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1 The History of the *Norvegr* 2000 BC–1000 AD

When written in Chinese the word crisis is composed of two characters.

One represents danger, and the other represents opportunity.

John F. Kennedy, Indianapolis, April 12, 1959

Stretching for more than 2000 kilometres, Norway's rugged coast has always posed a challenge to seafarers. Distribution of Late Neolithic artefacts imported from South Scandinavia indicates that coastal navigation became commonplace from approximately 2400 BC. Certain place-names of islands and promontories can probably be dated to the Bronze Age, indicating that the western sea-route must have been established during this period, when vessels were still propelled by paddling and aristocratic societies flourished. By the early Iron Age, rowing had taken over from paddling, allowing for bigger and faster ships. Nor(ð)vegr may have been established as the name of the sea-route at this time, when again aristocratic societies existed in the region. In the Viking Age, northern ships were equipped with sails, permitting voyages across the Atlantic. By then, Norway had become the name of the country, which eventually was united as one kingdom. Thus, the development of the name can be seen as running parallel to three main stages of shipbuilding and to three stages of aristocratic splendour in Scandinavia: the Bronze Age, the early Iron Age, and the Viking Age.

Norway, encompassing the western part of the Scandinavian Peninsula, is a land of extremes and natural dynamism hardly equalled anywhere in Europe. Above all, the coast can be singled out as the country's most striking feature. In geographical terms, Norway's coast is made up of a diverse range of terrain types (Klemsdal 1982:151; see also Skre 2018b:782–4):

strandflat coast, fjord coast, fjärd coast, cliff abrasion coast, flat abrasion coast and moraine topography coast, all primary coasts, and moraine cliff coast and sandy beach coast, both secondary coasts.

This chapter takes as its theme the history of the concept of Norðvegr or 'Norway' – how it first arose as a metaphor for the importance of the sea-route, and how it then came to prevail as a name for the country itself, in parallel with the development of sea traffic along the coast, with shipbuilding, and eventually with the rise (and fall) of powerful and even aristocratic communities in this part of Scandinavia.

Historians' attention to the conceptual significance of the coast of Norway of course is not new, if perhaps the long-range perspective hopefully represents a new view. Among the many works to deal with this topic, the present work is indebted particularly to Bøe (1942) and the commentary Hagen (1973). Among more recent

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efforts, Kvalø (2007) and Engedal (2010) deal with many of the questions discussed in this article. The present author wishes to apologise for the oversight if any other relevant works have been omitted from the references below.

1.1 Geography, technology, power, and time

This study will consider the emergence of the idea of ‘Norway’ through four areas of inquiry: geography, language (including toponomy), technology, and archæology. Cutting across these four categories is the field of logistics – a key historical factor in establishing and sustaining power. In the period under discussion, logistics was concerned with coastal and overland travel in its practical aspects, in how it could be controlled, and in how it could be used in the struggle for power.

At the most basic level, the geographical features of the Norwegian landscape would have been decisive in either facilitating or impeding logistics. The availability of basic supplies will have been essential to any political power, which will have been seated at particular geographic locations, whether permanent or transitory, which would have required local economic resources and productional capacity to uphold and exercise it.

In Norway, this will have meant agricultural resources and livestock, possibly supplemented by trapping of game such as elk, red deer, and reindeer. Fishing grounds are available almost everywhere along the Norwegian coast; the most abundant fishing resources range from notoriously unstable such as herring (Lea 1949) to more stable and dependable such as cod and salmon. Large-scale trade in fish seems to have occurred only in the Middle Ages, certainly not before the 10th century (Storli 2007).

Trapping of cervids was practiced on a relatively large scale in certain periods as early as the Mesolithic (e.g. Lødøen and Mandt 2012), but most intensively only after the period of concern here, in the Middle Ages, particularly the 11th–13th centuries in connection with an emerging market economy (Mikkelsen 1994).

Compared to Continental Europe, agricultural resources in Norway are limited, not least concerning their distribution. While cereal growing in the Iron Age could be practiced as far north as Malangen in Troms, approximately 70° N. Lat. (Sjøvold 1974:295ff and 346ff), much of the country including the western coast consists of barren mountains. Outside of southeastern Norway, the main regions suitable for agriculture along the Norwegian coast comprise Lista, Jæren, the interior of the western fjord country, and the Trøndelag region on both sides of the Trondheim fjord. Smaller favourable locations can be found scattered throughout the extremely varied landscape, for example in Sunnmøre on the islands west of Ålesund.

Manifestations of power structures in the landscape may take several forms, for example the shape of residential areas or centres surrounded by resources to be exploited, perhaps as catchment areas as suggested by Higgs and Vita-Finzi (1972). In

the present case, the availability of seafaring vessels entails a considerably wider geographical range.

The coastal route by nature of its two-directional travel lends a linear character to the coastal landscape otherwise shaped by the shorelines of the waterways, by islands and promontories, by barren coasts, by protecting islands and skerries, by straits and broad or narrow passages, and by currents and prevailing winds. Against this vast backdrop, this study concerns itself with the establishment in pre-historic times of the West-Norwegian coast as a reliable sea-route and an arena for economic and political ambitions beyond serving local needs, a development linked to advancements in maritime technology affecting the construction of boats and the manner in which they could be sailed or propelled.

History, of course, is rarely predictable; the deeper one digs, the harder it can become to identify recognisable patterns, let alone laws or regularities. In the present study, we can point to one such general feature at play: repeated cycles of stability and change. History abounds with cases of successful, established order experiencing a crisis and demise. The particulars will vary by situation, but the broader question may serve as a productive starting point.

For a later example from the same geographic area, consider the virtually complete collapse of the Kingdom of Norway after the Black Death in 1349. As the country recovered from the late 16th century onwards, culture, language, economy, and political institutions were reinvented on two bases: indigenous popular culture and new impulses from abroad. Many social and cultural aspects, even when not obviously interrelated, experienced changes more or less simultaneously.

While the Black Death was not the sole factor, this central part of Norwegian history provides a model example of the crisis-induced demise of an established culture resulting first in misery but later followed by fresh creativity and initiative, and subsequently the establishment of a new orthodoxy. Exactly *why* the aftermath unfolded as it did remains to be explored, and the variables may differ in similar situations and other times, but the historical phenomenon itself is not in doubt.

Keeping in mind the limitations as well as the strengths of this model, the present study will take the sequence of an established culture experiencing crisis followed by creative instability and then by new orthodoxy as a framework for investigating the rôle of a developing shipbuilding technology in the changing fortunes of prehistoric powers along the coast of Norway.

1.2 Norway – northern or narrow?

To start with, let us revisit the name of the country. In modern Norwegian it appears as either *Norge* or *Noreg*. The earliest written records of the name are from foreign sources: in the Durham *Liber Vitae* from c. AD 840 it is *Nortuagia* (Fig. 1.1; *Liber*

Fig. 1.1: The earliest known mentioning of the name Norway (*nortuagia*) (Durham *Liber Vitae*, c. AD 840). © British Library Board Cotton Domitian A VII 47r.

Vitae, 56; Brink 2018:666; Rollason et al. 2004), and in King Alfred's edition of the Orosius World History, dated c. 880, it appears as *Norðweg*; other forms cited from Frankish chronicles are *Nort(h)wegia* and *Norwegia* (Jakobsen 1981; Myrvoll 2011:114; Brink 2018:666–7). Most of these exonyms include a dental, whether /t/, /ð/ or /th/. By contrast, in Scandinavia, the first written appearance of the name is on the large runic stone at Jelling, erected by King Haraldr Gormsson, called Bluetooth, c. 965 or possibly a little later; transcribed as *Nuruiak*, it reads *Norvegh*, with no dental (Moltke 1976:166ff; Düwel 2008:105ff; Myrvoll 2011). Similarly, the name appears as *Nuriki* on the c. 1034 Kuli runic stone from Smøla, Møre og Romsdal fylke,¹ the oldest known mention of the name within present-day Norway, again with no dental (Knirk 2001).²

The etymology may appear to be straightforward: 'the way to the North', corresponding to the commonly attested *austurvegr*, *vesturvegr*, and *suðurvegr*. Nearly all modern scholars share this conclusion (Nordland 1950; Stemshaug 1973; Jakobsen 1981; Andersson 2001; Brink 2007; this interpretation is implicit in Engedal 2010 and apparently Ystgaard 2014:33; see also Heide 2016). However, another theory has also been suggested, in which the first element of the name is derived from the noun *nor*, meaning 'narrow inlet or bay' ('narrow passage in a river, strait, fjord or lake' according to Rygh 1898:69). This theory was advanced as early as 1847 by Nils H. Trønnnes (1847:71; cf. also Seip 1923:11). The idea appears in an 1874 Icelandic dictionary under the entry *Noregr*:

the former part *nór* is prob. from *norðr*, qs. *the north way*; yet another derivation, from *nór* = *a sea-loch*, is possible, and is supported by the pronunciation and by the shape of the country, a strip of land between sea and mountains, with many winding fjords. (Cleasby et al. 1874:457)

This notion was revived by the Swedish scholar Adolf Noreen (1897:21–9), pointing to the circumstance that *Nórvegr* with a long vowel *ó* by far is the most common form in the early sources, particularly in the skaldic poems where the vowel must be long in order to fit the meter; several examples are mentioned by Myrvoll (2011:114). This form would seem to be incompatible with the short vowel and dental of *Norð-*; Noreen suggested 'regio a[n]gusta' as a folk etymology. Marius Hægstad discussed the question at some length, conceding that the metrical point was not easily overcome, but ultimately dismissing Noreen's suggestion for semantical reasons, finding it hard to reconcile with 'Norway' as the name of the country

¹ The Norw. *fylke* is usually translated as 'county'.

² Pliny (*Naturalis Historiae* IV:104) mentions a *Nerigon* (in some manuscripts *Berricen*). Most scholars have taken this to denote Mainland or Shetland, but some have argued that this represents the first mention of Norway (see Keyser 1868[1839]:92, ref. by Nansen 1911:44). According to Fridtjof Nansen, this theory was with some reservations accepted as possible by Alf Torp, who proposed a hypothetical **NorpravegaR* in Proto-Nordic, which would have been used by southerners such as the Danes (Nansen 1911:82). This remains speculation, especially in the absence of source material.

and preferring the ‘North Way’ interpretation analogous to *austrvegr*, *vestrvegr*, and *suðrvegr* (Hægstad 1908:2). Most subsequent commentators by and large have been content with Hægstad’s conclusion (e.g. Seip 1923; Jakobsen 1981; Stemshaug 1973; Andersson 2001; Brink 2007). Recently, Klaus Johan Myrvoll has reopened the question, arguing that Noreen’s points about meter must be taken seriously and providing several examples³ (Myrvoll 2011:114, 116). The philological debate most likely will continue for as long as anybody is interested in this question (cf. Heide 2016, who sticks to Hægstad’s conclusion; but also Brink 2018, who now seems open to Trønnes’s [and Myrvoll’s] interpretation).

How might these etymologies compare with the geography of the country? The sea-route along the Norwegian coast, consisting as it does of a long succession of straits, fjords, and sounds, is not far off from the narrow inlet or straits noted by Cleasby (et al. 1874). Taken in its entirety, the coast might be thought of as a single, extended ‘*nor*’, although there are few examples of the use of the term for geography on so large a scale (a possible example is ‘*Nørvasund*’, the Norse name of the Straits of Gibraltar). Of greatest relevance to the present discussion is Norheim, an ancient farm site about a mile north of Avaldsnes, on the eastern shore of Salhusstraumen, at the narrowest part of Karmsundet (Fig. 1.2). Oluf Rygh derived its name from the Norse *nór* in part on the basis of the topography (Rygh 1915:410, cf. 143). Norheim is the site of some of the earliest of the many prestigious Iron Age graves along the Karmsundet (excepting the Flaghaugen grave), the standing stones known as the five ‘Foolish Virgins’ (Skre 2018a). Both *nor* and *Nørva-* are derived from the Germanic **narwa-* meaning ‘narrow’ (Falk and Torp 1906:542–3); the modern English word ultimately hails from the same source. Thus, a case can be made for an interpretation of ‘Norway’ as the *nór-vegr*, the way along the sounds and straits.⁴ Further, it could be speculated that the name at first referred only to the Karmsundet, a trace of which survives contained in the name Norheim.

This origin theory does not preclude an apocryphal reinterpretation as the ‘North Way’, as Noreen and Myrvoll have supposed. The latter form of the name is the one encountered in the first foreign sources; whereas *nór-vegr* would be informed by local perspective and familiarity with the topography, the ‘North Way’ reflects an external, southern perspective on Norwegian geography relative to continental Europe, as suggested by Torp (see above). When the coast of Norway enters the historical record in the Late Iron Age, as in the 9th century AD account of the

³ ‘Frå eit ljodhistorisk synspunkt er dette ei rekkja produktive hypotesar, som dessutan hev parallellar, i motsetnad til dei mange ad hoc-hypotesane som sermerkjer den eldre uttydingi’ [‘From the point of view of phonological history this is a series of productive hypotheses, which moreover have parallels, contrary to the many *ad hoc* hypotheses that characterise the older interpretation’ (present author’s translation)].

⁴ ‘*Nordomani*’ denoting the northerners apparently is mentioned first by the anonymous ‘Ravenna Geographer’ as living in ‘Dania’ in the late 7th century (Nansen 1911:118).

Fig. 1.2: Map of Karmsundet, with Salhusstraumen and Iron Age monuments. Illustration: I. T. Bøckman, MCH.

Norwegian seafarer and occasional merchant Othere's journey from North Norway to *Sciringes Heale* and *Haithabu* and from there to Alfred's England (Bately and Englert 2007), the country has acquired a significance beyond mere geography, as an established sea-route and an arena for realisation of manifold ambitions and adventures, and by the 11th century the name had risen to sufficient prominence to denote the whole of the country.

