WHALES, DOLPHINS AND PORPOISES IN THE ECONOMY AND CULTURE OF PEASANT FISHERMEN IN NORWAY, ORKNEY, SHETLAND, FAROE ISLANDS AND ICELAND, CA.900 - 1900 A.D., AND NORSE GREENLAND, CA.1000 - 1500 A.D. (VOL. I)

Ole Lindquist

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at the
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IN THE ECONOMY AND CULTURE OF PEASANT FISHERMEN
IN NORWAY, ORKNEY, SHETLAND, FAEROE ISLANDS AND ICELAND,
CA 900-1900 AD, AND NORSE GREENLAND, CA 1000-1500 AD

Volume 1: Thesis

By
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Diplom-Historiker, Diplom-Philosoph;
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November 1994

A thesis
submitted to the Faculty of Arts,
University of St Andrews, Scotland,
for the degree of Doctor of Philosophy
Declarations

I, Ole Lindquist, hereby certify that this thesis, the main text of which, apart from the appendices, is approximately 100,000 words in length, has been written by me, that it is the record of work carried out by me and that it has not been submitted in any previous application for a higher degree. The extension in length was granted by the Associate Dean of Graduate Studies in writing, 9 October 1989.

28 November 1994

I was admitted as a research student under Ordinance No 12 on 14 January 1986, with effect from October 1987, and as a candidate for the Degree of Doctor of Philosophy as from the same time on 21 March 1988; the higher study for which this is a record was carried out in the University of St. Andrews between 1987 and 1994.

28 November 1994

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28 November 1994
Abstract

By way of introduction the thesis considers Norse whaling history, in general, concepts like 'whaling tradition', 'whaling culture', and describes the approach to the divers studies of cetaceans in Norse peasant fisherman economy and culture and of Norse whaling techniques, ca 900-1900 AD.

It is argued that the Icelandic littoral and inshore régime reflects the primordial Norse régime in which property zones on land are 'mirrored' in the littoral and the sea; furthermore, that the Orcadian-Shetlandic Udal ebb limit is not Norse in origin. Norse mediaeval cetology and popular views about real and fictitious whales are studied. Many whales are identified, including the now extinct North Atlantic gray whale is positively identified as previously well-known to, and hunted by, the the Icelanders. It is argued that traditional Norse whale measures in 'ells' are not exaggerated extent measures but often exact appraisement sums, using a unit called *hvalsalin* ('whale ell'). Few ritual aspects are found but in West Norway peasant fisherman apparently sustained, into the 19th century, a tradition of sacrificing whale tails to the old Norse god Njörør. Mediaeval and early modern Norwegian whale traps are discussed and land rise suggested as one reason for their disappearance. A technical and linguistic analysis demonstrates that mediaeval Norse whaling with piercing weapons, rather than being hand harpoon tow whaling, was spear whaling which continued in Norway until 1870 and in Iceland to the mid 1890s. Spear whaling explains the elaborate Icelandic system of registering whaling shot marks and partly the wide 'driftage zone' of coastal estates there. Spearing and arrowing caused clostridium infection in the whales which usually died in a matter of days after which some were recovered. It is also argued that gaffing of larger cetaceans constitutes a separate whaling method.

The Appendix contains numerous calendars and sources in the original, including transcriptions of parts of the 'Icelandic fishlore' by Jón Ólafsson frá Grunnavík, 1737, and the whole treatise by Andreas Christie, 'Account of the whaling in Sotra district', West Norway, from 1785/86, all with tentative English translations and summaries.
Preface

The present thesis reflects a longstanding interest by this student in inshore and littoral environments, coastal cultures and the use of marine resources, i.e., "the interrelation of man and cetaceans throughout history",\(^1\) in particular around the Northeast Atlantic Ocean.

In the late 1970s I contemplated writing a book on the subject and made the following policy declaration (which was actually not intended for publication):

"... I do not intend to follow the 'traditional' path and instead want to produce a synthesis of the biology, ecology and sociology of bigger whales, dolphins and porpoises on one hand and the social, technical and cultural development of human society on the other, from times immemorial to the present, ...").\(^2\)

This commitment I have tried to uphold in the present study, inter alia, in order to acquire for myself, and communicate to others, a deeper understanding of Nordic history and culture at the interface of land and sea and of interactions between man and marine mammals in the Northeast Atlantic region down through history. The study has been more comprehensive than the present thesis reveals: the analysis of various other aspects is basically completed and await presentation elsewhere while still others are only in the initial stage of analysis.

In December 1985, a detailed project had been accepted by the University of St Andrews, Scotland, which I had selected as the most suitable academic environment for the studies and research leading to the PhD. As planned, I resigned from my post as Lecturer at the College of Akureyri (Menntaskólinn á Akureyri), North Iceland, in

\(^1\) Cf Contos 1979.

\(^2\) Cf Contos 1979.
August 1987 and commenced the full-time research into the present subject as from October 1987. Since then I have enjoyed the affiliation with the Scottish Institute of Maritime Studies where Professor T. Christopher Smout, FRSE, FBA, FSA (Scot), formerly at the Department of Scottish History, now at the Institute for Environmental History, took upon himself to supervise it. For his guidance, patience and confidence I am particularly grateful.

Thanks are also due to numerous other persons, including friends, colleagues, archivists, librarians and biologists throughout northern Europe and North America who have assisted me in divers ways during research visits, through correspondence, in discussions and otherwise. Only a few can be mentioned, as follows.

The most liberal use of the facilities of the Municipal Library (Amtsbókasafnið) in Akureyri, together with the helpfulness of Chief Librarian Lárús Zophoníasson and his staff, has been invaluable. The geographically isolated position in Akureyri, away from many basic scientific facilities and services, have caused me to lean particularly heavily on Mr Harald Hamre, in his capacity of director of Stavanger Museum, and the librarians of that museum. The same concerns Mr Frank D. Story, Senior Assistant Librarian, St Andrews University Library. In the past two years the librarians of the newly established University Library in Akureyri (Bókasafn Háskólans á Akureyri) have also been very effective in assisting me.

Concerning specialist assistance in the search for, and interpretation of, material I am particular indebted to Professor Reidar Bertelsen, Institute for Social Science, University of Tromsø, Norway; Professor Gunnar Eriksson, Institute for the History of Ideas and Science, University of Uppsala, Sweden; Ms Alison Fraser, Archivist, Orkney Archives Office, Kirkwall, Orkney, United Kingdom; Professor Povl Simonsen, Tromsø Museum, University of Tromsø, Norway; and Mr Brian Smith, Archivist, Shetland Archives, Lerwick, Shetland, United Kingdom.
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A special thank is due to Curator Einar Wexelsen, for the kind invitation to present a paper based on this research, in June 1992, at the 75 Anniversary Whaling History Symposium of Commander Chr. Christensens’s Whaling Museum, Sandefjord, Norway, which he was then in charge of.

Moreover, I am particular grateful to Mrs Leslie Busby, Città Della Pieve, PG, Italy, for thoroughly reading much of the draft text of volume one and suggesting improvements to the English language. The present thesis is apt to bear the hallmark of being written by a foreigner which this - and other similar but less substantial - assistance cannot, and was not intended to, mitigate. The author, of course, assumes the full responsibility for all shortcomings in orthography, language, presentation and contents of this thesis.

Furthermore, I am indebted to Miss Margrét Ingibjörg Lindquist for having traced the figures and illustrations.

To all these kind and helpful people, and the many others who have not been mentioned, I offer my warmest thanks.

Since 1983, I have been able to follow closely the work of the International Whaling Commission (IWC), including the research associated with the Commission, which has greatly benefited the present study. Therefore, I wish to express my gratitude to the International League for the Protection of Cetaceans (earlier Rye, East Sussex, England, now Città Della Pieve, PG, Italy) whose accredited Observer to the Annual Meeting of the IWC I was in 1983, and to the International Ocean Institute, Valletta, Malta, and especially its president, Professor Elisabeth Mann Borgese, Halifax, Nova Scotia, for giving me the opportunity to be

Acknowledgements for financial support are due to the Swedish Institute (Svenska Institutet), Stockholm, for its grant covering costs of a three month research visit in March-May 1989, at the University of Uppsala, Sweden; to St Leonard's College, University of St Andrews, for the Russell Trust Award 1989 towards most costs of my research visit in October-November 1989 to Tromsø, Norway; and to the Icelandic Council of Sciences, Reykjavik, for its grants in 1990 and 1991 which covered basic living costs during these two years of the work.

A thought should also go to my late parents, Jenny Ruth and Carl Johan Lindquist, Esbjerg, Denmark, whose thrift in the first instance made it possible for me to embark on this enterprise and later to carry it through periods of no outside financial support.

Finally, appreciation must be expressed concerning the understanding and help in practical matters which Ms Hölmfríður Guðmundsdóttir and our daughter, Margrét Ingibjörg Lindquist, have offered me during the past seven years of travel, research and writing.

Akureyri, 28 November 1994

Ole Lindquist
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1 Introduction

Humans have interacted with pinnipeds (qv, in the Glossary) and cetaceans (qv) since first settling in coastal areas. The interaction ranges from mere awareness of the other being, over peaceful but occasional tense encounters, to pursuit and killing by man. In northwestern Europe we may distinguish between the taking of pinnipeds and cetaceans by hunter-gatherer-fishermen; peasant-fishermen-hunters (since Neolithic times); the Basques (Biscayans) (from the early Middle Ages); the Old whaling trade (from 1611) and the Modern whaling industry (since ca 1870). The first two categories are local, or at the most regional, basically subsistence, activities while the last three involve regional to far-ranging activities, often expeditions, and are commercial activities on a large scale. The latter have commonly caused the destruction of great cetacean populations. We shall concentrate on the Norse peasant fisherman whaling, ca 900-1900 AD. It must be emphasised that this thesis is merely intended to consider certain aspects of the present topic and is not even an 'exhaustive' treatment of them.

Cetaceans, which range in size between that of a human to the largest animal on Earth, are fully marine and highly migratory animals. Because of their predominantly pelagic nature, size and strength, they appear 'distant' in various ways even to coastal hunters and fishermen; sometimes man's only 'contact' with a cetacean species was through stranded specimens which he came across. Conversely, the amphibious pinnipeds are closer to man both in space and size.

Although my interest has been more associated with cetaceans than pinnipeds it was a basic assumption, which has proven correct, that considering cetaceans and

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1 Remarks concerning the way of presentation, lists of acronyms and abbreviations, guiding definitions and a glossary are found in the Appendix, items A.21, A.22 and A.23.
pinnipeds together would be beneficial because information about the one might in certain cases complement or contrast that of the other. Initially, I considered the fundamental aspects of mediaeval Norse peasant fisherman whaling, e.g., hunting methods, to be generally settled issues, theoretically as well as practically. My intention was therefore to survey printed and unpublished sources, review literature and previous research, with a view to rectification where appropriate, to integrate Orkney and Shetland into the overall picture of Norse mediaeval and (early) modern peasant fisherman whaling as they are virtually absent from it, and to produce a synthesis of it all. Special efforts were made to obtain source material from the Orkney and Shetland Archives to this end. The work with the Orkney and Shetland aspect not only produced a considerable and interesting body of information (cf item A.17.1) but also valuable insight into the circumstances and history of these countries¹ and the complex interaction of cultures that have taken place there. This, in turn, deepened my understanding of Norse culture as such and widened my scope of interpretations.

Of course, this student could at first only accept interpretations, basic notions and underlying assumptions by the various authorities in the field. Not surprisingly, inaccurate data and doubtful interpretations came to light which I felt able to correct while adding new information to the various aspects. As the study of mediaeval Norse whaling and sealing methods, and littoral legal régimes, progressed I increasingly noticed inconsistencies and fundamental contradictions between the Norse primary information and the practice of the Old whaling industry, on the one hand, and the traditional interpretations, concepts and assumptions in Norse whaling history as hitherto presented, on the other hand. At a certain point

¹ Orkney and Shetland are 'countries' (like the Faeroe Islands) in a geographical, historical and cultural sense notwithstanding their legal status within the realms of Norway, Scotland or the United Kingdom.
I felt it necessary to test my own notions on the basis of a new paradigm and to build a new coherent picture on the results. For cognitive and scholarly reasons the initial approach and emphases had to be modified because the original ground was proving to be shaky. Indeed, the new approach settled the issue to my satisfaction. However, this automatically shifted the emphasis of the whole study 'back' to Norway, Iceland and the Faeroe Islands. The experience of the critical examination of so-called 'harpoon' whaling (which turned out to be spearing) greatly increased my understanding of the whole theme, the sources and, not least, the research tradition. So equipped, I found that other basic areas like 'poison whaling', 'whaling voes' and 'whale measurements' also needed to be thoroughly re-analysed and re-interpreted. It furthermore emerged that many aspects of Norse whaling history structurally and historically are far more complex than has ever been presented before. These unexpected developments and circumstances have prolonged the project and also complicated the presentation of this thesis. Its main part (volume 1) presents and analyses, in English, little known and new material, and suggests comprehensive alternative interpretations of Norse peasant fisherman whaling, with implications for European whaling history as a whole. Source materials are presented in the Appendix (volume 2), i.e., in original versions (transcripts and extracts), translations and summaries, as appropriate, together with calendars, lists of references and some so-called and other actual excursuses. The tentative character and limited scope of the whole presentation must be emphasised; much material has been surveyed but will hardly, if at all, be touched upon in this thesis, which also shows that much work remains to be done in the field.  

