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The Relationship between Land Roads and Sea Routes in the Past – Some Reflections

Introduction

Curiously enough, almost all archaeologists dealing with land roads and transportation, including the transcendent aspects, neglect the maritime parallels of the roads. This happens again and again, despite assurances that some of them are aware of the excessive importance of water transport in prehistory and early history. There are few traces of any discussion or a comparison between these two facets of transportation. Examples in this text will be taken from Northern Europe, mainly Scandinavia in a wider sense, "the North," including not only the peninsula thus named. Various kinds of sources, not only those of archaeology, will be used. In this article, only open coastal water routes with archipelagos will be considered. The open waters of the sea are not comparable to any land conditions. Such crossings over vast water areas were certainly extremely unusual – if not actually nonexistent – in prehistory.[1]

One thing implied by the above is that the same kind of comparison as this one with monuments, features and remains of land roads could be made along rivers; in fact, such a comparison presents a useful and interesting challenge for the future. Even road nets on land are not taken into account very often by archaeologists in general. Elisabeth Rudebeck (2002) uses the maritime metaphor of separate Iron Age long-house "islands" in order to characterize the present lack of understanding about communication. She wants to replace it with a more appropriate model of a network of roads between these "islands." This is laudable and in this context the metaphor is perhaps an appropriate one. However, a seemingly obvious allusion to the origin of the "island" metaphor is lacking. Perhaps it is a case of metaphoric seduction: The term and fact of *isolation* is applied to islands (Ital. *isola*). Clearly this should only appeal to people studying a map, not those who want to confront reality. In the past, islands were probably more accessible and less isolated from various forms of communication than most inland settlements.

In this text I will try to shed some light on those parallels between land roads and sea routes that are obvious to me. My point of departure is maritime archaeology. In certain respects this subject is a part of the archaeology of transport and communications. In my lectures I have always integrated an overview of the land roads and thoughts based on their connection to harbours and sea routes. The principal themes of maritime archaeology appear as ship history – "material cultural products as reflections of society" – and the maritime cultural landscape. With regard to both areas, communication and transport aspects are obviously of salient interest. And mind you, the communication aspect, including that of moving and travelling, certainly bears supernatural or transcendent implications, sometimes embodied in ritual. The ships are

also very relevant. I will not deny that I consider shipwrecks to be unique: Where do we find wagons, carts, roads and paths which give such concentrated information both on communication and landscape as well-preserved shipwrecks, especially those with traces of their cargo? And there are indeed a lot of them!

The other theme, the maritime cultural landscape, has been briefly defined by me as the "network of sea routes, with harbours and related constructions and remains of human origin, below as well as above the water." It can already be discerned here that the maritime cultural landscape is *par définition* much more evidently marked by communication than the cultural landscape inland. The principal part of the latter is agrarian. Traces of fossil landscapes are found everywhere. Even if the sea could be considered as the "field" of the fishermen, it does not leave any rune stones, standing stones or bautas, grave fields, fences, cattle drives, cultivation terraces, corn plots or hollow ways for us to observe. We are forced to apply a pragmatic approach in our mapping of ancient maritime communications. Most of the ancient monuments and traces relating to the sea routes are found on land, i.e. on islands and promontories/points of the mainland. This is the reason why open waters are not of current interest to the present study. A large part of the analysis is based on oral tradition, *the tradition of usage.*

In an archipelagic milieu we can thus see clearly the connections with and similarities to inland conditions. On skerries and islands we find counterparts to the monuments inland. Sometimes we find remnants under water of the same character as the agrarian field traces, e.g. extensive fishing weirs. But it is sometimes doubtful whether all the remains of transport are connected directly to the routes. The course of the sea routes appears, logically, to be more variable, more fluent (!) than that of the land roads.

The oldest sailing descriptions – of the type *periplus* – do not provide detailed accounts of the route followed.[2] They only account for a series of points and place names, in the same way we would do in the absence of a map. These points are mentioned since they have been visited or – as well-known orientation points – only passed. But only a small fraction of all the possible havens or harbours are enumerated. No alternatives are given. Every known bay or channel is in itself a potential emergency harbour. But the choice of such a haven is not coincidental. It depends on cultural practice and mediated knowledge, a pattern of action. Accordingly, for this choice of behaviour I have developed the term "tradition of usage."

It appears to be natural in a survey of this type to account both for similarities and differences between sea routes and land roads. Mogens Schou Jørgensen[3] has pointed out in a diachronic perspective on hollow ways and other traces that principally all available terrain has been used along the peninsula of Jutland (fig. 12). Along both sides of the coast, almost all the accessible waters have been utilized.

Such a statement could, however, develop into a simple truism. It should therefore once again be emphasized that the choice of the way – also the choice between a land road or a sea route – is *a cultural factor,* not just a manifestation of unconditional rationality, nor just a whim of the moment. It is a result of tradition and practical learning. We should consider the close connections between land and water as self-evident, particularly since they certainly were that way for the people of the past. A sectorization of transport appears as absurd now as it surely did then. But it is obvious that this close relationship is seldom taken into account in research. To one of the pioneers of geographical road research, the Swede Nils Friberg, who contributed a lot to my formation of my own views of the history of roads, there was no principal difference. He himself treated roads and sea routes at the same time[4], ultimately concentrating on the sea traffic of Stockholm, from the Bothnian hinterland[5] as well as from the Mälaren valley.[6] His work is based on an intuitive appreciation of the most important nodes of both land roads and sea routes – the towns, especially port cities, and in the case of Stockholm, a typical "channel city" between

two waters. Another simpler node is that of the maritime cultural centre (fig. 36), with primarily a maritime background, but in close contact with central places inland.

Apart from channels, or sounds; often with ferry traffic, to which we will return, topographical features such as the mouths, deltas and estuaries of rivers have been fundamental contact nodes between land, river and sea traffic (cf. figs. 24, 25). It is probable that this aspect attracted the wielders of power to such sites at a very early date.[7] All similar transit points or pivots, including portages (below), are not only attractive to power and control but also to the weaving of myth and ritual around the place. These aspects can be characterized as two sides of the same coin, since myth legitimizes power.

Maritime Culture

Having defined the maritime cultural landscape[8] as a concept, I have to make an effort to define what I mean by maritime culture. In doing so, I point out the differences between maritime culture and the predominating agrarian culture and thereby also the differences between sea routes and land roads. I would like to define maritime culture as the compound of cultural experience, the customs, the cognitive systems and the material cultural products which are created in what I have called maritime cultural centres or maritime enclaves. One of its chief identifying characteristics are the strong, intentionally created contrasts such as those found in maritime magic. A strong mental, structural and symbolic opposition between land-related and sea-related aspects seems to be inherent to maritime culture.[9] We are all familiar with the division imposed between "landlubbers" and "sailors." There is also a fundamental connection between the maritime occupations – those of the mariculturalists – fishing, the merchant marine, military navies, the lighthouse people and the pilots. The recruitment ground seems in general to be the fishing industry. As a mode of life, maritime culture is often an expression of a spectrum of part-time occupations, each of which is insufficient to form a basic economy on its own. They are not really side lines, because there is no "centre line," as it were. This combination is stubbornly defended by maritime people. If one of these niches is threatened, the emphasis is laid on another and the mode of life as such survives. Yet the common element still remains – the experience of and demand for the boat and the sea.

There is also a tendency for a *social security valve,* expressed in anarchistic tendencies: piracy, sea robbery, wreck plunder, smuggling, and other ways of escaping the control of the authorities or the state. It is a *landscape of resistance* as opposed to that of power. This facet is particularly apparent in small-scale shipping. Apart from this, the coast is a world of its own, characterized by the rapid transmission of information. Coastal culture is potentially an area of innovation. This is normal. Where this mechanism does not work, the reason lies in other – stronger – cultural factors.

Contacts and language, including vocabulary and place names, in a coastal area has been characterized in general as the following: *An important possibility of interpretation* [of maritime philology] *which is common at least to most of the words characteristic of coastal culture, is the fact that communications often have been livelier between the different coastal settlements than between the coastal settlements on the one hand and the inland on the other. The coast has been a world of its own.*[10]

Maritime culture also shows a striking rapidity of transport and spatially more extended communication lines than terrestrial or agrarian culture. It is of course in no way without bounds, but the borders are more widely spaced and different from those on land. It is often associated with living on islands. A concept such as "isolation," meaning "detached in the manner of an island," as mentioned above, could never have arisen in the North. It has its background in the

Mediterranean, with its huge islands, where the island has achieved an almost continental, and thereby "isolated" character, e.g. Sardinia.

Almost all of those aspects of the maritime cultural landscape to which I have called attention, serve to show the affinity with land-based phenomena, such as the power landscape, the territorial landscape, i.e. of aggression or of defence, and the cognitive or toponymical, i.e. place-name, landscape. This is valid not the least for the landscape of transport/communication.

But the outer resource landscape, marking the local ecology, especially fauna and flora, including wood for shipbuilding, and the economical landscape, mainly that of fishing, are particular to the maritime sphere. The same goes for the magic or ritual landscape, recently analyzed by the author.[11]

Feudal State, Monuments, Roads

In prehistoric times, roads were planned and constructed only to a very small degree. The fragments of actual constructions that have been found consist of stone and/or wooden foundations in wetlands and at fords (figs. 3, 4, 23). Some roadways are more the creation of nature than of man. This fact alone could serve to indicate that waterways were more important. But even without such a conclusion we would reasonably guess that waterways were infinitely more attractive for any kind of heavy and extensive transport in prehistoric times. It is not until the High Middle Ages that we find any kind of built roads or actual bridges. Apart from these monuments, the first documented efforts at organizing the maintenance of both sea and land communication seems to start at approximately the same time.

The interests of the state (or rather protostate) appear to be a decisive component in the development of a network of roads. In the case of land roads, this factor has been emphasized in research, but much less so concerning sea routes. The Swedish archaeologist Åke Hyenstrand poses this question on the Viking Age fairly early (1973): *Can the network of roads be seen in another context* [i.e. other than communication in general, my addition]*; does its development possess internal political significance?* The geographer Nils Friberg comments on the practical effects during the High Middle Ages (c. AD 1300) in a comparatively peripheral area, Swedish Norrland[12]: *The organization of the roads that we meet in the Hälsinge law is truly astounding. Without even the faintest indication in the sparse historical sources on what has been going on, you find yourself standing in front of a fairly mature organisation in the field of roads, with a well-developed classification of various road types, with a maintenance regulated in details, and with agreed-on standards as to the quality of the roads.*[13]

According to my argumentation[14], feudal power is developed by ever more stable forms of: 1) internal appropriation or taxation; 2) delegation of the authority from the king – personally and in the form of enfeoffment to control (trade and order) and to active command (of troops); 3) regional production (with a tendency towards regionalization and specialization in different areas); 4) roads and transportation. The martial character of the feudal crest furthermore leads to an aggressive "foreign policy," if not incessant in-fighting bordering on civil war.

Our interest is of course No. 4 above. But all of these aspects seem to be intimately interconnected. You cannot analyze any one of the prerequisites without keeping the others in mind. In this connection, I would like to distinguish between what I have called *transport pattern, transport system* and *transport structure* (fig. 1). By *pattern*, I mean the naturally developing regional variety; the *system* is what is put on top of it by the authorities. In feudal times, the authorities can roughly be divided into king, church and aristocracy. Other interested parties are the towns and trade organizations of the Hansa type, but in my area they do not play the same role as in the south. In my belief, the general organization belongs to the latter phenomenon, i.e. the

Fig. 1 Indigenous feudal powers in the North display a vested interest in sea routes as well as land roads. In contrast to the situation in central Europe, independent towns play a minor role, except in connection with the Hansa, dominant in trade activities during the thirteenth to the sixteenth centuries. Note the surmised development from fragmented transport *patterns* to at least the semblance of a transport *system* and the amalgamation of these two into a transport *structure*. (Drawing: Christer Westerdahl)
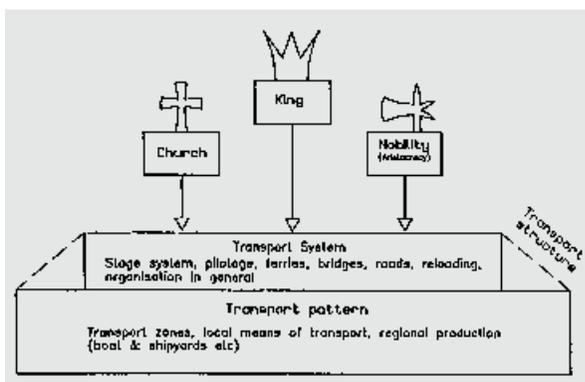
system, together with the principal roads, the conveyance by relays, reloading, ferries, sea marks and pilotage. The *structure*, finally, is the amalgamation of the two. It is difficult to know what is what, especially what the underlying patterns are. Perhaps the traditional transport zones (below) belong to the original patterns. As will be pointed out, they are intended for traffic on both sea and land. It is important to note that not only the physical presence of acknowledged roads is of interest here, but also, and even more so, the traces they have left behind in social organization, e.g. in the form of construction methods, markings, maintenance, help for travellers, ferries, conveyance of post and couriers, control and mobilization for defence.

All these factors are excellent examples of the manifestations of a more or less omnipresent authority. But it is always the local peasants who have to perform the actual work, the running maintenance, entertain the visitors sent out by the authorities, and man the levy fleet. During the Middle Ages some of these tasks are changed into permanent taxes. These taxes are canalized by way of various social levels, such as the herred (hundred, district), probably also the levy or assize district, or even the parish.

With some knowledge of Nordic road history[15] it is possible to infer that the establishment, maintenance and expansion of roads and transport systems depends to a great degree on the strength of the central – or at least theoretically central – administration. As important stages in post-Medieval times we can cite the reign of the union monarchs, the government of Gustavus Vasa (1523-60), the short Swedish epoch as a great power, Queen Christine after the ordinance of 1649, the Danish period of royal absolutism, in the 1660s with the assistance of the engineer/scientist Ole Rømer including Norway beginning in the 1680s and, finally, the Swedish absolutism of King Gustavus III from 1772. During this last period, in 1793, an important Danish ordinance was issued. Any change in one country is reflected in the other with corresponding systems.

The first efforts at centralized sea marks and royal pilotage thus seem to appear in Sweden under the reign of Gustavus Vasa. However, this may very well be an illusion. Probably the process has been going on for quite some time; a dormant organization may merely have been mobilized by this active and well-documented ruler. The reverse happens during the periods of enfeebled rulers; the neglect of maintenance, the decay of road systems and related institutions, including ferries, conveyance, pilotage, and sea marks. This is a more significant negative factor than war. During war, potential pilots were withdrawn and sea marks destroyed intentionally.[16] But the mobilization required for this effort makes it comparatively easy to reinstate and reconstruct afterwards. The active wielders of power often find prestige in travelling itself and mark this along the roads, including the pilgrim routes. An early example would be the considerable number of runic inscriptions on or by travellers.[17] From times immemorial, the means of trans-

Fig. 2 The depression presently marking the course of the Kanhave canal of Samsø island, Denmark, of which the wooden lining has been dendrochronologically dated to AD 726. It seems to have been in use for only a comparatively short time, however, apparently during a period of strong but "cyclical" kingship. (Photo: Christer Westerdahl)

Fig. 3 Only short stretches of roads dating from the Bronze Age could be expected. the existence of simple four-wheeled carts as well as chariots for the benefit of a marked aristocracy is attested to, however, by rock carvings and actual fragment finds. This bank was discovered in the vicinity of Malmö, Sweden. (Photo: Malmö kulturmiljö)

Fig. 4 Short road banks in wet-lands are also known from the Iron Age. South Skåne, Sweden. The carts used in Denmark have been illustrated by Schovsbo (1987). (Photo: Christer Westerdahl)

port – the wagons and carriages[18] as well as the ships[19] – marks the status of the chieftains. The prestige of travelling among Greek aristocrats of the Iron Age is apparent in the account of the travels of Ulysses.[20]

When does the state develop? Look at the road!

At least in Sweden, the inception of the process towards a feudal state starts with the symbolic introduction of Christianity in c. AD 1000. As usual, the archaeological sources pertaining to the North leave out the period before the Danish Jelling runic stone of the late tenth century. Per-haps the development of a central kingship is much older, but unstable and "cyclical."[21] It seems that the protostates were already slowly evolving in Denmark during Merovingian times, late seventh century AD. Such striking monuments as the *Kanhave* canal (fig. 2) across the island of Samsø emerge as early as AD 726, and the first parts of the gigantic *Danevirke* wall, from the late seventh century onward, with a marked climax in AD 737, including a massive defensive piling underwater in the Schlei/Slien fiord. At about the same time, the first proto-urban settle-

Fig. 5 A partial reconstruction of the impressive bridge at Ravning Enge, central Jutland, Denmark. The bridge is dendrochronologically dated at AD 979, and may have been built by Slavonic carpenters called in by King Harald Bluetooth (Blåtand), who had his residence in Jelling in the immediate vicinity of the bridge. However, the bridge does not seem ever to have been repaired after its initial construction, obviously meaning that it fell into disuse. It was a temporary prestige object. (Photo: Christer Westerdahl)

ment is founded at Ribe, c. AD 710-720. Then we know of the activities of the powerful king Godfred from the imperial Carolingian annals of around 800. Danish chieftains or petty kings had certainly built a few road banks to enhance their own prestige and legitimacy already long before. Some have been found by archaeologists, dating from the Bronze Age (fig. 3) and the early Iron Age (fig. 4).

This process of consecutive "cyclical" kingships may have come to an end during the reign of King Harald Blåtand, manifested by the Jelling complex and the *trelleborgs*. The latter are well-executed circular camps with walls, possibly with a crew of regulars. From the point of view of transportation, the remarkable bridge (fig. 5) at *Ravning Enge* southwest of Jelling, dated AD 979, is particularly striking. It can be compared to the Kanhave canal or the trelleborgs in several ways. It seems, for example, never to have been repaired, which indicates its temporary nature as a prestige monument. Thus the road aspect of the first protostate seems to be an illustration of this cyclical process. The permanent state with irreversible bureaucratic consequences belongs to a much later period, perhaps in earnest not until post-Medieval times.