It is clear that the term soon after its inception came to denote the whole of the sea-route, and is likely as old as the sea-route itself. Geographical names in Antiquity, in Northern Europe and elsewhere, were often bestowed upon the discovery of the land in question, as was the case with Iceland, Greenland, and Vinland. By contrast, it appears that there were three stages in the historical development of the name Norway. First, it was merely an appellation describing the sea-route as a geographical or nautical entity, perhaps initially only the Karmsundet. Second, only sometime later did it acquire the status of an actual name, a *proprium*, of the whole sea-route. This development from an appellation to a *proprium* possibly occurred only when the circle of users of the place in question, *in casu* the Norwegian sea-route, was extended to include outsiders (a notion developed by Knudsen 1939:118f). Third, the name finally was extended from the sea-route to the fjords and littoral, eventually encompassing the hinterland, the mountains, and the valleys in the interior.

By that time, Norway had become the name of an object over which one could hold power and a thing one could fight for. Long before a single ruler, by tradition Haraldr hárfagri (c. 850–c. 931/2), managed to gain control over the whole of this country, the sea-route and its various parts would have been an arena with space for several competing powers along its long stretch.⁵

⁵ There might be other proper geographical names derived from formerly 'simple' designations referring to the very aspects of political, economic, religious, or social power used to hold power over the named region in question. According to Grønvik (2006), '*Thule*' (Θούλη) may have had a similar function as the name of at least part of the country at the time of the Massilian explorer Pytheas (Πυθέας), approximately 4th century BC (Roseman 1994). This interpretation to some extent rests on the identification of who the *pulr* might have been: possibly a religious leader (Grønvik 1999:36, 2006), or perhaps rather an 'official orator' responsible for memorizing and reciting accounts of 'kings, dwarfs, giants, titles of Odin and other gods, terms for battle and weapons, the sea, rivers, fishes and whales, ships and parts of ships, earth, trees, plants, animals, birds, islands and so on' (West 2007:70; we might add 'sailing routes' to this list). While such an office would have been crucial in a non-literate aristocratic society, it seems an unlikely source from which the name for the entire country would have been derived. The precise location of Pytheas's Thule remains in question: possibly it refers to a section of the Norwegian coast, if it is included in Pytheas's concept of the extreme north, although this remains far from certain (see Roseman 1994:148ff); Cunliffe (2001) favours Iceland, but the sources are too few, too scattered, and too ambiguous for any definitive conclusions (Krag 2012). Several alternative but ultimately unlikely suggestions for the etymology of *Thule* are mentioned by Nansen (1911:45p, note 1).

1.3 The sea-route along the western coast of Norway

The physical geography of the western Norwegian sea-route is also a defining factor. Taking the southernmost tip of present-day Norway, Lindesnes (57°58'56" N. Lat.) in Agder, as a convenient starting point, the coast northward to North Cape (71°9'56" N. Lat.) is about 2,000 kilometres or 1,080 nautical miles long, excluding bays and inlets. The conditions for navigation are described in detail in *Den Norske Los*⁶ (abbr. DNL), issued by the Norwegian Mapping Authority in eight hefty volumes and renewed every six years. This monumental work includes not only references to modern navigation aids, but also traditional sea-marks and conditions of currents, winds, local topography, and other points of interest to captains with varying levels of experience. This information has been surveyed in recent scholarship on prehistoric voyages along the coast – by Frode Kvalø concerning the southwestern part of Norway as far north as Kormt (Kvalø 2007:62ff), and by Ørjan Engedal concerning the entire stretch from Lista to Tjeldsundet in Lofoten and onwards from there to Pasvik (Engedal 2010:207ff). Both authors concentrate hazards and the means of dealing with them, in particular isthmuses or portages.

Both authors refer to the DNL's identification of 24 particularly hazardous stretches along the coast (see map in Fig. 1.3), due to waves caused by any combination of wind, currents, or the shape of the coast or seafloor (see also Kvalø 2007:64, fig. 4; Engedal 2010:map 19).⁷

The sea-route along the western coast of Norway is of course determined by several critical points in the shape and topography of the coastline. While the route keeps to the outer part of the coastal area, close to the open sea, along most of its

Another early name of possible relevance is *Rusbeas*, mentioned by Pliny (Nat. Hist. IV:13: 94–5), which Nansen suggests to have denoted Lindesnes (Nansen 1911:76 with references to older literature and several uncertain interpretations).

Mediaeval Irish sources mention a kingdom called *Laithlinn* (*Lothlend*, *Lochlainn*), sometimes thought to refer to Norway (MacKillop 2004), although its precise location has been under debate since the mid-19th century. Recent attempts to locate it in Viking Scotland or thereabouts (Ó Corráin 1998) have been thoroughly refuted by Colmán Etchingham (2007) in favour of a Norwegian location, although his attempt to derive the Irish term from a name for the Trondheimsfjord in Trøndelag, Middle Norway, surely should be considered in the same light-hearted manner in which it clearly was offered. Arne Kruse (2015), with some reservations, proposes an etymology deriving the name from a Norse **Leiðland* and places it in Southwest Norway, with Avaldsnes as its centre. Based on the available sources, however, a reliable etymology for *Laithlinn*/*Lochlainn* remains quite nebulous (Ó Corráin 1998).

⁶ Engl.: 'The Norwegian Pilot'.

⁷ Some experiences from paddling along the coast of Nordland in a kayak are offered by Nydal (1988), highlighting both the value of natural sea-marks such as Landegode and Bolga and Tomma (see below), but also the certainly obvious need to take heed of weather conditions.

Fig. 1.3: The Inside Passage (*Leden*) along the coast of Southern Norway, with names of islands and mountains that may have been seamarks. (After Engedal 2009:map 19 and Kvalø 2007:62ff)
Illustration: I. T. Bøckman, MCH.

long stretch it nevertheless serves as an inside passage (the *nór* of the hypothetical *Nór-vegr*) protected from the North Atlantic by a long succession of large and small coastal islands, known as the *skjærgård* or ‘fence of skerries’. Such stretches include the *Karmsundet* between Kormt and the mainland, and the *Sunnmørsleia* passage inside the Sunnmøre islands. Still, there are dangerous stretches of open sea without such protection. Five or six of these in particular present hazards to navigation along the coast. Starting in the southwest, a ship is exposed to the Skagerrak and North Sea coast, approximately from Mandal to Lista, where the route northwards from Jylland to south-western Norway reaches land. Next, there is the unprotected Jæren coast all the way from Åna-Sira to Tananger, although the situation may have been somewhat more favourable during the Bronze Age, when the sea level was approximately 4 m higher; harbours which have since disappeared would have provided shelter for shallow-draught craft, such as in Orrevatnet in Klepp (Solberg 1993). *Sletta* north of Kormt is another challenging stretch, followed by *Ryggsteinhavet* in Askvoll about 65 nautical miles north of Bergen. The treacherous sea outside of the *Stad* promontory where the coast turns in a general northeasterly direction has been notorious among captains in all periods. Further north there is the *Hustadvika* off Bulandet. And finally there is the *Folla* west of Fosen in Trøndelag, which Engedal singles out as perhaps the most significant obstacle to voyages between southern and northern Norway in ancient times (Engedal 2010:210f).⁸ The sea-route ends at Lofoten, beyond which the infamous Maelstrom lies in wait. Most of these unprotected stretches are still indicated as dangerous in the DNL as well as by the above-mentioned authors.

Some of the dangerous stretches may be avoided by continuing the journey overland, crossing isthmuses or portages (Norw.: *eid*). At Lista in the south, *Briseid* and in particular *Listeidet* have been and indeed still are important crossings. There is no overland option for the part of the route along Jæren. At *Sletta*, there are crossings at the 6 km long and at the most 40 m high *Haraldseidet* isthmus at Skjold from Skjoldafjorden to Ålfjorden, or farther east at *Sandeid* across the 7 km to Ølen. To avoid the *Ryggsteinhavet* there is the *Stubseid* between Stongfjorden and Stavfjorden (2 km), but its close proximity to the open sea limits the degree of protection it offers; in bad conditions here travellers would have to resort to the 5 km long haul from Stongfjorden to Vågane. The dangerous sea around *Stad* may be avoided by crossing from Moldefjorden to Vanylvsfjorden at *Eide* at the root of the *Stad* peninsula (2 km). A welcome alternative to crossing the nefarious *Hustadvika* is provided either by the 14 km long, but low-lying *Fræneidet*, or the 6 km from Eidsvåg in Langfjorden to Eidsøra in Sunndalsfjorden farther east. To avoid the hazardous *Folla* stretch, there is little choice but to resort to the 23 km long *Namdalseidet* from Beitstadfjorden to Løgnin (cf. Steen

⁸ The Maelstrom is first mentioned in passing by Paulus Diaconus c. 720–90 (Nansen 1911:122).

1942:296). These and similar portages may be thought of as complementary, or supplementary, to the sea-route proper.

The coast has not remained unchanged throughout history. The post-glacial land upheaval has brought particularly drastic effects. What was once a strait in the Early Iron Age may have been bridged by an isthmus in more recent times; former islands may now be peninsulas or otherwise parts of the mainland. These changes have not affected uniformly the entire stretch of the coast; the greatest land upheaval has occurred in the interior of some of the long fjords, such as Sognefjorden and Trondheimsfjorden. An interesting case which lies somewhat outside the main area covered here concerns the Drammensfjorden arm of the Oslo fjord. As Aslak Liestøl has shown, a number of place-names along the valley through which the Drammen River now flows slowly toward the sea can only be explained if one supposes a fjord stretching all the way up to Vestfossen, 22 km northwest of the present river mouth. Such would have been the case with a sea level 10 m above the present, as it may well have been in the latter part of the Early Iron Age (Liestøl 1959; cf. Hafsten 1956 concerning the post-glacial land upheaval).

Similar conditions may have obtained in many places along the coast of Norway. As mentioned above, the coast of Jæren may have featured several inlets which will have formed sheltered harbours in the Bronze and early Iron ages, as Bergljot Solberg (1993) mentions. Namdalen in Trøndelag may present another such instance (Farbregd 1986). Nevertheless, the extent of land upheaval has been more restricted in the outer regions of the coastal districts, and with the quite steep relief of much of the terrain, conditions will not have been very different from today. At the same time, even shallow inlets would have been accessible to prehistoric craft, which in general were relatively shallow-draught.

Norw. *eid* ('isthmus', 'portage', or 'neck of land') is a reflex of Germ. **aida-* which in turn is derived from an ancient Proto-Indo-European verbal root reconstructed as **H₁ey-* ('to walk').⁹ An *eid* consequently is as part of the landscape or of the road where one walks (Bjorvand and Lindeman 2007:215; de Caprona 2013:209; cf. Elmevik 1978). Another well-known reflex of this root is Lat. *idere*, 'to walk'. The semantic and formal connection between modern Norwegian *eid* and the concept of walking has been lost, and the word is now identified with a preferably low-lying and usually narrow strip of land surrounded by waters on two sides and connecting two larger landmasses. In place-names it can also indicate a land route past a waterfall or rapids in a watercourse, or in the mountains a (narrow) route leading from one region to another (Rygh 1898:48) or even apparently any route intended to be

⁹ The **H₁* denotes one of three hypothetical so-called 'laryngeals' in Proto-Indo-European which have disappeared from most later languages. This particular 'laryngeal' has not left traces in the form of colouring of surrounding vowels. The other two are a-colouring and o-colouring, respectively. For more detailed discussion, consult the specialist literature such as Bjorvand & Lindeman 2007 or Lindeman 1987.

walked, literally ‘a walkway’; Swedish scholars even report that it has been used as a designation for fords (Wahlberg 2003:63; cf. Skre 2007:432ff). From the point of view of topography these are all quite different features; it is precisely the functional aspect of the need to walk that is their only commonality. Consequently, the word *eid* would have retained its meaning as ‘a route for walking’ when it was introduced in Scandinavia and applied in geographical names up until the development of classic Norse; the present restriction of its use to one particular topographical feature would appear to be a relatively recent development. It occurs all over Norway and Sweden, and also as an ancient loanword in Finnish, but seems to be rare in Denmark (Modéer 1936:96). It was clearly still in use as an active element in the formation of place-names at the time of the Norse settlement of the North Atlantic islands of Iceland, the Faeroes, Shetland, Orkney, and the Hebrides (Waugh 2010), but perhaps already then restricted to denoting isthmuses.

The option of crossing isthmuses to avoid hazardous sections of the sea route certainly has always been important, and the practice has endured into quite recent times (Nordland 1950:43; Nymoen 1995; Stylegar and Grimm 2003:109). Indeed, at Listeidet in Agder *fylke* an overland transporting service for boats is still available according to DNL, vol. 2b:210. Before the modern technology of motorised tractors, such crossings would have been an arduous and time-consuming process, especially for large ships and entire fleets. Most modern commentators consider that the practice of transporting boats across *eid* in ancient times would have concerned primarily small craft (Steen 1942:294ff; Nymoen 1995; Smedstad 2001). Kvalø and Engedal identify several *eid* of special importance in ancient times, in part owing to a higher sea level than at present (Kvalø 2007:65ff; Engedal 2010:208ff). The sagas of King Sverre Sigurdsson (1153(?)–1202) and King Håkon Håkonsson (1204–63) recount ambitious transports of ships from the coast inland up rivers, across hills, and down into the lakes of South-Eastern Norway, where regular naval battles were fought during the strife of the 12th–13th centuries. As the mediaeval texts note, these were exceptional occurrences – ships were brought to where none had ever been (for a summary of these events, see Brøgger and Shetelig 1950:242ff; Steen 1942:272ff).¹⁰ Otherwise, the ancient saga or legal texts hardly make mention of hauling ships across portages. Such land-crossings might involve hazards of their own, away from the comparatively safe environment of the ship and the sea. At many of these *eid*, the significance of the place is demonstrated by the placement there of barrows and other ancient monuments, which were intended to be seen and to inspire awe and perhaps fear in those passing by, in any case serving as markers of local powers through whose land they passed.