1 The Orkney and Shetland material rests but I hope to resume work on it in due course.  
2 An analysis of local Norse whale divisions is nearly completed but cannot be presented here for lack of space. 'Remedies' against evil whales is a topic the initial systematisation of which shows it to be an interesting subject.
Background materials and preliminary results from the chapters 4, 10 and 11 were presented in June 1992 at the Whaling History Symposium, Sandefjord, and published in *Whaling and history* (cf Lindquist 1993). The present thesis is in direct continuation of this publication and its results.¹

¹ Lindquist 1992 is a kind of 'byproduct' from an early stage of the present study.
2 Northwest European (Norse) mediaeval and early modern coastal whaling: Key concepts; previous and present research and approach

2.1 Human ecology; maritime adaptations; peasant fishermen

We shall now look at the basic concepts implicit in this study and place the topic in its overall social and theoretical contexts.¹

The concrete relationship of each group of living beings, humans included, with its environment and position within the ecosystem, is described as its ecological niche.² People make use of materials and energy from nature according to their technical means, social organisation and what they at each time have realised as potential resources.³

The coastal inhabitants of northwestern Europe have subsisted into modern times on an economy that draws on both the terrestrial and maritime ecosystems, subject to considerable variations between regions. Initially the main economic activities were gathering, hunting and fishing; later animal husbandry, agriculture and occasionally also tree felling were added as primary economic activities. In varying combinations, and with varying emphases, these activities have provided sustenance and particular ways of life, ie, particular cultural adaptations ('maritime adaptations');⁴ in other words, the maritime adaptation encompasses ecological, socio-economic, legal and psychological (intellectual) aspects. The majority of those engaged in these combined economies (as opposed to specialised economic activities) in the Norse

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¹ The ecology of the Northeast Atlantic Ocean is presented in, eg, Anon 1972b; Anon 1981a; Couper 1983; and Gulland 1971.
² Cf Andersen et al 1992 ms: 4; Salamone 1976.
³ Individual social groups may exclude certain resources from exploitation for cultural (eg, ethical, religious) reasons; like other cultural aspects they are subject to changes.
⁴ G. Pálsson (1991: xvii) terms it 'coastal adaptation'.
area since Neolithic times¹ I have chosen to call peasant fishermen.² This is conceived as a socio-ecological category and embraces the way of subsistence regardless of the social status of the persons concerned and the legal status of the means of production involved.³ Being a very wide notion it is also taken to cover the mediaeval to early modern Norwegians and Coast Samis in Finnmark, Norway: The Norwegians at the fishing stations engaged in some animal husbandry which, together with agriculture, increased over time.⁴ The Coast Samis of Finnmark were hunter-fishermen-pastoralists. These combined economies were, into the late Middle Ages, subsistence economies, and remained semi-commercial in most cases into the late 19th century.

Coastal resources are both non-biological and biological, the latter being plants, crustaceans, fish, pinnipeds, cetaceans, birds. These resources variously belong to the upper shore (above the high tide level), the foreshore (inter-tidal zone), the littoral zone (to a depth of 5-10 m), inshore waters (waters adjacent to the shore and coastal archipelagos) and the open sea. Not all coastal resources originate locally or regionally; for example, larger cetaceans are highly migratory species but may come inshore either alive or dead; several pinniped species are

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¹ Cf Coull 1971: 2.
² In this I follow O. Løfgren (1977: 167f) and, in turn, R. Firth. The order of arrangement is not meant to imply any emphasis. We need not elaborate on this notion here. R. Andersen et al write that, for instance in northern Norway, "Until recent decades a typical ecological niche ... has been a combination of farming and fishing, and the term fiskerbonde (fisherman-farmer) has been widely used to conceptualize this adaptation" (cf Andersen et al 1992 ms: 53; see also Anon 1990: 30; Anon 1991: 10). Andersen (1979a: 10f, 20, see also 15) speaks of 'fishermen-farmers', 'fishermen-pluralists' and 'economic pluralists' as opposed to 'specialised fishermen'. R.P. Burton (1, 1875: 191) calls them ‘fishing peasants’ and Coull (1971) ‘crofter-fishermen’. J.R. Tudor (1883) coined the phrases that the Orcadian was a farmer with a boat and the Shetlander a fisherman with a croft (cf Tudor 1987: xxi, 104, 130, 131, 143; see also Donaldson 1958: 46, 94). J. Rathke, around 1800, also often uses the term fiskerbonde (cf Rathke 1907: 95, 97, 125, 130).
³ Cf Andersen 1979a: 10.
⁴ They are, thus, much akin to the Shetlandic crofter fisherman.
migratory species; and driftwood is transported across oceans with currents and sea ice.

The traditional major subsistence terms of 'hunting', 'fishing' and 'gathering' are inadequate, as A.P. McCartney (1975: 298) points out. They do not account for "(1) mobile versus immobile organisms, (2) marine versus terrestrial organisms, (3) sought-after (unpredictable) versus harvestable (predictable) organisms, or other relevant dimensions." Also, they lump together greatly different technologies (gear and methods) under the same rubric and assign much the same quality to each of the categories.

Humans approach the marine mammals on land or from land. Geography and ecology circumscribe the species; the geographical circumstances and the individual animal (species, adult, male, female, young, juvenile) in question are decisive factors with regard to the method (gear, organisation) necessary for their taking; and the geographical circumstances has legal implications.

In the utilisation of marine and littoral resources some appliances and methods will be specialised while others are easily transferred between activities. The transfer appears; in principle, to work in two directions: (a) from land to sea and (b) between marine mammal species.\(^1\) In order to avoid prejudices and unintended assumptions concerning hunting methods (technology) and legal aspects, the land-sea interface should therefore, in my opinion, be considered in very flexible terms. "Any particular [ie, food and other resource procurement] system is not defined by a particular tool type but rather by the combination of technology, habit, animal, and human behaviour which, in

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\(^1\) R.F. Heizer (1941 ms: 143f) observes that drive and crossbow hunting of whales constitute an adaptation of land hunting techniques to cetaceans. Actually, this seems to apply to all pre-Modern techniques like trapping, drives (manngard; cf ch 9.3), spearing, arrowing, and possibly even harpooning, of cetaceans and pinnipeds.
toto, makes one distinctive from another."¹ This implies that earlier Norse taking, perception, classing, etc, of cetaceans should be considered in the context of the utilisation of other marine and littoral resources. Only a sufficiently differentiated set of, eg, geographical and technical, categories can serve as an analytic tool in this respect. The relevant categories at the land-sea interface I therefore suggest as follows:²

**Gathering:** onshore; intertidal; inshore; offshore;  
**Fishing:** onshore; estuarian and riverain; inshore; offshore;  
**Hunting:**  
  - fowling: at nesting sites; on water;  
  - sealing: onshore; estuarian; inshore; offshore;  
  - whaling: intertidal; estuarian; inshore; offshore.

### 2.2 European and Norse whaling history

Mediaeval West and North European whaling is not prominent in research and literature. R. Ellis (1992: 41) characterises Norse whaling history as a 'neglected' subject. According to W.M.A. de Smet (1981: 302) the situation is as follows:

"most books" consider that traditional (European) whaling history begins with the whaling at Spitsbergen, as of 1611 AD; "Several texts, however, also draw attention to the fact that the Biscayans had an active whaling industry in earlier centuries (from the 11th century onward)" but "Only a few authors are aware of the fact that whaling existed in

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¹ Cf McCartney 1975: 299f. What McCartney calls 'systems' I prefer to call aspects.  
² This is in strong modification of McCartney (1975: 298f). Any classification depends on its purpose, so also here. The gear and methods will be considered below.  
³ This student considers the term 'scavenging', not least in the sense of 'obtaining meat' for human consumption (cf Hunter and Whitten 1976b: 213), to be generally incorrect.
still earlier days in other European seas, and that it was practised in the North Sea and English Channel during the Middle Ages, certainly from the 9th century onward. Evidence of this early whaling is quite scarce and is distributed throughout a number of texts."

De Smet himself offers a study of assembled sourced regarding the early North Sea and English Channel whaling (with some reference to early Norse whaling). However, the general impression is, as R. Harrison (1988a: 183) writes, that "Nothing of real importance comes down to us about whaling during the Middle Ages."

The taking and utilisation of marine mammals by coastal inhabitants in northern and western Europe in prehistoric times, and human-marine mammal cultural aspects, have been studied by archaeologists; historians have studied the Old commercial whaling trade (17th-19th centuries) and the Modern whaling industry (since ca 1870) in detail, and some conspicuous cases of 18th-20th century Norse peasant fisherman whaling have been studied and presented ethnographically. However, studies of Norse whaling and whale utilisation in the Middle Ages and early modern times are comparatively few and neither systematic nor comprehensive, or as U. Schnall (1992) puts it: 'There exists no detailed comprehensive presentation of Scandinavian mediaeval whaling and whale utilisation.'

The available descriptions are usually quite brief and focus on one country, often with some references beyond that, the repercussions of which we shall return to.

Older topographical, geographical and natural history literature and modern ethnological literature offers descriptions and analyses of whaling activities by coastal inhabitants but it concentrates on the Faeroe Islands, Shetland and West Norway in the last two centuries or so.

The main body of research and literature about the hunting of marine mammals in the Northeast Atlantic Ocean

1 Cf Schnall 1992: 221; see also 1993: 11.
is concerned with the technological, resource and economic history of large-scale commercial activities of the Old and Modern whaling industries, viz:

The Basques are acknowledged as having developed hand harpoon (tow) whaling (qv) (and lancing) of black right whales\(^1\) sometime in the early to high Middle Ages. They later transferred the technique to the bowhead whale and in this form it became the basis for the Old (English, Dutch, Danish, German, etc) whaling trade, as from 1611, initially at Spitsbergen. These far-distance expeditions finally became pelagic and shifted to East Greenland and the Davis Strait where they also conducted sealing. The Old ('Greenland') fishery lasted into the early 20th century.\(^2\)

Modern whaling, like S. Foyn developed it, 1864-1870, aimed at catching large rorquals by using steam-powered boats having mounted special canons for firing harpoons with explosive charges into the whale and a steam winch for retrieving the animals. For several decades this industry remained virtually a Norwegian monopoly. At first it was conducted in northern Norway, in 1883 it spread to Iceland and other parts of the Northeast Atlantic.\(^3\) Through the use of smaller cannons the technique was as from 1877 adapted to the taking of northern bottlenose whales by the Scots and Norwegians.\(^4\) Minke whales were not taken to any degree in commercial operations before the late 1920s when smaller Norwegian vessels began hunting them particularly, using the Modern technique.\(^5\)

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1 Cf item A.14 for the nomenclature (including alternative terms) of Northeast Atlantic cetaceans and pinnipeds.
2 For the standard literature regarding the harpooning technique, cf Lindquist 1993: 22f.
5 Cf Andersen et al 1992 ms: 2, 5, 22; Collett 1911-1912: 564; Jenssen 1985: 11; Jonsgård 1992: 25. For obvious reasons S. Risting (1922) does not mention such a fishery.
In my opinion the technical aspects of pre-modern Norse whaling have been greatly neglected by historians (and ethnographers) who have generally been content with comprehensive terms and imprecise definitions in that respect, aspects which are closely linked.

This study attempts to be very specific as to the methods and circumstances of the whale takes (qv), to define the takes in technical and practical terms (aspects and complexes), classify ('stratify') the data, pursue them progressively on the basis of as many sources as possibly, and to establish their geographical scope and possible changes over time.

Similarly, I have chosen to approach the Norse whaling régimes and whale divisions along two lines, ie, on the one hand, according to the whaling provisions of the regional and national legislation of Norway, the Faeroe Islands and Iceland and, on the other, as found in known longstanding local traditions. In fact, several local traditions have passed unnoticed hitherto. From a methodological point of view it seems essential to separate the details and structures of both in order to establish 'primal' factors, all-Norse, regional and local aspects, and the range of modifications and adaptations possible by similar premises. This also requires that ramifications should be accounted for which originate in more recent socio-political circumstances, such as increasing feudalisation, the

1 At this point I shall only mention expressions such as 'passive whaling' (passiv hvalfangst, N) and 'active whaling' (aktiv hvalfangst, N; aktiver Walfang, G) (cf, eg, Andersen et al 1992 ms: 23f; Anon 1988b: 10; Barthelmeß 1992: 11; Bogen 1933: 11; Gjessing 1955: 55; Martinsen 1964: 23, 27; Schnall 1992: 214; Wexelsen 1987: 62, 66) which I regard as contradictory (cf "Whaling ... The action, practice, or business of catching whales"; cf OED 12, 1961: 3; SOED 2, 1987: 2531; my emphasis) and unhelpful because of their extensiveness; the same concerns terms such as 'open sea whaling' and others which we shall return to.

2 There is hardly any reason not to use specific terms in popular presentations as well as scientific discourse, except as a deliberate means of generalisation. Specific expressions help, firstly, to explain the phenomena concerned and, secondly, to reveal the context they occur in, aspects which general terms obscure.

3 The rendering in English of many Old Norse, Icelandic, Faeroese, Norwegian and Danish (mainly legal and technical) terms and expressions reflects the analysis in this study.
Reformation, the incorporation of Norway into the Danish state and of Orkney and Shetland into the Scottish realm, the introduction of absolutism in Denmark-Norway, and the reception of Roman law.

At this stage it is useful to be more explicit about the central aspects that have hitherto been associated with Norse mediaeval and early modern whaling history. Gathering (salvage) of whale carcasses and naturally live-stranded animals is a common feature, usually treated in broad terms and generally implying that the whales had died naturally at sea or fled from orcas. As to the catching of free-swimming cetaceans, F. Nansen (1911a-b), A.O. Johnsen (1962/1981) and Å. Jonsgård (1992) rely strongly on Clausson Friis (1599) and offer the following picture of Norse whaling: The taking of larger whales by harpooning disappeared in Norway during the late Middle Ages. In Johnsen's opinion

'There have probably been several reasons for the development taking this course. Since the 14th century the Norwegian shipping and seamanship declined and at the same time the fisheries developed strongly in the coastal areas of North Norway and claimed a big part of the free labour force. The relations with the Carelians and Russians have perhaps also played a role.' Only 'the chasing, enclosing and killing ... of minke whales in whaling

1 Cf, eg, references about the (unfortunate) 'passive whaling', above.
2 Cf Friis 1881a: 76.
3 Nansen (2, 1911a: 178) and Johnsen (1962/1981: 164) add 'in open sea' which is followed by, eg, Schnall (1992: 214; 1993: 13f); this imprecise expression carries the connotation of 'pelagic' (qv) which is indeed also O. Martinsen's (1964: 39) interpretation: 'The iron developed ... the boat in such a way that it became safer to engage in hunting expeditions in the open sea. And in this pelagic catching the harpoon has played a dominating role.' ("Jernet udviklet ... båten, slik at det sikrere kunne bli fangstferder på det åpne havet. Og i denne pelagiske fangsten har harpunen spilt en dominerende rolle."). A reference to open or semi-open waters makes no difference with regard to the harpooning technique as such.
4 Cf Johnsen 1981: 164.
voes [qv] was maintained through the Middle Ages and further on, especially at certain places in West Norway but also farther north in the country. ¹

Jonsgård (1992: 10f) considers that 'During the period of Norway's decline, which began in the 14th century, virtually all whaling ceased but a peculiar catching of smaller whales survived the period of decadence and continued right through to our century in West Norway', especially in the archipelago off Bergen.