The rise of lower administrative levels such is the *herred/hundare* are undated. They seem to exist as early as the eleventh century. As classical evidence, let us refer to the runic inscriptions of Jarlebanke in Täby, Uppland, Sweden, c. AD 1050 and the donation of the Danish King St. Knud to the cathedral of St. Lawrence at Lund in AD 1085. Such territorial divisions for exploiting human resources, at least in the form of labour, must be at the basis of any road organization. No continuous maintenance or support would be possible otherwise. According to Snorre Sturlason, a legendary Swedish Yngling king was called Braut-Anund, "Road-Anund." It would be more reasonable to surmise that this nick-name did not originate in the Merovingian age but

rather referred to the historical Christian king Anund Jakob during the first half of the eleventh century. Some of the deeds enumerated by King Øystein of Norway may indicate that an embryonic road and sea route systems were built up in c. AD 1100 or slightly earlier.[22]

A probable ambition of these proto-feudal kings was precisely to eliminate the isolation of the settled areas. Local roads for heavy winter transports had certainly existed for a long time. The same goes for some water routes, although they may have been of less importance inland than on the coast or along the major rivers. None of these routes presuppose any more extensive measures.

Let us now turn our attention to stable summer roads cutting through the vast border forests encircling the main settlement areas or provinces of central Sweden. These forests were of such impressive length that they received names of which the denotation is almost on a level with entire provinces: *Kolmården, Kilsbergen, Tiveden, Tylöskog.* Along the coast of Norrland, the concentrated settlements were separated from each other physically in the manner of "islands." The border forests were called *Ödmården, Årskogen, Skuleskogen, Malingen.* Thus the overall topographical picture of Sweden is very similar to that of Norway, although forests are more important obstacles there than steep rocks. For the maintenance of these principal roads rules were set up in the Medieval provincial codes. These roads correspond to what have been called roads *between districts (bygder),* the next more advanced stage after *roads of the farmstead/ village* and the *internal roads of the district (bygd).* The last-named would accordingly be examples of the transport pattern.

The Swedish *Eriksgata* (fig. 20) should be seen in this light. According to the provincial laws, the king who was elected in Uppland had to be confirmed in his rights and duties by the provincial assizes (ting) by way of the *Eriksgata*, a circuit journey in a specific road corridor all round Lake Vättern, from Uppland and Södermanland to Östergötland och Småland (Jönköping). On the way back, the provinces of Västergötland, Närke and Västmanland were visited. This was anything but a meaningless, merely formal ceremony. Before the mid twelfth century, an elected king, Ragvald Knaphövde, was killed by the *västgötar* because he had not followed the custom of the province of giving hostage during his Eriksgata. He had dishonoured them and that may have been the immediate reason. Furthermore, the province of Västergötland had elected the Danish crown prince Magnus Nielsen[23] king of the country. A temporary fragmentation of power was perhaps an important and necessary factor in the process towards unified power.

The legitimacy of the ruler is just one aspect of the Eriksgata. The Eriksgata was also a prerequisite for the maintenance of the king and his retinue.[24] The Norse concept for this maintenance is *veitsla* or *veizla*, Swed. *gästning*, and is known in Sweden as *wæzla* from the Hälsinge law in connection with the maintenance of the *konungs åre,* the representative of the king. This first-mentioned term is also known in Västergötland, however, perhaps significantly so because of its strong Norse connection. The early Medieval king had the royal demesnes at his disposal. They were called *Uppsala öd* in Sweden, or otherwise *kungsgårdar*.

At least 130 localities throughout the North are called *Hus(e)by* (fig. 6). They are the unalienable elements of the royal demesnes, belonging to the kingship irrespective of the individual. The demesnes served as stations on the incessant journeys of the king. Here the produce for his maintenance was collected the whole year round. It seems that, to a great degree, the struggle for power was a fight to obtain this attractive means of maintenance. The same goes for Norway, where the royal demesnes is called *kongsgårde* or *Huseby*, and for Denmark with its *kongelev*. Most of these demesnes, private or belonging to the royal family, have strikingly route-related, communicative and maritime locations.[25] This means that self-interest might have spurred the actual development of road systems and conveyance on water by the early
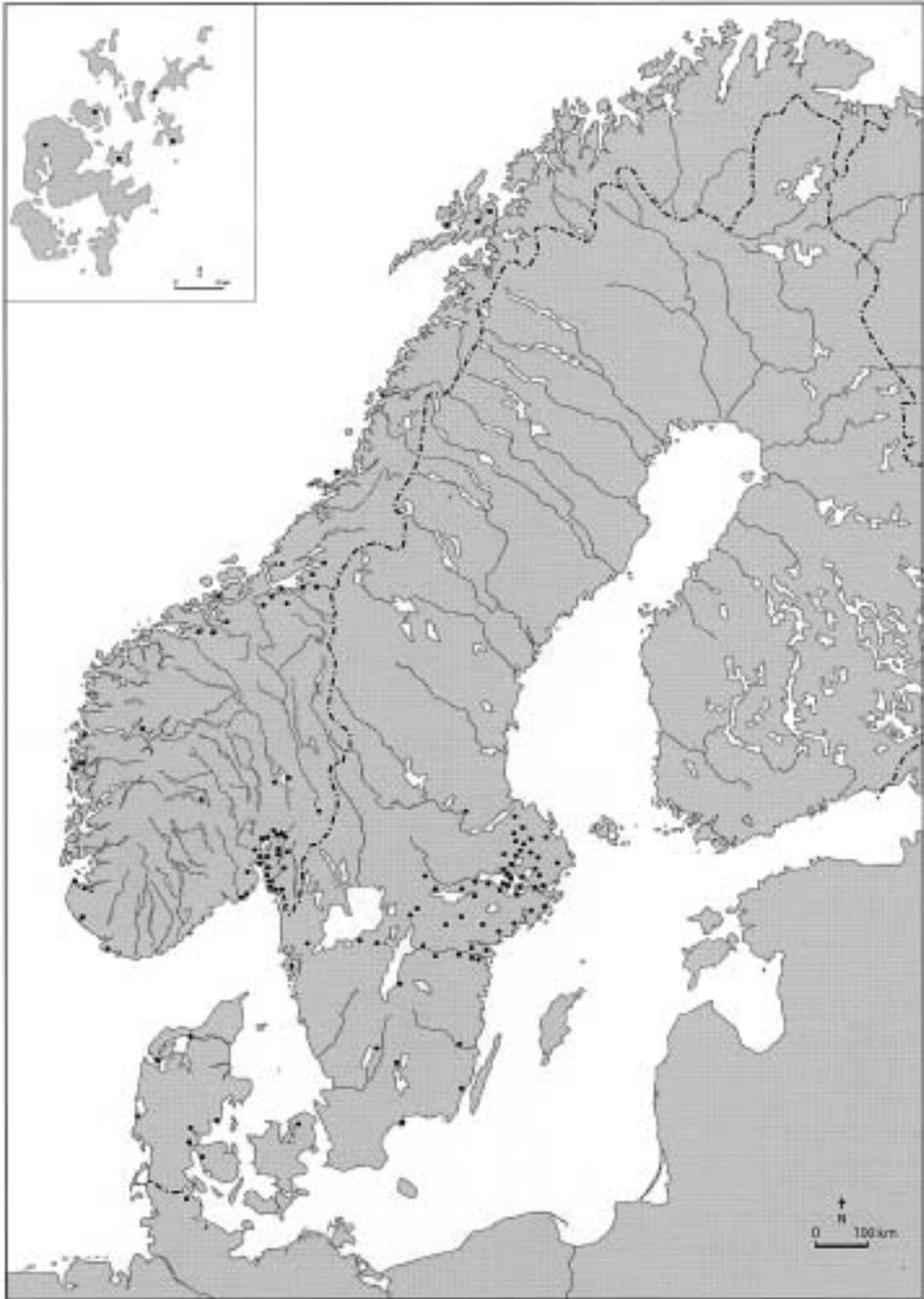
Fig. 6 The distribution of the *Husby* sites in the North, including the Orkneys. The dating according to Wester-dahl/Stylegar 2004 would mainly be the eleventh-twelfth centuries AD. Even if these royal mansions appear to be an indigenous creation of the north, they may very well have been inspired by the *Palatinate* phenomenon, in this case the rejuvenation of it by the German Ottonic emperors, an idea to be pursued in the future by this author (Westerdahl, forthcoming). The connection to important junctures of roads and waterways is apparent everywhere. (Frans Arne Stylegar, from Westerdahl/Stylegar 2004)

Fig. 7 The northern travel routes of the archbishops of Uppsala, Sweden, in their huge (arch-) diocese during the Catholic Middle Ages illustrate the division of transport patterns into winter traffic on land and summer traffic along the coast. This pattern is repeated by historical transportation: south of the line, farmers travelled to southern cities during the winter; north of the line, even more distant destinations were sought by sail. Thus the pattern delineates two transport zones, and a concomitant cultural barrier or border, open to study on the basis of archaeological, ethnological and linguistic source material. (Drawing: Christer Westerdahl)
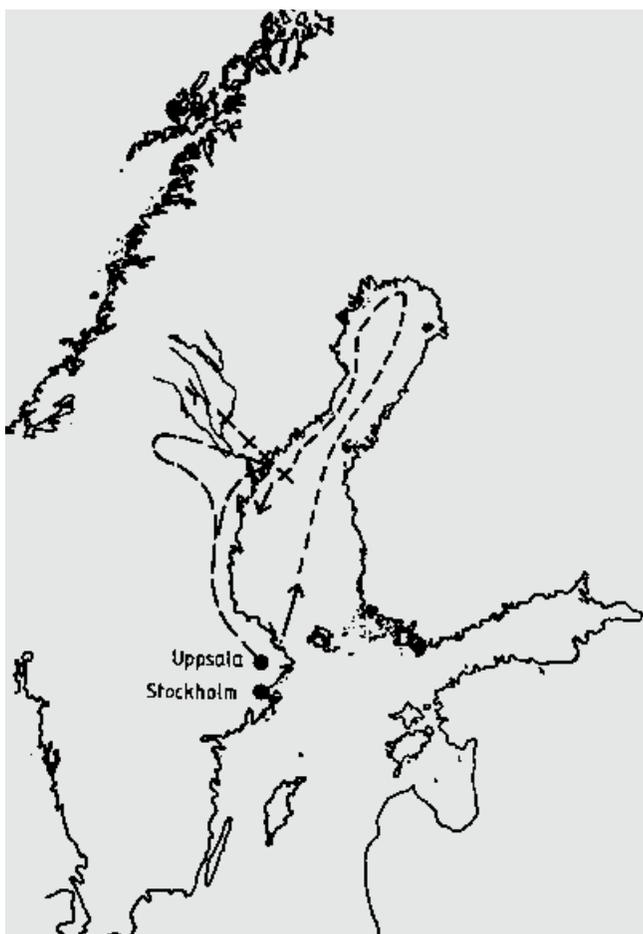
kingship of the North. During these journeys, a necessary control of the demesme and their administration was exerted. Apart from that, the king exercised his royal rights as the supreme judge at the provincial assizes (landsting). It is possible that the Carolingian and later imperial *circuitus*[26] represents a prototype to this circuit. On the other hand, perhaps it is not necessary to look for a prototype outside of Scandinavia, although some of the ceremonial trappings may have been influenced by continental (and imperial) manifestations.

Thus in the Swedish periphery of Norrland, the conveyance and the maintenance of the *konungs åre,* the agent of the king, is sketched by the Hälsinge law. His journey proceeded along the Norrstigen coastal road and between the *Uppsala öd* royal demesnes. A delegation of royal power had taken place, even if the role of the indigenous, authority-wielding aristocracy – local or regional – may possibly be underestimated. As during the archbishop's visitations, the winter journey is carried out up to northern Ångermanland (fig. 7), which is the traditional pivot of transport and trade for the local inhabitants between heavy winter transportation on land and summer traffic at sea. In certain respects, this transport border corresponds to a cultural border.[27] This circumstance serves well to illustrate the dependency of political control on the traditional pattern of transport and how this pattern is reflected in cultural terms (cf. map fig. 40).

Monuments on Roads and Routes – The Roads and their Markers as Monuments

The runic inscriptions document the expansion of roads, while commemorating the individual construction of bridges and road banks. This process goes on during the later part of the Viking Age, as attested to by archaeological datings and written source material in Denmark[28], Norway[29] and Sweden.[30] The beginning of runic monuments (c. AD 500-1000) appears somewhat different. The scarce early inscriptions are more strongly associated with graves and grave fields. But it seems clear that even the grave fields are concentrated along ancient roads, of which traces are sometimes even found within the grave field. Perhaps these roads should be regarded as local. Mårten Sjöbeck has made the qualified guess that both grave fields and roads are located on common land.[31]

This connection with roads is not only valid for rune stones (figs. 8-10), but also for various other early burial monuments. Amongst the famous pieces of wisdom of the *Hávamal* of the thirteenth century[32], it is emphasized that *bautasteinar standa brauto nær* ("bautas are located near the road"). The standing stones are sometimes called *brötarkumbl* in the runic inscriptions, "road marks" or perhaps more precisely "monuments on roads." In this way, the standing stones also served as markings for the road in snow or poor visibility. It thus appears that grave fields with bautas have close connections with ancient path and road lines.

Most of the rune stones and the runic inscriptions on large boulders and rocks, thus in an original location, are found along the roads, at crossroads, including some with meeting places for markets and assizes, at river fords and constructed road banks across wetlands. Almost all of the stones refer to Christians. These monuments were obviously intended to save the souls of either the erectors themselves or their immediate ancestors. The building of roads was encouraged by the church as a laudable action with which to earn absolution. It is not clear whether the erectors of rune stones as a whole belonged to the same group as the king's immediate entourage. A fairly great number of the Southern Swedish rune texts mention *thegnar*, Anglo-Saxon *thanes*, and *drengar*, which refer to proto-feudal vassalage, although it is not always obvious to which king.[33]

Fig. 8 Runic memorial stone of the eleventh century AD in its original position at a present-day land road of Täby, Uppland, Sweden. (Photo: Christer Westerdahl)

Runic inscriptions were carved until well into the twelfth century, not least of all in connection with churches, some of them obviously the first generation of wooden churches. The Romanesque private stone churches follow almost directly during the twelfth century as monuments commemorating the same families, possibly the direct descendants of the rune stone erectors. It thus appears reasonable to see the rune stones, the roads and the stone churches as monuments of the ideology and the interests of similar, or identical, social groups.

In his fascinating study, Leif Gren[34] demonstrates how the church building in itself marks a hitherto unknown level in society, the parish. Its function was intended to weaken the traditional connection of the individuals exclusively to their farmstead, family and the pagan cosmology. This level was introduced by the proto-feudal authorities in their own interest, supported heavily by the international Catholic church. The rigid pyramidal hierarchy, with its ultimate origins in classical antiquity, served as the most important legitimization of royal power. In other words, the dated distribution of stone churches could in fact provide a relevant map and time sequence as to the expansion of feudal power.[35]

The through roads are a natural sequel to these developments, with the church as the instigator even in peripheral districts such as Swedish Norrland. The archaeology of dated Medieval wooden causeways has been studied in Trøndelag, Norway, by Ingrid Smedstad[36],

Fig. 9 The Karlevi stone, central Öland, Sweden, is a runic memorial of the tenth century AD, dedicated to the memory of a Viking Age Danish warrior aristocrat, possibly a "sea-king," who presumably was buried here close to the sea route of Kalmarsund. To a certain extent, therefore, this is a combination of grave and sea route marking (although the shore is not in the immediate vicinity). The text contains an unusual heroic poem. Curiously enough, even a cross and a few Latin letters for a personal name have been inscribed on the back; see Andrén 2007. (Photo: Christer Westerdahl)

who compares them with the regulations of the provincial laws. In both cases, the archbishops – Nidaros and Uppsala – played a fundamental role. In my own account of the transport conditions along the Medieval coast of Norrland, I emphasized the importance of Medieval parish churches and centres close to the contemporary shoreline. Stefan Brink[37] also considers it likely that the locations of the churches were based on transport considerations and can also be interpreted as manifestations of strategy with regard to central locations in the pagan landscape. Some of the inland locations are also strongly associated with significant locations on inland waters or junctions. Sometimes the distances between church locations in agrarian flatlands in the south are astoundingly equal, indicating the church's influence on, and possibly also its control of, the road nets. Not just the question of accessibility by boat or horse must be considered. There was also a need for a central place with multi-faceted functions. At least in Swedish Norrland, the location of the church – often called *Vallen* – has served as the local market, meeting place, the site of the assizes and sometimes as the local harbour as well. It is probable that this utilization corresponded with the intentions that came to bear in choosing the location. The results of some archaeological excavations, e.g. in Norrbotten, may support such a view.[38]

Fig. 10 The impressive runic monument of Björketorp, Blekinge, Sweden, of the seventh or the eighth century AD, consists of three erected stones, of which one contains a warning to those who try to desecrate it. It seems to be situated at an ancient crossroad. (Photo: Christer Westerdahl)

Apart from being a monument in general, comparable to roads, bridges, rune stones and prominent sea marks, the church building actually was a sighting point in itself. Church towers and even church buildings often served as land and sea marks. They soon became regular elements in navigation. The church tower of the cathedral in Helsingør, the tower of the Church of St. Peter in Rostock[39] and the church of St. Olav, now Oleviste, in Tallinn, Estonia, are justly famous. But church towers were as important in the countryside, e.g. *Långe Jan* in southern Öland and the church of Öja on southern Gotland, with the famous tower called *Gra gasi*, "Gray Goose," both the latter being noa names, names of maritime magic. Any other tall building, castle or tower, could fulfil the same function. On the very flat coast of Skåne, the tower of the sixteenth-century castle of Tosterup was important although it is situated at least six kilometres inland from the coastal sailing routes. Fires in the upper storey are supposed to have warned sailors of the reefs of Sandhammaren by establishing their position. Contours of church topography are still indicated on sea charts of the eighteenth century.[40]

State and Road in World History

Let us now call attention to a few international parallels to the development in Scandinavia. Since the invention of the wheel, road construction is one of the most important tasks of all early states.[41] Just observe the curious fact that the Inca Empire built the most elaborate road systems without having practical knowledge of the wheel. For a general overview of road systems see e.g. Schneider[42], for those of the Roman Empire Bagshawe[43], for the Middle Ages a brief characterization by Szabó[44], for the India of the precolonial Moghul (Mughal) emperors Deloche[45], the latter both on land and water.