¹⁰ Even so, on some of these lakes ships or boats probably were in regular use already in the Bronze Age, to judge from the presence of rock carving pictures of boats (Østmo 1991, concerning Tyrifjorden) or numerous barrows or cairns along their shores (Skjelsvik & Pettersen 1974 concerning Aspern and Aremarksjøen; many others certainly exist).

Such sites have been interpreted as possible centres during the early Iron Age, places where ship traffic could be easily controlled, thanks to navigators preferring the safer inside passage for their rowed and paddled craft. One case of an ancient settlement centre situated by a portage is Spangereid in Lindesnes, Agder, where a number of place names and rich archaeological finds of graves as well as indications of a farm with a hall structure and large boathouses all testify to a busy hub during the late Iron Age, and probably earlier (Stylegar and Grimm 2003:89–90). The settlement pattern of the time was oriented towards the sea, with as many as twelve different cemeteries for each farm, while settlement in the late Iron Age was more concerned with agricultural resources exploited from farms that were largely identical with those known in later, historical times (Herje 1986 with references; Sognnes 2000:34). Against this backdrop, Kalle Sognnes highlights the apparent contrast between the mundane, noisy business taking place at a portage and its status as a place of holy, possibly esoteric ancestor-worship, as evidenced by the many grave structures to be found at sites such as at Valseidet, Bjugn, Trøndelag (Fig. 1.4). Equally, Sognnes points to signs that early Iron Age captains did not always follow the safest course along the coast, but just as often preferred the straight, if more risky route outside of the sheltered inside passage (Sognnes 2000).

Fig. 1.4: Valseidet, Bjugn, Trøndelag, with several grave mounds. From Norge i bilder (Frøya-Vikna 2013).

In any case, it seems that many of the *eid* mentioned above were named, and therefore presumable used, in the Early Iron Age at the latest, thereby contributing to the impression of a great age of the sea-route along the coast and of coastal traffic in general.

The narrow passages along the sea-route may have provided welcome protection from the open sea, but will at the same time have provided opportunities for others, whether pirates or royal authorities, to control the traffic. But what did ‘control’ of traffic at Karmsundet, Avaldsnes, and similar places actually entail? The Sound Dues at the Sound between Zealand and Scania were only introduced by the

Danish King Eric of Pomerania in 1429 (remaining in effect until 1857) (cf. Lauring 1952). In the Iron Age, the collection of dues at sea would have been hindered not least by the absence of firearms. Alternatively, a tax may have been levied on goods arriving at Avaldsnes, traded under supervision of the local authorities, rather than collected at sea.

Where traffic could be spread out over a larger area, or there were several choices of which route to take, ‘control’ would have been more difficult. But where there was little or no choice, such as at Karmsundet, the establishment of a seat of power would have allowed for more effective control. Even if there was no set tax or tribute required for passage, a show of respect would be expected, lest there be unwanted consequences (cf. Nordland 1950).

Along the Norwegian coast, Karmsundet stands out as the prime case of such a concentration of possibly conflicting interests. Similar conditions appear to have obtained at the Sunnmørsleia, as well as at several other places of more local significance.

The risks along the Norwegian coast naturally will have preoccupied all who sailed such waters; when voyagers met they exchanged experiences (Fig. 1.5). The tales told on such occasions may have been tall, and sometimes maybe rather more so than even the harsh reality of the coast itself. A fear of legendary monsters, especially in the north, emerges from an account in the 12th century *Historia Norwegie*:

Fig. 1.5: Olaus Magnus: *Carta Marina* (detail). Printed in Venice 1539. The sea-monsters apparently were considered a real threat.

For here live huge sea-beasts of various species, that will smash the stoutest vessels to smithereens and gulp down the crews; some of these they will drown. One-eyed, very ferocious walruses are to be found here, cutting furrows through the ocean depths, with manes fanning out. There also, are the whale and the hafstramb, a gigantic creature but without tail or head, which merely springs upwards and downwards like a tree-trunk, and only appears to predict perils for sailors. There, too, one may discover the hafguva and the hafkitta, the very largest of maritime monsters, and all the countless others of their kind.¹¹

(Ekrem and Mortensen 2003:56f.)

1.4 Navigation aids

Navigation along the Norwegian coast requires skill and knowledge about dangers to be avoided, but also about the sea-marks that may provide guidance past such hazards. Beacons and lighthouses are fairly modern inventions to this end, but many natural features of the coast itself will have been of crucial importance to sailors at all times.¹² The great age of some of the natural sea-marks mentioned in the current issue of DNL is indicated by their linguistically ancient place-names. Many of these have been commented upon by Oddvar Nes (1987). Beginning in the south, we find *Agder*, reflecting the plural of the ancient **ogd* (promontory, point). The name of the southern peninsula *Lindesnes* is a reflex of *liðandi*, interpreted as the ‘place where the land comes to an end’. *Lista* and *Jæren* both reflect the meaning ‘edge’ or ‘brim’ as quite apt characterisations of both of these landscapes. Further north there is *Møre*, from **Mærr*, the ‘land by the sea or ocean’. Nes also mentions *Folda* further north in Namdalen as denoting a broad, open stretch of sea, a name which also was used by the ancients for the Oslo fjord (Nes 1987:21). All of these names arguably have forms as well as contents indicating their origin as names given by navigators negotiating the coast.

Of particular interest, however, are names of prominent islands along the coast. Nes lists a total of forty names of coastal islands, from *Bokn* in Ryfylke in the south to *Kunna* in Helgeland in the north (Nes 1987:21ff),¹³ but even this is far from

¹¹ ‘Ibi etiam cete grandia diuersi generis fortissimas naues confringentia, nautas diglutiunt, quosdam submergunt. Ibi equini ceti monoculi iubis diffusis profunda pelagi sulcantes ferocissimi reperiuntur. Illic pistrix, illic hafstrambus, maxima bellua, sed sine cauda et capite solum susum et iusum dissiliendo ueluti truncus, non nisi nautarum pericula prefiguret, apparet. Illic hafguua et haffkitta, pre cunctis marinis monstribus maxima, et cetera huiuscemodi infinita reperiuntur.’

¹² Several such features along the Jæren coast are mentioned in a local perspective and particularly concerning their names in Særheim (2015:48–56 and passim).

¹³ Beginning in the south, those that are mentioned include *Bokn*, *Karmøy*, *Bømlo* (*Siggjo*), *Stord*, *Borgundøya*, *Huglo*, *Stolmen*, *Hufto*, *Reksteren*, *Sotra*, *Strøno*, *Herdla*, *Radøy*, *Solund*, *Alden*, *Staturen*, *Aralden*, *Flora*, *Kinn*, *Reksta*, *Batalden*, *Hovden*, *Stad*, *Frøya*, *Runde*, *Lepsøya*, *Valderøya*, *Smøla*, *Storfosna*, *Tarva*, *Hardeidlandet*, *Froan*, *Torget*, *Dønna*, *Hugla*, *Tomma*, *Aldra*, *Hestmona*, *Træna* and *Kunna*. Fourteen of these, those underlined, are still mentioned as prominent natural sea-marks in

the latest edition of *DNL*. Etymologies mostly according to *Norsk stadnamleksikon*, 4. *Utgåva*, Oslo 1997 (ed. Jørn Sandnes and Ola Stemshaug) (NS):

- *Bokn*. Germ. ‘sign’, ‘beacon’, Bugge 1904:342–5. Other, less likely possibilities are discussed by Særheim 1996.
- *Karmøy*. Norse *Kǫrmt*, ‘shelter from the sea’, Hovda 1961:296–7.
- *Bømlo*. A mountain, from ‘thick, swollen’ NS:114.
- *Siggjo* (Fig. 1.6). Related to Got. *saihwān*, ‘to see’. ‘The visible’. NS:391; Grönvik & Hovda 1960: 160–3; Hovda 1961:291–2. Cf. Olsen 1910:125.
- *Stord*. Uncertain. Perhaps related to **ster-*, ‘rise, stand out, tower, dominate’ NS:428 with references to other, less likely interpretations.
- *Borgund(øya)*. Probably from *borg* in the original sense of ‘mountain’ reinforced with *-und*. NS:100–1, cf. Nes 1985:9.
- *Huglo*. Rel. to Germ *Hügel*, ‘hill’. NS:226–7.
- *Stolmen*. From **stel-*, ‘to stand’ or ‘stiffen’. NS:428; Frøysadal 1968:70.
- *Hufto*. Compared to Norse *huft*, ‘hip’. NS:226.
- *Reksteren*. Rel. to Norw. *rekka*, ‘reach’ or ‘stretch out’. NS:360.
- *Sotra*. Uncertain. Perhaps rel. to Norw. *sjode* ‘to boil, seethe’ or *suge*, ‘to suck’, of sea currents. NS:418; Brevner 1942:197–211.
- *Strøno*. ‘Surrounded by currents’. NS:432; Frøysadal 1968:118; Nes 1970:6–7.
- *Herdla*. Uncertain. Possibly ‘the separated’ (from Askøy by a narrow strait). NS:210 with references to other, less likely possibilities.
- *Radøy*. Norse *Roð*, ‘moraine, row’. NS:334.
- *Solund*. From **sól*, ‘furrow, cut, notch’, reinforced by *-und*. NS:416–17; Kjær 1919:215–16, also references to other, less likely interpretations.
- *Alden* (Fig. 1.6). Rel. to Lat. *altus*, ‘high’, in Germ. preferably with the meaning ‘large, thick’, Frøysadal 1968:70ff. NS:68.
- *Stauren*. Not in NS. Norw. *staur* generally translates ‘pole, stake’.
- *Aralden*. Norse *ari* ‘eagle’ + *alden* as above. NS:74.
- *Flora*. Norse **flóðr* ‘current’. NS:151.
- *Kinn*. Norse *kinn*, ‘cheek, steep mountainside’. NS:254.
- *Reksta*. As *Reksteren* above.
- *Batalden*. From Norse *bati* ‘advantage, benefit, good’ + *alden* as above. NS:85. Frøysadal 1968:72.
- *Hovden*. Norw. *hovde* ‘rounded peak’, related to *hovud*, ‘head’. NS:226.
- *Stad*. ‘Standing up’, NS:422 with reference to Hovda 1961:164, 1982:col. 574.
- *Frøya*. Probably from Proto-Germ. **Fraujō* ‘foremost, most forward’. NS:160 with reference to Kjær 1919:376. Another possibility is **fraujō*, ‘the large island’, C. Marstrander 1929:123–4.
- *Runde*. Probably from Norse (*H*)*rund*, ‘the most forward (island)’, or possibly from a meaning of ‘steep cliff, precipice’. NS:371–2; cf. Kopperstad 1918:35–40; Olsen 1918:41, alternatively S. Strandberg 1983:136–8.
- *Lepsøya*. Compared to Norw. *lepe* ‘lip’. NS, 288 with references to other, less likely interpretations.
- *Valderøya*. Uncertain. Perhaps from Norse *Vǫrl* compared to *vǫr(r)* ‘lip’. NS:476–7 with references and discussion.
- *Smøla*. Norse *Smyl*, perhaps related to Norw. *smol* ‘splinter, dust’ referring to the archipelago of small islets and skerries. NS:412, cf. Olsen 1924:63–4 and Hallan 1965:49–51.
- *Storfosna*. *Fosen* from Norse *Fólgsn*, ‘hiding place’, referring to the harbour. NS:156.

exhaustive (cf. Nes 1997). A commonality to these names is that they describe conspicuous features of the islands, as seen from a distance from the sea; all are natural sea-marks or otherwise represent features of the coast of interest to navigators. Nes argues that all these names for linguistic reasons must be very old, in several cases pre-dating Old Norse, often probably considerably older. Magnus Olsen offers the cautious suggestion: ‘early in the early Iron Age’ (Olsen 1939:37). Another point of interest is that the names are individual as opposed to generic; true *propria*, not generalised appellatives. Nes forwards the idea that their very individuality as identifiers of prominent features of the coastal route may reflect a kind of ‘convention’ to aid in keeping record of a long and dangerous sea-route (Nes 1987:26).¹⁴

Such a convention perhaps might take several forms, but it would have to preserve the names in the correct sequence along the coast. Literate societies achieved this with a written text such as an ancient periplus (Gr.: περιπλους). In an illiterate society such as prehistoric Scandinavia such descriptions would however have to be kept in memory. The preservation of the sequence might be preserved by the metric form of poems, or the narrative structure of tales. In later, historically attested times, these and similar names for conspicuous features along the coast were in some cases committed to memory by tales about love and hate among the fairies and giants who were believed to be represented in the names. The best known of these is the tale involving various islands, mountains, and other features of the Nordland coast, about the desire felt by *Hestmona* (Fig. 1.6; originally meaning the

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- *Tarva*. Uncertain. Perhaps related to Proto-Germ. **ter-* ‘to tear’, referring to the archipelago. NS:447 with references and discussion.
 - *Hardeidlandet*. Perhaps related to Norse *Hǫð*, the name of an ancient people, or from a meaning ‘foam’. NS:196–7.
 - *Froan*. Related to Norse *froða*, ‘foam’. NS:158.
 - *Torget* (Fig. 1.6). Probably from Norse **torg* ‘with a crack or hole’, perhaps related to Proto-Germ. **derk-* ‘to see’, ‘eyed’. NS:456–7; Hesselman 1929; cf. also A. B. Johansen 2008.
 - *Dønna*. Related to Norw. *dynja*, ‘boom, rumble’. NS:128.
 - *Hugla*. Same as *Huglo* above.
 - *Tomma*. Probably Norse *þomb*, ‘belly, tummy’. NS:456.
 - *Aldra*. As *Alden* above.
 - *Hestmona* (Fig. 1.6). See text.
 - *Træna*. Probably from **þrið*, referring to three mountain peaks on the largest of the islands. NS:464.
 - *Kunna*. ‘Easy to know’, related to Norse *kunnr*. NS:269.