In other words, these scholars offer a picture of an ancient Norse hand harpoon (tow) whaling tradition that faded away in the late Middle Ages in Norway,² while drives and enclosures of smaller cetaceans continued only at a few West Norwegian localities (whaling voes and sounds).³ This is still an accepted view in the international scientific community.⁴

Andersen et al (1992: 23f) offer a somewhat different picture: These scholars acknowledge that Norwegian prehistoric bone harpoons are "too fragile to have been of much use in whaling" although "they resemble iron [ie, toggle] harpoons used along the coast of ... Norway until this century". Smaller odontocetes, like the pilot whale, will otherwise have been taken in drives, beachings and seinings. Harbour porpoises were also netted "well into this century". The Old commercial (hand harpoon tow) whaling off northern Norway and the sporadic Norwegian

² We shall here leave the implications of this view regarding other Norse lands aside.
³ The picture has hardly changed since Nansen (2, 1911a: 178) wrote (with reference to Clausen Friis): "This seems to show that the Norwegians' whaling in open sea had really gone out of practice, for otherwise this author must have known of it; on the other hand, whale-hunting in the fjords, which were closed by nets, has continued to our time."
⁴ Schnall writes: "Es ist für Nordeuropa ... Hochseewalfang zumindest von der Merovingerzeit an wahrscheinlich, von der Wikingerzeit an sogar unzweifelhaft zu belegen. Der Höhepunkt dieses Walfangs scheint um 1300 erreicht" (cf Schnall 1992: 214; see also 1993: 14).
participation in that trade "did not give rise to an indigenous tradition based on active large type whaling [ie, of large cetaceans] among the Norwegians, however, although a few apparently unsuccessful attempts to develop this kind of whaling were made in the following centuries, particularly in northern Norway."¹ Andersen et al (1992) write that "Several historical developments merged in the rise of modern minke whaling" (as of the late 1920s), viz: drivings/beachings of small to middle-sized cetaceans; "drives" of minke whales into voes and their enclosure and arrowing there; commercial sealing from northern and southern Norway (since the 1790s and 1840s, respectively), with supplementary catches of northern bottlenose whales (since the 1880s); Modern whaling of large cetaceans (since ca 1870), including that "conducted from shore stations in western Norway periodically between 1912 and 1967" and which "became more firmly integrated into the local communities as local people took over most tasks within a few years"; furthermore, the shifting of cannons and gunners from bottlenose to minke (killer and pilot) whaling.²

The traditional picture of Norse mediaeval and early modern whaling includes hand harpoon (tow) whaling in Iceland,³ the chasing ashore (beaching) of smaller cetaceans in all Norse countries but particularly in the Faeroe Islands,⁴ and, as a rather unique phenomenon, the enclosing in an inlet at Sotra island, West Norway, by pulling a large net across its mouth and the shooting of the whales there with 'poisoned' crossbow arrows (cf chapters 9.6.1 and 12.4).

¹ Cf Andersen et al 1992 ms: 23f.
³ Cf Lárusson 1981h.
2.3 Concepts and definitions: 'Activity', 'tradition', 'history', 'whaling tradition', 'whaling culture'; time frame of thesis

Explicitly and implicitly the temporal character of things will be considered and characterised in terms of 'activity' ('incident'), 'tradition' and 'history' as analytical categories; the distinction between them is as follows:

'Activity' ('incident')\(^1\) involves no statement as to the temporal extent apart from the present that is described.

'Tradition' is defined as "The act of transmitting or handing down or fact of being handed down, from one to another, or from generation to generation; transmission of statements, beliefs, rules, customs, or the like, esp[ecially] by word of mouth, or by practice without writing."\(^2\)

'History' refers to the occurrence in previous times of phenomena, their recording, analysis and presentation;\(^3\) 'history' is a wider and less explicit notion than 'tradition' and does not necessarily involve 'tradition'. Any discussion of 'tradition' seems to the present student to depend greatly upon the overall conceptual framework ('ethnographical', 'cultural', 'historical', etc) in which the discourse takes place, the definitions adopted, and the angle and perspective chosen (historical progressively; contemporary retrospectively). In my opinion, 'tradition' is an abstraction (construction) by which social scientists comprehend and characterise historical factors that are considered necessary, interrelated and interacting in a particular social function. In the present context I consider it useful to distinguish between a narrow (ie, aspect) and a wider (ie, composite) sense of 'tradition'

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1 Cf SOED 1, 1987: 20, 1044. It is not considered necessary to quote further authorities in this respect. These three to four notions have the same meaning in all other languages relevant to this study.
2 Cf SOED 2, 1987: 2340. Other quoted meanings fall within this wider definition.
3 Cf SOED 1, 1987: 968.
which may be compared with a cord and its strands. A less specific use of the term ‘tradition’ will hardly be helpful in analyses. One should be careful not to shift the reference for a particular ‘tradition’ in the course of one’s reasoning which inevitably leads to a false argument.

‘Whaling tradition’ is the integrated body of a particular gear, social organisation, individual and collective skills and knowledge (technology), rules of capture of a cetacean species, or several related species, their processing, and the distribution and utilisation of the products as conveyed across generations. If a fundamental pre-industrial strand of a (technical) whaling tradition is discontinued or replaced by factors of a new mechanical/industrial quality this is bound to have profound consequences for the tradition as a complex and it may not be unreasonable to speak of different traditions, eg, pre-industrial peasant fisherman, old (pre-industrial/commercial) and modern ones, respectively. To what degree a pre-industrial tradition is transformed into a modern one, as opposed to an old one disappearing and a new one emerging, depends on the degree of carrying over of other strands of the tradition.1

The designation ‘whaling culture’ implies a maritime adaptation which is technologically and economically specialised in the exploitation of cetaceans and where cetaceans are particularly important in other spheres of daily life. This is not the case around the Northeast Atlantic Ocean so this term is not relevant here.2

The selection of classes, species and specimens for capture, etc, are partly determined by the general world view, including the attitude towards cetaceans (and other marine mammals), and partly by the technological means at disposal. A specific whaling tradition, or even two or

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1 Having one or more common target species is far from sufficient in this respect. The fact that coastal inhabitants have utilised marine resources, or marine mammals, does not reveal a whaling tradition, neither do finds of cetaceans bones imply whaling proper, etc.
more, form part of a maritime adaptation, a coastal culture.

2.4 Introductory and standard literature

The purpose of this study is to analyse older literature and unpublished sources dealing with cetaceans in particular aspects. In such a specialised study we can only presuppose a broad basic knowledge of cetaceans and pinnipeds. On the other hand, one of its corner stones has been the continuous consultation of the most recent scientifically reliable works about cetaceans and pinnipeds from among the vast body of literature.¹

The interpretation of older (pre-1900) sources often depends on a combination of zoological, ecological, behavioural and historical evidence.

Throughout this study species are usually mentioned by their vernacular names according to the principles and particulars outlined in the Nomenclature, item A.14; there the scientific names may be obtained when necessary.

The prehistoric (archaeological) and partly mediaeval conceptual and substantial aspects of this study are found in numerous works. The more theoretical literature counts many publications in geography, economy, sociology, cultural and social anthropology (including ethnology and ethnography) and folklore. Many works on fishing and the history of fisheries have also been consulted. Whenever of direct relevance these works will be mentioned in the

context concerned.

Introductory and basic literature which treats of maritime adaptations in the north and the taking of marine mammals there might roughly be grouped into two: firstly, works with emphasis on prehistoric (archaeological) and mediaeval aspects;\(^1\) and, secondly, literature which considers peasant fisherman and combined coastal economies in northern Europe in historical, mostly modern, times.\(^2\) Numerous articles in the standard publication *Kultur-historisk leksikon for nordisk middelalder* fall into both categories.\(^3\)

2.5 Time frame; approach to peasant fisherman whaling, and methodology

This thesis considers the 'role' of cetaceans in the economy and culture of Norse peasant fishermen which, however, cannot be taken to imply 'importance' unless it is qualified by reference to definite (known) entities.\(^4\) The geographical scope and social context stays with the coastal areas, inshore waters and the coastal populations of the mediaeval Norse lands and settlements. The time frame of ca 900-1900 AD implies a focus on the Middle Ages, with extensions backwards and forwards. This has three

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3 Cf KLNM 1-22, 1956-1978/1980-1982). The more central contributions will be referred to in way of introducing particular aspects of this study.

4 If not well defined the term 'importance' becomes prejudicial.
reasons: (1) the historical period commences around 900 AD; (2) the first and the last third of the period constitute transition periods; such periods often reveal aspects of past traditions which may otherwise be difficult to discern: many strands are, so to speak, laid open at such times; and (3) the connection with more recent ways during the latter transition period and, thus, our contemporary understanding of things, facilitates the interpretation of past matters (not to be confused with retrospective inference).

R. Andersen (1979a: 1f) observes that the maritime adaptations in societies and regions bordering on the North Atlantic Ocean "have been greatly neglected in social science research when contrasted with efforts to understand their urban-industrial and declining rural-agrarian hinterland communities and occupations."¹

In their report about contemporary Norwegian minke whaling, Andersen et al (1992) touch upon the need to address whaling as part of the "coastal culture in Norway and that theoretical issues will in due time be given the full attention they deserve."²

Peasant fisherman whaling has been considered from different angles which may perhaps be summed up as follows: (a) an 'ethnographical'³ approach which centres on the 18th-20th century evidence about (particular) peasant fisherman whaling traditions and infers retrospectively from it to mediaeval (and prehistoric) whaling; (b) a 'historical/ethnographical' perspective⁴ that ostensibly

¹ Most anthropological and ethnographical studies in coastal, or maritime, adaptations relate to fishing in the narrow sense of the term; cf, eg, Andersen 1979b; Pálsson 1987; 1991.
² Cf Andersen et al 1992 ms: 19; see also 1, 14f, 22-24. The experience from the present study is that neither the Norwegian historical nor the theoretical aspects can be satisfactorily considered in isolation from the overall Norse context.
³ This and the two following designations are chosen for want of better short terms.
⁴ Cf, eg, Nansen 1911a-b, Johnsen 1981 and Jonsøgaard 1992.
draws rather equally on mediaeval sources and 18th-20th century evidence about (particular) peasant fisherman whaling traditions (but in which aspect (a) seems implicit), with retrospective inferences about prehistoric whaling; (c) a 'modern' perspective that centres on Modern whaling (1870s onward) and draws on the other two for its historical perspective. Often these perspectives (and related methods) are implicit.¹

This thesis is a specialised study in Norse coastal, or 'maritime', adaptation, from the point of view of a historian, rather than that of a cultural anthropologist or ethnographer. It is based on traditional historical sources but attempts to take the fullest possible account of archaeological, ethnographical, folkloristic, mythological and linguistic evidence, and the student endeavours to apply traditional prudent research techniques in social sciences, in general, and history, in particular.² Furthermore, it is attempted to establish the traditional research paradigms in particular critical fields and in the analysis and interpretation to pay attention to natural and social dynamics and the intellectual frame of reference of people at various times.

T.S. Kuhn (1977) mentions five standard criteria of a good scientific theory. It should involve (1) accuracy within its domain so that deducible consequences from the theory are in agreement with results of existing experiments and observations; (2) consistency, not only with itself and internally but also with other currently accepted theories applicable to related fields; (3) a broad scope, with consequences extending far beyond the particular subject it was initially designed to explain; (4) simplicity, by bringing order to phenomena which otherwise would be individually isolated and on the whole confused; and (5)

¹ The vast literature does not permit references here.
² B. Crawford (1987: 10) appears to agree with trying such an approach.
fruitfulness, in that it should disclose new phenomena or previously unnoted relationships among such already known.\textsuperscript{1} Kuhn stresses that accuracy and consistency should also apply to objectivity.\textsuperscript{2}

Since the publication of Kuhn's \textit{Structure of scientific revolutions} (1962) the issue of paradigms has been given greater, and I think, deserved, attention. Kuhn argues that "No natural history can be interpreted in the absence of at least some implicit body of intertwined theoretical and methodological belief that permits selection, evaluation, and criticism."\textsuperscript{3} P. Haggett and R.J. Chorley (1970: 27) explain the issue like this:

"Without such paradigms all the available facts may seem equally-likely candidates for inclusion. ---. Paradigms tend to be, by nature, highly restrictive. They focus attention upon a small range of problems ---. In practice such 'rules' are acquired through one's education and subsequent exposure to the literature, rather than being formally taught. Indeed a concern about them only comes to the fore when there is a deep and recurrent insecurity about the nature of the existing paradigm."

It follows from the relative emphasis on Kuhn's five criteria and the selectiveness of data drawn upon in each case "that communication between proponents of different theories is inevitably partial, that what each takes to be facts depends in part on the theory he espouses". "The same limits make it difficult or, more likely, impossible for an individual to hold both [ie, two competing] theories in mind together and compare them point by point with each other and with nature."\textsuperscript{4} This, in other words, entails blindness to alternative interpretive modes by all users of

\begin{itemize}
  \item \textsuperscript{1} Cf Kuhn 1977: 321f; see also 335.
  \item \textsuperscript{2} Cf Kuhn 1977: 338.
  \item \textsuperscript{3} Cf Kuhn 1970: 16f; see also Haggett and Chorley 1970: 27.
  \item \textsuperscript{4} Cf Kuhn 1977: 338.
\end{itemize}
scientific theories and paradigms.¹

The study of changes and forces of action is considered a raison d'être of socio-economic and cultural history. When basic environmental factors have been incorporated into socio-economic studies, I consider that it has quite often been in a rather static way. The increased seriousness and awareness of environmental issues during recent decades, together with the results of specialised studies in environmental (including climatic) history,² stress the need for appreciating environmental factors and their dynamics in socio-economic studies with a horizon of more than 50-100 years, - without falling into environmentalism as a variant of determinism. When a study involves cetaceans and pinnipeds it must be remembered that the population (stock) size of many species has been reduced dramatically, particularly in modern times, and their distribution affected accordingly: most conspicuous is the over-exploitation of the large right whales (by the Basque and Old whaling trades) and the rorquals (by the Modern industry);³ to this must be added over-exploitation of fish stocks and environmental degradation in coastal waters and semi-enclosed seas in this century which have affected small cetaceans in particular. A historical perspective of a thousand years or more, as in this case, requires awareness of the likely pristine state of animal populations and should accommodate natural and societal dynamic factors in interpretations although they are often difficult to quantify.⁴

¹ The paradigm issue goes far beyond any '-ism', such as 'historicism', 'diffusionism', 'evolutionism', 'functionalism', 'structuralism', etc. This student acknowledges that such '-isms' have merits as designations ('labels') for certain theoretical main positions, approaches and interpretations but I consider it unhelpful to directly theorise along such lines.

² Cf, eg, Ford 1982; Lamb 1977; Ritchie 1920; Wigley, Ingram and Farmer 1985.