It is interesting to see that these roads serve not only as army roads for external demonstrations of power. They are equally important for internal control, for the couriers of the ruler, his intelligence systems and his spies. As we have stated above, the decay of roads is obvious in periods of interregnum or political fragmentation. The transport systems are in permanent need of maintenance.

It may be harder to demonstrate these principles in the case of maritime transport. There is certainly an organizational ambition at sea as well, but more in the sense of the mobilization of human resources. Some early examples of importance to world history are the Phoenician and Greek thalassocracies, and later the Hellenistic and Byzantine areas of influence. Behind them lies a Minoan and Mycenaean background. None of them, however, presuppose a state formation. Quite to the contrary, the mercantile thalassocracies seem to be notorious for their lack of unity and mobilization for common goals. They appear to have been easily exploitable by land-based empires such as the Assyrian, Persian and Roman. Their commercial rivalries must have precluded common investments in such things as sea marks, if not in the direct interest of the state. In the Medieval north the mercantile aspect is already incorporated in the development of the protofeudal state, with the earliest royal towns. No such obstacles as in the Mediterranean area appear to exist.

Hærvejen: The "Army Road" and Other Danish Experiences

Denmark forms an important barrier or transit archipelago between the North Sea, the Kattegat/Skagerak and the Baltic inner seas. At the same time, it is the only point where a land traveller could minimize his sea passages to Scandinavia in the past. Denmark is therefore crucial in the North both as a transport barrier and as a mediator of land and sea transports. Presumably

Fig. 11 The unusually well-preserved stone Migration Age (AD 400-550) pavement of a ford at Broskov, Zealand, Denmark. Possible prototypes may be found in Roman roads. Several hollow roads lead down to this ford. (Photo: Christer Westerdahl)
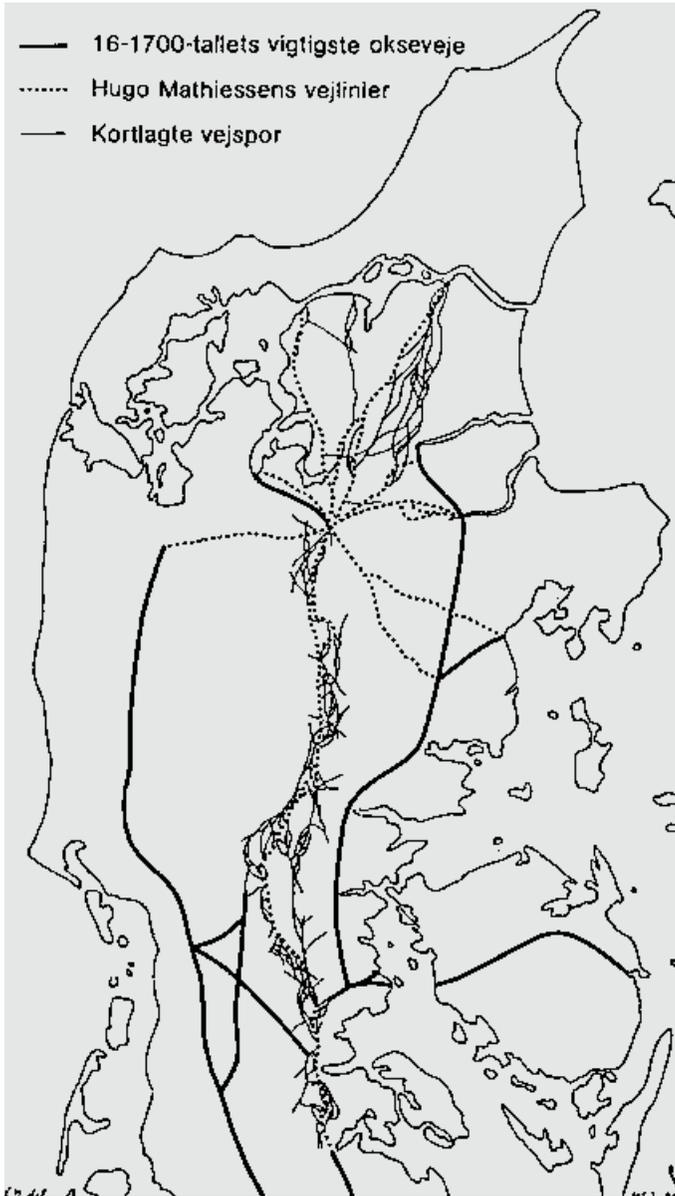
Fig. 12 The road corridors of the Army Road *(Hærvejen)* of Jutland, Denmark. The earlier pattern of a fairly straight road line along the water-sheds is rather to be broken down into several parallel stretches, according to the varying states of the unpre-pared road tracks. (After Mogens Schou Jørgensen)

this area established the pattern for other, more peripheral parts of Scandinavia. One aspect is the road along the peninsula of Jutland and its adjacent sea route(s). Another are the roads lead-ing across the land and the large islands from one port to another, connecting the sea and the ferry routes.

To give some examples of relevant connections between land roads and sea routes, I have cho-sen the Hærvejen complex. Furthermore Denmark can justifiably be described as the earliest and most important innovation area of road networks in the north. There are several other examples of prehistoric road banks in Denmark (fig. 11). Of particular interest are the stone-laid causeways of Stevns, East Zealand in view of the exceptional Roman Iron Age finds, indicating

a centre of power.[46] Nearly the same applies to the Gudme area on Funen. Both have a strategic maritime position, south of the Sound and on the Great Belt respectively. We have already discussed the relationship between state formation and roads, also indicating a direct connection with contemporary maritime control. However, these causeways are extremely limited in scope, being mainly very short and only situated at crossings of wetlands and fords of small rivers.

But the most famous example of roads (Medieval in a European sense) in the North is the *Hærvejen* ("Army Road") complex (fig. 12). There is early evidence of its name, but other designations exist, for example *Kongens Hærvej, Hærstræde, Hævdvejen, Allemandsvej, Alfarvej, Alvej, Adelvej,* all indicating its supreme importance for everybody and its connection to royal power. In Mathiesen's classical study[47], it is thought to have followed the watersheds of Jutland. Several new investigations have established a multitude of variations, or corridors, however, and also differ from Mathiesen in many other ways.[48] Two run near to the coast in the east in addition to one in the west. Wherever the road crosses a main river or the inner parts of a fiord, a prerequisite arises for a nodal point of land, river and sea traffic.

The oldest reference to this road corridor appears to originate in Iceland. In the middle of the twelfth century, the Icelandic abbot Nicolaus travelled this route by way of Norway to Ålborg and then passing Viborg, Skodborg Å, Hedeby, Slesvig, the Eider river and Itzehoe to the Elbe. It took him two days from Ålborg to Viborg, and a week from there to Hedeby. This means a day's journey of between thirty and forty kilometres. This distance corresponds well to the distance between night refuges, called *härbärgen* or *själastugor,* in Swedish Värmland on the pilgrimage route to Nidaros or, for that matter, to other experiences like the stages of approximately forty kilometres a day on the route to Rome.

In Scandinavia, Hærvejen was the first section of the regular overland pilgrimage route to Santiago de Compostela or Rome. Many interim destinations were affected and profited hugely from the traffic. During the passage, the church of *Kliplev* in Sønderjylland served as an important destination in its own right. The cult figure was a statue of Christ, called St. Hjælper, which is mentioned as a recipient in the will of Queen Margaret I in AD 1416. As we shall see, this need not be mere coincidence. Queen Margaret I was instrumental in structuring the road network. The end of this kind of traffic came with the reformation, which took place in Denmark in AD 1536.[49]

As indicated by its most well-known name, this was a military road as well. Several important battles took place along the Hærvejen corridor. One of the most fateful was the battle at Grathe Hede in AD 1157, where King Svend Grathe lost his life and the glorious era of the Valdemars began in Denmark. In conformity with the common law of Queen Margaret I of AD 1396, the bailiffs of the realm were ordered to build an inn at every fourth *mil*, which together will be approximately 30 kilometres, along the principal roads. These later developed into the privileged royal inns, which essentially adhered to this allotted distance. This is approximately what was counted as a normal day's journey with horse and carriage at the time. More precisely it is 33 kilometres, which is in fact 4 units of a *rast* or a *vika/ugesøs* at sea; 1 *vika* being 8.3 kilometres; see below. The first regular roads with a continuous causeway or bank were constructed during the reign of King Frederik II in the 1580s. But this kind of road was mainly intended for the benefit of the king himself on his travels between various royal residences. Only a few of them were parallel to common roads. During the seventeenth century a wagon normally was driven with a speed of 4 kilometres an hour. This means that a day's journey took eight hours. In later ordinances, an inn was stipulated every $2^{1}/_{2}$ mil (= 20 km), which meant food, drink and a possible overnight stay for every fifth hour. A daily journey of eight hours was evidently considered unrealistic even in late historical times. We will return to this matter below.

At the time in question, it was the peasants who bore most of the burden of the road maintenance work. The Danish ordinance of 1793 later expressed the opinion that those who benefit from the road also must pay for its construction and maintenance. This meant the local and regional authorities. The duties of the peasants were not abolished altogether but simply limited in scope.[50]

The direction of the later Hærvejen is connected with the extensive oxdrives from Denmark to Germany. It is indeed a general rule for the most important road courses of the past that they have been fixed and visibly deepened (hollowed) mainly by the wear and tear of hooves, cloven or not. In this case we are touching one of the main export products of Denmark after the great decline of agriculture during the fourteenth century. It was a privilege of the noblemen. During the period of social upheaval at the beginning of the sixteenth century, the burghers and peasants supporting the deposed King Christian II fought in vain against these privileges.

This type of transportation is also the background for the *Härkätie* (the "ox road") of Finland.[51] The wear and tear of it also applied to other parts of the road network. The smaller tributary roads were often the pasture drives (Swed. *fägata*) from the village to the commons. The preserved customs documents of Gottorp testify to 12,000 imported oxen in 1485, rising to some 40,000 in 1578. In the early seventeenth century the annual number was 40-50,000. Between then and the introduction of railways, the number declined only slightly.

Similar traffic, though not as extensive, must have taken place during the latter part of the Middle Ages along the road courses named after the important river valleys of Danish Halland. They comprised *Ätrastigen* with the district of *Redväg*, the "road for riding," *Nissastigen, Lagastigen* – *stig* meaning "path, route" and the first component of the name indicating the river –, and Blekinge from the Swedish provinces of Västergötland and Småland, likewise only succeeded much later by railway traffic. As in the case of Hærvejen these approximate courses are the foundations of present-day main roads. And finally, these developments came about even though the Danish cattle export had maritime alternatives, which served as such throughout the entire period, but only in the south and only on parts of the land roads: Korsör-Nyborg/Assens-Årøsund (Haderslev), Rødby-Neustadt/Travemünde (from the Baltic). On the west coast of Jutland, Ringkøbing, Hjerting, Ribe, Højen (at Tønder) are well known as cattle ports. For other cargoes, however, sea routes were parallel to the Hærvejen road courses throughout their existence, particularly along the comparatively sheltered eastern coast of Jutland. On the western side, water traffic could also be conducted inside the dunes. This route was of the same type as those used in the tidal flats of the *Waddenmeer* of northwestern Germany and the Netherlands. In Holland they were called *binnen de duinen* in contrast to the outer route, *buiten de duinen,* which exposed sailing ships to far more dangerous currents and wave action. Finally, the transit routes across the peninsula of Jutland run between the most important river ports, often Medieval towns, on either side.[52]

From Sound to Portage, *bor* and *ed:* The Sound as Portage of a Land Road, the Portage as Sound of the Sea Route

A channel is a great asset in coast-bound traffic. It serves as the destination for the sea route and the location of the harbour. From that point of view, a pilot (Norse *leiðsögumaðr*, Swed. *ledsaghare*) could very fittingly be called a "sound-finder."[53] There is a classical book on navigation entitled "The Haven-Finding Art,"[54] which clearly expresses what importance the protected haven had for the direction of the sea route. On the other hand, the channel is a hindrance from an inland point of view. The original meaning of "sound" (channel) is a place where you have to swim. If you have to cross it, the interruption of the land journey normally consists of a ferry

Fig. 13 Wooding hauling stand for boats used in timber floating along the Gargån River. This stretch of river consists of turbulent rapids and boats have to be dragged on land. This stand was originally built in 1909 and is still visible in the terrain. (Photo: Museum of Skellefteå in the 1970s)
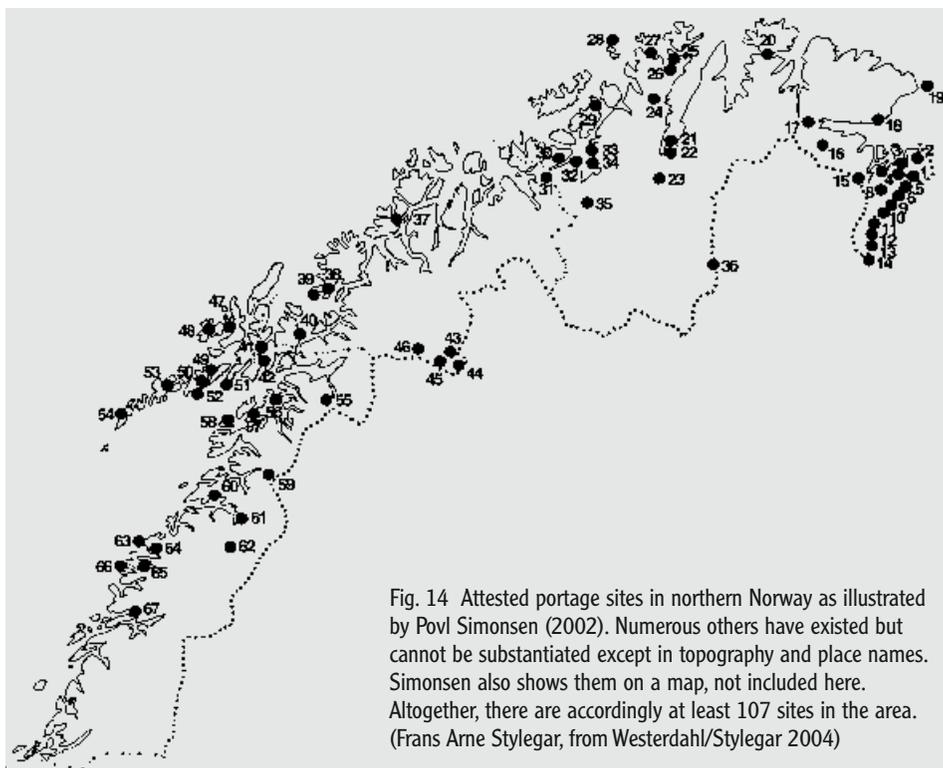

Fig. 14 Attested portage sites in northern Norway as illustrated by Povl Simonsen (2002). Numerous others have existed but cannot be substantiated except in topography and place names. Simonsen also shows them on a map, not included here. Altogether, there are accordingly at least 107 sites in the area. (Frans Arne Stylegar, from Westerdahl/Stylegar 2004)

Fig. 15 Place-names containing *Drag-* and *Ed-* elements along the Hälsingland coast of eastern Sweden. They seem to illustrate an ancient portage route for small vessels across points. In the north, the bay is called *Vintergatsfjärden,* referring to a winter road and reflecting the fact (supported by oral tradition) that the route, including its portages, was also used by sledges on the ice in winter. (Drawing: Christer Westerdahl)

transport. An alternative term for ferryman in Swedish during the late Middle Ages is *sund-karl*, "sound man" (e.g. Söderwall, supplement). Bjarne Rogan uses *sundmann*, which is the usual term in Norway.[55] To sea travellers, the short overland passage between two bodies of water plays a corresponding role. This is where you find hauling sites or portages across the isthmus. Recently this complex was the subject of an international conference organized and published by this author.[56]

Sometimes the land transport was so long and so well-frequented that you might find actual systems of hollow roads across the portage. These may in fact have been among the very first stable roads. Apart from the phenomenon itself, the place name elements *drag* and *ed (eid)* are well known throughout Scandinavia. The philological root of an *ed, eid* is a verb related to Latin *ire*, "to walk" (participal form *itum*). These are accordingly places where you had to walk, necessarily implying that you would otherwise have travelled by boat. The place names containing the *ed/eid* element are particularly prolific in Norway and in eastern and northern Sweden (cf.