14 The creation of such names involved many factors, not all of them connected with the coastal sailing route or the memorisation of sea-marks, hazards, or characteristics. Many places were re-named in later times, with the older or original names sometimes preserved in secondary or derivative names or in texts. Nonetheless, a great number of these names appear to have had a meaning most readily explained as derived purely from references to conspicuous features that will have been suitable as sea-marks.

Fig. 1.6: Some of the mountains which served as seamarks in both ancient and modern times. Clockwise from the upper left: Bømlo (Siggjo), Torghatten, Alden, Hestmannen. By J. Ådanes, W. Höltz, H. Maltesen and Rart (via Wikimedia). The images have been cropped.

‘horse mane’, by latter-day fishermen reinterpreted as *Hestmannen*, the ‘horse man’, actually an island with a characteristic profile when seen from the southeast for the beautiful *Leka* maiden (*Leka* is another of those islands). The tale has been told many times, an early version was published by Andreas Faye in 1833 with references to even earlier renditions (republished as Faye 1948); a detailed version may also be found in Ytteren (1944).

The age of the sea-route itself is certainly indicated by the obviously great age of many of the names. In some cases, we apparently must go back to Norse or Proto-Norse to find the origin of a name.¹⁵ Concerning even earlier linguistic stages, Ottar Grønvik suggests that his partly hypothetical ‘North-West Germanic’ may be dated to approximately 500–200 BC (Grønvik 1998:145ff; cf. Anthony 2008:4–5), and by retrospective extension the typologically earlier Proto-Germanic (Norw. *urgermansk*) should be dated to the Late Bronze Age (approximately 1000–500 BC), at the latest. Even so, a precise positioning of the origin of a received place-name

¹⁵ Norse (Norw. *norrønt*) is the language that was spoken in Scandinavia in the Viking Age or Late Iron Age, after the 6th century, while Proto-Nordic (Norw. *urnordisk*) generally is considered to have been spoken in the Migration Period and probably also in the Roman Period.

within the sequence Proto-Germanic – North-West Germanic – North Germanic – Nordic I–III (cf. Grønvik 1998:135) may be difficult. It is noteworthy that the beginning of Germanic may be pushed back (at least) into the Bronze Age (cf. Kristiansen 2009:115ff). Furthermore, the existence of a Pre-Germanic stage has been hypothesised as preceding Proto-Germanic and comprising ‘an undocumented period of linguistic change that must have occurred between [Proto-Germanic] and Proto-Indo-European’ (Anthony 2008:4).

In consequence, many of the ancient names of islands, promontories, and similar conspicuous features of the Norwegian coast may have been established by the Bronze Age. The etymologies cited above in many cases refer to Proto-Germanic origins, with a cumulative impression of an early date of the group of place-names as such within the historical sequence of the languages. This would lend support to a hypothesis that the names, and therefore the sea-route itself, existed in the Bronze Age or even earlier. Given that the entire body of sea-mark names likely belonged to one collective entity, the sailing route along the Norwegian coast therefore likely was established as a passage at that time, its various properties and hazards having been experienced and described and made known by their different, yet characteristic names among captains and sailors, corresponding to the hypothetical first stage of the history of ‘Norway the sailing route’ indicated earlier. It is clear that the third stage, when ‘Norway’ became established as the name of the country, had been reached by the Late Viking Age. By implication, the hypothetical intermediary second stage, when some equivalent of ‘Norway’ was established as a true *proprium* or name of the coastal route and indeed the coast itself, may correspond to the Early Iron age – at least the latter part of it, perhaps the Migration Period.

1.5 Sea-route archaeology

The great age of the sea-route is also evident in the archaeological record (cf. Westerdahl 1995a). Along with the category of finds concerned directly with coastal traffic – boats and remains of boats and boat gear including pictures on rock carvings and elsewhere, and boathouses – there are also finds indicating prosperity and power, and finds pointing to connections along the coast and beyond with more distant places. Also of importance are the existence and not least the position of prominent ancient monuments, many of which clearly connected with the importance of the sailing route.

1.5.1 Stone Age craft

Today, the Norwegian coastal sea-route remains vital to regional transportation, navigated by passenger and cargo ships alike, to ports large and small.¹⁶ The current coastal traffic, though governed by modern commercial markets quite different from the forces that drove prehistoric travel (cf. Storli 2007), still bears some relevance from the point of view of North European and maritime history. Voyages along the western coast of Norway doubtless have taken place since the earliest human habitation; most archæological traces of human activity here are a testament to a lifestyle that exploited the bountiful coastal resources and used the fjords, sounds, straits, and dangerous stretches of open sea to maintain connections both with close neighbours and with more distant places.

The rapid spread of Mesolithic settlement all along this coast from the Oslo fjord and Rogaland in the south to Finnmark in the north around 10,000 calBC can only have taken place by boat (Bjerck 2008; Glørstad 2013); coastal resources such as fish and game would have been instrumental in inducing people to set out, albeit probably incrementally, on the long and hazardous voyage to the north. In this important sense, the Norwegian coast and its varied resources have been of basic significance to life in these parts for as long as people have lived here, since the end of the last Ice Age.

It has been suggested that the history of Scandinavian boatbuilding can be followed without breaks, if not without profound changes, from the Stone Age to the Viking Age and onward (Christensen 1966, 1988; Crumlin-Pedersen 1970; Rieck and Crumlin-Pedersen 1988; Østmo 2003, 2005, 2006, 2008, 2011a). Recent studies converge on the idea that boats along the Norwegian coast most probably were dug-outs already from the earliest times, at first prepared from pine trunks and only later from lime, at least in the south (Glørstad 2013). Mesolithic dugouts are indeed known from South Scandinavian archæological sites such as Tybrind Vig off Funen (Andersen 2013), but not from Norway or Northern Scandinavia. The oldest evidence for boats in Norway, although perhaps of a different construction (Fig. 1.7) occurs in the indirect form of the rock carvings of the Northern Scandinavia tradition, such as the 2017 discovery of a ground image, certainly of Pre-Boreal date at Valle in Efjorden, Nordland, as well as those at Melkøya in Hammerfest (Hesjedal et al. 1996:75ff; cf. Hesjedal 1993) and Evenhus in Frosta (Gjessing 1936:82f. and pl. LXXVII).

¹⁶ In relatively recent history, at least two forms of sea traffic along the West Norwegian coast stand out in particular and could even be said to have achieved almost iconic status. The oldest of these is the trade between North Norway and the Hanseatic merchants in Bergen in dried cod which was carried on traditional vessels from the 13th century until more modern means of transportation took over at the turn of the 20th century. The other, more recent concerns the Coastal Express packet boat service from Bergen to Kirkenes and back since 1893, for the last sixty years with daily sailings all year round (Norw. *Hurtigruten*).

Fig. 1.7: Rock carvings from Evenhus, Frosta, Trøndelag (left) and Melkøya, Hammerfest, Finnmark (right) with representations of Stone Age boats. (Gjessing 1936:pl. LXXVII and Hesjedal 1996:fig 69).

It is difficult to determine the type of vessel the crudely drawn pictures represent, possibly a hide boat.

Not all scholars share the view that the northern boat-building tradition, which still is alive today, began with dugouts, (e.g. Brøgger and Shetelig 1950; S. Marstrander 1963, who favoured the view that construction of the plank boats of the Iron Age was developed from earlier hide boats). This view would seem to have been laid to rest effectively by Crumlin-Pedersen (1970; cf. Humbla 1937), who pointed at the very different, indeed mutually exclusive construction principles of hide boats and traditional Scandinavian clinker-built plank boats. Even so, the idea that a northern hide boat tradition lay behind the establishing of contact between Western Norway and Jylland in the Late Neolithic is met with again in a recent study (Engedal 2006). Ørjan Engedal invokes several pieces of circumstantial evidence for support, including North Scandinavian rock carving pictures of boats with details similar to those found on South Scandinavian Bronze Age ship pictures while apparently pre-dating the latter, the spread of northern asbestos-tempered pottery as far south as the Lista peninsula in southernmost Norway, and even the Western Norwegian custom of sacrificing Late Neolithic flint scrapers intended for preparing hides for boats by women who wore spade-shaped pendants possibly representing hafted scrapers as a sign of their identity (cf. Engedal 2010). All of which is plausible, except that the spoon-shaped Late Neolithic scrapers certainly are a South Scandinavian type, maybe even produced there (the type DO 537–8, Glob 1952; P. V. Petersen 1999:68, no. 49), and not least the widely divergent constructional properties of hide boats and plank boats; Engedal does not consider these differences at all except for a general reference to the need for ‘re-negotiation’.

What remains certain is that dugouts did exist already in the Mesolithic. For that matter, they continued to be used into the modern age (Arisholm and Nymoen 2005), regardless of other developments of shipbuilding and navigation.

1.5.2 The Late Neolithic and the Bronze Age

While smaller craft, dugouts or otherwise, presumably were in use along the Norwegian coast since the beginning of history, a change seems to have occurred at the transition to the Late Neolithic, when sailing beyond sight of the coasts first became regular. Evidence of this change remains circumstantial and subject to interpretation. The distribution of items imported into South Norway from South Scandinavia is at the centre of this line of reasoning (Østmo 2003, 2005, 2006, 2008, 2009, 2011a, 2012, 2014).

Archæological finds attributable to virtually all of the traditional Neolithic cultures identified in South Scandinavia are present in Norway also, from the Funnel Beaker Culture via the Pitted Ware and Battle Axe (or Corded Ware) cultures to the Bell Beaker and Late Neolithic cultures (Hinsch 1955, 1956; Malmer 1962; Prescott and Walderhaug 1995; Apel 2001; Prescott 2012). But it is striking that in Norway the earlier among these mainly are represented in the southeast, in particular in the Oslo fjord region. This concerns the 3800–2800 calBC Funnel Beaker Culture (Østmo 2007), but to a large degree also the 2800–2350 calBC Corded Ware Culture, and certainly the Jutish Single Grave Culture aspect of it (Hinsch 1956). The diffusion of the various expressions of these cultures to Norway therefore probably took place overland or along the coasts, literally within sight of land. Thus it is striking that the particular North Jutland aspect of the Funnel Beaker Culture (Ebbesen 1978) has left no trace north of the Skagerrak. A few items (mostly stone axes) of Funnel Beaker Culture types have been found in Western Norway. Such finds are most numerous in the south, i.e. in the *fylke* of Rogaland, with numbers rapidly decreasing as one moves north to Hordaland and beyond. The pieces also often are re-shaped or otherwise bear signs of quite complicated and presumably long histories (or ‘biographies’), and more often than not have been found in places indicative of their integration in the local hunter-fisher-gatherer culture. All of this can be taken to indicate that these items arrived in Western Norway along the coast from south-east (Bergsvik and Østmo 2011). The most difficult and challenging obstacles along the coast such as the Stad promontory probably had not yet been tackled, at least not regularly. The few Funnel Beaker Culture items which have been found north of Stad more likely arrived via Trøndelag, Middle Norway (cf. Østmo 1999, 2000; Valen 2012), having been carried across the mountains either from Southeast Norway or across the Scandinavian peninsula from Sweden. Similarly, items attributable to the MN B Corded Ware or Battle Axe culture seem to have reached Western Norway partly from the south, whether along the coasts or across the sea from Denmark, and partly from north-east via Trøndelag, to judge from the distribution in Western Norway of such finds as battle axes and thick-butted flint axes. The border between the two zones of influence reasonably enough seems to have been just at Stad, down to Sogn, as only a few of these items have been found in that region (Hinsch 1956 e.g. fig.85 p. 156 and fig. 86 p. 161; Berg 1988:258ff).

A change to this pattern occurs only at the beginning of the Late Neolithic c. - 2350 BC, when the change in distribution of relevant archaeological finds is all but dramatic. It concerns especially finds which may be attributed to influences from the South Scandinavian Late Neolithic Culture, which, as has been increasingly clear in recent years, appears to have been profoundly influenced by the Bell-Beaker and Beaker cultures of Western Europe (Kaelas 1952; J. A. Jensen 1973; Lomborg 1973, 1977; Skjølsvold 1977; Kühn 1979; Ebbesen 1980; Vandkilde 1990, 1996; Prescott and Walderhaug 1995; Østmo 2005, 2008, 2009, 2011a, 2011b; Prieto-Martinez 2008; Prescott 2012). A map of Norwegian finds of the characteristic early pressure-flaked, bifacial points with barb and tang corresponding to Kühn's type 5 (Kühn 1979:69; Mjærum's Type A, Mjærum 2012), shows this quite clearly. Indeed, the distribution pattern is sufficiently clear to represent an historical event of considerable singularity. The impression is enhanced by mapping finds of the earliest (type I) Nordic Late Neolithic flint daggers (Fig. 1.8; Apel 2001; Østmo 2005:61ff).

As suggested already by J.J.A. Worsaae (1869:7), such items must have come to Southwestern Norway directly from Jutland at the transition to the early Late Neolithic. The inevitable conclusion is that they must have arrived by sea. This applies also to the Bell Beaker pottery from the late middle Neolithic Slettabø settlement site in Rogaland, which according to the technical investigation of the ceramic matter by Rosenqvist and Rosenqvist (1977) may have been produced in Northern Germany. Moreover, this connection across the Skagerrak certainly was a novelty at the time, c. 2350 BC, because otherwise finds from the earlier Neolithic cultures, among which the Jutish Single Grave culture is only the latest, also surely would have been present in this region; as mentioned, they are absent but for a few items.

There can be no question that this movement originated south of the Skagerrak. What is particularly conspicuous here is the sudden appearance of Late Neolithic, South Scandinavian artefact types in Southwestern Norway. There is no comparable rise in the number of northern items such as West Norwegian types of axe, or slate knives, spearheads, and points in Jutland or elsewhere in Southern Scandinavia (cf. Sørensen 2014:29). On the basis of a very few finds of arguably northern origin in Southwestern Norway, Ørjan Engedal has argued that the driving force in this movement was the northern hunters and trappers, bringing attractive pelts and furs to southern customers (Engedal 2010), but the paucity of evidence for this calls for caution.