⁴ Cf, eg, Vibe 1981.
Only selected data about people's reality in the past come down to us. Historical research requires strict adherence to facts but data must be correlated and interpreted, and such correlations and interpretations only make sense if due account is taken of their contemporary economic, social and cultural context, including the intellectual (cognitive) frame of reference. The issue is basically the same as with the paradigms in (contemporary) scientific discourse, here in the form of world views (cognitive, attitude and action systems) of various social groups\(^1\) at different times and in different circumstances. Even within the same overall cultural context people some generations apart perceive the reality around them very differently from 20th century persons. It is therefore a great challenge for every historian to avoid, as far as possible, projecting modern notions into our forefathers' and foremothers' cognition, attitudes and actions in the course of analysis and interpretation. This issue is omnipresent but one aspect may be mentioned:

To us pinnipeds and cetaceans are scientifically well defined natural entities; as such they will be used for reference in the present study. However, it is imperative to realise that 'species' are cognitive and cultural categories; even where they seem well defined and carry a name recognisable to us they do not necessarily correspond to scientific classifications, least of all our Linnean taxonomy and notions. In modern ethnological discourse it is common to contrast scientific taxonomy with folk taxonomy. The former refers to the Linnean natural history understanding and the latter to popular views. However, when we consider the situation in the Middle Ages we have a different situation, with two to three main lines of thought: an Aristotelian tradition proper; learned opinion that contains views of Aristotle and Pliny the Elder mixed with local features; and popular views of the time and place.

\(^1\) Cf Hunter and Whitting 1976c: 408.
After having read a considerable amount on the history of whaling and sealing by peasant fishermen this student considers that the research into, and presentations of, the topic are fragmented:¹

(a) into narrow categories of whaling and sealing, respectively, which have been artificially separated from each other, making potential interaction and overlapping between them invisible;

(b) by treating Norse whaling history more or less in isolation from whaling history, in general, including the comparative material it offers;

(c) by considering the sources in rigid categories such as archaeological, historical, ethnographic, folkloristic and philological;

(d) by centering in each case on one (modern) Nordic country, with only references to others;² and

(e) by being limited in accessibility to sources for the sake of language, ie, backward in time (eg, Old Norse) and between modern languages, including the Nordic ones.

Furthermore, I have discovered (f) that interpretations often rely strongly on retrospective inference³ and (g) that views (of doubtful solidity) concerning whaling in one 'country context' are adopted as premises or 'evidence' in the context of another country and which may even (h) take the course of several rounds of invalid circular reasoning 'between countries'.

The modified structural and methodological approach which this student developed may be summed up thus:

(1) a systematic and integrated treatment of the sources, which differ strongly in the various countries as to kind and quality, offers a great potential for complementation and comparison;

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¹ The absence of a comprehensive work on Norse whaling history (cf Ellis 1992: 41; Schnall 1992: 214; 1993: 11) is part of this.
² Regarding a similar issue C.-A. Moberg (1975: 102) remarks: "With such ethnocentric attitudes, problems of general importance may not get their due share of attention".
³ For the limitations of this method, cf Helle 1964: 7.
(2) the analysis should build on technical and cultural complexes as entities and be truly inter-Norse (rather than countrywise);

(3) the analysis and interpretation of the source material should basically be progressive, only allowing for exceptional and minimal retrogressive inference; this 'historical progressive' approach means that the point of departure is the early to high mediaeval sources, that older evidence and notions in the sources take precedence over younger ones, and that progressive conclusion takes precedence over retrogressive inference;

(4) inferences and conclusions should in each case be limited to one or two (defined) logical steps at a time in order to secure that the positive evidence (about 'presence', 'take', 'catch', 'shooting', 'harpooning', 'utilisation', etc) is not stretched unduly;¹ and

(5) great attention should be given to the limitations of our secularised mind and 20th century scientific world view with regard to the interpretation of past notions, actions and events.

The steps and internal logic of the initial analysis of the present themes have already been mentioned. For the benefit of the argument and the reader the order of presentation is different here.²

We must in this specialised study also presuppose a comprehensive knowledge of marine mammal, whaling and

¹ For example, rock carvings with cetaceans and cetacean remains in an archaeological context are being interpreted as reflecting 'whaling' (cf, eg, Andersen et al 1992 ms: 22): In fact, they merely demonstrate the presence of cetaceans, on the one hand, and the taking (not necessarily catching) and utilisation of them, one way or another, on the other. Similarly, references to cetaceans in historical sources are often interpreted beyond their actual evidence, for example, when a general expression such as 'hunting'/'catching', 'shooting' is, more or less a priori, taken to mean a particular method.

² The current presentation takes account of analyses of known (local) whale divisions, North and West European induced ebb strandings and Norwegian drives/seinings which it has not been possible to include here.
sealing history, northwestern European historical and economic geography, demography, prehistory, general history and culture, including farming, handicraft, construction, ship and boat building, and navigation. Socio-economic, political, legal and technical details of immediate relevance will be mentioned as the discourse progresses but otherwise the reader is referred to item A.22 for definitions and explanations.
3 Cetaceans in the Northeast Atlantic Ocean; marine mammal products

3.1 Cetaceans in the Northeast Atlantic Ocean

In continuation of earlier introductory remarks about marine mammals we are here only able to touch upon a few points that must be borne in mind throughout and differentiated clearly between in each case:

In post-glacial time, 8 species of baleen whales (mysticetes), 18 species of toothed whales (odontocetes), 6 seal species and the walrus (ie, 7 pinnipedian species), are known to have existed in the Northeast Atlantic Ocean and adjacent seas.

The cetaceans range in maximum length from ca 1.5 to ca 26 m (cf item A.16.2)\(^1\) and are regionally or highly migratory species which move seasonally between feeding and breeding grounds, often over vast distances between tropical/subtropical and temperate/subpolar waters. Some species are entirely plankton feeders, others live on a mixed diet of plankton and shoal fish, and yet others feed mainly on squid, supplemented with seals and porpoises. Some cetaceans move regularly inshore for feeding while others mostly stay offshore. The main bonding is between cow and calf but each species displays a particular social behaviour and forms schools (or pods) varying in size from 5-10 to 1000-2000 animals. Cetaceans communicate, inter alia, by sound and orientate, among other things, by echolocation and the Earth's magnetic field. Boisterous behaviour in individual animals and groups is known in some species, eg, by leaping free of the water, during mating and in relation to feeding. In some species there exists marked sex and age dimorphism. Cetaceans are long-lived: larger odontocetes and mysticetes have a life span of 30-80 years or so (cf item A.16.2). The animals usually carry

\(^1\) For general size references, cf item A.22, 'Cetaceans'.
natural or acquired individual markings.

In chapter 2.5 attention was drawn to the great changes which the Old and Modern whaling industries, and other human activities, have wrought on the cetacean populations in the Northeast Atlantic Ocean. Authoritative observations may illustrate this point and offer the necessary perspective:

As to Iceland, H. Becker (1736) mentions 'the numerous whale fishes which, [numbering] 30, 40, 50, ... run into the fiords before everybody's eyes'. N. Horrebow (1752: 222f) writes that big whale fishes 'occur in great numbers around Iceland, indeed often in the creeks and the bigger fiords, like Hvalfjörður (of which it has its name), Hafnarfjörður and several others in the [ie, north-] western part of the country. So I have myself seen 10-12 ones at the same time in Hvalfjörður which prevented the passage so that people did not dare cross it ... In the fiords of the [ie, north] western part of the country the whale fishes come (even) more continually and more often.'

S. Magnusson (1785) offers a similar description. The reports by Icelandic sheriff-stewards, 1778-1779, testify to the same (cf items A.16.3 (B) and (D)). L. Kristjánsson writes that 'Earlier whales were so abundant off the southeastern coast [ie, of Iceland] that boats occasionally were forced to the shore ... - called hvalanaud', ie, 'whale emergency'.

P.C. de Fine (1870: 127) describes the situation in West Norway, around 1745:

'After these springhvaler [ie, dolphins, orcas] one sees from shore out at sea numerous breakers and high

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1 Cf N.N. 1798: 22.
3 Cf Kristjánsson 4, 1985: 131.
gushing smoke, like from a thousand chimneys and fireplaces, from the many and very large whales which in variety come chasing the herring inshore and are accompanied by many kinds of screeching and squalling sea birds, sea and beach gulls; --- the shockingly huge whales ... move so closely around and near to the shore as they can ...’.

3.2 Marine mammal products

It is only a part of the Northeast Atlantic cetacean species which have played an economic and cultural role with the peasant fishermen there, notably the right whales (black right and bowhead whales), rorquals (blue, fin, minke and humpback whales), the gray whale, longfinned pilot and northern bottlenose whales, together with orcas, various dolphin species and the harbour porpoise. These cetaceans have different habitats (including seasonal migrations) so they are not distributed evenly in the vast Norse area.

All taking (ie, collection, salvage, hunting) of marine mammals is part of an economic strategy for obtaining the products from these animals. Cetaceans offer soft body parts (blubber, flesh, entrails) and hard ones (bones, baleen, teeth) and, in the case of a few species, directly oil and wax and, in one species (the sperm whale), the exotic substance ambergris. Since prehistoric times coastal inhabitants have used these products for their own sustenance, partly for exchange, and in modern times increasingly for commerce. Into the 19th century Norse peasant fishermen made thorough use of all these products in their subsistence and semi-commercial economy: meat and blubber were used for food; blubber was rendered into oil for illumination, impregnation and lubrication; bones\(^1\) of

\(^1\) Not to be confused with ‘whalebone’ (E) = baleen. H.D. Bratrein (1, 1989: 181) presumably repeats K. Helle’s (1982: 309) statement that ‘whale bones’ (rather than ‘whalebone’) were exported from Norway
larger cetaceans were used for implements and as building material; baleen for lashing, suspension and containers; sinews for thread; and crushed bones for animal feed, etc.\textsuperscript{1} The walrus also offers a big hide that was turned into high quality leather, and seals provide skins. Of a more exotic character are the sperm whale teeth and walrus tusks, the ivory of which was praised and used for artistic purposes, and not least the beautiful narwhal tusk. Whale teeth, walrus tusks and carved items from them, in addition to walrus ropes, were presumably the most valuable items which the Norse in Greenland could offer in exchange for foreign goods and as payment abroad.\textsuperscript{2} In the late Middle Ages ambergris may have acquired a commercial value for the peasant fishermen.

The relative weight of the product categories, and of the cetacean and pinniped products in the economy as such, depends on the concrete environmental circumstances which vary greatly between the south and the north, the east and the west, of the Norse region as here defined. A late 20th century reader should be especially aware of peoples' higher fat requirement in past times due to their poorer housing, clothing and work conditions, in general, and in the northern temperate and subpolar climate, in particular. Fat (blubber or oil) provides twice the caloric yield in humans as protein and supplies most of the body energy required under cold stress; it is therefore crucial for human survival in these circumstances. Furthermore, very little vegetable material was available (or used) in the more exposed areas, so people received all essential

\textsuperscript{1} Cf Christie 1785/86, UBB 221: f22r-22v; Kristjánsson 4, 1985: 90f (porpoise intestines); 5, 1986: 70-72, 352f (blubber, rengi [qv], meat), 72-74, 353 (baleen, skin, senews), 74-79; 353 (whale teeth, whale bones, otoliths); see also, eg, G. Clark 1947 and J.G.D. Clark 1974: 62-72; Martinsen 1964: 50-60; Sæmundsson 1932: 96f, 324. Because A. Christie's work is presented in extenso in item A.20 no cross-references will be made to it.

vitamins and trace elements from a varied animal diet.\textsuperscript{1} While the oil could be left to ooze naturally from the blubber, it was also obtained by rendering (ie, by melting and boiling, producing train oil) and by boiling proper. If not consumed fresh, blubber could also be pickled. Meat, undanflátt\textsuperscript{a} (qv) and rengí (qv) were also consumed fresh, otherwise they were preserved by drying, fermentation, salting, pickling and smoking. Around the mid 18th century, Icelandic export records distinguished 6 different kinds of train oil, viz: cod oil (porskalýsi); probeagle and mackerel shark oil (háfslýsi); Greenland shark oil (hákarlslýsi); bottlenose oil (andarnefjulýsi); whale oil (hvallýsi); and seal oil (sellýsi). Abroad, these products mainly served as illuminants.\textsuperscript{2}

All these marine products illustrate basic features of the Norse peasant fisherman subsistence as well as semi-commercial economy.

The products obtained from cetaceans of the same species and size vary greatly according to season and the life circumstances of each individual animal. Figures can therefore only be taken as indicative of the quantities involved in the taking of, eg, larger cetaceans. Statistical series are available for the fin whale showing that it weighs on average ca 23.1 tonnes at a length of 15 m, 53.5 tonnes at 20 m, and 63.8 tonnes at 21.3 m. Of this, 55\% is meat, blubber 19\%, intestines 11\%, bones 10\% and miscellaneous 5\%. Over most of the body the blubber layer is around 9 cm thick.\textsuperscript{3} In modern commercial whaling the average meat yield is estimated to be for the blue whale, 40 tonnes; fin whale, 17 tonnes; sei whale, 10 tonnes; humpback whale, 8 tonnes; and minke whale, 2

\begin{enumerate}
\item Cf McCartney 1975: 300.
\item Cf Aðils 1971: 489f.
\item Cf Vikingsson 1993: 179f; see also Johnsen 1959: 32f; S.dór 1975: 7.
\end{enumerate}
Although decaying carcasses did not provide meat they offered most other products. The oil yield is bigger in the right whales, the sperm and northern bottlenose whales than in the rorquals but the sperm and bottlenose whales are not considered particularly good for food. The bowhead whale offers the longest baleen plates, up to 4.5 m; otherwise, the baleen reach in the black right whale, 2.4 m; blue whale, 1.0 m; fin whale, 0.9 m; sei whale, 0.75 m; humpback, 0.64 m; gray whale, 0.5 m; and minke whale, 0.3 m. 2 Another important species, the longfinned pilot whale, as taken in the Faeroe Islands, is on average 4 m long and weighs ca 780 kg; males reach a length of 6.25 cm and a weight of ca 2.4 tonnes; the corresponding data in females are 5.12 m and 1.3 tonnes. 3

It is obvious that meat in quantities of 2-40 tonnes from a rorqual, and usually far more from a pod of, eg, pilot whales, with all other products proportionally, must have been of the utmost importance for every peasant fisherman household and coastal community throughout history. In fact, each porpoise mattered to any cottager family.