Fig. 16 Scottish portage sites, often containing the place name element *Tarbert*, in Shetland and the Orkneys replaced by Nordic words like *Eid* (gaelicized as *Uidh* in other places). (Phillips 2006 after MacCullough 2000)

figs. 14-15). In central Middle Sweden, other name elements point to the same phenomena, especially *bor* as in *Borlänge, Sundborn,* containing direct information not given by the other names, the term *bor* being a verbal abstractive of *bära,* "to carry." These names also appear in Russia.[57] In northern Scandinavia, there is a multitude of Saami and Finnish names of the same or similar denotation, e.g. *muorka, muotka, matka, taival, taipale.* They are a characteristic feature of the *erämaa* language, used by hunters and fishermen in connection with long transports in a roadless country – an "amphibious landscape."[58]

But Norway is undoubtedly the country where this type of name is most evenly spread, especially along the indented and fiord-strewn coast. *They are a peculiarity of the Norwegian coast,* as the Norwegian historian Yngvar Nielsen commented in 1905.[59] On the other hand, it could also be pointed out that place names of this denotation are also found in Scotland, where the topographical situation is quite similar to the Norwegian one. There are at least forty significant *Tarbert* sites, after the Gaelic word *tarbairt,* "overbringing," for a portage, and there are many other compound names (fig. 16).[60]

Inuit Greenland has got a similar meaning for place names at similar sites, e.g. *Itillersuaq, Itilleeraq.*[61] All these localities are found on narrow isthmi deep inside fiord-like landscapes where it is possible to find shortcuts from one fiord to another and to avoid weathering a cape in the open sea with dangerous waves or currents. This kind of locality is also found in less dramatic landscapes of the North.[62]

Fig. 17 The impressive portage of *Listeid* in southern Norway, still used for small boats, in order not to cross the treacherous open waters doubling the peninsula of Lista. The portage allows navigation on brackish water in the fiord closest to the viewer. Other portages could also be used in the continuation of the same route parallel to the open coastline. (Photo: Christer Westerdahl)

The Norwegian nestor of Nordic place-name research, Olav Rygh, provides a wide range of meanings for *eid*: a passage from one settlement district to another, a passage in the mountains, an overland road between two bodies of water, rapids or currents in rivers. With such a general meaning developing over time, it is not unreasonable to conjecture that the localities thus named could point simply to a watershed, like the Russian *volok*, which later came to signify a portage or hauling site for boats.[63] The same happened to Swedish *bor* and Finnish *keidas* names.[64]

The element *Drag* seems to have been used at sites of a corresponding nature, according to Rygh *a low or shallow eid, a transition between two waters, rapids or a current in a river.* On a preliminary list, there are altogether more than 65 *drag* localities and at least 400 *eid* in Norway.[65] At the *Tiltereidet* portage between Eidsør and Eidsvåg in Møre and Romsdal remnants of a wooden causeway were excavated, measuring approximately 500 m in length and 2.5 m in width. It is thought to date from the Migration Age, AD 400-550. This *eid* ascends to about 100 m above sea level. *Foldereid* in Nord-Trøndelag has also yielded remains of the same kind, although they are probably later. Another well-known *eid* is *Mannseidet* on Stadlandet outside the Horn of Norway at Selje. *Spangereid* in Vest-Agder on the southern coast is one of the central transit points between the traditional Norwegian transport zones.[66] This inner passage starts further west at the impressive portage at Listeid at the narrowest base of the dangerous peninsula of Lista (fig. 17). Remarkably enough, a canal was dug at the Spangereid portage during the Iron Age.[67] One of the largest and richest Iron Age grave fields is also to be found in these parts. This feature is not unknown from other such passages. The existence of a sizeable permanent population is a prerequisite for the proper function of a superregional *eid*.[68] The *eid* sites were

important as crossways and meeting sites and accordingly churches were often built there. In those cases, the parish name usually contains the element *eid*. Some of the major portages were of great strategic significance and could be controlled in troubled times by local chieftains in the name of central power, along with other alternative routes.

The most common function is probably that you changed means of transport here, left your boat on one side, unloaded the cargo, carried it across the portage where you reloaded it onto another vessel. If the vessel was very small it could possibly have been carried across as well. But the normal *eid* was probably furnished with boats on both sides. The question is just how ordinary this way of transport was. There are unfortunately no sources available to provide any answer for earlier periods, except the very small number of archaeologically dated sites.

In Russia it seems that similar conditions are fundamental for the understanding of state formation and of communications within/between the Russian realms.[69] Transports of this kind must have presupposed the (more or less daily) help and assistance of people living permanently or seasonally close to the site. A Russian long *volok* could only be used properly when a settlement had been established there, according to Makarov.[70] This assistance must have been almost a civic duty, even if it was not codified in these cases. On the other hand, reference to such service is mentioned in connection with the Smolensk treaties of AD 1229 and 1274 between Novgorod and the Germans and Gotlanders.[71]

As late as 1761 a Norwegian by the name of Ole Olsen was called to the assizes by the bailiff, because he had been unwilling to assist in hauling a boat across the portage at Tiltereidet.[72] Even during the nineteenth century, these minor transports were quite common, and frequently mentioned in travel diaries and other contemporary texts. Some have been in use for small boats up to our own times. Other early sources mention the hauling of ships for military reasons. The fleets of Norwegian kings, especially that of Harald Hårdråde in the early 1060s, were hauled across at Løgstør Bredning in Limfjorden, North Jutland, and also up into Lake Vänern in Western Sweden. Snorri Sturlason proposes that only the smaller and lighter craft were transported by the latter means. According to the Håkonssaga of Sturla Thordarson a similar transport for military reasons – and perhaps prestige as well – took place in 1227 from Lake Vänern up into lake Glafsfjorden, Värmland, still Sweden, and further into Norway by way of the river Glomma.[73]

The concept *skipsdrott*, "ship haul," which is mentioned in the Norwegian provincial laws, must have referred primarily to the duty of hauling boats up onto land in town harbours and also, in winter harbours in the countryside, to levy ships with boathouses, the Norwegian *naust*. But in Denmark the similar place name *Skibsdræt* for the end of an old waterway north of Gudsø Vig on Jutland may have marked a portage of a more sophisticated kind.[74] The bay of Gudsø Vig is well-known for its successive stages of defensive pilings, from the pre-Roman Iron Age to the Viking Age. This *Skibsdræt* may therefore have possessed strategic significance. There are indeed good military reasons for hauling vessels overland, known in the North even from later naval history, in fact well into the seventeenth century.[75]

Monuments, Traces and Remains of Old Roads and Sea Routes

In this survey I will now try to demonstrate similarities and differences between roads and sea routes by focussing on certain representative elements. There is in fact a whole battery of categories for roads and road courses.[76] One of my intentions will be to show that, to some extent, the same categories also appear along the sea routes. It is, however, also obvious that certain remains are unique to the sea routes and their nodal points, i.e. harbours with their boat causeways, landing stages, piers, jetties, etc. But the point of departure is consistently the land roads.

Fig. 18 Hollow roads may be hard to distinguish from small-scale drainage ditches or moats. Hollow way in Dalarna, Sweden, leading to a river passage. (Photo: Christer Westerdahl)

Fig. 19 The hollow of a riding track may be deepened successively by rainwater to an impressive degree. This track near Timmele, Västergötland, is 7 m deep. (Photo: Christer Westerdahl)

Fig. 20 It might be easier to discern the course of parallel hollow roads when they are covered by a thin layer of snow. The system illustrated in this picture is thought to have been part of the *Eriksgata,* the circuit of a medieval Swedish king to obtain confirmation of his title in the provinces. As many as nine parallel tracks are in fact visible. Cf. fig. 21. (Photo: Christer Westerdahl)

Fig. 21 The wear and tear and narrowing of a hollow road for riding may become an obstacle, especially when other traffic is encountered. Parallel tracks are accordingly adopted, creating rather more a corridor than a single line of tracks. Timmele, Västergötland, Sweden. (Photo: Christer Westerdahl)

The place names are an important part of the remnants but here they have been treated very briefly. And the most important type of remain in connection with roads and sea routes is undoubtedly the *settlements* and traces of their organization, such as fences and other markings of ownership and use. For obvious reasons, this is a much too extensive group of remains, and moreover has much too complicated a background to be treated at all in this text.

Traces of the Road Course Itself

It is only natural that most of these traces have no counterparts in the sea. But comparable traces can at least be found in the latter category, e.g. in portages.

Hollow ways: The largest complexes in Sweden are to be found at Draget, close to Stäket, in Lake Mälaren, Stockholm, and at the so-called *Eriksgatuleden*, along the royal circuit route called Eriksgatan above (fig. 20), parish of Sandhem, Västergötland; close to Mullsjö one hollow way is 9 m deep (cf. figs. 19, 21 approximately in the same area). Of course no parallel exists in seaways.

Beddings of branches, fascines (Neolithic, Denmark), planks (Bronze Age, Denmark): Without any parallel at sea, like the following:
– Stone-laid edge or curb stones for wooden fill.
– Stone-laid beddings (Bronze Age, Denmark, Scania).
– Traces of roads under burial mounds (particularly Denmark).
– Bridges. A contact surface between ford or ferry traffic, often preceding the bridge. The bridge can secondarily be used as a barrier in the water route.
– Wooden causeways in wetlands[77] (fig. 23).
– Finds of horseshoes and horseshoe nails.

Fig. 22 An ancient road track, now in disuse, in Östergötland, Sweden, not far from a present main road. A runic monument is in its original position, placed at a short hollow road in the background. (Photo: Christer Westerdahl)

Fig. 23 The wooden pavement, *kavelbro*, of a medieval causeway, excavated close to a wetland in Trøndelag, Norway. (Photo: Ingrid Smedstad)

Remains of fences on both sides of a narrow space (stone rows, piles): This is often the obvious indication of the small local road between the boundaries of cultivated land where the animals were driven to the pastures.

Indications of old roads on historical maps and charts, either observing seemingly unmotivated jerks in boundaries or road courses, compared to aerial photographs, perhaps to known common lands.[78] Old sea routes can also be found on maps.

Collections of road corridors/road bundles at fords with e.g. hollow ways: Since fords downstream a river often emerge where the current shoals and branches out, this is also a topogra-

BOUNDARY STONE (Site for i.e. the offering of charcoal from a domestic hearth, together with birchbark.)

DISTRICT BOUNDARY

PINE (MEETING PLACE FOR A SCHNAPPS)

STONE MARKER (Marker for the limit of a stretch of way dutifully maintained by one single farmer or household.)

BOUNDARY STONE

TREE (MEETING PLACE FOR PASSING WATER)

BURIAL GROUND

LOCAL ASSIZES SITE

GALLOWS

HAFNAR CROSS HARBOUR CROSS (SEA MARK)

MILE-STONE

OFFERING SITE (VOTIVE DEPOSIT)

THIEVES' ISLE

PARISH BOUNDARY

HOLLOW ROAD

RUNE STONE

HAVEN

VAEDHIL (VEJLE) FORD

HILL FORT

STEG-STAK-POLE BARRIER (IN WATER)

DEPOT

OFFERING SITE

STAFF MOUND

(STONE) CAUSEWAY

BRIDGE

FARBJERG

INN *STAGE POINT*

LOG CAUSEWAY

PILGRIMAGE CHURCH *STAGE POINT*

WATERING PLACE

HILL FORT

Fig. 24 A principal sketch of monuments and traces of ancient roads, connected to a ford across a river with hollow roads on both sides of the bank, where the lower estuary provides direct contact with the sea by way of a harbour. Such a site may result in a medieval coastal town, as in fig. 26. (Drawing: Christer Westerdahl, Erik Hoops)
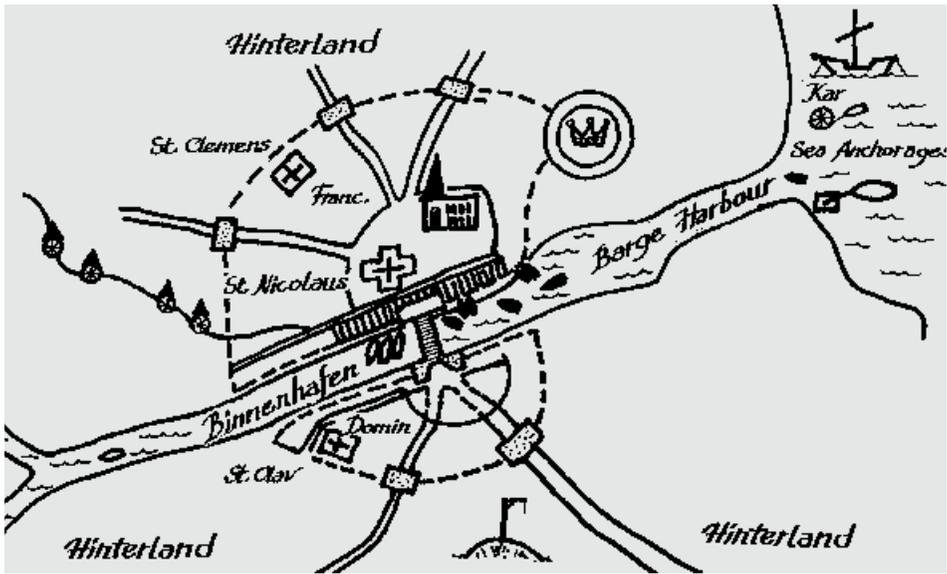
Fig. 25 A principal sketch of a medieval coastal town port at a river mouth, substantiated in several North European examples. The foundation may have been the result of the initiative of a feudal power at an original ford location such as that of fig. 24. (Drawing: Christer Westerdahl)

phical obstacle for a boat either way. For this reason a harbour can be foreseen both in the direction of the mouth or estuary and upstream. Such a passage forms the basis for interaction between sea, river and land traffic, perhaps a market and even as an extension of a Medieval town (figs. 23, 25).

Finds of wheels and parts of carts/wagons in wetlands[79]: Some could perhaps mean boat transport on wheels, depending on context. It is possible here to refer to the enormous maritime heritage of means of transport, i.e. wrecks. It should only be remembered that they only indicate the route proper if they are found in inner routes or rivers. In all other cases, they could have been driven to the locations in which they are found by currents and wave action. Both categories might, however, be found on or at portages in the future.

Road in a parish or district border: May to some extent be compared to waterways inland where territorial borders can be drawn for topographical reasons. But normally the settlement is on both sides of a major river valley, and the river forms a natural bond between them, presumably in conjunction with a bond of common culture.

Hauling sites for boats *(båtdrag/e(i)d)* with traces of either wooden bedding, *lunner*, or hollow ways[80]: For short stretches the bedding may be succeeded by canal-like ditches. This is, as mentioned above, a classical point of contact between land and water. The Norwegian maritime archaeologist Pål Nymoen has conjectured[81] that it would be possible to find fragments of the ballast at each end of an *eid*. In many cases this ballast would have been reused by the vessels on that side. On the other hand, most ships actually hauled over an isthmus would have been so small that they did not depend on ballast in order to sail. The conjecture has not yet been tested in earnest, however. Nor have any wheels or carts been found at portages to date, although we know that they existed.[82]
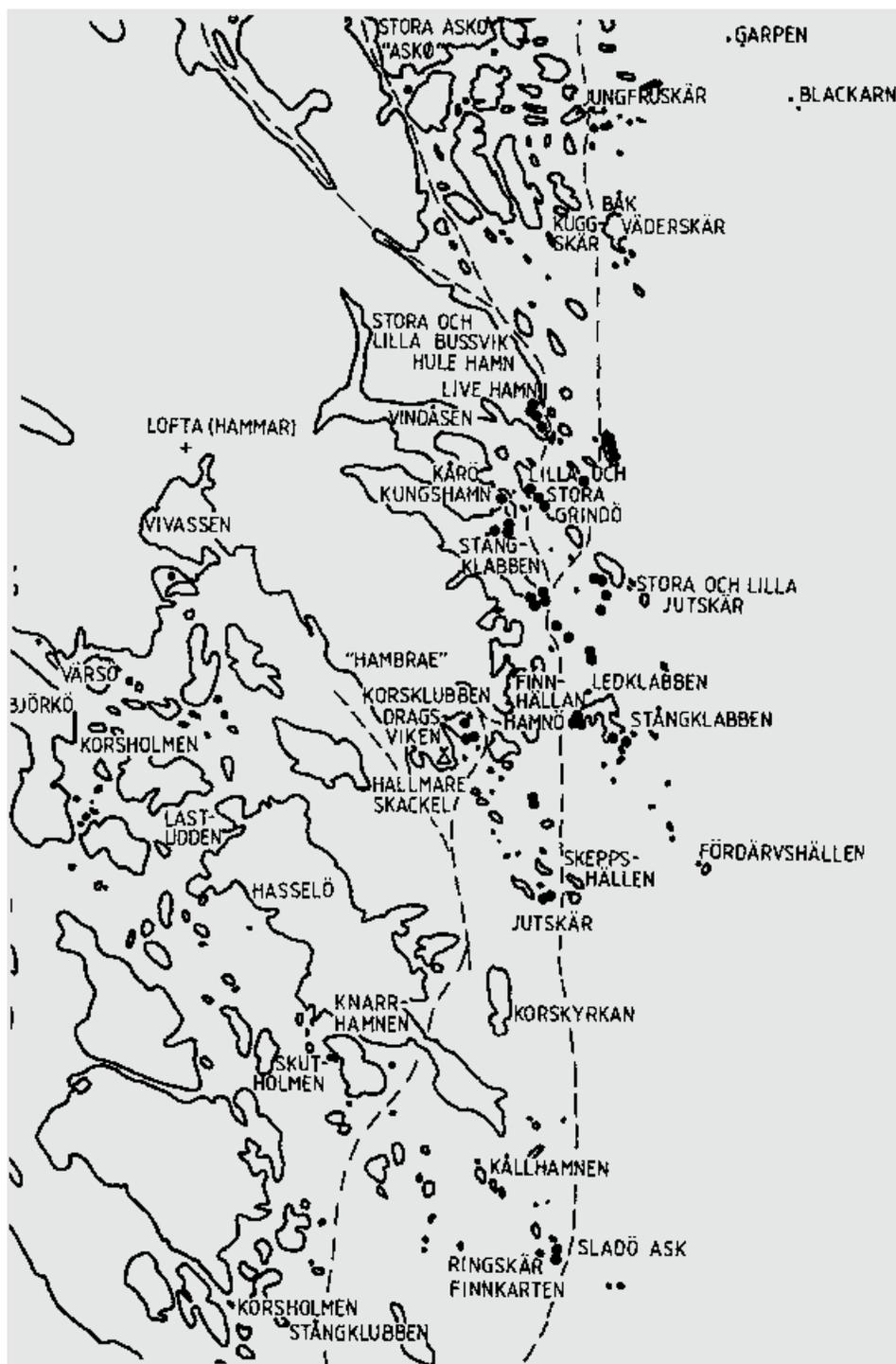
Fig. 26 Sea mark cairns along part of the eastern coast of Sweden, some of them probably Medieval.
(Drawing: Christer Westerdahl, based on material provided by Peter Norman)

Remains of Markings

Individual burials and grave fields of all categories: I discussed the land road as a ritual arena, not only in connection with burials, and even executions, but also with other markings of a possibly transcendent character such as sacrifices, in a paper of 1999.[83] Since then, Rudebeck has treated this subject, including Mediterranean parallels from Classical Antiquity, with reference to the transcendent and mythical aspects of moving and travelling.[84]

On land, the category comprises grave mounds, runic stones, standing stones without inscriptions *(bautas)* and other memorial stones.