Presumably social and political forces lay behind this expansive thrust of South Scandinavian Late Neolithic culture. Technological matters, too, may have presented new possibilities to the shipwrights of the time. Breakthroughs of the Late Neolithic included not only the pressure-flake technique and the many types of precisely shaped flint implements which were made with it, but also the art of casting metal. Axes and ornaments of copper had been known in Scandinavia at the time of

Fig. 1.8: Finds of flint daggers of type I in Norway. After Apel 2001:fig 9:2 and Østmo 2005:fig 4.
Illustration: I. T. Bøckman, MCH.

the Funnel Beaker culture in the late 4th millennium BC (Klassen s.a.), but this knowledge seems to have disappeared along with the Funnel Beaker culture itself, to be followed by a period of almost one thousand years when little or no metal was in use. A reintroduction of metal appears to have occurred only with the Late Neolithic, possibly preceded by small amounts of copper used mostly for ornaments during Middle Neolithic B (Malmer 1962:281ff). Helle Vandkilde lists a total of 32 copper axes from Denmark with a likely dating to Late Neolithic I, in addition to a couple which may be from Middle Neolithic B. Judging from the maps published by Vandkilde, it is striking that the early Danish flat and low-flanged copper axes predominantly have been found in the landscapes surrounding the Belts and the Limfjorden, precisely where the need for seaworthy vessels would have been most pressing (Vandkilde 1996:178ff). Similar axes are quite rare in Norway, although not so rare as has previously been thought. S. 7825 from beneath a cairn at Bersagel at Høle in Sandnes (Fig. 1.9) has been identified as an A -axe by Jan Aakvik (Aakvik 2000:19, 91; cf. Vandkilde 1996:66–7). Another nine axes have been considered to belong to the type B 4, which may date back to LN II. Metal tools, in particular axes, may have led to significant improvements in the conditions for building larger vessels, for instance by facilitating preparation of planks.¹⁷ The composite plank boat may have been developed on the basis of a dugout tradition, perhaps only when metal tools came into use. Seán McGrail has suggested that conjoined boats in general came into use only when metal tools became available (McGrail 2001).

Fig. 1.9: Copper axe (Inventory no. S. 7825) from Bersagel at Høle in Sandnes, Rogaland. Photo: unknown, AM.

¹⁷ Other scholars have differed in their consideration. A. W. Brøgger assumed that stone axes could have been used for cleaving planks regardless of how cumbersome it may seem to us, and that bronze axes probably did not represent any significant advance (Brøgger & Shetelig 1950:49). S. Marstrander agreed with this view, to which he remarked that what matters is ‘whether available tools and technical knowledge allowed this kind of work to be performed on the scale needed to make the plank-built boats common to all so that they could form the basis for travel by sea’ (S. Marstrander 1963:151, present author’s translation). It is precisely at this point I think that the introduction of metal tools should be considered differently from Brøgger and Marstrander, especially when the archaeological record strongly indicates that flint axes quite rapidly went out of use (cf. Bakka 1976).

Andrew Sherratt suggests that advanced carpentry was established only in 1000 BC (Sherratt 1997:95), but this date is perhaps somewhat late.¹⁸

These boats were paddled, as they would continue to be throughout the Bronze Age, as clearly depicted on the rock carvings of that age that contain sufficient detail, such as on a picture at Kalnes, Sarpsborg, Østfold (Fig. 1.10). With bigger and better boats the risk involved in negotiating the open sea may have been reduced to an acceptable level for courageous mariners, who would be able to cross the Skagerrak in c. 12–15 hours with a speed equal to that which could be achieved by the still paddled 4th century BC Hjortspring boat – at least according to the modern reconstruction *Tilia Alsie* (Vinner 2003:117; Østmo 2005:72).

Fig. 1.10: Bronze Age rock carving with mariners holding paddle oars at Kalnes, Sarpsborg, Østfold. Photo: J. Kile-Vesik, Østfold fylkeskommune.

The South Scandinavian Late Neolithic initiated the Scandinavian Bronze Age, remarkable above all for being based wholly on imported metal (*pace* Melheim 2012). In general terms, the South Scandinavian Bronze Age, which encompassed Western

¹⁸ The great variety of meticulously prepared flint and stone axes, adzes, and chisels, of both thick-bladed and thin-bladed varieties, surely testifies to quite advanced carpentry in both the Early and Middle Neolithic of Southern Scandinavia, possibly indicating sophisticated methods for building dugout vessels as well.

Norway, is in turn a part of Indo-European Bronze Age culture (S. Marstrander 1957; Håland and Håland 1982; Kristiansen 1989, 2011; Prescott and Walderhaug 1995; Østmo 1996). In the main, this must have been a local, northern adaptation of impulses from abroad, in particular from the south and southeast. For the present purpose we will accept this premise, which is not to discount the possible role played by indigenous cultures if only as substrates – concerning all parts of culture, but not least rock art, and the development of shipbuilding (cf. Engedal 2010, which takes this as its main theme).

Some of the strongest evidence occurs in the form of thousands of rock carving pictures that bear witness to the significance of seafaring at the time. The dominance of ships in rock art emerges clearly from the numbers reported by Mats P. Malmer for all Scandinavian Bronze Age rock art sites, on which he found 3,877 ship pictures, 61 cart designs, 457 weapon designs, 10 clothing designs, 33 hand designs, 1,016 foot designs, 648 circle designs, 1,034 human designs, and 2,379 animal designs including those in the north probably belonging to the hunter-gatherer tradition (Malmer 1981:tables 1–25). While not all such images have been accounted for, and Malmer's numbers remain the minimum tally, John Coles estimates the total number of images of all sorts in Bohuslän and Østfold alone at 'something like 75,000' (Coles 2005:17), the relative frequencies are unlikely to have changed significantly as a result of new finds or re-interpretation of old ones during the years that have passed since Malmer published his counts. But ship images also occur on bronze artefacts such as weapons, razors, and neck-rings. The ship as a means of transportation, as an instrument for adventure and war, and as a powerful image for artists and poets must have been right at the centre of life and dreams of Bronze Age people in Scandinavia (cf. for instance Almgren 1927, 1934; Brøgger 1937; S. Marstrander 1963; Østmo 1997; Kaul 1998). The basic technological characteristics of Bronze Age vessels appear to have been established quite early, although the varied pictures may reflect variation in the way real boats were constructed, too. One may for example wonder whether there really existed boats corresponding to the size of the biggest known on rock carvings, with more than 120 crew lines (Torsbo in the Bohuslän parish of Kville, Sweden, Coles 2005:191), or whether such ships were purely mythical. Furthermore, it is questionable whether Bronze Age ships could have had a carrying capacity sufficient for settlement expeditions, with people, livestock, and equipment of all kinds. One reason for this doubt is the circumstance that the paddled Bronze Age vessels in Scandinavia must have had a uniformly low free-board. However, the Hjortspring replica *Tilia Alsie* needed 600 kg of ballast in order to be properly trimmed in addition to twenty oarsmen (Fig. 1.11; Vinner 2003:103ff), so such concern might not be warranted. The need to keep animals calm during a Skagerrak crossing would have been another matter.

In any case, it is certain that paddled, canoe-like larger and smaller vessels were in use throughout the Bronze Age, both for crossing the Skagerrak and elsewhere in

Fig. 1.11: Reconstruction model of the Hjortspring boat. Photo: L. Larsen, owner: National Museum of Denmark.

the north, regardless of the fact that both rowing and sailing long had been established elsewhere, for instance the Mediterranean. As early as in the Bronze Age there appears to have been little or no contact between shipwrights in Southern and Northern Europe (cf. Crumlin-Pedersen 2003). As mentioned above, the long-standing debate between the adherents of the theory that Bronze Age boats in Scandinavia were built of hides and those favouring the view that vessels in those times were built of planks as precursors of the clinker-built vessels of the Iron Age appears to have been settled in recent years in favour of the latter view. Consideration of the basic technical characteristics of the northern boatbuilding tradition (Crumlin-Pedersen 1970), as well as archaeological finds (Sylvester 2006a, 2006b), are consistent with Scandinavian Late Neolithic and Bronze Age boats having been built of planks. Another circumstance pointing in the same direction is the continuity of ship representations in rock art, spanning at least from the early Bronze Age or even the Late Neolithic to the Pre-Roman Iron Age, when it overlaps with the preserved Hjortspring boat, built of planks while clearly belonging to precisely the type of ship pictured on the rocks. It seems likely that this artistic continuity reflects a technical continuity of the shipwright's craft, concerning the way actual vessels were built during the time covered by the Bronze Age rock art tradition.

A reflex of this technological innovation has been preserved in modern English, Norwegian, and other Germanic languages. Among the many traces of old terms for vessels and seafaring found in modern language, let us consider the word Engl. 'ship' (Norw. *skip*). According to recent etymological studies, this word is ultimately

derived from an Indo-European verbal root reconstructed as **skey* – denoting ‘to cut, split, cleave’ – possibly a reference to the process of preparing planks in the prehistoric manner, by cleaving or splitting the logs (Østmo 2005:72; cf. Bjorvand and Lindeman 2007:973). The derivation must be very old and certainly not later than Proto-Germanic, as the verb itself does not seem to have been a part of North Germanic (Bjorvand and Lindeman 2007:970). For that matter, it might be as old as the very invention of plank-built boats.¹⁹

The distribution of finds of Late Neolithic imports from Southern Scandinavia provides a general idea about where this nascent southern interest in the North was focused (Fig. 1.8). The sea-route, starting from North Jutland, appears initially to have taken land east of Lista, whence it proceeded north-westward along the coast to Jæren (cf. S. Marstrander 1950; Ø.K. Johansen 1986:151ff; Kvalø 2007:30ff; Engedal 2010). Both of these regions have produced numerous finds of flint daggers and other contemporary items such as pressure-flaked points, especially those with barbs and tang particular to the Bell Beaker Culture and datable to the initial phase of this whole movement (cf. Lemerrier 2012; Mjærum 2012), as well as spoon-shaped scrapers and uniform, large, un-retouched flint flakes (Ebbesen 1980). Beyond the typological connection offered by such items, a group of hoard finds merits special attention, as examples of ritual practices of a kind well known from Late Neolithic finds in Southern Scandinavia. There is no space here for a complete survey of all such finds, but some striking examples serve to demonstrate the significance of this point. In an early work, H. Gjessing listed 17 such hoards from Rogaland (H. Gjessing 1916). Rolf Scheen in an unpublished work has added another fourteen, notwithstanding his preoccupation with finds that include flint daggers (Scheen 1979). Among the more noteworthy, a find from Brattebø, Høyland, Rogaland (Inventory no. S4071),²⁰ consists of four daggers of early types, one thick-butted flint axe, one scraper, and a total of 120 large flint flakes. It was found 10 inches underneath a big stone (de Lange 1922:91–2; Scheen 1979:19). The most remarkable of all such hoards in Norway has come to light at Hauske on the north-western side of Kormt, about three km northwest of Avaldsnes (Fig. 1.12). It consists of no less than 26 flint daggers of early types (Brøgger 1913:figs. 8 and 9), one ‘table knife’ (Brøgger 1913:fig.10) (Norw.: *matkniv*, the type Danske Oldsager (‘Danish Antiquities’) 528–9, Glob 1952; cf. Nielsen 1976, probably actually a particular form of dagger), three scrapers, a Late Neolithic flint axe, and more than 200 quite uniform, large flint flakes (Inventory no. S3513, Brøgger 1913:31–6; Scheen 1979:81; Ebbesen 1980). Interpretation of hoards is however no easy matter, and a subject much too large to be treated in full on the present occasion. In general, hoards are thought of as either profane – connected with trade, metal production, or war – or as

¹⁹ Another etymology is offered by Kroonen (2013:446), who suggests that the Germanic word is an early loan from Latin *scyphus* m. ‘drinking cup’ and Greek σκύφος m. ‘cup, can’. To my mind this seems semantically awkward and historically unlikely, even if it may be formally possible.

²⁰ Cf. Østmo 1998 for overview of the inventory numbers of Norwegian archaeological museums.

Fig. 1.12: The Hauske flint hoard (Inventory no. S. 3513). Photo: T. Tveit, AM.

sacred – as sacrifices or as equipment for the next world (Karsten 1994; Ø. K. Johansen 1993:92). Nevertheless, hoards represent material values, and implicitly a surplus; therefore the act of depositing such riches can be taken as an indication of a certain level of wealth, and interpreted as signs of wealth, power, and prestige, regardless of the spiritual or social context of the moment.

The archæological record thus suggests that Kormt, Avaldsnes, and in particular the Karmsundet strait were important already at this early date for manifestations of wealth and power.

In the *fylker* to the north of Rogaland, Hordaland and Sogn og Fjordane, similar finds are nowhere as common as in Rogaland. But a few Late Neolithic hoards have been found even in the landscapes far into the long fjords such as Sognefjorden and Nordfjord (Mandt 1991:432). Otherwise, it is only north of Stad, in the *fylke* of Møre og Romsdal, that a noticeable group of hoard finds is known. Scheen lists six hoards, the largest of which are one from Blindheim on Vigra island consisting of five early flint daggers (Inventory no. B5111, Gustafson 1896:18), and another, later one from Sandbakken in Sande, with four late flint daggers, two spoon-shaped scrapers, another scraper as well as one flake (Inventory no. B7177 a–i, Shetelig 1932:31–2; Scheen 1979:61). Gro Mandt includes many more finds, based on a somewhat broader definition of hoards, showing a remarkable concentration of Late Neolithic hoards along the Sunnmørsleia, especially in the islands (Mandt 1991:430ff).