Only hard body parts of marine mammals survive in natural and wrought forms under favourable archaeological conditions. Among Norwegian Iron Age whale bone artifacts one finds, inter alia, weaving battens (late 6th-10th century AD); 'plaques', with stylised animal heads, for smoothing linen cloth (8th-11th century); 'cleavers', a small tool of unknown function (7th-9th century); fishing line winders (second half of the 9th century); and fishing line chafing pieces, to be lashed to the gunwale of the fishing boat. They are partly richly ornamented items. 4

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1 Cf IWC/37/OS ISAP 1985: 4; see also McCartney 1980: 536.
2 Cf Watson 1985: 60.
Fishing line winders (súla, F) and chafing pieces (*vaðbein, ON; vaðbein, F; vabein, N; vaðbeygja, I) in material and magic-religious respects relate to the present subject but their history cannot be considered here.

We have now presented the background and premises of this study and shall turn our attention to some six, quite diverse, main aspects of the theme.
4 Littoral and inshore legal régimes; whales and whaling

4.1 Synopsis

In this chapter the basic legal systems concerning property in northwestern Europe since prehistoric times will be introduced as a background for considering the socio-economic and legal categories of ownership to, and utilisation of, coastal resources, in Europe in general, and with Norse peasant fishermen, in particular. The taking of cetaceans and pinnipeds will be placed in the overall context of Norse farm appurtenances. The Anglo-Saxon/English, Norwegian, Icelandic and Orcadian-Shetlandic (Udal) inshore and littoral régimes will be presented, and the development of the ancient Norse/Norwegian régime and its relationship to the régimes in mainland Britain and Orkney are considered in particular. It is argued (a) that the internal process of the establishment of crown prerogatives in wreck, commons and whales in Norway must have modified a primal, late prehistoric, coastal and littoral régime which will have been very similar to that which has existed in Iceland until modern times; (b) that the Norwegian marbakki limit at the subtidal slope of coastal estates was established under the influence from Anglo-Saxon Britain, via Orkney; and (c) that the ebb limit in Udal law of Orkney and Shetland is not of Norse but rather of indigenous/Anglo Saxon/English origin.

4.2 Norse littoral and inshore legal régimes relating to whales and whaling: The framework

Ownership of land is generally considered to have developed in northwestern Europe during the Neolithic period when people settled and adopted agriculture in a permanent way. In Norway, and in fact all Norse countries, single farms predominate, not villages as in the rest of Scandinavia,
Approximate extent of various Norse law provinces in the Middle Ages and the theoretical route of a blue whale recovered in Greenland, 1385 AD, with an identified Icelandic shot.
Norwegian counties (fylker),
20th century

Figure 2
Icelandic counties:
Late mediaeval to modern *sýslur*,
with modern subdivisions
the British mainland, and farther south in Europe. Norwegian farms had cultivated infields and outfield of pastures and forest. The farm boundaries followed natural features in the landscape (rivers, burns, watersheds, mountain ridges, hills, etc) or were marked by stakes. Beyond the bounds of the farms was the commons.¹

Norwegians settled in Orkney, Shetland, the Hebrides and the Faeroe Islands in the 8th-9th centuries AD; settlement in Iceland followed mainly in the period about 870-930 AD, partly from Norway, partly from the archipelagos just mentioned. Finally, around 1000 AD, Icelanders established colonies in Greenland which survived into the 15th century.

Their common origin in Norwegian law of the 8th-9th centuries AD, and later interactions among the various Norse legal provinces, together with great societal stability over the centuries, has resulted in a high degree of similarity of the legal systems within the vast Norse area. Despite this, the integrity and internal dynamics of each legal system must be acknowledged. Even when described by the same words, many socio-legal categories ('commons', 'property limit', 'whale voe', etc), in the Middle Ages (and later) acquired varying meanings and were applied in different ways in the provinces, depending on the varying constitutions, traditions and local applications. Similarly, socio-economic changes caused developments over time, for example, turning the exclusive property of a single proprietor into communal property through farm divisions.

Since the early Middle Ages the taking of cetaceans in the Norse area operates within a framework of categories of activities at different and changing levels. If the mediaeval Norwegian, Icelandic and Faeroese laws and regulations are taken together, without any recognition of regional and temporal differentiation, the basic legal concepts underlying regulation of whaling encountered are

¹ Cf Heber 1939: 133; Robberstad 1978: 173f, 178.
roughly as follows:

(a) Discovery, securing, salvage and processing:

(aa) discovery, securing and salvage of drifting and stranded carcasses and living (dying) cetaceans in (peasants' and crown) commons, ie, outside the property boundary of a shore estate;

(ab) discovery, securing and salvage of drifting carcasses and stranded carcasses and living (dying) cetaceans in the littoral within the property boundary of a shore estate;

(ac) transport of a whale carcass (or whale products) through the waters of a shore estate;

(ad) flensing of a whale carcass within the property limit of a shore estate;

(b) hunting:

(ba) driving of cetaceans:

(baa) driving ashore in the commons;

(bab) driving onto the ground of a shore estate (or communally held private ground):

(baba) outside the farm garth (garðr);

(babb) inside the farm garth (garðr);

(babc) outside a (designated) whale voe/whale garth (hvalvägr/hvalgårð);

(babd) into a (designated) whale voe/whale garth (hvalvägr/hvalgårð);

(bb) 'shooting' of cetaceans:

(bba) 'shooting' in the commons, including outside the property boundary of a shore estate;

(bbb) 'shooting' inside the property boundary of a shore estate.

We may infer that part of this framework was also applied in Orkney and Shetland (even in the Hebrides) during the Viking and Middle Ages but sources about whales and whaling there seem only to refer back to the late 16th century.

As a technical term 'hunting' only applies to cetaceans that are moving by their own power, ie, swimming freely in the water and which, if touching the ground, are still able to refloat and swim away by their own power. If a cetacean cannot move by its own power, ie, is dead (floating or stranded) or is stranded beyond chance of refloating and moving away, it becomes subject to salvage. The concepts

1 Cf Bjørk 3, 1963: 179.
of ‘hunting’ and ‘salvage’ did not imply any property right: such a right was assigned separately to individuals and the ground.

4.3 Allodial, Roman and feudal law; littoral and inshore régimes

‘The encircling of hunting and fishing by specific legal rules must be much older than the codification of the laws’, ¹ or indeed their being written down.² The taking of whales is part of the utilisation of littoral and coastal resources; it is regulated primarily under the specific legal régime pertaining there and, secondarily, by the general rules for hunting and fishing.³ This involves exercise of the property rights which exist in the littoral zone and inshore waters as such, on the one hand, and in the living, captured and dead cetaceans, on the other. It is necessary, therefore, to sketch the principles of the Norse littoral and inshore legal régimes, outline their historical development in order to be able to place cetacean utilisation in the overall context. Occasionally a comparison with the régimes applied to pinnipeds,

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¹ Cf Gjessing 1955: 57.
² The most important legal sources are: Denmark: Scanian law (SKL), ca 1202-1216 AD; Jutlandic law (JL), 1241 AD; king Christian 5’s Danish Law (DL), 1683; Norway: Older City and Mercantile Law (EB), in force until 1276 AD; Frostathing law code (FTL), in force until 1274 AD; Gulathing law code (GTL), until 1274 AD; National Code of king Magnus Håkonsson lagabætir (MLL), enacted 1274 AD; king Christian 4’s Norwegian Lawbook (NLB), 1604 AD, basically a translation into Dano-Norwegian of MLL; king Christian 5’s Norwegian Law (NL), 1687 AD, a reformed code which basically prolonged the earlier whaling provisions; NL’s whaling provisions are first modified and replaced by the Norwegian Whaling Act, 1863 (NWA 1863), upon which follows totally reformed Whaling Acts 1869, 1896, 1904, etc; Faeroe Islands: Seyðabrævið (SB), 1298 AD, an amendment to MLL for the Faeroe Islands; revised SB statutes of 1637 (SB 1637) and 1698 (SB 1698); Pilot Whaling Statute (Grinderegulativ) 1832, etc (GR 1832; GR 1857; GR 1872; GR 1909; GR 1940-1953; GR 1955; GR 1986); Iceland: Grágás (GG), laws of the Icelandic commonwealth, effective to 1271 AD; Járnsíða (JS), king Magnus Håkonsson lagabætir’s code for Iceland, 1271-1281 AD; Jónsbók (JB), king Magnus (6) Håkonsson lagabætir’s code for Iceland, adopted by the Althing 1281/83. For further details, cf item A.15.
³ This should not be confused with statutory and common law.
driftwood and wreck is illuminating.

There exist three legal systems and corresponding principles which must briefly be introduced in order to establish them as analytical categories, viz, the allodial, Roman and feudal systems. Within allodial and feudal law particular regional variants may be distinguished.¹ First we shall look at the relations to the land proper, then the sea and finally the littoral.

The Norse allodial littoral and inshore régimes, including those of Orkney and Shetland, can only be understood in the context of northwestern European allodial law and the overall European developments in Roman and feudal law, together with the influences and dictates deriving from the Danish and Scottish/English crowns, respectively. This applies from the Viking Age to the 19th century.

Land held without acknowledgement of, or service rendered to, a superior is called allodium. Although free of limitations from above allodial ownership entails the right of disposition by the family or kin and might be subject to obligations from below if the holder had (feudal) tenants; similarly, allodial holders were subjected to reciprocal (neighbourhood) obligations. The payment of simple land tax (tribute) to the king is considered compatible with allodiality.² This is found widely in Germanic law and in recorded Norse law, being a branch of Germanic law. Allodial ownership of land entails ownership of the adjacent littoral and even sea, which we shall consider in detail later.

¹ Only selected references can be offered for the background aspects. Basic legal terms are presented by W. Bell (1826); J. Erskine (1903); T.B. Smith (1962); and J. Stair (1981). The sea, sea fisheries (including whaling) and the seashore (including the right to whales taken there) under Roman, feudal, British and Norwegian law are treated in detail by Bjerk 3, 1963: 6-20; Fenn 1926/1974; Fulton 1911; Moore 1888; Niitemaa 1955; and Rastad 1912.

According to older Roman (Quirintic) law, prior to the enactment of the Justinian civil code of 534 AD, Italian land could be held in full ownership (*dominium*, corresponding to *allodium*) or its ownership was divided so the owner had the 'naked property right' and the user held (possessed) it 'in bonis esse' (Pratorian property right). In the Roman provinces another kind of divided property right to land existed: the property as such was considered to be vested with the state (the Roman people, the emperor); private persons could only obtain a right to usage of such ground, *ie*, provincial property right.¹

Under the influence of Germanic law, the Justinian Codex fundamentally reorganised property in land along the lines of feudal dual ownership (*duplex dominium*): superior ownership (*dominium superiorius*; also called *dominium indirectum*) which could theoretically be allodial, and subordinate ownership (*dominium inferius*) which did not necessarily go beyond the right of usage (*dominium utile*). Feudal law regarded all land rights as emanating solely from the sovereign (*imperium*), in accordance with the law of God. In other words, the crown owned the country as a whole and no land could be held except upon an immediate or mediate tenure of the crown. The rule is, therefore, that whatever has no proprietor belongs to the king ("Quod nullius est fit domini regis"), *eg*, the commons. The same applies to movables, including hidden treasures, whose owner is unknown. Independently of his property rights (*dominium*), the king holds certain prerogatives (*regalia*), the principal one of which is jurisdiction. Some prerogatives are inseparable from the crown (*regalia majora*) while others (*regalia minora*) may be conferred on a subject. Many prerogatives originated in Roman law, others developed later, but after a council held in Roncalia, 1158 AD, they became statutory imperial feudal law by being incorporated into the Corpus Juris Civilis.²

¹ Cf Härtel and Pölay 1987: 188-190; Robberstad 1978: 170f.
Among these prerogatives (inter regalia) are the right to land, forests, salmon fishing, gold and silver mines, navigable rivers, ports, highways, bridges, the sea and seashores. No-one can claim rights to hold any regalia minora, including land, except by explicit title in writing from the crown or a crown grantee, following the maxim "nulla sasina nulla terra". According to feudal law the bounds of the realm extended to the middle of the adjoining sea(s), the extreme expression of which was the claim by, for example, the English/Scottish and Danish-Norwegian monarchs to sovereignty over whole oceans (mare clausum), claims which peaked in the 16th-early 17th century.

Different from the feudal superior/subordinate ownership is the principle found in all pre-modern legal systems by which two or more parties each hold specific rights in the land (thing), ie, where the ownership is separated from possession or subjected to certain rights or benefits in favour of others. Such restrictions on ownership occur when somebody owns a servitude (pertinence or easement) on another man's ground.

According to Roman law, fish and wild animals are res nullius, things belonging to nobody; they become the property of the person who first takes possession of them. The sea, navigable rivers and the foreshore (littoral, littus maris) belong to no-one and are common, ie, open for use to everybody (res communes omnium). The foreshore was considered to be the land below the highest usual tide mark in winter time. The state had no property rights in the foreshore, only the right to exercise sovereignty.

2 Cf, eg, Fulton 1911; Moore 1888: 227, 305; Røstad 1912.
4 Robberstad (1978: 171, 180) and T. Austenå (1985: 5) have, quite usefully, called this 'divided', or 'split', ownership for short.
(imperium) over it. People could therefore fish freely in the sea and navigable rivers. On the other hand, a cove alongside private property could be enclosed by stakes and a backwater of a public river could be acquired by prescription, *ie*, undisputed usage and enjoyment over a certain period of time.¹

In the mediaeval legislation of Denmark, Norway and Sweden as a whole one finds nearly all prerogatives of the state and crown (regalia), albeit in varying ways, *viz*: in the land, commons, foreshore, wreck, whales, streams and water courses, found goods, ownerless things, coinage, customs, taxes and, in later times in Norway and Sweden, also mining.²

In the Baltic and North Sea areas alodial ownership of the littoral and all its benefits came under pressure at least from the late 10th century AD when individual merchants were granted royal protection of life and property in the case of wreckage. In the period about 1100-1300 AD, the combined efforts of the crowns in northern Europe, the trading cities there, and the church (for humanitarian reasons), resulted in alodial shore proprietors being generally divested of rights to 'wreck', in the widest sense, including flotsam (*qv*), jetsam (*qv*), lagan (*qv*), sturgeons and cetaceans. It became *inter regalia minora*, with the exception of wreck proper where any person (in England also: dog or cat) survived: such wreck was held in custody for a year and a day to leave time for the owner(s) to reclaim it. Following the development in Germany and France, this process also resulted in the sea and the foreshore in England, Scotland

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¹ Cf Cushing 1988: 7f; Moore 1888: 245, 256; Nygard 1974: 131. Theoretically, three inter-tidal zones, or *littora marina*, may be distinguished according to the various tides, *viz*: (a) equinoxial high spring tides (cf Roman law); (b) twice-monthly spring tides; and (c) ordinary, or nepe, tides; the legal *terra firma* extends down to the ordinary high water mark. (Cf Moore 1888: 392f, 415, 674-676).