This category should be compared to certain coastal remains, especially Bronze Age and Iron Age burial cairns, and the island chapel churchyards of the Middle Ages, sometimes misunder-

Fig. 27 Chapter illustration in *Historia de gentibus septentrionalibus* (1555) by Olaus Magnus showing the important navigational feature of Bjuröklubb, Västerbotten, Sweden. The hill is certainly seen as a sea mark in itself. Even the human figures appear to illustrate sea marks. This is not the only instance in which Olaus Magnus anthropomorphizes – not only cairns, but thus also nature. However, ancient tradition does the same, as is apparent from place names.

Fig. 28 Another instance in the historical work cited in fig. 27 by Olaus Magnus, of figures as sea marks, pointing to the safety of a natural harbour, probably situated at the present Swedish part of the Baltic.

stood as "pest" or even "cholera" churchyards. The normal procedure was burial in one's own parish churchyards so these are either indications of what Per Lundström once fittingly called "harbours of strangers" or graves of unknown corpses washed to the shore.[85]

Road cairns *(vägkummel, varder)*/milestones: The corresponding cairns at sea are sea marks or possibly foundations for other types of markings (cf. fig. 26). Some of them may indicate various kinds of distances as will be discussed below in relation to measuring systems. Olaus Magnus' woodcuts of 1555 (figs. 27-28) illustrate sea marks in the shape of human figures. It is possible that he wants them to correspond to natural formations, e.g. the rock called *Munken*, Lat. *Monachus*, at the Faroes, or place names with the meaning of various "categories" of human beings, females or males such as *Käring, Karl, Kall, Gubbe,* etc., which all invariably point to sea marks.[86] Other Medieval and later sea marks consisted of large barrels anchored to the bottom like latter-day perches. The famous Barrel of Tønsberg, *Tønsberg Tønne,* in Norway, actually a beacon, was and is, however, on land. Some of them may also have left "archaeological" traces like the cairns.

Milestones were erected in the Nordic countries from the mid seventeenth century onward. Particularly in Sweden, thousands of preserved milestones (down to $^1/_4$ of a mil, a mil being approximately 11 kilometres) still document the presence of an intricate pattern of roads used by the crown. Milestones worked like taxi meters for royal functionaries in measuring their expenses. They thus appear to be an excellent illustration of the dependency of road systems on political power (figs. 29, 30).

Left Fig. 29 Sandstone milestone from Västergötland, Sweden, thought to date from 1707, with the royal crown and initials of Charles XII. Beginning in the 1650s, thousands of such stones were used to mark distances of as little as $^1/_4$ of a *mil* (11 kilometres) and served as a kind of "taxi meter" for travellers in the service of the crown. (Photo: Christer Westerdahl)

Above Fig. 30 Eighteenth-century iron milestone with the initials of the provincial governor. Småland, Sweden. (Photo: Christer Westerdahl)

Stone crosses: Some of these have maritime locations, but they were not mentioned by Olaus Magnus in 1555. On the other hand, as early an author as Saxo Grammaticus mentions a cross at Grønsund in Denmark which was destroyed by Slavonic pirates during the 1150s.[87] Roald Morcken believed that the Norwegian stone crosses go back to the later Viking Age.[88]

Rock carvings: In this case we refer to rock carvings of historical times. Crosses and other figures, to some extent ships, in later times mostly letters and numbers, are known from "skrivarsteinar" in Norway and Sweden, not least of all along the pilgrims' routes.[89] A great number of rocky havens along the Nordic coasts of Sweden, Finland and Norway, contain rock carvings of ships, the arms of noblemen, dates, ship names, personal names, etc. Considerably more than a hundred localities have been registered by Staffan von Arbin.[90] Gustaf Hallström[91] has shown that they can be dated at least back to AD 1463.

"Duty stones" (Dan. *vejpligtstene,* Swed. *väglottsmärken*): These stones marked the boundaries for stretches of road maintenance for the implicated farmer, winter and summer. Such markings are not known on the coast. But coastal peasants were charged with similar duties, applying either to sea marks during the sailing season or markings for winter routes on the ice (e.g. bundles of brush). We know of several strong exhortations by the authorities, including the king himself.[92]

"Dram- or piss-pines" (Swed. *sup-* or *pisstallar*): Travellers used to stop regularly at such places over hundreds of years, as attested by tradition. Unfortunately the valuable phosphate is soon dissipated, leaving few traces of equivalent sites along sea routes.

Inns and taverns: Such facilities inland were often furnished with ponds to water the oxen or the horses.[93] Sea inns are a natural element along all sea routes in historical times, and particularly at the entrance to large harbours or port cities. There were a great number in the archipelago of Stockholm and inshore in Lake Mälaren. An unpublished catalogue of the Swedish inns was drawn up by Nils Friberg.[94] They are referred to as *tafernishús* (taverns) in the Norwegian countryside during the fourteenth century. Roald Morcken[95] presupposes a regular system already in this period, which appears somewhat doubtful. Sea inns have been documented in Norrbotten, Sweden, for the 1680s by Gunnar Hoppe.[96] I myself have registered thirty-four localities in Lake Vänern alone, although certainly from different periods, but beginning in the 1620s.[97] The sea inns often function as relay stations for conveyance either by boat or by horse. From the 1620s, a few stage relays are known along the Hälsingland coast.[98] There were relay stations of this kind even along the rivers, e.g. along the Ångermanälven River in Sweden.[99]

Simple lodgings (Swed. and Norw. *själastugor, sæluhus*): These huts offered no service at all and were put up along routes, especially pilgrimage routes, already during the late eleventh century, according to a runic inscription from Funbo, Uppland, Sweden (U 996).[100] Slightly later on (?), King Øystein of Norway mentions the building of such lodgings along mountain routes (Dovre) in Norway in the enumeration of his deeds at the beginning of the twelfth century.[101] Other manned stations are known from pilgrims' routes[102] to Trondheim, called Nidaros in those days, as early as the thirteenth century. Some place names[103] indicate that similar lodgings were erected in rest or emergency harbours in the archipelagos if shelter in deserted seasonal fishing camps was not available.

Remains of Activities in Connection with the Road

Market sites[104]: This is a truly maritime phenomenon as well as a "terrestrial" occurrence. Harbour or beach markets are well-known from the Middle Ages in the Baltic, especially the famous *nundines scanienses,* "the Scanian markets," at Skanör/Falsterbo. Some appear already during the Viking Age. I myself have mentioned the smaller sites in connection with parish churches on the coast.[105]

Stores of trade goods: These can be considered an indication of exchange/turnover along the roads. Some also appear as offerings. There may be coastal finds but I have no good and incontestable examples.

Sacrificial depots or offerings: These deposits were presumably laid down for successful travelling or other ritual purposes. Such offering or sacrificial sites may not yet have been localized in the maritime environment. Some indications may exist in general wetland or water offerings, presumably starting in earnest during the Neolithic Age, particularly in Denmark, or the isolated Viking Age sacrifices at Kyrksundet in Hitis, Finland.[106] But this latter site may have another explanation. Olaus Magnus does in fact mention votive offerings of gloves and silken sashes by sailors at Blå Jungfrun in Kalmarsund, Southeast Sweden.[107] There is a strong suspicion that such sacrifices may have been given directly to the sea, as in the Mediterranean.[108]

Holy places: Fishing and shipping chapels are found in fairly great numbers along the Nordic coasts. Generally, aspects of the ritual landscape at sea have been treated by the author fairly recently.[109]

Fig. 31 An execution site on the main coastal road in Skuleskogen, Ångermanland, Sweden, as illustrated by E.D. Clarke in his Scandinavian travel book of 1838. His journey was undertaken in 1799 in the company of the later famous demographer Thomas Malthus. In the same way, the corpses of those who had been executed were exposed to the public on islands and other sites particularly visible along the sea routes.
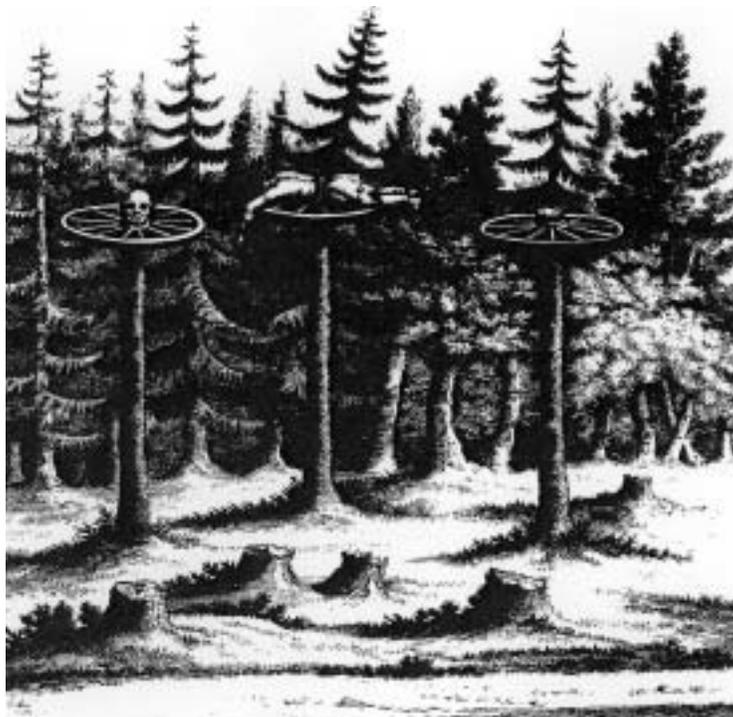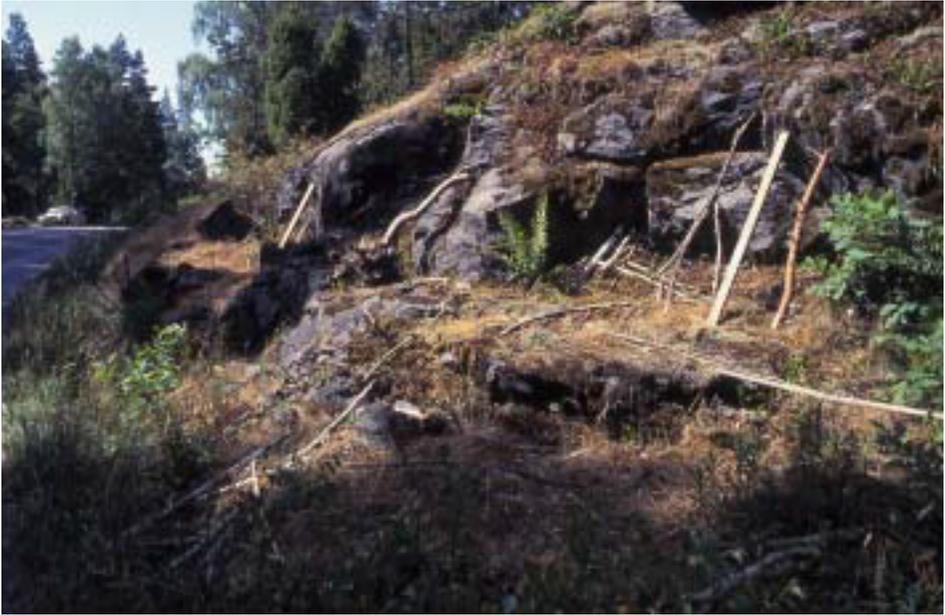
Fig. 32 Votive mound site on a road, Swed. and Norw. *kast* or *offerkast,* where twigs and branches are put along a rock, supposedly to commemorate the murder of a traveller or a similar event. The maritime parallel – the stoning of a wreck underwater – was, according to tradition, a means of keeping the drowned persons from coming back. Stötteberget, Kålland, Västergötland, Sweden. (Photo: Christer Westerdahl)

Fig. 33 Votive mound site at a rock called *Stötteberget,* like that seen in fig. 32 at Alingsås, Västergötland. The road is the ancient main connection between Gothenburg and Stockholm, and the present-day new road still runs close by. (Photo: Christer Westerdahl)

Sites of assizes *(ting)*, places of execution: It is easy to understand that assizes were summoned at places with good communications. In order to warn as large a part of the populace as possible, the gallows were put up near important junctions and roads (fig. 31), especially immediately outside a town. There are indeed quite a number of islands called *Tjuvholmen*, "Thief's Island," in Norway. A penetrating study of this complex was carried out by Gustav Indrebø.[110] A large proportion, if not all, are more or less attested places of execution. The same is true on the Swedish side of Scandinavia. Islands with the same or a related name, some indicating assizes, are found near towns. In fact they could almost be used as an indication even of other central places with legal function. At the river crossing near the parish church of Skellefteå "Bonnstan," *Tjuvholmen* was the gallows site in the middle of the sixteenth century.[111]

Votive cairns or heaps (Swed./Norw. *kast* or *varp, offerkast* or *offervarp*): This category consists either of branches and twigs or of stones (figs. 32-35). In ancient Greece such offering sites were called *hermaios lofos.* They are prolific in the North and were put up at legendary dangerous places or at a place where, according to tradition, somebody was supposedly attacked and/or murdered. This custom is mentioned already by Olaus Magnus in 1555.[112] It is sometimes unclear what distinguishes the offering cairns from a general road marking, a cairn, Norw. *varde*, Swed. *kummel*. It is hard to know whether this practice was common at sea, but the feature itself is often mentioned in oral tradition in connection with islands. People have offered coins on, or stoned down shipwrecks, of which the background was known. This applies especially to those wrecks which were supposed to contain drowned members of the crew. It is interesting to note that this could be a cause for the contamination of shipwrecks by seemingly younger objects, especially coins. But the name component *Kast-*, "throw," also has another meaning at sea. The vessel may have sailed into an area with dangerous and shallow rocks or was stuck on a shoal. To be able to put her afloat or generally to get her higher in the water, parts of the cargo were jettisoned. As might well be imagined, this was very common in undecked vessels. This jettison was called *sjökast*, or just *kast*. The practice is mentioned early, e.g. in several Medieval Swedish maritime codes from the fourteenth century onward.[113]

Defensive constructions: On land there are certainly several well-known categories. Apart from hill forts and related works, the rarely observed pitfalls for cavalry or pilings against horses at fords[114] could also be mentioned. Underwater pilings are a recently documented but already fairly extensive category of construction from prehistoric and historic times.[115] Most of them have been discovered during the last twenty-five years. In Denmark several are thought to date from periods as early as the pre-Roman Iron Age, the first century BC, and a sizeable number from the Migration Age, AD 400-550. There are a few Viking Age datings in Sweden, otherwise the pilings seem to be of Medieval origin and later.[116] This type has not yet been discovered in Norway and Finland, although underwater pilings occur at most Medieval castles in the North which are surrounded by natural waters.[117]

Place names on roads: Only a few examples will be given here. The names of roads can denote any one of those aspects that have been mentioned above. Some on Hærvejen may refer to road piles, rune stones or bautas: Dan. *Staghøj, Stanghøj, Sælshøj, Knaghøj, Stavshøj,* to holy places: Dan. *Dansehøj, Solbjerg, Stalhøj,* etc. There is a *Pilgrimshøj* in Østerløgum along the Hærvejen complex. *Kors-* ("cross") and *Munk-* ("monk") names can mark coherent pilgrim roads (e.g. Ernvik 1955). The name element *Far-* refers either to land traffic, to a road or to a sea route: *Farbjerg, Farsø, Farris, Ferring, Fårö,* etc. The same is true of *Led-*. Apart from a way or course, *Led-* can denote a gate. Topographical details are well covered; such as *vad*, "ford," as in *Ullervad, Vædil* (Vejle), or *Wedel* in Low German, as in *Salzwedel*, "salt ford." The latter example

Fig. 34 *Kast* cairns or stone heaps can still be found along insignificant paths and tracks in the forests of Scandinavia. This cairn in inland Ångermanland, Sweden, was covered by moss and almost invisible. This kind of marking was presumably built up partly as a road mark. It is not mentioned in oral tradition. Precisely this type seems to correspond to cairns along the sea route. (Photo: Christer Westerdahl)

Fig. 35 A few stories on the origin of votive mounds can be substantiated in historical sources. In this case, close to Kristinehamn, Värmland, Sweden, a wealthy farmer was ambushed and murdered in 1710 by two farmhands, but he survived long enough to give a testimony which brought the robbers to the gallows. Two heaps are still built up by travellers, one at the place of the murder, another where the victim was found the next morning. (Photo: Christer Westerdahl)

indicates the transported cargo, like the Nordic name elements *Salt-*, *Öksna-* ("oxen"), as in Engl. *Saltdrive, Oxdrive, Maltdrive,* etc. The hundred of *Redväg* mentioned above, the "riding roads," in Västergötland refers to the Ätrastigen road following the valley of the river Ätran between ancient Sweden, Västergötland, and Denmark, Halland; other such names have been mentioned above, e.g. Nissastigen, the "path of river Nissan." At least one exhaustive study of related transport place names in Denmark has been carried out.[118]

In Middle Sweden, the number of road names denoting the principally north to south-going esker ridges is striking. These were the driest and best possible terrain for any kind of land transport. On the *Långheden,* the longest of all the esker ridges and at the same time the principal road from the mining district of Bergslagen and the province of Dalarna down to the port city of Västerås in Lake Mälaren, there are numerous examples of the name element *Hed-* "esker," e.g. *Mehedeby,* the "hamlet or village in the middle of the esker," *Malm(a)-, -malm* ("gravel ground") and the most prolific *Ås-* which means approximately the same as ridge, but in a transferred sense also road corridor.[119] These are all functional names in connection with the function of the road as such. A large number of other name types could refer to the road as an arena in the sense proposed by Elisabeth Rudebeck.[120]

The place name types of the sea route: In my work *Norrlandsleden I*[121] on the sources of the maritime cultural landscape, I have accounted for a number of place name categories or types that occur in the archipelagos and along the coasts of the Nordic countries. But the principles of name-giving are universal. By and large, any possible maritime activity or aspect can be referred to in the name flora.