Farther north, at Eikrem in Aukra, a deposit of 12 spoon-shaped scrapers in addition to several flint blades and flakes was found in a bog in 1933 standing on end in a decayed birch-bark container (Inventory no. T14772, Th. Petersen 1934:38–9; Henriksen and Myrvang 2003:21). More recently, a flint hoard including fourteen spoon-shaped scrapers came to light during an archæological excavation at Ytterland in Giske in 2015 (Rantala 2016).

From Trøndelag, Sverre Marstrander mentions 20 Late Neolithic sacrificial deposits (S. Marstrander 1956:24f), one noteworthy case concerning five spoon-shaped flint scrapers that were found standing on end in a bog at Grønning, Stadsbygd, Trøndelag (Inventory no. T13003, S. Marstrander 1954:66, fig. 37 on p. 67).

In Northern Norway, scattered finds of Late Neolithic flint daggers, sickles, strike-a-lights, and stone axes occur as far north as the Alta fjord in Finnmark *fylke*, but nowhere in hoards like those from Southern Norway. The finds may nevertheless have been connected with emerging agriculture (Valen 2012).

The hoards appear to suggest that this practice, originating in Southern Scandinavia, was transferred to the north and adapted to suit northern circumstances concerning the habit of sacrificing large numbers of unretouched flint flakes – a practice not unknown in Denmark, but less frequently occurring there (Ebbesen 1980).

The larger picture offered by the map of all Late Neolithic flint dagger finds supports and confirms the impression left by the hoards, of a rapid spread along the west Norwegian sea-route along from the beginning of the Late Neolithic. Not coincidentally, the finds are most numerous in the main farming districts of Lista and Jæren, where topographical and other natural conditions resemble those in Jylland more closely than anywhere else in Western Norway. Those farms that may have been cleared during the Late Stone Age appear to have been in use one way or another almost continually since, for example at Kvåle, Norheim, Time, Rogaland, beginning with one of the biggest (23 m long) two-aisled Late Neolithic houses yet discovered in Norway (Børsheim et al. 2001). Several additional sites have been discovered and excavated in recent years both in Rogaland and farther north, including in Trøndelag (e.g. at Tiller in Trondheim, Haug 2000).

Settlement here despite the navigational risks would imply that the main obstacles along the coast, including the Stad promontory and the Folla (or Folda) had been mastered by this time.

North of Jæren, the natural potential for farming was important in Kormt as well as in Sunnmøre and Trøndelag, and even in places in Northern Norway. Of significance is also another landscape feature. Both Kormt and Sunnmøre are among the places where sea traffic along the western coast most easily could be surveyed and even controlled, as ships had to sail through narrow straits or risk the unprotected, open sea outside of the sheltering islands.

The decisive factor for creating places of power (which in all cases appear as simply big, or extended farms) would seem to have been a combination of two particular conditions. First, farming resources at the level to feed the household of the local potentate and the military strength needed to exercise that power. Proximity to bountiful fishing grounds may have played a supplemental part. But the needs of a Bronze or Iron Age chieftain or court extended beyond the basic feeding of the chieftain's retinue; the latter, as would any prominent guests, would also expect to be entertained by feasts offering food and beer or mead in ample quantities (cf.

Rødsrud 2010 with references). As late as the Viking Age, kings were compelled to divide their time among different seats, as no single location had the resources to entertain the royal household continuously (Steen 1942:65ff, 386ff).

The second decisive factor would have been control of traffic along the coast. As at the Strait of Gibraltar and the sound separating Sjælland and Skåne, control is established and maintained most easily in places where a sea route is forced through a narrow passage: Karmsundet, in particular its narrowest part Salhusstraumen, and Sunnmørsleia, the inside passage along the Sunnmøre coast. In short, agricultural and communication needs were essential to settlement.²¹

In the Late Neolithic and the early Bronze Age, grave chambers built of stone slabs first appeared along the western Norwegian coast. The few graves datable to the Late Neolithic, commonly overlooked due to poor preservation and a lack of scholarship, can be regarded as expressions or aspirations of monumentality, a testament to an emerging aristocracy. Beginning in Lista, there is a grave at Brastad and another at Lunde, both Farsund. In Jæren, graves are known at Austrått, Sandnes. A survey of these and several other, less certain examples is given in Østmo (2011b; cf. Solberg 2006). Similar structures from the earliest Bronze Age are known farther north, such as at Yndestad in Askvoll and Røe in Halså (Østmo 2011b). A few graves built of decorated slabs are known from Jæren to Trøndelag, most notably Mjeltehaugen at Giske, but most of them have long been destroyed and are not well known (Linge 2007; Sand-Eriksen 2015).

Dated to the pronounced Early Bronze Age in southwestern Norway are several quite substantial barrows situated in prominent places along the coast, foremost in Lista and Jæren and adjoining districts immediately to the north. The most conspicuous of these certainly must be the barrows at Blodheia in Kormt, close to Avaldsnes. Some of these barrows contained richly equipped burials comparable with those in Jylland south of the Skagerrak. This group of burials are the strongest evidence that a class of aristocratic aspirations and achievements had risen to power in this region (cf. Myhre 2004; Skre 2018a).

Centres in the Bronze Age may be easier to identify on a regional level than on a strictly local one. The Bronze Age cultural landscape characteristically was conceived on a large scale, with grave monuments occupying hilltops and promontories, rock carvings keeping close to the outfields, confined as they were by the availability of suitable rock faces, while actual dwellings were located elsewhere, dependent on suitable ground for houses and various logistical considerations. In

²¹ For Kormt in particular, it may be noted that the presence of copper ores, mined in recent times, has been invoked to support a theory of copper mining in the Bronze Age (Melheim 2012). However, no definite trace of such mining has been found, and Melheim's theory still requires further elaboration and empirical evidence before it can be considered sustainable. The remarkable and monumental Bronze Age at Kormt should be explained with reference to other factors; the Karmsundet itself represents an obvious point of reference.

Jæren, the actual settlements have been thought to have been placed on low hills in the low-relief landscape (B. Myhre 1981; L. N. Myhre 2004), actually not too far removed from the ‘primeval farm’ (Norw. *‘urgård’*) theory advocated in the 19th century by Rudolf Keyser and P. A. Munch, and revived in the late 20th by Trygve Vik (1978).

Some of the oldest place names preserved in Norway may date back as far as the Late Neolithic. This concerns especially Lista and Jæren; in the latter landscape a group of names with uncertain etymologies, originally referring to centrally placed and notable farms that often have been promoted to parish names, have long attracted scholarly attention. Many of these places have indeed been distinguished by notable Late Neolithic and Bronze Age hoard and grave finds (Bakka and Møllerop 1963; B. Myhre 1981). The possibility that some of the names may even have pre-Indo-European roots has been discussed, but recent studies tend to favour origins within Germanic and Proto-Indo-European. *Sola* probably is the most well-known of these names (Bjorvand 2005; Særheim 2007, 2015:203; Brink 2018).

The northern limit of Scandinavian Bronze Age culture appears to have lain just south of the Arctic Circle in Helgeland. Even in this northern region the whole gamut of Bronze Age finds is represented, including rock carvings, settlements with houses, graves in stone cists in cairns, sacrificial deposits, and not least the bronzes themselves. In some places, coastal, hill-top cairns so characteristic of the Bronze Age in Southern Norway and Sweden are a feature of the cultural landscape, such as at Skjeggesnes in Alstahaug. Together with the fine Bronze Age rock carvings at Tro and Flatøy in Alstahaug (Sognnes 1985:142–3), this suite of archaeological items begins with Late Neolithic finds such as a grave containing a flint dagger of an early type at Viksdalen in Vefsn (Inventory no. T14913, Binns 1985:151; Kaul and Rønne 2008). Farther north still there are also scattered, similar finds, but not the totality found at Helgeland and in the south.

All of this shows quite clearly that Bronze Age culture spread rapidly along the coast of Norway, beginning in the Late Neolithic. The sea-route therefore was an established fact at this time, certainly corresponding to the first phase and possibly even to the second mentioned above. Some strong or central places or regions along the route also had been established, including Lista, Jæren, and Kormt. One condition for this was the development of shipbuilding to allow construction of vessels capable of at least reasonably safe long- or medium-distance voyages away from the relative safety of the coasts.

1.5.3 Early Iron Age

The transition from the Bronze Age to the early Iron Age and the Pre-Roman Iron Age has long been an enigmatic part of Northern prehistory. In comparison with the glorious Bronze Age (considerably more glorious in Southern Scandinavia than

in most of Norway) and with the remarkable early Roman Period, the transition period is marked by a perceived paucity of grave finds and their minimal content of valuables, as well as a real or imagined lack of other archæological indicators. In Norwegian archæology, this idea has dominated the writings of almost all scholars with an interest in the period, from Ingvald Undset (1881), via A. W. Brøgger (1940), Haakon Shetelig (Schetelig (*sic*) 1912, 1914), and Anathon Bjørn (1927), to Bjørn Hougen (1947), Erik Hinsch (1953) and Anders Hagen (1951). Only during the last 20 years or so have scholars begun to question this axiom in earnest, among them Lars Pilø (1989) and Vivian Wangen (2009). Wangen in particular presents a detailed and instructive overview of Norwegian research about the Pre-Roman Iron Age. Early ideas about the ‘Celtic Hansa’ impeding connections between northern and Southern Europe (Lindqvist 1920), or climate-induced disaster (Sernander 1910; Hasund 1926) should be treated with caution or abandoned altogether; rather, the apparent meagreness of the grave finds is increasingly considered to have more to do with religious ideas and the burial customs of the age, whereas more and more finds of Pre-Roman Iron Age farm sites, especially from the coastal regions all the way north to Trøndelag, testify to the existence of seemingly thriving communities.

And yet, the Pre-Roman Iron Age must have been a time of profound changes. The importance of the beginning of local iron production cannot be overstated, especially as the old international networks through which copper and tin had been distributed across Europe declined and possibly broke down altogether (Kristiansen and Larsson 2005). That a considerable change to a colder and wetter climate occurred is indisputable, although not quite as severe as was once thought. A reduction in population in certain areas likewise cannot be ignored – if people were living in great numbers in the interior of Southern Norway at the time, how is it that they could have left virtually no trace? If there were powerful and wealthy chieftains or kings, where are the signs of their power, and what happened to the wealth?

Indeed, attempts at applying C. J. Becker’s tripartite South Scandinavian PRIA chronology (Becker 1961) to Norway will result in the second period passing all but unrepresented (Pilø 1989; Nybruget and Martens 1997). This may have to do with regional differences between Jylland and southern Norway concerning the archæological material, but the question remains relevant as to whether this may actually reflect a demographic crisis.

Adding to the possible effects of a change of climate, disasters such as violent volcanic eruptions and plagues certainly struck during the Pre-Roman Iron Age as they have done at so many other times. During the Peloponnesian War in Greece, plague struck repeatedly during the years 430–427 BC to mention just one example, vividly described by Thucydides who was actually afflicted by it himself.²² As is

22 Thucydides: *The Peloponnesian War*, book II:47–54.

well known, such disasters may strike widely (thus also Olsen 1939:42). They may have affected Scandinavia, including Norway, as well.

From the last years of the Pre-Roman Iron Age, several grave finds with a more varied and precious content indicate the rise of an elite, including in Western Norway (Solberg 2000:41–2; Martens 2002:257, 2008; Skre 2018a:753).

Precisely during this period of change and possible hardship, shipbuilding underwent a crucial development. The Hjortspring boat from c. 350 BC still was a large, paddled canoe (Crumlin-Pedersen and Trakadas 2003); a late expression of the Bronze Age boatbuilding tradition, the outline of the hull corresponding quite closely with rock carving boat pictures of a type usually dated to the Pre-Roman Iron Age (S. Marstrander 1963:154ff; Rieck and Crumlin-Pedersen 1988:55ff; Kaul 2003:192ff; Sognnes 2006; Christensen 1966). Paddling was apparently still practised by Germanic tribes at the time of Tacitus, who describes the ships of the Suiones in his ethnographical work *Germania* (AD 98):

The form of their vessels is peculiar in this respect, that a prow at either extremity acts as a forepart, always ready for running into shore. They are not worked by sails, nor have they a row of oars attached to their sides; but, as on some rivers, the apparatus of rowing is unfixed, and shifted from side to side as circumstances require. (Hadas 2003)²³

The Suiones are said to dwell on an island in the ocean itself, and are usually identified with the ‘Swedes’. This may be an apt description of a paddled vessel of Scandinavian type: With a ‘prow’ at both ends, no sail, and loose oars (S. Marstrander 1963:92; Bruun and Lund 1974, 59; Rieck and Crumlin-Pedersen 1988:78; Jensen 2003:585). But on a rock carving at Dalbo in Bærum, Akershus, immediately west of Oslo, we find what may be the earliest Scandinavian depiction of a ship that is not paddled, but clearly rowed with long oars (Fig. 1.13, cf. Østmo 1992, 2003, 2008, 2014). The image (Dalbo II/8) seems to be the only known Scandinavian rock carving picture of a rowing vessel, other than a few instances described from Western Sweden in early sources at Valla, Tossene parish, Bohuslän (Tham 1794:tab. XIV no. 1), and at Vese in Bro parish, Bohuslän (Holmberg 1848:124). None of these has been confirmed by more recent studies. More importantly, to judge from the details such as they are, the ship pictured at Dalbo II/8 still had a hull of the type of the Hjortspring boat. An assessment of the various chronological implications of this picture supports a likely Pre-Roman Iron Age date, or around the 1st century BC (Østmo 1992).

The advent of rowing in Northern Europe may have been a local invention, or it may have been introduced through the (re-)emerging contacts between Southern and

²³ ‘forma navium eo differt quod utrimque prora paratam semper adpulsui frontem agit. nec velis ministrantur nec remos in ordinem lateribus adiungunt: soluntum, ut in quibusdam fluminum, et mutabile, et res poscit, hinc vel illinc remigium’ (Tacitus *Germania* Book 1:44, from Bruun & Lund 1974:74).

Fig. 1.13: Early Iron Age rock carving of boat with rowing oars at Dalbo, Bærum, Akershus. Photo by the author.