² Cf Fenger 1977: 78.
(mainland) and Denmark becoming inter regalia.\textsuperscript{1} This affected inshore fisheries considerably but offshore fisheries and merchant shipping only in particular cases. It must here be noted that in Norway and Sweden (then including Finland) the allodial ownership of the littoral continued to exist apart from a universal royal prerogative in wreck proper and, in Norway, also a partial prerogative in cetaceans that was graded between infield and outfield, and the commons,\textsuperscript{2} and which was established no later than around 1100 AD.\textsuperscript{3}

4.4 Anglo-Saxon, Norman, English and Scottish littoral and inshore régimes; royal fish

S.A. Moore (1888) has documented and analysed the history of the littoral and inshore legal régimes in England and partly in Scotland. Much of the following is based on his work.

The allodial (Udal) right to land is assumed to have prevailed in Britain before the strictly feudal system was introduced.\textsuperscript{4} Anglo-Saxon England seems in the early 11th century AD to have been in the process of feudalisation which was greatly advanced through the Norman Conquest in 1066 AD; however, many other features of Anglo-Saxon society continued to exist, only to be significantly modified later.\textsuperscript{5} Moore (1888: 653) concludes that in Saxon times the greater part of the foreshore was without question out of control of the crown; the Conquest changed

\textsuperscript{1} In Nordic literature this legal régime is often called 'Continental' which is misleading.
\textsuperscript{2} The crown share in whales seems, in principle, to increase with the zonal distance from the farmstead (cf figures 5 and 6).
\textsuperscript{4} Cf Bell 2, 1826: 546.
\textsuperscript{5} Cf Whitelock 1981; L.B. Smith 1981: 204f.
this state of things only in theory. The Conqueror confirmed, or regranted, Anglo-Saxon estates to be held 'in terra et mari, on stronde and on streame, on tyde and off tyde', implicitly recognising the rights of the owners of manors to the sea and river shores, the bed of tidal as well as non-tidal rivers. Other early Norman kings granted many similar liberties and franchises.¹ In rare instances actual grants of littus maris are known² but the right to entire ships, wreck, wine, sturgeon, porpoise, whale, a particular fishery, etc, is often specified as either being exempted or chartered separately, independently of any grant of manor or shore.³ The earliest known grant of wreck is by king Canute, 1023 AD, to the church of Canterbury.⁴ Sturgeon, porpoise and whale (balæna) are mentioned as kinds of royal fishes (piscis regius), also called great fishes (grand pisce, L; grampise, Fr) in England. The latter terms included cetaceans but we do not know which species were involved. In England, neither salmon nor lamprey have been treated as royal fish while salmon is regarded as inter regalia in Scotland.⁵ Towards the end of the reign of king John (1216 AD) rights to virtually the whole coast of England had been granted away.⁶

Despite the fact that the liberties of wreck, flotsam, jetsam, lagan and royal fish (primâ facie) belonged to the crown, they could by prescription, after 60 (40) years, become the true property and interest of a subject.⁷ Similarly, they may in Anglo-Saxon times also have been

² Cf Moore 1888: 682.
⁴ Cf Moore 1888: 9.
⁵ Cf Bell 2, 1826: 13, 416; Moore 1888: 104, 412, 579.
parcel of, or belonged to, rapes (Sussex) and hundreds, which were later granted to subjects.\(^1\)

The statute *De Prerogative Regis* (17 Edward 2, 1324 AD, ch 11) enacted that the king shall have wreck of the sea, whales, and sturgeons taken in the sea or elsewhere within the kingdom, except at places privileged by the king ("Rex habebit wreccum maris per totum Regnum Angliae, ballenas, sturgiones captos in mari seu alibi infra Regnum, exceptis quibusdam locis privilegiatis per Reges."). The statute is silent about the foreshore generally but its rules for construction of royal grants of lands and other circumstances imply that the foreshore as such, to the low water mark (and not the high water mark, or greensward), is usually parcel of a (chartered) manor (under *jus privatum*),\(^2\) but subject to the public rights (*jus publicus*) in, and peoples' necessary use (*usum necessarium*) of, it.\(^3\)

At least until about 1600, there seem to have existed two main concepts relating to the foreshore in England, namely: (a) that "all wrecks found so nigh the shoar as a man may adventure to ryde with a horse of xviij. hand hight and reach with a speare of xviij. foot longe, affirminge the Lord's soile to extend so farr."; and (b) it being the land between the high and low water marks, at ordinary tides, where the lord of the manor, provided he had wreck to his manor, would receive lagan while the king or his admiral would take flotsam.\(^4\) The former rule about wreck proper and whales bears the hallmark of being the older one, presumably Anglo-Saxon, while the latter would be post-Conquest and part of modern English law. Around 1575, proprietors in Wessex were said to "prescribe to have wreck

\(^{1}\) Cf Moore 1888: 152f, 411, 642; see also 394.
\(^{2}\) Cf Moore 1888: 147, 203, 230f, 244, 246-248, 364, 409, 643, 652; see also 227, 285, 302, 313, 378f, 414.
\(^{3}\) Cf Moore 1888: 33, 77, 256f.
\(^{4}\) Cf Moore 1888: 246; see also xxxvi-xxxvii, 255, 394, 468f, 481f, 674f.
as far from them as they can see a Humber barrel"¹ which could be reminiscent of a further Anglo-Saxon 'wreck limit', not dissimilar to the Icelandic driftage limit (cf below).

Moore provides illuminating examples of the feudal practice after 1280-1281 and, indirectly, of the old Anglo-Saxon rules about wreck and the division of whales, viz:

Under Edward 1, the Bishop of Durham, in 1280-1281 AD, was challenged for appropriating wreck at four estates in Yorkshire. He stated that he only claimed whale, if whale ought to be called wreck, saving to the king the head and tail thereof, and that he claimed by grant of king Ecgfrid (Ecgfrith, king of Northumbria from 670 AD) and confirmation by the Conqueror and Edward 1.² Gilbert de Gaunt and Richard Malebise were also challenged for appropriating wreck: They stated that they merely claimed whale which came ashore at a particular port, saving to the king the head and tail of it; the king's attorney prayed judgement because the whale was a royal fish. The jury found that the men and their ancestors had taken whale saving to the king the head and tail, but no judgement was passed.³ Similarly, de Gaunt was challenged for wreck at another estate: He pleaded that he did not claim wreck but only whale, 'if it ought to be called wreck, saving to the king the head and the tail', and this by prescription. The jury found that he and his ancestors had the whale from all time and he was discharged.⁴

The story repeated itself, with variations, in Lincolnshire in 1281, when various lords of, often considerable, manors were challenged for appropriating wreck, eg: a Roger de Lascelles stated that he took whales which came ashore but saved to the king the head and the tail by prescription. The prior of Spalding claimed wreck

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1 Cf Moore 1888: 231.
2 Cf Moore 1888: 81.
3 Cf Moore 1888: 81.
4 Cf Moore 1888: 82.
of the sea by prescription, saving to the king the head and tail of whale and other royal fish. Emeric de Rupecandardiri claimed wreck of the sea, including wrecked ships, and all royal fish coming ashore, saving to the king the head and the tail of them. The king's attorney stated that these prerogatives could not pass out of the crown without speciality but that, alternatively, if the court found prescription (long seisin, ie, freehold) to be sufficient then he prayed that the use be established. In all cases the juries concluded that the defendants and their ancestors had always had the whales and (other) wreck as claimed and either discharged them or passed no judgement. ¹ William de Wyleghby was also challenged for taking wreck at his estate in Lincolnshire. He claimed wreck of whale and all royal fish, saving the head and tail for the king. The jury found that he had taken it ab antiquo and that the king had had what belonged to him of right; de Wyleghby was discharged. Moore (1888: 84) concludes: "It would thus appear that the right to the head and tail of royal fish was reserved to the King, at any rate throughout the county of Lincoln." As we have seen, the same 'head + tail division' is known from Northumbria, presumably going back to ca 670 AD. Henry de Bracton (d 1268) also stated that only the head and the tail of the whale belonged to the king; neither did anciently the entire sturgeon belong to the king. ² From the traditional division by the prior of Spalding, the sturgeon seems also to have been subjected to the 'head + tail division'. Lord Chief Justice Hale (ca 1667: 412) states that according to the custom used in the English admiralty all 'great fish' "were divided, and a moiety [ie, half] was allowed to the taker, the other moiety to the admiral in right of the king". In the case of whales "The king had the head, and the queen the tail, which countervailed a moiety; and the taker had the body, which

¹ Cf Moore 1888: 83f.
² Cf Moore 1888: 412.
countervailed the other moiety."¹ Hale assumes this "to expound Bracton". It is hardly improper to infer that this also is the content of the earlier head + tail divisions, even as far back as about 670 AD. Although this writer is not aware of documentation from southern England in particular, it is submitted that we have enough evidence to establish the main features of the ancient Anglo-Saxon inshore and littoral legal régime and rules of division of royal fish, including cetaceans.² There is every reason (cf below) to assume that it was in the same tradition that the Scottish kings, in 1154 and 1227 AD, granted the whole head, except the tongue, and half of the fat for altar lights, of whales taken between Forth and Tay to the abbey of Dunfermline.³

It was with T. Digges (ca 1568/69), during the reign of Elizabeth 1, that the argument was first advanced that the English crown had never granted out foreshore, salt marshes, etc, as parcel of manors, and with the accession of Charles 1 (in 1625) the crown, on the basis of jus privatum, began to grant foreshores, fisheries, etc, from the lords of manors who had previously enjoyed them to others.⁴ This involved the application of Roman law.⁵ Digges also explained that the English kings had been content to suffer that the common people (fishermen) of England, by virtue of jure gentium, enjoyed the fish they took offshore in the English seas by their own work and adventure, ie, the kings recognised a common right of piscary in the 'royal vast' (ie, commons); however, for remembrance of this favour and to recall their dominion and empire of the seas and the sea soil (including the right of anchorage) so that it would not be extinguished, the kings

¹ This moiety-moiety division is notable; we shall return to the aspects of head, trunk, tail division and 1:2 ratio in chapter 7.
² Northumbria/Cumbria is in any case most relevant for our coming reasoning.
³ Cf APS 1, 1844: 364a, 386a, 407a, 427b; see also APS 12, 1875: 'Whale'.
⁴ Cf Moore 1888: 182-184, 258, 419, 432f, 676.
⁵ Cf Moore 1888: 303.
had always reserved to themselves the chief fishes, sturgeon, whale, etc.\textsuperscript{1} From about 1800, the British crown also asserts its ownership of the foreshore on the basis of \textit{jus publicum}, ie, that the king holds it as a trustee for the public privileges.\textsuperscript{2}

On the Scottish mainland, Scots and Picts were united into one kingdom in 843 AD. Anglo-Saxon cultural influence was considerable in Scotland: Prior to 1018, the kingdom of Northumbria extended into the southeastern Scottish Lowlands, Anglo-Saxons immigrated into the wider Lowlands, and the Scottish royal house intermarried with Anglo-Saxon noble families. David 1 (1124-1153 AD) and his successors strengthened the royal government and influence under a modified form of Anglo-Norman feudalism. The emphasis on a charter, setting out rights and obligations involved in landholding, was a new, radical, element in Scottish society. Although the Celtic clan system, stressing family bonds, became increasingly feudal, the distinction between Lowland Scotland and the clan dominated Highlands remained for many centuries. The main influence in Scoto-Norman law was from the south and the English legal experiment was largely copied in Scotland.\textsuperscript{3}

In Gaelic Scotland we find an allodial system where land seems to have been inherited by all free-born males of the same lineage and perhaps held jointly by inheriting sons.\textsuperscript{4} Laws and landholding in the Lowlands hardly differed substantially from what was recognised in (English) Northumbria. The earliest Scottish grants (11th century) are in style reminiscent of Saxon grants made centuries before the Norman Conquest.\textsuperscript{5} As to the foreshore, Moore (1888: 573) writes: "the ancient law on this subject in

\begin{itemize}
\item \textsuperscript{1} Cf Moore 1888: 203; see also 256, 295, 298f, 367, 377.
\item \textsuperscript{2} Cf Moore 1888: 433, 464, 466, 573.
\item \textsuperscript{3} Cf Simpson 1981: 234f; Smith 1962: 5f, 10, 13.
\item \textsuperscript{4} Cf D.S. Thomson 1987: 72.
\item \textsuperscript{5} Cf W.J. Dobie 1936: 462f; Smith 1962: 6.
\end{itemize}
Scotland has, like the ancient law in England, been overridden by the prerogative theory". While the *primâ facie* theory of the prerogative right to the *jus privatum* in the foreshore was first advanced (by Digges) in England 1568/69, and was strongly resisted there until 1670, it seems not to have been introduced in Scotland before 1849. Until then Scottish law appears to have been the same as it was in England prior to the late 16th century.¹ Scottish law, at least until 1849, was, therefore, that the foreshore is presumed to be granted as part and pertinent of the adjacent land under the burden of the crown's rights as trustee for public uses (ie, navigation and fishing) of the shore or what is covered at ordinary high tide. The grant is construed to include the shore to the ebb mark, with the property extending and receding with the tide. A right to the shore includes, by implication, sea greens (salt marshes) which are occasionally covered by the water, rocky islands also occasionally covered, with their seaweed, etc.²

The Scottish royal prerogative regarding cetaceans is set out in *Leges forestarum* (attributed to king William 1 the Lion, 1165-1214).³ The Latin text of chapter 1 ("De investione ceti") is more compressed (edited) than the Scots one ("Of a quhail fyndyn on pe see cost"), possibly because the former does not follow ancient formulae as closely as the latter does. The Scots text reads approximately like this:

'Of a whale found on the sea coast.
If somebody finds a whale beside [ie, above] the ebbing of the sea toward [ie, below] the flood mark [Lat: 'within the flood marks'] it shall be the king's escheat except that every baron has his part according to the assize of the kingdom and besides the king's tithe shall be safe. Similarly, if any

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¹ Cf Moore 1888: xlii, 573f. This aspect is important when interpreting various 19th century 'whale cases' in Shetland.
² Cf Bell 2, 1826: 422; Moore 1888: 547, 676; Smith 1962: 64.
³ Cf APS 1, 1844: 692 [328].
[such] fish or a little whale or a tumbral [tumbrellus, L] or any such fish be found beside the marks of the sea [Lat: 'within the flood marks'], beside land of the baron or of any other free tenant so that a wain with 6 oxen may draw the fish or that whale or that tunbrell [tynellus, L] to the land of the baron, the baron shall have the escheat and if the wain breaks within the flood mark the king shall have the escheat.'