The foremost category is that of the sea route name. Many of this category are foundering names or denote a shipwreck. This principle was already observed by Olaus Magnus in 1555.[122] Among this type there are names of individual ships and of a large number of ship types, such as the well-known Viking Age or Medieval *Snäck-, Knarr-, Kugg-* but also more general and diachronic designations such as *Skut-, Skepp-* and *Båt-*. Some denote nationality and origin or the profession, title or cargo of either the skipper, the owner or his ship. Warning names of dangerous places are numerous among the skerry names.[123] Many refer to sea marks, most of them now disappeared, but the linguistically old-fashioned form of some names may point to cairns or poles that already existed in prehistoric times.[124]

The *Kors-* ("cross") names constitute one of the most important categories. As mentioned above, they can also denote inland pilgrims' routes.[125] A *hafnarkross,* "harbour cross," marked many important Medieval harbours. The forms *Korshamn, Korshavn* or *Krosshamn* are attested to in at least four cases in the fifteenth century, one as early as the 1330s.[126] A few localities have been named after foreign harbours, famous port cities or features in the neighbourhood of the latter. Among the archaeologically most interesting are those names which denote blockages or other intentional obstacles under water, like *Stäk, Steg-*. Finally we have names representing the route itself or navigation in it, like *Led-*, which is often meant in the plural; for a crossroads or where the route branches off, *Far-*, as discussed above. There are numerous references to navigation on transit lines, as *Me(d). Drag-* and *ed-* names were referred to above.

At havens or harbours we encounter several types of names denoting either the location (e.g. protection from the winds), the anchor roads, *Sätt-, Stad-,* its installations, *Kar-* "stone cist or caisson," or loading or unloading, *Laberg, Lahäll,* and the goods that have been handled, e.g. *Korn-, Järn-* ("iron"). Apart from the shipbuilding activities at a shipyard, the timber resources may be marked, as in the example of *Rotskär,* as well as the process of rigging the hulls, as in *Mastberget.*

Some of these categories indicate a realm of specifically maritime phenomena, but most of them correspond to the names of the road above, including possible ritual names.[127]

Making surveys of land roads: The only reasonable way of following ancient road systems is by way of field work.[128] It can be a complicated task, owing to extensive encroachments of later times. For example, it is possible in part to trace the directions of the *Hærvejen* or the *Eriksgata* on the ground, not least of all in hollow ways. In the same way as the rune stones, ancient monuments – not least of all settlement remains with grave fields and early churches or chapels – are grouped along the ancient roads, fords and bridges.

To preclude misunderstanding, this should be understood as if it is the settlement that determined the direction of the roads and not the opposite. However, with quite some success, it has been maintained by, e.g., Andrew Sherratt[129], that it could be the other way around. Details of roads, in particular those for riding, may be possible to ascertain by way of hollow ways, marking cairns and phosphate analyses, the phosphate originating chiefly in human droppings.

Archaeological projects on roads and road systems are relatively uncommon. The most well-known is perhaps Ingrid Smedstad's on wooden causeways in Middle Norway.[130] A sketch on a project for Swedish *Ödmården*, the southernmost border forest, between Gästrikland and Hälsingland, along the Norrstigen road was presented by Mats Mogren and Peter Mansson.[131] Later contributions to the discussion on road projects have been delivered by Terje Gansum, particularly on hollow roads.[132]

Mapping older sea routes: It cannot be said that shipwrecks unconditionally indicate the waterways. They do so only in inland routes. In many cases the shipwrecks have been driven far from the site of foundering, which is more likely to be on the route. On the other hand there is a clear connection between shipwreck sites and harbours or havens. Pole barriers or blockages show that somebody has tried to stop unwished-for visits along frequented routes to tempting destinations. In many cases, the blockages seem to have openings intended for those who knew about them. Some may have worked as the passage where customs duties were collected, e.g. the pilings at the Helgeandsholmen passage, Stockholm, from the second half of the thirteenth century.[133]

The most visible remains of the sea route on land are sea marks, such as older cairns and other foundations for wooden crosses or poles. In exceptional cases they can perhaps be dated by lichenometry. It appears that the most frequented routes have got most of these markings. Some examples have been illustrated by Peter Norman[134] (fig. 26) on that sea route which today is called "King Valdemar's Sailing Route" because it was "documented" in the tax register of the Danish king Valdemar Sejr (1202-41). Probably this brief sequence of place names dates from c. AD 1300.[135]

Among the most secure and at the same time most difficult sources are the place names. Some can be dated fairly well. Most seem to be Medieval or later. I have listed a number of the current categories above. The place name flora is always very rich along a regularly used sea route, and even richer if the archipelago consists of many islands and islets. A coastline without islands is far poorer in this respect. On the other hand, the choice of route is so self-evident that place names are of little independent use in this context.

The incomparably most important sources to me have always been taken from maritime culture, from what I have called the "tradition of usage." By way of interviews and participant observation, I have been able to obtain part of that tactile – visual-motor- and direct experience which coastal people possess about their own area. But so far there has indeed been no wholesale archaeology on sea routes.

Very generally, it can be said that sea routes in the Middle Ages and later consist of three types: 1) The inner coastal rowing route, hugging the coast, which today is grounded up and connected to *drag* and *ed* places in the inner part of promontories; 2) the outer route, following or hugging the coastline under sail with supporting havens at the outer parts of characteristic

Fig. 36 A principal sketch of a "maritime cultural centre." Such a centre has as its basis a harbour and is often the point where roads from central places on land meet a natural harbour. The harbour function is drawn outward successively from the inner parts of the mainland to the outer sounds and islands, pari passu the land uplift combined with vessel draught and other reflections of ship technology. (Drawing: Christer Westerdahl)
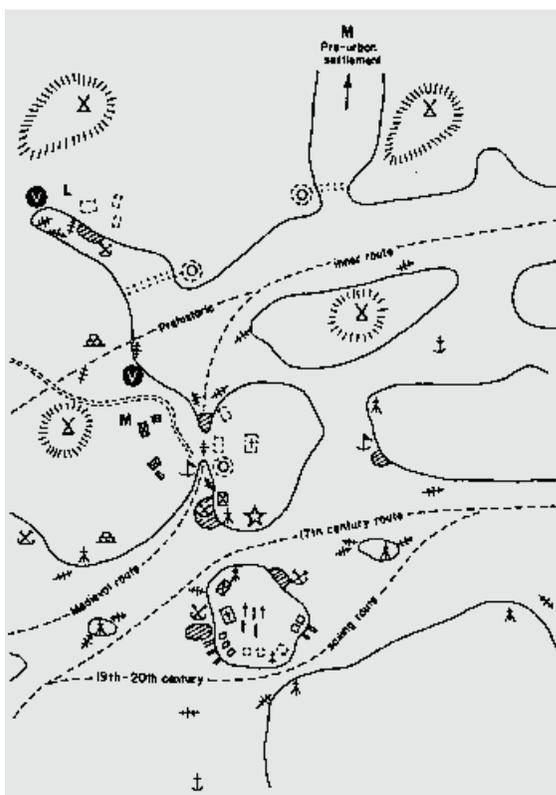
promontories or islands; 3) the open sea route, Norse *utleið*, at sail far out at sea without observing the coastline as more than a thin contour at the horizon. Only prominent landmarks such as high mountains are visible in clear weather. But this principle rather seems to give a bundle of routes concentrated in a kind of corridor than a fixed route. The harbour is the basis of what I have called centres of maritime culture, condensations of maritime remains. A fictitious one is found in the principal sketch, fig. 36. There all the maritime components are found as well as the connections to the land roads.

Measuring systems for relay stations on land and at sea: There are clear points of contact between land roads and sea routes in older distance-measuring systems. The *vika (veckusjö/uge søs)* at sea is "rost at lande" according to Östgöta law. A reasonable distance between "rests" *(raster)* or reposes must be the origin of the measure called *rast.* According to Adolf Schück the *rast* was 9 kilometres.[136]

As we have seen above on Hærvejen, the distance between the inns or taverns has been counted as 30-40 kilometres. But this measure is not identical with either a *rast* or a *vika*. The meaning of the maritime *vika* refers indeed also to the need for repose: You change rowers for every *vika*. This certainly happened at distinct places. Some remnants of these places are found in oral tradition. Others are documented in place names like *Bytet*, "the change," *Skiftesgrundet, Ombyteshällan*, "rock of change," or *Halvfaran*, "half journey," which all mark the points where the change of rowers was supposed to take place. Kurt Zilliacus[137] has found other examples with the same meaning in Finland, the *Ömsar* names. It is interesting that the well-known concept *roddskede* means relay stages, or the same as a change of rowers. Several *Skede* place
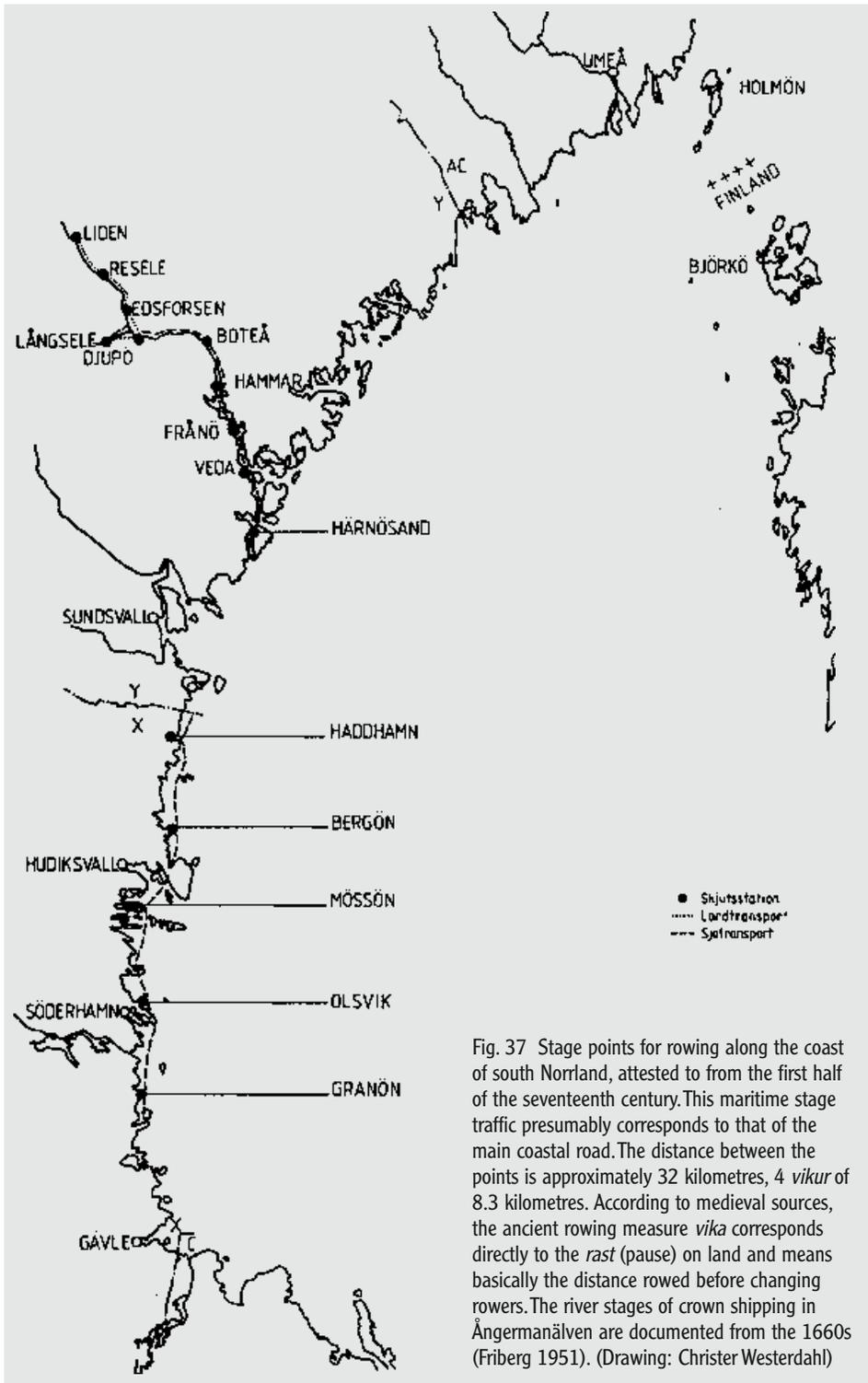
Fig. 37 Stage points for rowing along the coast of south Norrland, attested to from the first half of the seventeenth century. This maritime stage traffic presumably corresponds to that of the main coastal road. The distance between the points is approximately 32 kilometres, 4 *vikur* of 8.3 kilometres. According to medieval sources, the ancient rowing measure *vika* corresponds directly to the *rast* (pause) on land and means basically the distance rowed before changing rowers. The river stages of crown shipping in Ångermanälven are documented from the 1660s (Friberg 1951). (Drawing: Christer Westerdahl)

names are therefore of particular interest for us.[138] The current localities can be marked by natural features alone, a transit line, a so-called *me(d)-,* or by artificial means, a cairn, *varde/ kummel,* some certainly used for other purposes as well, such as a general sea mark, or as a fishing site. These localities are very small and insignificant, however, and never documented on maps or any other records. They cannot be found anywhere except in local tradition.

An older *vika* or *veckusjö/uge søs* is equivalent to 8.3 kilometres. The computation of this distance was made originally by the Danish author N.E. Nørlund, who had the itinerary of King Valdemar of c. AD 1300, mentioned above, as his starting point.[139] But it has been rechecked by me and by others. It seems in fact to work all over the North. At the same time, it is congruent with the *rast* discussed above.[140] In later times there are larger measures for a *vika*, e.g. identical with a geographical (German) mile, *meil*. The standard distance between relays at sea appears to be 4 *veckusjöar* (i.e. approximately 32 kilometres). This is almost identical with half a day's journey = 33 kilometres.[141] A day's journey is accordingly 66 kilometres = 8 *raster* or 8 *vikor*.

One instance of the application of these distances can be seen between the relay points along the Hälsinge coast (fig. 38) of Sweden. It can be observed that this is the same distance as above (32-33 kilometres) and the same as that between the inns or taverns in the fifteenth to seven-

Fig. 38 Sketch of parallel land roads and sea routes along the peninsula of Jutland in Denmark, and the coasts of Halland and Blekinge of present-day Sweden. Some particularly dangerous places for shipping have been marked (Skagen, Northern Jutland, Læsø, (Kullen), Falsterbo riff). Such sites may of course divert the sea route from being parallel to land roads. Along both Halland and Blekinge, and, unmarked here, along Eastern Jutland, river mouths display medieval town foundations, reflecting crossroads of sea routes and the main coastal land road. The route leading to Blekinge along the coast of Skåne runs between the feared sand banks of Sandhammaren in Skåne and the corresponding natural sea mark of Hammeren on Bornholm. It is no coincidence that they carry the same name, *the Hammer.* (Drawing: Christer Westerdahl, Erik Hoops)

teenth centuries. The stage points were on land at a distance of 4 *raster* from each other, at sea at a distance of 4 *vikor*. In both cases, changes of horses or boats took place at these sites, i.e. the sites were relay stations, often combined with an inn.[142] If a main sea route or land road has been established as to its direction these distances can be employed to locate the reasonable relay stations/havens, starting with 8.3-9 kilometres, and the larger units up to 32-33 kilometres. In fact, in parts of Norway it would also be possible with up to more than 40 kilometres with the longer *vika* of 10.4 kilometres discussed by Roald Morcken, if this is accepted.[143] But it is possible that even the layout of the road/route can be reconstructed with the aid of these measures.