Northern Europe concerning i.a. maritime matters. The earliest historically attested information about such contacts dates to the early Pre-Roman Iron Age; this includes the fragmentary account of Pytheas's journey from Massilia (present-day Marseilles) to 'Thule' in Northern Europe, arguably the coast of Norway (Grane 2003:129; Roseman 1994). However, rowing must have been a real novelty in Scandinavia, regardless of whether it was a true invention or adapted from southern practice.

It is difficult to imagine the challenge of directing the crew for the very first time to take their positions in the boat with their backs forward for the very first time, let alone the spectacle of the first attempts at actually rowing. With practice came progress and eventually success. Several developments followed in the wake of this revolution: with the long rowing oars²⁴ the freeboard could be raised, in turn paving the way for building bigger vessels, eventually at least of the size of the 23 m long Nydam ship with a crew of 45 men including 36 rowers, ships that could negotiate not only the Skagerrak between Jylland and Southwestern Norway, but potentially even the North Sea between Scandinavia and Britain. The Nydam ship (Nydam B) is dated by dendrochronology to c. AD 320 (Bonde 1999:31). Several authors have noted that archæological finds, in particular jewellery and other costume accessories, indicate fairly regular contacts between

²⁴ The oars found with the Nydam ship are from 2.2 to 3.4 m long (Gebühr 2001:35).

Britain and Scandinavia, including Norway, from the 5th century onwards (for instance Slomann 1956; Bakka 1959, 1971; Hines 1993). It was then that Britain experienced the invasion of Germanic tribes from the Continent, when Angles, Saxons, and Jutes crossed the English Channel and the North Sea, presumably in vessels similar to the Nydam ships. This type of rowed ship must have served as a model for the 'Bro type' among the ship images on the earliest of the Iron Age pictorial stones known in considerable numbers from Gotland and in smaller numbers also from elsewhere in Sweden (Lindqvist 1941, 1942) as well as a recently discovered rock picture east of Steinsfjorden in Hole, southeastern Norway (personal communication from Magnus R. Tangen).

At the same time the helmsman must have assumed a more significant *rôle* since the crew now faced astern had to rely on him for navigation, although throughout most of the early Iron Age the helmsman appears to have shared these responsibilities with another crew member with a steering oar at the bow of the ship, as depicted on the Dalbo II/8 rock carving and on the Gotland pictorial stones (Østmo 1992, 2003). In the mediæval sagas, two classes of officer are in fact mentioned, namely the *stýrimaðr* or *stýrir* (the helmsman) and the *leiðsögumaðr*, whose task it was to plot the course (cf. Ingstad 1985:31).

Several inherited language terms are related to the development of larger ships. Although there is no trace in language of a distinction between paddling and rowing – the term 'to paddle' is of uncertain origin (de Caprona 2013:769) – the received word for rowing has ancient roots, ultimately reconstructible as Proto-Indo-European **H₁roH₁* (Bjorvand and Lindeman 2007:889). This root is widely represented in several Indo-European languages with the same or a closely related meaning as in modern English – from Sanskrit to Greek, Latin, Irish, Lithuanian, and others, which strongly suggests that it must be of an ancient, common origin at least regarding non-Anatolian Indo-European languages (Bjorvand and Lindeman 2000:730ff) – certainly pre-dating the change from paddling to rowing in Scandinavia. It has not been possible to discern any particular, older meanings of the word, which has apparently always denoted propelling a boat with oars. Several scholars have shown that the cultural process behind the spread of Neolithic (or rather Eneolithic) cultures in Norway in the Middle and Late Neolithic, and particularly in Western Norway, has been connected precisely to the dissemination of Indo-European language and culture (so Håland and Håland 1982; Prescott and Walderhaug 1995; Østmo 1996; Kristiansen 2011).

Interesting too is the word for 'keel', derived from the Germanic u-stem **kelu-* originally meaning 'gorge', 'throat' (Bjorvand and Lindeman 2007:573–4; de Caprona 2013:763; cf. Lindberg 1941). This connexion becomes clear in the context of the vessel itself, from which perspective the keel in early, clinker-built boats resembles the 'throat' of the boat. The old name of the foremost steering oar probably was a cognate of Middle English *lōf* 'large oar' (Bjorvand and Lindeman 2007:681),

derived from its perceived similarity with a hand (Norw. *love*; cf. de Caprona 2013:766).²⁵

While the development of the bigger, rowed ships of the Early Iron Age required technological preconditions – the dissemination of iron production and its use for tools as well as rivets – the entire process was also integral to social and economic developments: the concentration of power in the hands of chieftains astrade, war, and piracy facilitated the distribution of luxury goods. Rowed ships were not merely a passive reflection of technological change, but rather an innovative solution to achieve specific goals.

Iron production and shipbuilding contributed broadly to innovation in other spheres as the Pre-Roman Iron Age gave way to the Roman Age AD 1–400 and then to the Migration period 400–550/600 AD. In the latter part of this period (c. AD 300–600), many different categories of finds and archaeological remains reflect various aspects of the culture (cf. Skre 2018a, 2018b). Farm sites in Lista and Jæren as well as in Trøndelag and Northern Norway include farm houses of considerable size; large houses with a length of more than 30 m proliferate toward the final years of the Pre-Roman Iron Age. The so-called courtyard sites have been argued by some to have had religious functions (Grimm and Pesch 2010). Grimm 2006b envisages a broader combination of central functions – cultic, but also military and legislative assemblies. More specifically, the sites may have served as barracks or rallying points for armies of the kind suggested by the Illerup sacrificial deposit as well as descriptions by classical authors of the war bands of the Germanic *Allmennii* (Ammianus Marcellinus, 4th century AD) (Grimm 2006b; Grimm and Stylegar 2004). The courtyard sites are best known from Jæren, but also from Northern Norway, and several more discoveries have

²⁵ For dugouts in particular there is another ancient word, preserved in Latin *navis* and in modern Norwegian as *nu* (meaning ‘trough’), and in *naust*, ‘boathouse’, literally ‘boat-stand’ (Bjorvand & Lindeman 2000:644–5; de Caprona 2013:768). In Norse times the word as a designation for a ship existed only in rare, poetic use. A rare preserved example is found in stanza 24 in Thjodolf of Hvini’s poem *Ynglingatal*:

*Ok bitsótt
í brandnói
hliðar þangs
á hilmí rann,
þás timbrfastr
toptar nokkvi
flotna fullr,
of fylki brann.*

This roughly translates as ‘And the biting disease of the grass (i.e. the fire) overcame the King in the hearth’s ship (i.e. the house), when the timber-strong boat (i.e. the house) burnt, filled with men, about the King’. ‘*brandnór*’ m, is here used as a *kenning* or metaphor for the house (Jónsson 1966:59). The word *nór* is also listed as a possible designation for a ship in Early Mediaeval Icelandic *þulur* or lists of poetic words (Jónsson 1973:668).

been made in recent years, some of them in the intermediary districts of Western Norway and Trøndelag (Wik 1983, 1985; Farbregd 1986; Binns 1988; Stenvik 1988; Berglund 1994). Boathouses large enough to have held ships of the size of those from Nydam (B. Myhre 1985, 1987a, 1997; Grimm 2001) have been dated to the Roman and Migration periods (Hansen 2006:24, who focuses on Hafsfjord in particular with several boathouses perhaps connected with the ancient central farm Sola nearby; see also Grimm 2006a). Hill forts belong to this picture as well, although they may have possessed less strategic value than has sometimes been supposed (such as by Munch 1965; B. Myhre 1987b; Ystgaard 2014; cf. Skaar 1952; Østmo 1978; Skre 1998). Rich archæological data has come from graves – whether solitary or in cemeteries – as well as hoards, especially the gold-rich ones from the 6th century; the latter are mostly, although not exclusively, from Southwestern Norway and Rogaland in particular (Bøe 1926; Axboe 1999).

A comprehensive survey of Iron Age settlements along the Norwegian coast certainly is beyond the scope of this article. Nonetheless, the presence of particularly large farms that may have been the seats of prominent leaders certainly is of interest. For such seats of more or less durable power, logistics would have been paramount (Iversen 2007; Ringstad 1986; B. Myhre 1997; Reiersen 2017). Bjørn Ringstad on the basis of the presence of large barrows ($>400\text{ m}^3$), imported goods, and precious metals has identified 26 economic and political centres of power in Vestlandet (the *fylker* Hordaland, Sogn og Fjordane and Møre og Romsdal) in the Late Roman and Migration periods, from Avaldsnes in the south to Bremsnes in the north (Ringstad 1992:118–27). The majority are situated along the coast, most prominently at Avaldsnes and in the neighbouring Sunnhordland and along the Møre coast north of Stad. Another group consists of centres deep in the Western Norwegian fjord country, particularly in Sogn and Nordfjord. In general, it seems that the availability of sufficient agricultural resources was a decisive factor for where such centres became established, in addition to logistical considerations – contact with the sea and above all with the main sea-routes (cf. Reiersen 2017).

For Southwestern Norway in particular, an even more comprehensive effort along similar lines has been made by Bjørn Myhre (1987b). By mapping finds of imported bronze vessels, glass, and gold against hill forts and present *fylke* borders, Myhre identified nine likely chiefdoms and centres of power along the Norwegian coast from Grenland in Telemark to Nordfjord (B. Myhre 1987b:esp. p. 181; cf. also B. Myhre 2000). Myhre based his identification on the presence in grave finds of bronze vessels, glassware, or gold items, on the quantity of gold found in general, on the presence and distribution of hill forts and on natural features such as the coast, rivers, mountain areas, and natural borders. The results then were compared with historical records of the names of tribes to produce a compelling theory about political conditions in this region in the early Iron Age.

Torunn Herje makes the case that the settlements of the early Iron Age were oriented more towards the sea than those of the late Iron Age (Herje 1986). In this view,

power over the sea and the sailing routes was of greater importance early on, whereas control of territory gained importance only in the late Iron Age. Avaldsnes is the prime example of this, with its location just by the narrow strait of Karmsundet, taken together with the spectacular Flaghaugen grave (Grave 2) as well as the Late Iron Age graves, the historical legacy of Avaldsnes as told in the sagas (Schetelig 1912; Opedal 1998, 2010).

Trond Løken (2001), however, has argued against Avaldsnes as a centre of power in the Migration period, at least relative to the comparatively resource-rich Jæren area. Of the two sites, only Jæren could possibly have equipped and manned the army that was defeated at Illerup in Jylland (Løken and Myhre 2008), which has been assumed to have come from the Scandinavian Peninsula, quite possibly Western Norway (Ilkjær 1993:374ff, 2000:142ff; summarised by Grimm 2008 who mentions other interpretations also). Nevertheless, the finds from Flaghaugen, and the whole situation at Avaldsnes demonstrate the prominence it was afforded; if anything, this serves to underline the importance of control of the sea-route and the Karmsundet passage in particular, clearly the foremost asset of Avaldsnes.

Another important place along the coast is the *Sunnmørsleia*, the inside passage past Ålesund (Fig. 1.14). The route is protected from the Norwegian Sea by the islands of Hareidlandet, Godøy, Giske, Valderøy, Vigra, Lepsøya, Haramsøy, and Fjørtoft. On most or all of these comparatively prominent and old farms are

Fig. 1.14: The Sunnmøre inside passage (Sunnmørsleia) from Ålesund. The island to the left is Godøya. Photo by the author.

found to this day. Hundreds of ancient grave monuments testify to the prehistoric importance of these islands; most islands feature one large grave monument standing out from the rest: Oshaugen on Hareidlandet, Ellefsrøysa on Godøy, Mjeltehaugen on Giske, Valderhaugen on Valderøy, Stølshaugen and Blimshaugen on Vigra, and Haramshaugen on Haram. Most of these exist still (Mjeltehaugen (Linge 2007; Sand-Eriksen 2015), Blimshaugen, Valderhaugen, Haramshaugen), while several have been removed. Rich archaeological finds have come to light from several of these large monuments (Solberg 1984). Even so, their date has been a matter of some controversy. Johs. Bøe published an influential paper arguing that most of these monuments should be dated to the Bronze Age (Bøe 1942). Mjeltehaugen in particular has even been considered as possibly Late Neolithic (de Lange 1912:28; S. Marstrander 1963:325; Mandt 1983; Sand-Eriksen 2015; cf. Østmo 2005:69–70). Bøe's dates have been questioned by Anders Hagen (1973), from the vantage point of several more and quite spectacular finds having come to light in the meantime. During late Roman Age and the Migration Period, an aristocratic culture flourished, to judge from the grave finds containing imported weapons, cauldrons, glass, and not least gold ornaments. The region continued to be a centre of power during the Late Iron Age, fostering the Møre Earls who became a political power of significance during the Viking Age and later.²⁶

Building on earlier works by Haakon Shetelig (e.g. Shetelig 1920), the historian Sverre Steen summarised the evidence for an Early Iron Age realm in Western Norway, mentioning the supposed immigrations of *horder* and *ryger* (to *Hordaland* and *Ryfylke*, respectively), certain place-names carrying traces of ancient cultic procedures (*Herøy*, *Nærøy*), the Migration Period connections between this region and Western Europe so evident in archaeology, and the reference in ancient sources to peoples settled in this region, but not elsewhere in Norway. The 6th century Roman historian Jordanes mentions several peoples in 'Scandza' (presumably Scandinavia), including *Grannii*, *Augandzi*, *Taetel*, *Rugi*, *Arochi*, and *Ranii*. Several of these have been identified with Grens, Håløygs(?), Teles(?), Ryges, Hordes (Harudes), and Ranes, most of which correspond to Southern Norwegian locales (Grenland, Hålogaland, Telemark, Ryfylke, Hordaland, and Ranrike or Romsdal) (cf. Lund 1993:285). 'This coast is it that is called Norðrvegr; this coast is it that the archaeologists claim was a coastal realm with good connections with Europe' (Steen 1942:43–3, present author's translation). A map of the 112 so-called *vestlandskjeler* or 'Vestland cauldrons' found in Norway may give some indication of which regions maintained southern connections during the late Roman and Migration periods (Hauken 1998:12). Beginning in the south, the regions are Lista and the valleys immediately north, Jæren, the south-western, outer part of

²⁶ It is worth mentioning, perhaps, that Queen Elizabeth II on her first visit to Norway in 1955 made a point of including Sunnmøre in her itinerary, to see the home of one of the earliest known ancestors of the British Royal lineage, the Viking Rollo (Norwegian: *Gange-Rolv*), who (probably) became the first Duke of Normandy.