From the same period we know that William de Bruce (1194-1214 AD) chartered to the abbey of Holmcultram, a particular fishery off the firm land and at sea banks on the Scottish side of the Solway, excepting craspies and royal fish.

Chapter 1 of the Forest Laws remained statutory law until most recent times. In 1809, A. Edmondston analyses the practice and concludes:

"From what I have observed, respecting the size of the skeleton, and from what I have learned from others, concerning the bulk and weight of the blubber and muscle, I am disposed to think, that any whale not exceeding thirty, or thirty-five feet in length, may be drawn by a wain and six oxen at high water; the distance prescribed is very short, and the power is great."4

For reference purposes it may be mentioned that according to current (1976) Scottish law all whales 25 feet or longer are royal fish (subject to manorial rights) with the exception of northern bottlenose and longfinned pilot whales which, regardless of their size, are not royal fish.

On the basis of the present evidence this student

1 Cf APS 1, 1844: 748 [384].
2 Cf grand pisce (L) and grampise (Fr), above.
3 Cf Moore 1888: 23.
4 Edmondston 2, 1809: 156.
5 Cf Fraser 1976: xi.
ventures the hypothesis that the Scottish 'six oxen power draught' (30-35 feet length) and the (Dunfermline and English) 'head + tail division' are both early Anglo-Saxon forms of royal fish, possibly resulting in approximately similar proceeds for the crown over time.¹

4.5 Norse farm system; commons, inshore and littoral régime in Norway

In Neolithic times peasants occupied favourable farm sites along the Norwegian coast where they lived with their extended families. Through the establishment of further single (allodial) farms, settlements developed which used and held territories well beyond the immediate settlements. Initially there was no-man's land between these territories which was slowly occupied in the same way and by expansion of the neighbouring settlements.

The coastal region in Norway has presumably since ancient times been considered to extend to the upper range of the salmon migration in rivers.² The impermanently settled mountain areas, plateaus, moors, forests and pastures were called 'upper commons' while the uninhabited headlands, islets, islands, parts of the fiords and of the sea were termed 'outer commons'.³ 'The commons shall remain as they have been of old, both (at) the upper and the outer' ("Svä sculu almenningar vera sem verit hafa fyrr at fornul fari bæði hit öfra oc hit ytra"; FTL xiv 7).⁴ Into modern times the overwhelming part of Norway was

¹ It is a question whether Edmondston's estimate of 35 feet as the maximum size for removing a whale in the described manner offers a clue to the origin of the comparable (postulated) ancient Norse limit of 20 ells and the derived mediaveal Norwegian limit of 18 ells (cf chs 7.3; 7.5.4; and 7.6); furthermore, whether the suggested 35 feet could imply the 'Minke whale' (cf item A.17.3, Table B) as the reference species behind the Scottish 6 oxen draught.
² Cf Aðalbjarnarson 1, 1979/IF 26: 176.
⁴ See also MLL vii 61; NL 3-12-1; GTL seems not to have such a provision.
Inshore and littoral legal régime in Iceland

Inshore and littoral legal régime in Norway

Inshore and littoral legal régime in Orkney and Shetland
Figure 5

Hypothetical premordial Norse landward and seaward property régime.
Sketches of the mediaeval to modern landward and seaward property régimes

in Iceland (fig 6a)

in Norway (fig 6b)
clearly commons. Through perscription and, since the Middle Ages, by settlement of crown tenants in the commons, they were gradually reduced.¹

Norse property rights in land, like all other rights in natural resources, centre on the fenced-in infields of the farm, ie, its cultivated fields and meadows, around the farm houses (cf innangarðs). The farm usually included, as private property, adjacent land (outfields) which was defined by natural boundaries, land marks and signs, the littoral and the adjacent sea (of varying extent between countries). Outfields, lakes, sea, forests, mountain pastures, etc, were often also communal (for some farms) or common (for the settlement or district) with rights in them pertinent to the farm and usually relative to the size of its infield. The basic notion in old Norse law seems to have been that the common resources, whether in the outfield or in terrestrial, littoral and marine commons, belong to those living closest by.²

In the course of time the preferential right of the local people to the commons became more marked but the activity which fell under this provision varied from place to place. In southern and inner districts (the 'upper commons') hunting, fishing, catching, pasturage and chaleting, hay making, peat cutting, tree felling, charcoal making and bog iron production were dominant. In the 'outer commons', ie, along the coast and in Finnmark, the emphasis was on fishing (including the right to establish fishing stations, to stay there during the fishing season and to maintain fish drying racks there), hunting and the taking of drift wood and whales.³ The Norwegian traditions of commons varied considerably between districts.⁴

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¹ Cf Anon 1988a: 55.
⁴ Cf Tønnesen 1977: 126.
As Finnmark traditionally was commons under Norwegian statutory law as well as Samish common law, private property and odal rights in land were virtually unknown there until the late 18th century.\(^1\) A small part of the outer commons in the rest of the country also belonged to the crown.\(^2\) In 1578, the Council of Lords (herreddag) found for the inhabitants of Finnmark against their feudal overlord that they had the right to drift wood: this should remain as it had always been, the judgement stated.\(^3\)

Since at least 1100 AD and through the 19th century it has been the main rule in Norwegian law and practice that the shore estate has exclusive right of utilisation of resources down to the marbakki (mararbakki, marreinsbakki, marreinubakki; cf GTL 95; MLL vii 65e; NLB vi 62d; NL 5-12-17), ie, the point where the subtidal slope towards 'the deep' (djúp) begins which is common (cf MLL vii 64 and 65).\(^4\) The infield was considered to extend to the subtidal slope,\(^5\) an extension we could call the 'marine infield'. Robberstad (1952: 14f) suggests that the subtidal slope may initially have been the border of free traffic (as opposed to utilisation). From this follows that the later known private and communal 'fish fields', etc, (cf below) farther offshore were presumably initially part of a continuum adjacent to the 'marine infield', ie, a kind of 'marine outfield'. Determination of its outer limit will be considered later.\(^6\) As lately as in 1889, the Norwegian High Court, in two judgements, declared that

\(^1\) Cf Niemi 1979: 166; Olafsen 1923: 339.
\(^2\) Cf Olafsen 1923: 343.
\(^3\) Cf Tønnesen 1977: 128f.
\(^4\) Cf Austenå 1983: 8f; 1985: 12f; Bjørk 3, 1963: 97-100; see also item A.16.15.
\(^5\) Cf Robberstad 1952: 13. For details, cf item A.16.15.
\(^6\) The implied mirror-imaging at sea of the land zonal division is important for the considerations regarding the Icelandic zones that follow below.
Norwegian law had never qualified the *marbakki* principle.¹ Where no subtidal slope exists comparatively near to shore a limitation to the 2 metre bathymetric contour line was first suggested by A. Helland in 1891, and by H. Scheel in 1912. Helland proposed a general rule, while Scheel allowed for special circumstances and tradition. Scheel’s view was first referred to by a minority of High Court judges in a case in 1915, while a judgement in 1927 established it as a secondary principle.²

Recently all (295) coastal municipalities in Norway were officially approached about the local understanding of how far into the sea the right of property extends: 76% of them replied, 20% of which mentioned the subtidal slope and/or the 2 metre contour line as the boundary (which now constitutes national legal practice); 24% mentioned the subtidal slope; 26% the 2 metre contour line; 5% the shoreline; and 10% various other limits, *inter alia* ‘as far as a horse can wade’ and ‘as far out as the salmon migrates’.³

Taking the above together, this student is bound to conclude that the *marbakki* limit, although it has been statutory law in the Gulathing law district since around 1100 AD and in the whole country since 1274, cannot be assigned the absoluteness with which it has hitherto been treated. In practice it has been modified by topography and greatly varying (extant) local customs, of which the horse and salmon examples could be the oldest of all: cf

1 Cf AustenÁ 1983: 9; 1985: 13; Neergaard 1984: 317. In 1889, an inclination of 1:5 was considered sufficient to constitute the subtidal slope. In 1915, this was raised to 1:2.5, with the upper beginning of the slope constituting the limit. (Cf Anon 1988a: 27; AustenÁ 1985: 11, 14). It is often within 30 metres from shore (cf Anon 1988a: 50).

2 Cf Anon 1988a: 27f; AustenÁ 1983: 10f; 1985: 14f; Nygard 1974: 134. The limit at the 2 metre contour line seems measured from the usual low tide (cf Neergaard 1985a: 12, 15; 1985b: 36). Helland chose the 2 m contour line on grounds of it being somewhat beyond the depth to which the proprietor could wade (cf Anon 1988a: 27; Nygard 1974: 134). The reference to a man’s wading distance may (also?) have been an ancient notion but Robberstad (1954: 23) is of the opinion that Helland misinterprets GTL and that the 2 m depth limit theory is not sufficiently supported.

3 Cf Neergaard 1984: 319.
the landward extent of the coastal zone and the Anglo-Saxon foreshore limit.

The early mediaeval Norwegian provisions regarding whales and whaling are contained in the Older Gulathing Law (GTL, chs 149-150), Frostathing Law (FTL, section xiv, ch 10) and Older Bjarkø Law (ÆB, ch 145), written down during the 11th-12th centuries AD. These provisions are generally incorporated into the high mediaeval National Code of Magnús lagabætur (MLL, section vii, ch 64), from 1274 AD, and repeated in the Norwegian Lawbook of king Christian 4 (NLB, section vi, ch 61), of 1604 AD, and the Norwegian Law of king Christian 5 (NL, book 5, ch 12, arts 1-13), from 1687 AD.¹ The land share in cetaceans is allodial but all mediaeval Norwegian legal codes show the existence of regalia in whales,² generally graded and, until their unification in MLL, also varying between the legal provinces.

From the early Middle Ages the Norwegian realm and administration was feudalised but in a far less complex way than is known elsewhere in western Europe. Following the union with Denmark as from 1380/1397 AD, fiefs along Danish lines were introduced in Norway. The feudalisation progressed further with the Reformation (1536).³ In the 17th century the Danish-Norwegian crown on several occasions enacted provisions in Norway that were contrary to the principle of allodial ownership unto the subtidal slope, viz: the decrees concerning the 'Privileges of the nobility' (24 June 1661, § 18), the 'Privileges of the counts' (25 May 1671) and NL 4-4-4 (1687; cf DL 4-4-4) that directly speak of 'the King's foreshore'.⁴ This new situation is reflected in the Larvik county (grevskab),

which was created in 1671,¹ and presumably wider: the feu charter, 1692 AD (extensions-patentet), inter alia, granted to U.F. Gyldenløve 'all wreck and foreshore rights and all other pertinences, regardless of their name' which later is detailed as 'pertinences from ship wrecks, fishery of all sorts of fish, and all other liberties, rights and pertinences, nothing excepted'.² The feu charter seems to violate Norwegian law in principle and the rights of allodial owners in the county in particular.³ Nevertheless, the ancient Norwegian practice prevailed in the littoral in general.⁴

4.6 Shetlandic farm system; Udal littoral régime of Orkney and Shetland; whale divisions

The Norse settlement of the Northern and Western Isles, Caithness and Sutherland began in the early 9th century. The Norse established theirodal holdings by occupation and acknowledged no vassalage, homage or service to king or nobleman. Orkney and Shetland became part of the Gulathing law province, and were so until 1611. From the late 9th century they were ruled by Norse earls nominally subject to the Norwegian crown. When the earls also held Caithness they did so as vassals of the Scottish crown. In 1195 AD, Shetland was detached from the Earldom of Orkney and governed immediately by the Norwegian crown after the earl of Orkney had taken part in an insurrection against the king. By the mid 13th century the Norwegian king was unable to retain the Hebrides and Man which were ceded to Scotland in the treaty of Perth, 1266. Orkney and Shetland were pawned to Scotland in 1467 and 1469, respectively,⁵

¹ Cf Fladby, Imsen and Winge 1981: 118.
² Cf Anon 1839a: 569, 571.
³ Anon 1839a: 571 also hints at this.
⁵ The Gulathing court (Bergen) remained the islanders' court of appeal until 1611 (cf Clouston 1914: 96-99 [dipl 43]).
as part of a marriage settlement with the crown of Denmark-Norway, but were never redeemed.\(^1\) The ensuing constitutional, legal, economic and cultural development in Orkney and Shetland is very complex and warrants the giving of some particulars: In the 13th century the Earldom passed into the succession of Scottish earls. After one earl in 1470 had made over ‘all right of his earldom of Orkney’ (Shetland was separate) to the Scottish crown in exchange for estates on the mainland, both the Earldom of Orkney and Lordship of Shetland were annexed to the Scottish crown in 1471.

Norse law made provisions for the superiors of Orkney and Shetland to act in what amounted to the capacity of admirals. The first recorded admiral in Scotland is Henry Sinclair (d 1417) who, as it happened, was at the time earl of Orkney. The fouds (bailiffs) also had maritime jurisdiction. The offices of sheriffship and foudry and office and right of admiralty were nominally separate from the Earldom and Lordship but they often went together and were intertwined. In 1472, the bishopric of Orkney and Shetland had been transferred by papal bull from Nilorós (Trondheim) to St Andrews. Following the Reformation in 1560, ecclesiastical estates in Orkney and Shetland were organised under a nominal bishopric (abolished in 1825). In 1564, Robert Stewart received from Mary, Queen of Scots, a tack (leasehold) of Orkney and Shetland and, in 1565, a feu charter for those countries. In 1581, the Earldom and Lordship were re-erected in Robert Stewart’s favour but upon the arrest of his son, Patrick, the Earldom and crown lands were, in 1612, again annexed to the crown and turned into a stewartry, administered directly by a senior royal official. Following an exchange of estates in 1614, the bishopric and earldom estates were reorganised, inter alia,

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to avoid overlapping jurisdiction. However, they were often farmed out together. From 1643 to 1669, the Orkney earldom estates were mortagaged to the Earl of Morton, then farmed out until 1707 when the Earl of Morton obtained a new grant which, in 1742, was confirmed by an Act of Parliament. In 1766, the earldom estates and rights were sold to the Earl of Zetland. The Earldom of Orkney was revived again in 1696 for George Hamilton (d 1737). Since the high Middle Ages, Scottish clergy, civil servants and gentry had settled increasingly in Orkney and Shetland.