Conclusions

I have tried to show the relationship between land and sea routes by way of the following:

a) Similarities: From the beginning, the waterways are most important for the transport of heavy goods. Not until the Middle Ages do impulses emerge to create constructed and maintained roads with ensuing organization. This goes for waterways as well. It would appear as if the land roads then were the prototype of the sea routes. This is, however, not self-evident. I think that I can find similarities in some categories of remains common to both, in the dependence of both on the feudal state, e.g. in conveyance by relays, and a congruence in distance measures. Older sea routes, like older roads, seldom follow a fixed course but are spread out in corridors in all accessible fairways or along ridges in flatter terrains. The meeting places or the overlaps are found in sounds/channels, portages and the mainland harbours, especially the estuaries or mouths of rivers.

b) Parallelism: By this I mean that there is seldom a principal road, especially on the coast, which does not have an alternative in a coastal sea route. I take as an example (fig. 38) the two provinces of Halland and Blekinge in Sweden, mainly consisting of coast, cultivated plain and forest lands with one single coastal road and one sea route. These routes meet in the river harbour, i.e. the Medieval towns. The direction of the *Hærvejen* course and its sisters is parallel to a certain extent with the dangerous western sea route and the protected one on the eastern coast of Jutland. But this is so obvious and so simple that no scope or variation is left for valid conclusions. A more complicated coastline with archipelagos and promontories/fiords would certainly give some examples of universal validity. The alternatives express the cultural choices of any travelling human being. Strikingly, often land transport is chosen even in the maritime realm in Norway during the Middle Ages, possibly for status or security reasons (cf. Steen 1929).

c) Identicalness: This means simply that the waterways were often used for traffic on the ice during the winter. One example is the coastal stretch between the towns of Hudiksvall and Söderhamn in Swedish Hälsingland (fig. 15). Along this coast is a row of *drag*- and *ed*-localities, which were used during the summer in an interaction between rowing in small vessels and portage across the isthmi. In the cleared forest space of the portages it was also possible to drive a sledge. But this kind of interaction ceased when the portages were rendered too long and too cumbersome by land upheaval. In northern Fennoscandia the winter roads played a primary role. Only during the season of bare ground were the extensive waterways of the roadless interior passable by boat, but as soon as they were frozen both the waterways and the vast wetlands could be passed with relish. These routes served to some extent as the great transhumance courses of Saami reindeer herders.

d) Coordination: Where the land road ends at the sea or at an inner waterway, there is presumably a harbour, a ferrying site or a starting point for a winter road on the ice. Dan Carlsson

has had remarkable success in applying this hypothesis to find Late Iron Age and Viking Age harbours on Gotland.[144] An important criterion was older maps which showed paths (some almost obliterated today) ending at the shore. Sometimes they came together in bundles towards a distinctive point, which might have been a lagoon or a protected creek. Some actually ended at the Viking Age height curve, which is here 2 metres above sea level. A closer inspection could reveal grave fields or individual burial cairns. Phosphate analyses and excavations have substantiated the expectations. It can be added that, even today, the inland road may stop at the water, with a continuation by ferry or, during the winter, on the ice.

e) Combination: In several cases it can be discerned in prehistory how long distances were overcome, and sometimes shortened, either on land or on water, by way of a longer land road, so-called *trans-isthmian routes*[145], starting and continuing by way of a longer sea transport. I have called this the intermittent means of transport. An example in the North would be the coast-bound route along southern Norrland where the *St. Olof* place names in fact appear to give the very details of that inner pilgrim route (fig. 39) and the following land route by way of Medelpad to Jämtland and thence to Nidaros cathedral in Trøndelag, Norway. The later land-oriented course could cer-
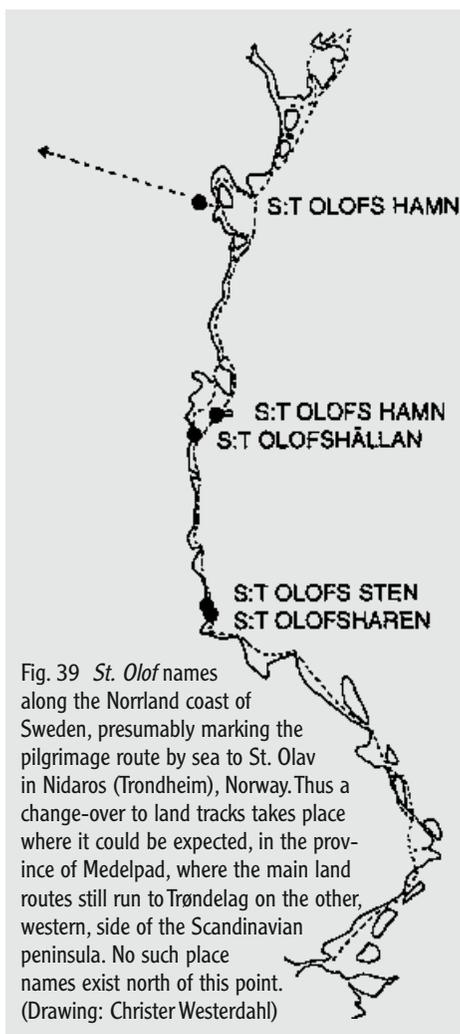

Fig. 39 *St. Olof* names along the Norrland coast of Sweden, presumably marking the pilgrimage route by sea to St. Olav in Nidaros (Trondheim), Norway. Thus a change-over to land tracks takes place where it could be expected, in the province of Medelpad, where the main land routes still run to Trøndelag on the other, western, side of the Scandinavian peninsula. No such place names exist north of this point. (Drawing: Christer Westerdahl)

tainly be intermittently broken by inland water transport but its principal character is that of a land route. And it was used as much during the winter as during the bare-ground season. In Swedish Bergslagen, the mining district, a very intricate and variable system on water/ice or land/snow carried the charcoal, the iron ore and the bar-iron to water-powered blast-furnaces and hammers during historical times.[146]

f) Transport zones, or rather *traditional zones of transport geography, the transport aspect of sociocultural space:* This term is defined as an area/region with the same or similar ways of transport and means of transport. The background is to some extent an observed variation in boatbuilding, but it could also be expressed in transport means on land or in seasonal differences in communications. Another would be the adaptation to nature, conditions of winds and currents, to haven topography, to cargoes and to cultural or social conditions, including tradition. The border between the area in question and other transport zones may mark successive transitions to other transport techniques. Sometimes this border coincides with cultural borders inland. It is particularly interesting if, by way of such analyses, it proves possible to locate those borders which formed a natural cognitive unit to people of the past, their
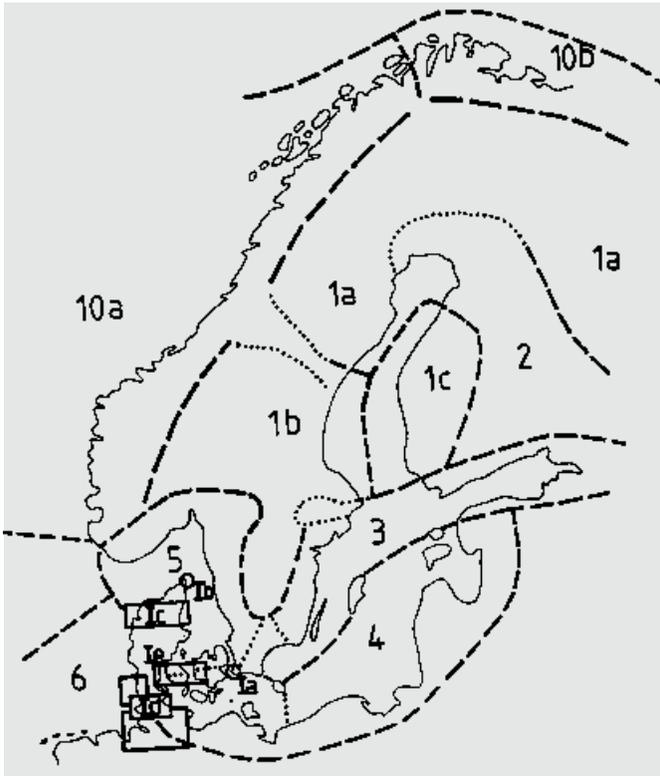
Fig. 40 Traditional (transverse) transport zones of the north, combining land and sea corridors. (Drawing: Christer Westerdahl)
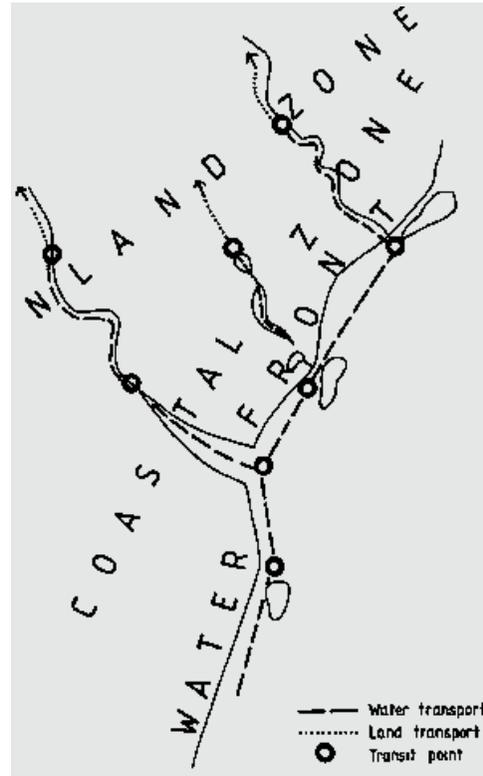
Fig. 41 A principal sketch of the longitudinal type of transport zones, running parallel to the coast, combining coastal routes and harbours, portages along rivers (rapids) and between river valleys, river traffic and land tracks alongside the river inland. Transit points either means portage or the change of vessel, often even of vessel type. (Drawing: Christer Westerdahl)

"small worlds." I have tried to illustrate these zones, both in a macro scale (for the coasts; fig. 40) and schematically, on a micro scale, where they can also be applied inland, and particularly in relation to waters and between such waterways (fig. 41). The transit points where the change of means of transport or way of transport has taken place are especially evident.

Frankly I do not pay much attention here to the profound differences between the world of the boat and the world of the cart. These differences are undoubtedly obvious to anyone without any long-winded explanations. Anyway, some reflections on their relationships and parallel appearance in human society have been presented above. As can be seen, what we have here is in many ways a mixture of the macro and micro perspectives. The seaways are indeed fluent. When we get down to details on land, we encounter the same difficult problems in the field as always. Culture/construction or nature? Or a mixture?

Concerning the sea routes, it can be stated from the nature of things that the choice of direction was extremely variable. The only secure factor was the point to which traffic was directed. In prehistory and Medieval times it was always the harbour, the lowest common denominator in the human world between land and sea.

I would like to maintain that the similarities between sea routes and land roads are so striking that in the future we ought to look for an interpretation of the phenomena or remains both on land and at sea in the same function or at least from the same perspective. The keywords are transport and communication in the widest sense. And both include an important cognitive and transcendent aspect, without which it is difficult to understand their role in human societies of past times.

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Notes:

1 *Saltus per noctem*, der Nachtsprung, as illustrated by Ellmers 1981. A comment to the ancient straight routes from south Norway to north Jutland suggested here is provided by Westerdahl 2004.
2 E.g. Westerdahl 1990.
3 Schou Jørgensen 1996.
4 E.g. Friberg 1955.
5 Friberg 1983.
6 So far unpublished.
7 For an archaeological effort, partly problematic, cf. Farbregd 1980.
8 Westerdahl 1987a etc.
9 Westerdahl 2005b, 2006d.
10 Modéer 1945: 39f. Transl. by the present author.
11 Westerdahl 2002a & b, 2005a, 2006d.
12 The law in question – the Hälsinge law – was also valid in Finland.
13 Friberg 1951, I: 80; translation by the author.
14 Westerdahl 1994a.
15 Swedish works like Ernvik 1974, Friberg 1951, Hoppe 1945, Lassila 1972, Mannerfelt 1938-52, Schück/Mannerfelt 1933 in Brøndsted/Schück (eds.) 1933; Denmark: Wittendorff 1972.
16 Westerdahl 2006b.
17 Larsson 1990.
18 Piggott 1992.
19 Varenius 1992.
20 Helms 1988, 1998.
21 E.g. Hodges 1989/1982; Hedeager 1990, 1992.
22 Westerdahl 2006b.
23 Killed 1134 in the battle at Fotevik.
24 Norse *hird* = perhaps from Anglo-Saxon *hired* = "household."
25 General survey in Steinnes 1955, this aspect is stressed for the Swedish localities by Larsson, G. 1986 and Larsson, M. 1987, Westerdahl/Stylegar 2004. The parallels between the German *Pfalz* and the Nordic *Huseby* complex may have genetic implications (Westerdahl, forthcoming).
26 As pointed out elsewhere even the *Huseby* complex may have been inspired directly from the continent.

27 Westerdahl 1994b.
28 Schou-Jørgensen 1988.
29 Smedstad 1988.
30 Ambrosiani 1987.
31 Sjöbeck e.g. 1950.
32 Hávamal verse 72.
33 Löfving 1987, 2001, makes a case for Canute the Great, even in parts of present-day Sweden and Norway.
34 Gren 1989.
35 In the area most closely studied by this author (Westerdahl 1987b, 1989, etc,) the process has been covered by Hiekkanen 1994 for the Finnish side and Wallerström 1995 (appendix) for the Swedish side of the north Bothnian bay. The building of stone churches belongs to a restricted period, between 1480 and 1520, thus indicating a late final incorporation of the area in an ordered realm, with some measure of factual control.
36 Smedstad 1988.
37 Brink 1990.
38 Wallerström 1994.
39 126 m a.s.l.; cf. *Das Seebuch* from c. 1500; Koppmann 1876.
40 E.g. on northern Öland, Sweden; cf. for medieval England some remarks by Hutchinson 1994: 170ff.; generally on early seamarks Westerdahl 2006b.
41 Piggott 1983.
42 Schneider 1982: 1-11.
43 Bagshawe 1979 etc.
44 Szabó 1996.
45 Deloche 1993-94.
46 Lund Hansen 1995 on the finds; and Hansen, V./Nielsen, H. 1979 on the causeways.
47 Mathiesen 1930; after orohydrographical maps.
48 Cf. Schou Jørgensen 1996.
49 For medieval pilgrimage in the North cf. Andersson 1989.
50 Cf. Wittendorff 1971.
51 Cf. the dissertation by Masonen 1989.
52 Cf. Madsen 1999, Poulsen 1999.
53 After an idea by Henrik Breide, Stockholm.
54 Taylor 1971.
55 Rogan 1984.
56 Westerdahl (ed.): 2006. For a survey see Westerdahl 2006a.
57 Cf. the name of the tribe of the *burjagi*, the "people at a bor" (on *bor* cf. Hesselman 1930, Widmark 1957, on the *burjagi* Falk 1951: 146f.).
58 Westerdahl 1996.
59 Nielsen 1905.
60 McCullough 1995, 2000, Phillips 2006.
61 Petersen 1986: 167ff. with a map, Petersen, H.C. 2006, Petersen, R. 2006.
62 Cf. the list in Westerdahl 1989: 195 with reference to the Swedish Baltic coast.
63 Cf. Makarov 1994 on archaeological traces of such in Northern Russia.
64 Finn. *keidas* to Swed. *skede*; cf. Pellijeff 1967, 1989.
65 After Nymoen 1995, 1997. Cf. Simonsen on Northern Norway, 2002.
66 Cf. Westerdahl 1995, 2006a; Stylegar 1999, 2006 etc.
67 Stylegar/Grimm 2003.
68 Cf. Makarov 1994 on Russia.
69 Cf. Kerner 1946, Westerdahl 1992, 2006a, referring to works by Jevgenij Nozov, such as that of 1992.
70 Makarov 1994 on eleventh-century North Russia.
71 Kerner 1946; App. 2. 153-54.
72 Nymoen 1995.
73 Westerdahl 2006a.
74 After an idea by Flemming Rieck, NMU, Roskilde; cf. Vinner 1997: 86ff.
75 Cf. Westerdahl 1989: 257f., 2006a; AD 1436, in the Swedish rhymed chronicle, Rimkrönikan II: 3005 on King Karl Knutsson, Olaus Magnus 1555 11:9 and a royal letter by king Charles IX as of Dec. 1607 in the Royal Records, Riksregistraturet.
76 For the Middle Ages cf. Hindle 1982, Cook 1998, for the travelling itself Ohler 1989. See my fig. 3.
77 Smedstad 1988, many references to Hajo Hayen, esp. 1957.
78 Swed. *allmänningar*, Dan. *fælled*, e.g. Sjöbeck 1950.
79 Hayen 1973, Schovsbo 1987.
80 Cf. Draget at Stäket, Sweden, above.
81 Nymoen 1997.

82 Westerdahl 2006a.
83 Westerdahl 2002c.
84 Rudebeck 2002. Helms 1988, and to some extent Helms 1993.
85 Lundström 1983. On medieval archipelago chapels of the North Westerdahl 2006d.
86 Westerdahl 2006b.
87 Christensen 1980-81: 534 XIII CLXXVII.
88 Morcken 1970, cf. Birkeli 1973, to some extent questioned as to early datings by Gabrielsen 2002.
89 Christensen 1980-81; Smedstad 1997: 196f., cf. e.g. Welinder 1992 on *Skrivarhällen* i southern Dalarna, Bergslagen, Sweden.
90 von Arbin, unpublished so far.
91 Hallström 1954.
92 E.g. the farmers of Vuono in Norrbotten were fined in 1562; Westerdahl 1989: 164.
93 At Hærvejen; cf. Levander 1935 writing with Mathiesen 1930 as his model.
94 Once kept at the Department of Geography at Stockholm University.
95 Morcken 1970.
96 Hoppe 1945. The sea inns of this area are situated at even distances from each other and are found on a map in Westerdahl 1990.
97 Westerdahl 2003: 169ff.
98 After Hedin 1939, Westerdahl 1990: 343, with fig., 2001: 155, fig. 9e.
99 Documented in the 1660s, here after Friberg 1951; fig. 39.
100 Karberga (Sundby) in Funbo parish: *þor/ir/ /l/et gæra sæluhus (siluaus) æftir Ingiþoru, kunu sina, ok æftir …* "Thorer got a sæluhus made for (the memory of) Ingithora, his wife and for …" (Wessén, E./Jansson, S.B.F. 1943-46). The place is near to a road with a bridge in an open agrarian landscape, not in any kind of wilderness, like Dovre in Norway.
101 Westerdahl 2006b, Callmer 1994, Carlsson 1987, 1991, 1998, Ulriksen 1997.
102 E.g. Stugun, Jämtland, of which the name indicates such a building.
103 Some documented in Westerdahl 1987.
104 Cf. Levander 1935.
105 Westerdahl 1987, passim.
106 Edgren 1995.
107 Olaus Magnus Historia 1555; 2:23.
108 Anchors, pottery in the Mediterranean, cf. Westerdahl 2002a & b. Cf. on a site in Bohuslän, Sweden: Hermelin 1930: 100.
109 Westerdahl 2000a & b, 2005 and 2006d.
110 Indrebø 1928.
111 Westerdahl 1989: 191. This phenomenon is well known to many parts of Europe, in coastal Northern Germany e.g. in Hamburg.
112 Olaus Magnus Historia 1:31.
113 Bjärköarätten 20, Gamla (Visby) sjörätten 11, Andra sjörätten 8 and Skeppsmålabalken XI in the common law of king Magnus Eriksson, Magnus Erikssons allmänna landslag.
114 Cf. Olaus Magnus Historia 1555; 9:7, 10:24.
115 E.g. Crumlin-Pedersen 1985, Nørgård Jørgensen 2002.
116 A single occurrence could possibly in fact be Late Bronze Age, 9th century BC; the Gullbro piling of Uppland, Sweden. But its function is not clear.
117 Alopaeus 1989, 1996; Westerdahl 1989: 126ff.
118 See Jørgensen 1979.
119 Cf. Hesselman 1930.
120 Rudebeck 2002.
121 Westerdahl 1989.
122 Olaus Magnus Historia 2:28.
123 Olaus Magnus Historia 1.31, 2:28.
124 Ibidem 1:31/12:19. Cf. Westerdahl 2006b, where are stressed the transcendent and mythical aspects.
125 E.g. Ernvik 1955, also treating names in Lake Vänern, Birkeli 1973, Stylegar/Grimm. The beacons or cairns were often in historical times equipped with a cross on top. Some exist even today; Westerdahl 2006b. Because of the large quantity of the *Kors*-names I have suggested that they would sometimes rather point to a ritual aspect than denote an actual cross set up at the site.
126 Represented in Sweden, Denmark and Norway, possibly also Finland; Westerdahl 1989, 1993, 1995.
127 Cf. Westerdahl 2006b.
128 Cf. Friberg 1951, but also other works by this empirically extremely conscious scholar.
129 Sherratt 1995, 1996.
130 Smedstad 1988.
131 Mogren/Mansson 1995.