Hardanger, Nordhordland, the inner parts of Sogn and Nordfjord, Sunnmøre and Romsdal, and Inntrøndelag extending into Northern Sweden, by and large the districts with the most favourable conditions for agriculture and with settlement centres as outlined above.

It seems certain that there were well-developed aristocratic and warlike societies on the western coast of Norway in the first half of the first millennium AD. In the Migration Period, they must have been well established along the Norwegian coast as elsewhere in Southern and Middle Scandinavia, and even far north of the Arctic Circle. It seems equally certain that the logistical possibilities and challenges of the coastal sea-route were crucial to this historical situation. The Norwegian coastal sea-route had long been renowned by this point and most likely would have received a name corresponding to the second of the three phases outlined above. The sources available do not, however, allow a certain conclusion that the name had yet been transferred to the country.

1.5.4 Late Iron Age

The end of the Migration Period saw another crisis, which recent scholarship has connected with a natural disaster in or shortly before AD 536 (Axboe 1999; Gunn 2000; Larsen et al. 2008; Gräslund 2008, 2009; Løwenborg 2012; Arrhenius 2013). According to Larsen (et al. 2008):

New and well-dated evidence of sulphate deposits in Greenland and Antarctic ice cores indicate a substantial and extensive atmospheric acidic dust veil at AD 533–534 $\pm$ 2 years. This was likely produced by a large explosive, near equatorial volcanic eruption, possibly of the Ilopango volcano in El Salvador (Pratt 2012), causing widespread dimming and contributing to the abrupt cooling across much of the Northern Hemisphere known from historical records and tree-ring data to have occurred in AD 536. Tree-ring data suggest that this was the most severe and protracted short-term cold episode across the Northern Hemisphere in the last two millennia, even surpassing the severity of the cold period following the Tambora eruption in 1815.

Possible historical consequences in Scandinavia of this event have been considered by Bo Gräslund, who plausibly suggests that it was the historical background to the Norse tale of the *Fimbulvinter* known primarily from the *Vafþrúðnismál* poem (Gräslund 2008, 2009). Morten Axboe suggests that the numerous hoards of gold datable to the mid 6th century in Scandinavia may be attributed to the fear induced by the 536 event and its consequences for climate and harvest (Axboe 1999). Large tracts of Norway were all but abandoned, as still attested by scores of deserted farms above all in Southwestern Norway (J. Petersen 1933–6; B. Myhre 1972).

The remainder of the 6th and the 7th centuries involved a virtual reinvention of culture. Space had been created for renewal in settlement, weaponry, visual art with Salin Style II replacing Style I, language with Old Norse (Norw. *norront*)

replacing Proto-Nordic (Norw. *urnordisk*), and with the younger runes replacing the older (see Solberg 2000 for overview). For a while, the scene was open to powerful entrepreneurs who eventually were buried in some of the biggest and most magnificent grave mounds known in Northern Europe, for instance the *Uppsala högar* in Sweden (the Uppsala barrows, Lindqvist 1936; for more recent views on their dates, see Ljungkvist 2005), *Raknehaugen* in Romerike in Southeastern Norway (Skre 1997), or several places in Western Norway; the large barrow *Storhaug* at Avaldsnes should be numbered among these, if the timeline is extended to the early eighth century (Opedal 1998:64–5, 2010). Eventually, many of the places that had been prominent in the Early Iron Age rose to renewed significance, according to Ringstad (1987, 1992). Avaldsnes and Sunnhordland are still on the map, as are Sogn and Nordfjord and also Sunnmøre, the latter however perhaps slightly less so (Fig. 1.15; Ringstad 1992:125).

Throughout the Merovingian Age and most of the Viking Age, the rowing ship remained a key instrument for the exercise of power in Scandinavia (B. Myhre 1994). One prominent example is the ship remains found in *Storhaug* (Christensen 1998). But in the late Iron Age the sail finally appeared on Scandinavian ships. In a sense, this development arrived astonishingly late, as sailing ships of southern origin certainly had been known to Scandinavians as early as the 4th century BC, through visits by Mediterranean voyagers such as Pytheas. The oldest preserved sailing vessel in Scandinavia is the early 9th century AD Oseberg ship (Brøgger et al. 1917–2006), but it is reasonable to assume that sailing ships were in use somewhat earlier. A passage in the runic inscription about a shipwreck on the late 7th century Eggja runic stone from Sogn, Western Norway, in some interpretations would imply that the wrecked ship had a mast and a sail (Grønvik's transcription reads: *māðe þaim kaipa i bormōþa hūni*, i. e. modern Norw.: 'Keipene maddes (ble avslitt) for dem i den svært trøtte mastetoppen',²⁷ (Grønvik 1985:162–3; cf. Grønvik 2000:8–9), which seems to presuppose technical arrangements for hoisting the sail (see detailed discussion in Grønvik 1985: 50–1)). Some of the Iron Age pictorial stones preserved in Gotland bear pictures of ships with what looks like small sails, different from and perhaps earlier than the more elaborate pictures present on the Viking Age stones on the same Baltic island. These include the stones from Larsarve I in Eskelhem, Fole Church, Stenstu in Hablingbo, Petsarve II in Ardre, Broa I and X in Halla, Rikvide in När, and Källstäde in Lärbro, which mostly belong to Sune Lindqvist's '*Zwergsteine*' (Lindqvist 1941:35ff; cf. also Nylén and Lamm 1978:42 and 168ff). Lindqvist dates the stones with typological arguments concerning both the shape of the stones and in particular the animal ornaments in Salin Style II and interlaced patterns which can be found on some of these stones, with a resultant date to the Merovingian Age, the 6th and 7th centuries (Lindqvist 1941:115ff). The ship (and in particular sail) images in question are those of

²⁷ A rough translation to English might be 'the forked branches became worn for them in the very tired mast-top'.

Fig. 1.15: Large grave mounds in Western Norway. After Ringstad 1992:fig 1. Illustration: I. T. Bøckman, MCH.

Björn Varenus's Group II which he dates to the 7th to 9th centuries (Varenus 1992). Nevertheless, it should be noted that recent critical assessment of the evidence has found no archæological proof of sails on Scandinavian ships before the 8th century (Fig. 1.16; Westerdahl 1995b; Imer 2004; Kastholm 2009).

Fig. 1.16: The Gokstad Viking Age ship. Photo: unknown, MCH.

There is on the whole little doubt that the introduction of the sail in Scandinavia occurred in the late Iron Age. Linguistic evidence suggests that it could not have occurred at the very end of that period: the etymology of the word Eng. 'sail' (verb and noun), Norw. *seil/segl* (noun, n.), particularly the derivatives Norse *sigla* 'to sail' and *sigla* f. 'mast', both show the early Germanic i-umlaut (Bjorvand and Lindeman 2007:933) and therefore cannot be later than the second half of the 6th century (Grønvik 1998:54ff). Kroonen (2013:430–431) mentions additional possibilities, preferring a connection with Latin *sagum* n. 'coarse woollen cloak', 'may be a Gaulish loanword', although this does not necessarily contradict the dating based on the derivatives mentioned above. In any case, the Northerners certainly knew of sails, masts, and sailing and so may well have had words for it long before they began to practice it themselves. In any case, adaption of sails eventually resulted in the fully developed Viking Age ship known from Oseberg, Tune, Gokstad, Skuldelev, and elsewhere. From this point, the ships could be built bigger, and constructed to

strengthen the hull and the keel in order to accommodate the mast and sail and generally made worthy of sailing on the high seas.

Thus, with a sail and a sturdy keel the Viking Age ship was a true ocean-going vessel, which during the 9th and 10th centuries would take Norse settlers to Orkney, Shetland, and the Faeroes, as well as to Iceland, Greenland, and America, and provide an important condition for the establishment of the Scandinavian kingdoms during the late Viking Age. This concerned Norway perhaps even more than Denmark and Sweden, and the western coast continued to be an important battleground for the Norwegian Crown throughout the Viking age, but the sights were now set much wider and included most of the North Atlantic as well as the Baltic, Kattegat, the Skagerrak, the North Sea, and the English Channel and beyond.

The early development of Northern craft took place in the coastal environment of Scandinavia, and both the vessels and the method of sailing them would henceforth retain their original, basically coastal character. This includes the approach to navigation, even when extending across the Atlantic to Greenland and America, as evident in a well-known passage in the *Hauksbók* manuscript of the Icelandic *Landnámabók* regarding the Viking Age sailing route from Norway to Greenland:

From Hernar [modern Hennøy, 160 km or 86 nautical miles north of Bergen] in Norway one must sail a direct course west to Hvarf [modern Cape Farewell, Greenlandic: Ummannarsuaq] in Greenland, in which case one sails north of Shetland so that one sights land in clear weather only, then south of the Faroes so that the sea looks half-way up the mountainsides, then south of Iceland so that one gets sight of birds and whales from there.²⁸

(Jones 1968:162; another, very similar translation may be found in Ingstad 1985:34). This is succinctly summed up by Uwe Schnall: 'Die Hochseeschiffahrt der Wikinger ist eine Weiterentwicklung ihrer Küstenschiffahrt und nicht grundsätzlich von dieser unterschieden' (Schnall 1975:181; see also Steen 1942:191–2; Christensen 1993).

The history of Avaldsnes, Utstein, and other centres of power at this time is told elsewhere in this and the previous volumes (cf. Skre 2012). But as the sources – written as well as archæological – begin to flow somewhat more abundantly, it becomes clear that the historical conditions behind the establishment of economical and political centres were quite complex. Frode Iversen discusses the evidence for royal seats in Western Norway, and concludes that for the 11th century, five certain and ten possible or likely such places existed, based on credible historical evidence (Iversen 2008:20ff and table 1 p. 24). The certain ones are, from south to north, Utstein and Avaldsnes in Rogaland, and Fitjar, Alrekstad (Årstad), and Seim in Hordaland. Iversen connects all of these and several others

²⁸ 'Af Hernum af Noregi skal sigla jafnan í vestur til Hvarfs á Grœnlandi, og er þá siglt fyrir norðan Hjalptland, svo að því að eins sjái það, að allgóð sé sjávar sýn, en fyrir sunnan Færeyjar, svo að sjór er í miðjum hlíðum en svo fyrir sunnan Ísland, að þeir hafi af fugl ok hval.' (Benediktsson 1968:33).

of secondary importance to considerations of military strategy and control of traffic along the coast (Iversen 2008:30 and the map fig. 4 on p. 28). Similar centres existed farther north, in Trøndelag and Northern Norway (Wik 1985).

1.6 Conclusion

In Western Norway as elsewhere in most of Scandinavia, three major prehistoric periods of sea-borne economical, social, and political power, including expressions of aristocratic splendour, can be identified: the Bronze Age, beginning in the Late Neolithic, followed by the Early Iron Age, in particular the Roman and Migration periods, and finally the Viking Age, beginning in the late Merovingian period. These periods are separated by others with a much more restricted archaeological material and several signs of recession, which concerns the Pre-Roman Iron Age as well as the Merovingian Age. Each of the three prosperous periods may be linked to distinct stages in the development of boatbuilding and seafaring. The Bronze Age was the era of the paddled boat, culminating in the 4th century BC Hjortspring type. The Early Iron Age was the era of the rowed warships of the early 4th century AD Nydam type. The Viking Age saw the development of ocean-going sailing ships, e.g. the early 10th century AD Gokstad ship. These stages in shipbuilding are linked by many particular technical properties that demonstrate that they are all parts of one and the same tradition, most conspicuously the tradition of the construction of the hull as a self-contained shell structure, in later times known as clinker-building. It is noteworthy that the innovations themselves appear to have taken place during the leaner periods separating the more prosperous ones, so that the improved ships may rather be counted among the preconditions for the ensuing prosperous developments.

It is possible that the three stages of shipbuilding developments correspond to those concerning the concept of the sea-route along the Norwegian coast and the establishment of 'Norway' as an onomastic entity. At first, the sea-route was spoken about simply as the route along the narrow inside passage northwards, perhaps already in the Late Neolithic at the time of the paddled vessels depicted on thousands of Bronze Age rock carvings, as well as the preserved vessel from Hjortspring. Subsequently this designation became fixed as a proper name of that sea-route, possibly in the Early Iron Age, when ships such as those from Nydam were rowed with long oars. Lastly, when Scandinavian ships were equipped with sails, this name was extended to the country as a whole, and the name was reinterpreted as the route leading north. This reinterpretation may have taken place somewhere south of Norway, perhaps among mariners in the Baltic and the North Sea. This of course remains a hypothesis, but at least the first and last stages are virtually self-evident, and the semantics vouch for the second as well. More to the point, the

three stages have been linked with specific historic periods of shipbuilding as well as more general history with a view to the emergence, decline, and re-emergence of aristocratic societies on the western coast of Norway.

Acknowledgements: It is my privilege to gratefully acknowledge Professor emeritus Harald Bjorvand and the late Associate Professor Terje Spurkland for their advice in philological matters. Professor emeritus Arne Emil Christensen similarly deserves thanks for advice on all sorts of maritime questions, Associate Professor Randi Barndon for sharing her thoughts about Sunnmøre, and Professor Dagfinn Skre for repeated and spirited discussions about the matters considered in this chapter beside much else. Two anonymous referees also are acknowledged for their encouraging comments. Any shortcomings of course remain the responsibility of the author.

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