at Lejre, and later at Roskilde.

27. As regards the situation in Scania, I do not have a sufficiently detailed knowledge of the settlement finds to assess this area in comparison with present-day Denmark. At all events, Johan Callmer's interpretation of the Scania finds does not fit in with the siting of settlements on Bornholm, Zealand, Funen and in Jutland. (Callmer 1991).

28. Whether or not the level of the sea along the Danish coasts was about 1 metre higher in the 11th to 13th centuries is uncertain, and no final judgement can be reached at the present time. It is however worth noting that at the end of the 12th century Saxo describes sailing conditions at the mouth of Roskilde Fjord as difficult, on account of sandbanks, whereas today the water is 2 metres deep. Saxo also has this to say about the navigability of the River Suså: "At which he split his men up into three units and sent two thirds of the fleet in advance to the River Susaa, putting only a few men to the oars. These ships were to navigate the difficult passage up this winding river and give support to the infantry if necessary. But the night after the battle had ended, the fleet reached the harbour after sailing through the River Susaa. In the old days this river was navigable, but it is now so overgrown and narrow, that only few ships can enter its narrow and sluggish course." (From the Danish trans. by Winkel Horn 1911:I, 285f).