132 Gansum 1999, 2002. A pioneering work in Finland is Masonen 1989. The latest major discussion is Stenqvist Millde 2007.
133 Ödman 1987.
134 After Norman 1979.
135 Westerdahl 1990.
136 Schück 1933.
137 Zilliacus 1989: 207.
138 Cf. on *Skede-* Pellijeff 1967, 1989, however, this is a polysemic word.
139 Nørlund 1944: 63ff.
140 Schück; cf. the statement of the Östgöta Law.
141 Pointed out by Morcken 1970 et al.
142 Morcken 1970, 1978, Hoppe 1945, Westerdahl 1990: 340ff. and references (cf. fig. 4).
143 Morcken 1970, 1978.
144 Carlsson 1987, 1991, 1998.
145 After Sherratt 1996.
146 Cederlund 1999. In a larger scale the portage and sea routes to the Russian Arctic are a good representative; Jasinski/Ovsyannikov 2006.

Einige Überlegungen zu den Beziehungen zwischen Verkehrswegen zu Lande und im küstennahen Seeraum in vergangenen Jahrhunderten

Zusammenfassung

Der vorliegende Beitrag vergleicht vor einem breiten kulturgeschichtlichen Hintergrund die Verkehrswege im küstennahen Seeraum mit denen zu Lande. Die Betrachtung konzentriert sich auf den nordeuropäischen Raum und berücksichtigt vor allem die gravierenden, jahreszeitlich bedingten Veränderungen in Skandinavien. Zur Erweiterung des Blickwinkels erscheinen zudem einige räumlich weiter greifende Vergleiche nutzbringend.

Den Ausgangspunkt für die Betrachtung des Beziehungsverhältnisses zwischen Land- und Seewegen bilden die seefahrtbezogene Archäologie und Kulturgeschichte. Es muss vorausgeschickt werden, dass in der Vergangenheit eine berufliche Ganztagsbeschäftigung in der marinen Wirtschaft, wie in der Schifffahrt oder der Fischerei, zu keinem Zeitpunkt möglich war. Ungeachtet der Gründe für eine Bewegung entlang von Transportwegen war der Übergang vom Land auf das Wasser ganz natürlich und vertraut. In gleicher Weise gehörte im ganz normalen Transportverkehr mit kleinen Wasserfahrzeugen die Bewältigung von Überlandstrecken auf dem Weg von einem Gewässer zum nächsten zum alltäglichen Geschäft.

Im weiteren Verlauf stellt der Beitrag anhand von archäologischem Fundgut zu Land- wie Seewegen die Parallelen zwischen diesen beiden Gattungen von Verkehrswegen dar. Lässt sich eine der Gruppen aufgrund von materiellen Funden erschließen oder wird im menschlichen Bewusstsein mit bestimmten Charakteristika verbunden, so ist es sehr wahrscheinlich, dass Ähnliches auch für die andere Gattung der Fall ist. Die Archäologie, gleich ob see- oder landbezogen, bietet diesbezüglich besonderes Potential.

Aufgrund ihrer physikalischen Beschaffenheit, dem Verlauf über Wasser, können Verkehrswege im Seeraum natürlich nicht in gleichem Umfang anhand von archäologischem Fundgut verfolgt werden wie dies bei Verkehrswegen zu Lande der Fall ist (obwohl dies, wie unten ausgeführt, durch immaterielle Zeugnisse durchaus möglich ist). Seewege scheinen auch stärker zu variieren, sich an wechselnde Bedingungen wie Winde, Strömungen etc. anpassend. Andererseits waren auch Landwege in früherer Zeit weder gepflastert noch anderweitig in ihrem Verlauf festgelegt. Der berühmte *Hærvejen*, der Heer- oder Ochsenweg zwischen dem Norden Jütlands und der Elbe, beispielsweise folgte der Kontur des Landes und hatte eher die Gestalt einer Ansammlung von Pfaden, Kies- und Hohlwegen als die einer Straße.

Archäologische Überreste, die auf Landwege hinweisen, treten – von gewissen nahe liegenden Einschränkungen abgesehen – in gleicher Weise entlang von Seewegen entgegen. Seezeichen wie Leuchtfeuer oder andere Markierungen finden sich entsprechend auf Inseln und Schären sowie bisweilen in an die normale Route angrenzenden Gewässern. Dies deutet bereits an, dass die archäologischen Zeugnisse von Seewegen deren Verlauf nicht so eng folgen wie an Land. Jedoch findet sich die Eigenschaft von Landwegen als rituelle Schauplätze bei den Seewegen dupliziert. Votiv- und Opferstätten könnte es entlang beider Gattungen von Verkehrswegen gegeben haben, wie auch jeder Pilgerschrein egal auf welcher Route jedem gewöhnlichen Reisenden oder fahrenden Händler willkommen war. So wurden entlang der Verkehrswege die Gräber und Grabfelder, Erd- und Steinhügel im Gedenken an die Vorfahren errichtet. In gleicher Weise dienten die Transportstrecken, da ihre Lage den meisten Menschen bekannt war, als Orte der Zusammenkunft zu verschiedenen sozialen Anlässen, hierunter Märkte, Schwurgerichts- und Exekutionsstätten, die letzteren oftmals mit weithin sichtbaren Galgen zur Warnung der Reisenden. Alles, was der öffentlichen Darstellung wert erschien, wie Kennzeichnungen des Macht- und Kontrollbereiches zu Lande und zu Wasser, wurde zur Schau gestellt und hierdurch die alles durchdringende Gegenwart der Herrschaftsgewalt demonstriert, ungeachtet ihrer eigentlichen Schwäche.

Die Einrichtung festgelegter Land- und Seewege ist ein gesellschaftliches Produkt, wobei der Verfasser den Feudaltyp der Eigenstaatlichkeit als hervorstechenden Faktor ansieht. Die Verlockungen eines solchen beginnenden Staatswesens erforderten die Schaffung eines Transportwesens zur Eintreibung von Abgaben, die Kontrolle untergeordneter Herrschaft und eine regionale Warenherstellung mit Vertriebswegen zur Aufrechterhaltung und Stärkung der Macht. Aus einem bereits vorher bestehenden Transportmuster einer stärker zersplitterten Herrschaftsstruktur heraus wurde die Basis für ein Transportsystem gelegt. Die Verschmelzung dieser beiden bildete die Transportstruktur. Diese Struktur umfasste den organisierten Einsatz von Lotsen und Fähren sowie ein etappenweise durchgeführtes Verkehrswesen mit Gasthöfen, Landbrücken, Seezeichen usw. Instandhaltung und gegebenenfalls der weitere Ausbau der Verkehrsstrecken zu Lande und zu Wasser folgten sukzessive den Stärken und Schwächen der zentralen Verwaltung, häufig gleichbedeutend mit der persönlichen Autorität des Herrschers. Geregelte Verkehrswege sind Ausdruck eines Feudalsystems und erscheinen folglich erst mit dessen Entstehung, von einigen periodisch auftretenden und lokal begrenzten Anstrengungen abgesehen, sich durch die Errichtung von Monumenten einen gewissen Rang unter den Mithäuptlingen zu verschaffen.

Wie die Verkehrswege zu Lande auch, konnten die Seewege außer durch materielle teilweise auch mit Hilfe immaterieller Zeugnisse, insbesondere durch Bezeichnungen von Örtlichkeiten, rekonstruiert werden. Ihre Distanzen wurden anhand ähnlicher Längenmaße wie an Land bemessen, von *rast,* »Rast, Wegstrecke«, zu Lande und *vika,* »Ruderwechsel«, zu Wasser, wobei letztere etwa 8-8,5 Kilometer betragen haben dürfte. Häufig wurden vier derartige Streckenabschnitte als geeignete Entfernungen zur Ansiedlung von Zwischenstationen informeller oder formeller Natur angesehen. Einem bereits im 14. Jahrhundert niedergelegten, bis zur Frühen

Neuzeit aber nur unzureichend umgesetzten Plan zufolge fanden sich Gasthäuser an Gewässer-ufern häufig wie an Land in gleichen Abständen von etwa 30-35 Kilometern.

Die Beziehungen zwischen Verkehrswegen zu Lande und im küstennahen Seeraum lassen sich vereinfacht anhand einiger weniger Schlagworte kategorisieren: a) Ähnlichkeit (generell), b) Parallelität (wo immer beide Gattungen parallel zueinander in gleicher Richtung verlaufen), c) Gleichheit (überwiegend an Orten mit zugefrorenen Wasserflächen im Winter und in Feucht-gebieten), d) Übergang (von an der Küste endenden Landwegen in Seewege), e) Kombination (wenn beide Gattungen sich ergänzen). Um beide Arten von Verkehrswegen unter einer ein-heitlichen Überschrift fassen zu können, schlägt der Verfasser den Begriff der *transport zones* zur Kennzeichnung der traditionellen Zonen innerhalb einer Geographie des Transportwesens vor.

Sowohl Land- wie auch Seewege entwickelten sich kaum einmal spontan. Sie sind vielmehr ein gesellschaftliches Produkt und das Ergebnis kultureller wie sozialer Weichenstellungen und nicht ausschließlich durch Natur und Umwelt bestimmt.

Quelques réflexions sur les relations, au cours des siècles passés, entre les voies de communication terrestres et celles, navigables, proches de la côte

Résumé

En les situant dans une vaste perspective historico-culturelle, l'article présent compare les voies navigables à proximité de la côte avec les voies praticables dans les terres. L'observation se con-centre sur la région du Nord de l'Europe, en tenant compte avant tout des changements impor-tants qu'impliquent les saisons en Scandinavie. Afin d'élargir la perspective, il a paru en outre nécessaire de procéder à quelques comparaisons globales.

Le point de départ de l'étude est formé par l'archéologie maritime et l'histoire culturelle mari-time. Il faut tout d'abord réaliser que, dans le passé, une activité professionnelle à temps com-plet dans l'économie maritime, que ce soit dans la navigation ou la pêche, n'a jamais été possible. Quelles qu'aient pu être les raisons d'un déplacement le long des voies de transport, le passage de la terre à l'eau était tout à fait naturel et familier. Dans un tel environnement, il était courant et quotidien dans le trafic pratiqué avec des petites embarcations, en ayant recours au portage, d'avoir à couvrir des distances sur la terre ferme d'un cours d'eau à l'autre.

Les découvertes archéologiques faites dans les deux catégories, les voies terrestres et les voies maritimes, sont mises en avant afin de constater les parallèles entre ces deux genres de voies de communication. S'il est permis de saisir l'un des groupes grâce à des découvertes matérielles ou bien s'il est lié à certaines caractéristiques dans la conscience humaine, il est très probable qu'on les retrouve également dans l'autre groupe. Par conséquent, cela devait fonctionner dans les deux sens. L'archéologie, qu'elle soit maritime ou terrestre, offre à ce propos un potentiel par-ticulier.

Bien entendu, en raison de leur caractère physique même – un trajet se déroulant sur l'eau, les voies maritimes ne pouvaient pas être suivies grâce à des découvertes archéologiques de la même manière que les voies de communication terrestres (bien que ceci, comme il est évoqué plus bas, soit possible grâce à des témoignages immatériels). Il semblerait aussi que les voies

maritimes soient plus variables, devant s'adapter aux conditions ambiantes, telles que vent, courants, etc. D'un autre côté, autrefois, jamais les voies terrestres ne furent ni pavées, ni déterminées de quelque manière que ce soit. Par exemple, le célèbre *Hærvejen*, «chemin de l'armée» (ou des bœufs), entre le nord du Jutland et l'Elbe, suivait le contour du pays, assez proche de la ligne de partage des eaux pour éviter l'eau des terrains non drainés, et avait plus l'allure d'une suite de sentiers, de chemins cailloux ou creux, que celle d'une route.

Les vestiges archéologiques, indiquant des voies terrestres, apparaissent – à l'exception de certaines restrictions évidentes – de la même manière le long des voies maritimes. Des signalisations maritimes, telles que des feux ou d'autres signaux, se retrouvent sur les îles et les îlots rocheux, ainsi que dans les eaux voisines de la route régulière. Ceci montre que les témoignages archéologiques des voies maritimes ne suivent pas de façon aussi prononcée la trajectoire actuelle de la piste de transport sur terre. Toutefois, les voies terrestres en tant qu'arènes rituelles sont une particularité répétée dans les voies maritimes. Il pourrait avoir existé des lieux votifs ou de sacrifices le long des deux groupes de voies de communication, tout comme était bienvenu chaque haut lieu de pèlerinage, quelle que soit la route de tout voyageur habituel ou de commerçant itinérant. Ainsi, le long des voies de communication, furent érigés les tombes et les champs funéraires, les cairns en terre ou en pierres, en mémoire des ancêtres. De la même manière, puisqu'elles étaient connues de tous, les trajectoires de transport servaient de lieux de rassemblement à différentes occasions sociales, parmi lesquelles les marchés, les lieux où était rendue la justice et les exécutions menées à bien, ces derniers souvent pourvus de potences, visibles de loin pour prévenir le voyageur. Tout ce qui semblait avoir une valeur de représentation publique, comme les marques des domaines de puissance et de contrôle sur terre comme sur mer, était exposé, démontrant ainsi l'omniprésence de la souveraineté qui s'imposait partout, sans tenir compte de la faiblesse qui, en fait, était sienne.

L'établissement de voies terrestres ou maritimes régulières est un produit de la société, l'auteur considérant toutefois le type féodal de *statehood* (étatisme) comme étant un facteur manifeste. Les signes de succès d'un tel appareil d'état en train de s'établir requirent la création d'un réseau de transport pour collecter les impôts, le contrôle des seigneurs vassaux et la production régionale de marchandises avec des voies de distribution afin d'assurer et de renforcer le pouvoir. En partant du modèle de transport déjà existant auparavant, apanage d'une structure de pouvoir très fortement morcelée, fut établie la base d'un système de transport. L'amalgame de ces deux genres fut à la base de la structure du transport. Cette structure englobait l'organisation de pilotes et de bacs, ainsi qu'un réseau de relais de poste avec des auberges, de portages, de signalisation maritimes, etc. L'entretien et, le cas échéant, l'agrandissement des trajectoires des routes maritimes comme des routes terrestres épousèrent successivement les forces et les faiblesses de l'administration centrale, reflétant souvent l'autorité personnelle du souverain. Des voies de communication régulières sont l'expression d'un système féodal et n'apparaissent, en conséquence, que lorsque celui-ci est créé, exception faite de quelques efforts apparaissant périodiquement et localement limités, tendant à atteindre un certain statut parmi les autres chefs grâce à l'édification de monuments.

Tout comme les voies de communication terrestres également, les routes maritimes purent être partiellement reconstruites, grâce à des vestiges immatériels, en particulier des désignations de lieux, outre ce qui a déjà été mentionné comme étant des témoignages matériels. Leurs distances ont été mesurées avec des unités de mesure semblables à celles qui servaient à terre: *rast* («rest» – repos) sur terre, et *vika* («rowing turn» – changement de rameur) en mer. Ces dernières semblaient faire quelque 8 à 8,5 km. Souvent, quatre de ces sections furent considérées comme étant une distance adéquate pour y établir des relais intermédiaires de nature formelle ou informelle. Selon un plan, déjà introduit au XIVe siècle, mais insuffisamment implanté jusqu'au début des Temps modernes, les auberges sur les rives se trouvaient à un inter-

valle semblable d'environ 30 à 35 kilomètres les unes des autres, comme souvent celles dans les terres.

Les relations entre les routes terrestres et maritimes en région côtière se laissent classifier de façon simplifiée grâce à quelques mots-clé : a) similarité (en général), b) parallélisme (les deux genres existent parallèlement l'un à l'autre et convergent dans la même direction), c) équivalence (la plupart du temps là où l'hiver fait geler les surfaces aquatiques et les régions humides), d) coordination (quand les voies terrestres aboutissent à la côte), e) combinaison (quand les deux genres se complètent). Afin de pouvoir réunir sous le même titre les deux genres de voies de communication, l'auteur propose le terme de *«transport zones»*, afin de qualifier les zones traditionnelles d'une géographie du transport.

Les voies de communication terrestres, tout autant que les maritimes, ne furent pas l'objet d'un développement spontané. Elles sont bien plus un produit de la société et le résultat de décisions culturelles et sociales, qui ne sont pas exclusivement déterminées par la nature et l'environnement.