As a pledge, the two countries retained their laws while the royal revenues went to the Scottish crown. A codified Norse lawbook, presumably in two copies with specific regulations for each country (known as the Orkney and Shetland lawbooks, respectively), was used into the first decade of the 17th century. Although the language of the 'lawthing' (ie, general assembly and court of law) had become Scots, the legal language still used many Norn terms. In 1549, the church extended Scots law and practice to the diocese of Orkney which, after the Reformation, also applied to Shetland, but in an Act of Parliament of 1567 both countries were stated to enjoy their own laws and should not be subject to the common law of the realm. In 1611, the Privy Council abolished Norse law and replaced it with Scots law, except that land could still be held according to Udal right (without grant and infeudation) or, in the words of the relevant Act of Parliament in 1633:

'... the udallers of Orkney and Shetland who these many ages, conforming to the Danish [ie, Norse] law, possessed their land for payment of scatt and tiend, that no man be interponed between His Majesty and them to molest them, but that they remain His Majesty's immediate vassals for payment of scatt and

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other deities conforming to their rentals until His Majestie conform their rights to the laws of this kingdom.\(^1\)

Charters for subinfeudated lands seem first to have become the practice in Orkney and Shetland with the farming out of church lands after the Reformation. After 1612, Udal lands were also increasingly converted into (irreversible) feus by the issuance of charters by the crown and its grantees.\(^2\) The quality of land in Orkney by far surpasses that in Shetland. It is therefore not unreasonable to attribute some truth and historical depth to Tudor’s words that the Shetlander was a fisherman who had a farm while the Orcadian was a farmer who had a boat.\(^3\) In modern times, prior to the Crofters Act 1886, tenancy conditions deteriorated particularly in Shetland where crofters were also required to fish for the merchant laird (ie, landlord merchant) or his tacksman (lessee), who attempted to extend this obligation to whaling outside the littoral.\(^4\)

In Shetland, the Norse infield-outfield system continues to the present day, although under different and changing terms. Originally cultivated tracts, ie, non-fallow infields were skatt lands, skattald (NS), and were taxed for the upkeep of the earl’s government. As elsewhere in the Norse area the infield entailed outfield (hagi, ON; hoga, hog, NS), or communal pasturage. Somehow the term skattald got restricted to hagi and then superseded it, giving rise to the notion that skatt (NS) was a payment for the use of the outfield.\(^5\) In the 18th century all lands that paid skatt drew their proportional shares of seaweed, sea ware, driftwood (raga, NS), wreck and whales “within

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1 Cf APS 3, 1814: 41; 12, 1875: ‘Orkney’.
2 Cf Bell 2, 1826: 546; J.M. Dobie 1936: 449f; Craigie 1896; Rodger 1857: 27f; Smith 1962: 518.
3 Cf Tudor 1987: 104; see also G. Donaldson’s foreword (xxi) there.
4 Cf Fenton 1978: 547; Smith 1984; Tudor 1987: 130f.
5 Cf Jakobsen 1, 1985: 325; 2, 1985: 775; Johnston 1910: 100; 1912: 127. It would be desirable to follow Johnston (1910: 100) and maintain the original meanings of skattald and hagi.
their respective boundaries"; lands that paid no skatt (ie, fallow infields) were called grassland and drew no share of pertinences.¹

The earliest documentation of the bounds of shore estates in Orkney and Shetland is from the late 15th-early 16th century, viz:

1480, a deed pertaining to lands in both countries: "... fra the heast stane of the hill to the lawast in the ebb"; ²

1509, a judgement by the lawman of Orkney and roithmen regarding a particular farm in Orkney "... fyndis be the lawbuik" to extent "fre the said dyke and stane to the lawest of the se and sand"; ³

1527, a deed, issued in Kirkwall, conveying three merks of land in Clouston, Stenness, Orkney, "... fra the hiest stane in the hill till the lawest stane in the ebe"; ⁴

1528, a deed, drawn up in Scots and signed in Unst, specifies an estate in Shetland as extending "... fra the heyst p[oin]t of the hill to the laues stein off thye Ebb"; ⁵

1536, a deed, issued in Bergen, conveying six merks of land in Hammerland and Giotonn, Shetland, "... fra den offste stein [ij] fielde oc tull den neste stein i fioren och al [Æ]nge ... Rec ..."; ⁶ and

1538, a deed concerning four merks of land in Lunnasting, Shetland, "... fra the heast stane in the hil to the lawest in the eb". ⁷

² Cf Johnston and Johnston 1, 1907-1913: 52f [dipl 32].
³ Cf Clouston 1914: 81f.
⁴ Cf Johnston and Johnston 1, 1907-1913: 108f [dipl 57].
⁵ Cf Goudie 1904: 116. Robberstad's (1983: 65) rendering of this and the subsequent 1538 passages is not entirely correct.
⁶ Cf Goudie 1904: 88; modified by me as I presume the text should actually be read.
⁷ Cf Goudie 1904: 142; see Robberstad 1983: 65. From Orkney, 1530-1546, there exist further diplomas referring to '... the lowest (stone) in the ebb' (cf Clouston 1914: 211, 229, 232 [dipls 108, 120, 123].
To the present day the Udal maxim regarding the foreshore has remained '... to the lowest (stone) in the ebb' but in the 18th and 19th centuries it was challenged and in 1890 finally overruled by the feudal-Roman law principles in the case of whale drives (treating them as a kind of fishery proper).¹

Cetaceans were a valuable resource for oil and, thus, income in both Orkney and Shetland. Earlier, whale meat was also consumed² but presumably more in Shetland than Orkney. From about 1600 (as far as sources reveal) to 1890, cetaceans were a very contentious issue in Orkney and Shetland because of the extraordinarily complex situation arising from the royal prerogative, grants, jurisdiction, Udal rights in the foreshore, private agreements, (real and imagined) encroachments, and legal and social rights of capturers (in the sense of fishermen).³ Behind all these obscuring aspects this student had expected to find a country practice which would comprise the royal claim to whales above what 6 oxen could pull (or longer than 30-35 feet), with smaller whales being divided (perhaps ½:½) between the shore proprietor (Udal and feudal, alike) and the salvors/drivers. Pending a detailed analysis of the historical sources I see so far no trace of such a comprehensive system in the 18th-19th century.

T. Gifford describes how pilot whales which had been driven ashore in Shetland around 1733 were divided 1/3-1/3-1/3 between admiral, shore proprietor and drivers, "according to law and the country practice", giving tithe to the vicar and the heads to the bailiff.⁴ It seems that

² Cf Donaldson 1958: 56f; Gifford 1879: 25.
³ A. Fenton (1978: 545-547) and G. Donaldson (1958: 56f) give good summaries of the issue and various cases.
⁴ Cf Gifford 1879: 24f. The account offers an interesting comparison with the Faeroese practice.
whales driven ashore in Orkney in March 1733 were also subject to the 1/3-1/3-1/3 division. Such a division is not surprising. Also, the procurator fiscal of the Admiralty Court of Orkney, on 25 May 1737, states

"That by the practice of the Country when any Whale fish Either come a Shoar of themselves or are Driven on shoar by Boats and Men one third part thereof belongs to the proprietor of the ground on which they come on shoar One third to the Salvers and the other third to the Admiral free of any Charge." \(^2\)

This seems clear enough but even a hundred years later, in 1840, the Lords Commissioners of Her Majesty's Treasury instructed that the crown's rights regarding all large whales as royal fish "taken or stranded" in Shetland should be strictly enforced, and that they "wholly be claimed by the Admiral, his Depute or Substitutes for behoof of the Crown", but they found that the captors or salvors should be duly remunerated, but not with more than 2/3 of the proceeds. However (in the words of the Vice Admiral), "with regard to small whales taken on the Coasts of Zetland which are now legally divisible into three parts; vizt one to the Crown, one to the Heritors and one to the Salvor or Captors, the Lords of Her Majestys Treasury have authorised the Admiral to waive in favour of the Salvors the right to the said share or third falling to the Crown." The Vice Admiral and Sheriff are instructed to take care that the captors and salvors "reap the full advantage that is intended to them". \(^3\)

It is difficult to see why the procurator fiscal, in

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1 Cf letter by John Rideloch, dated Kirkwall, 19 April 1734 (OA D38/2549/22; see item A.17.1 (A)).

2 Cf OA D38/2526A; see item A.17.1 (A).

3 Cf Letter by the Lords Commissioners of HM Treasury to the Vice Admiral and Sheriff of Orkney and Zetland, 21 December 1840, and ensuing 'Notice to the Inhabitants of Zetland respecting Whales' by the Vice Admiral (in: Tait 1947: 107ff). J. Chisholm (1900b: 188f) states that in Shetland smaller whales 'belong' half to the proprietor and half to the captors. This is neither use and wont nor statutory law and is, thus, erroneous although it may be the contents of private agreements.
1737, even under the Admiralty of the Earl of Morton, should bypass the royal fish,\(^1\) except there existed a well-established practice in Orkney and Shetland of dividing all cetaceans according to the 1/3-1/3-1/3 rule, generally disregarding the royal fish. In 1738, the earl and his steward clearly tried to enforce the royal fish provision in Shetland concerning a 15 m long whale but were opposed by the widow of Henderson of Gardie who insisted "for a third to the Ground according to the ancient Zetland practice".\(^2\)

The 1/3-2/3 division was certainly effective as from 1841; it may, however, date from around 1825/26.\(^3\) After the crown was no longer directly involved in the division of the smaller cetaceans, proprietors indeed in a few cases claimed and/or took half of the catch.\(^4\)

Whales grounded beyond the ordinary (or maximum) low water mark were apparently not treated differently from those grounded above it.\(^5\)

J. Ryder (1988: 3) assumes "that the original Norwegian settlers established a system of law in Orkney and Shetland, as elsewhere, which closely mirrored the system with which they had been familiar (the more so if the impetus for the westward expansion was population pressure rather than political malaise). Since the Gulathing code was common to all the western colonies of the Norwegian empire, it is highly unlikely that the code accepted by the Orkney and Shetland lawthings was significantly different".

W.P. Drever (1900: 28) writes that "Udalism came to the

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1 Cf Fenton 1978: 545-547.
2 Cf letter from Andrew Ross to the Earl of Morton, 20 Sept 1738 (SA D19/2566B; cf item A.17.1 (B)).
3 Cf SRO 1890: 28-34, 37f, 41-62, 65-73, 75-79, 81-83, 85, 91f, 94, 96f.
4 Cf SRO 1890: 45f, 54, 59, 91.
5 Cf SRO 1890: 77.
Orkneys and Zetland with the Northmen, in its virgin state, in the ninth century" and "Udal law, so far as Scotland is concerned, is foreign, and confined to the Orkneys and Zetland". J.L. Wark (1933: 321) follows this view almost literally and other authorities are of the same opinion.¹ In fact, all legal historians appear, paradigmatically, to relate Udal law, including the foreshore aspect, to old Norse odal law and to contradistinguish it from Scottish feudal law. Among them only K. Robberstad (1983: 65f) has studied the origin of the Udal ebb limit as such, which differs considerably from the sub-tidal slope (marbakki) limit in mediaeval Norwegian law: He considers that it was probably modified in Orkney and Shetland and was then expressed in the clause 'to the lowest of the ebb'. "This modification could not be of any advantage to the landowner:² the use of the word 'ebb', which is not a Norse but an English word,³ indicates a mediating expedient and one of a type to be expected from a lawyer. When was the limit of the 'ebb' introduced ...?". With reference to the earliest relevant diplomas (1480, 1509, 1528, 1538) Robberstad concludes that "it is probable that the clause was first used in Orkney";⁴ that somebody there, in the late Middle Ages (perhaps the 15th century), "invented a new concept of the limit in the light of what he saw as the rule which would be in harmony with the nature of the islands - a rule which would bring least disadvantage to the islanders" in the face of pressure from the Scottish crown.⁵

The evidence about the littoral régime in Anglo-Saxon

¹ Cf J.M. Dobie 1936; Drever 1904; Johnston 1915; Robberstad 1983; Ryder 1989; Walker 1990: 703.
² It should not be forgotten that it creates a larger common.
³ 'Ebb' is of Old English origin but is also common in Middle and modern Low German and Dutch (cf SOED 1, 1987: 625) so perhaps the scope of possible influence should be widened.
⁵ Cf Robberstad 1983: 66. Robberstad cites bigger tidal differences, broader and more shallow fiords, and less steep beaches than is usual in Norway in this respect. In my opinion, this does not adequately reflect the diversity of Norwegian coasts but as it is unimportant for our argument we may leave it aside here.
and Norman England, and early mediaeval Scotland gives me every reason to consider the Udal foreshore limit to be part of a wider Norse-Anglo Saxon allodial/early feudal context, rather than being part of a closed Norse-Udal complex which seems, effectively, until now to be the accepted view of legal historians. This student therefore advances the following hypotheses:

(a) that a littoral régime, perhaps extending as far as one could ride (assumed to be one allodial principle among others), already existed in Orkney at the time of the Norse settlement, a régime which the Norse accepted because it did not in practice differ much from the (varying) customs they knew in Norway;¹

(b) that the Norwegian crown and/or the earl of Orkney adopted the low water limit (for Orkney and the Hebrides) through influence from Anglo-Saxon courts but, most importantly, in the cultural context that developed around the western sea route in the 10th century AD and which linked up with the Norwegian settlers in (Saxon) Cumbria and York;²

(c) that the adoption of the low water limit took place during the period about 900-1137 AD when the Orcadian peasants held their estates under a kind of suspended odal right while the crown put them out to feu;³

(d) that this (non-Norse, albeit allodial) low water limit, as customary practice, and presumably also statutory law, of Orkney (and Shetland) enjoyed the protection of the Gulathing law and court until 1611, by virtue of its

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¹ It seems not reasonable to argue that the Norse brought this (kind of) littoral régime with them when they colonised Orkney because it implies that the archipelago previously had no indigenous littoral régime and had been a sort of 'legal vacuum' between the wider Anglo-Saxon régime, on the one hand, and the Norse régime, on the other.

² Cf Crawford 1987; Falkus and Gillingham 1981: 48f; Helle 1988: 6f [incl map], 18. Helle (1988: 18) indeed writes that "the Orkneys ... were certainly a stepping stone for vikings going abroad. ---. But they were more than that. In return for the viking expeditions, Norway was laid open to European cultural impulses, and Orkney may well have functioned as a bridgehead by which some of these impulses reached Norway."

³ Cf Johnston 1915: 48-52.
ancient history, and that the general Gulathing marbakki (sub-tidal slope) concept, as a kind of 'counter-balance', bolstered the Udal limit against the pressure from the high water limit of Scottish/English feudal and Roman law;

(e) that the older Udal foreshore formula was '... to the lowest of the sea (and sand)', and presumably was stated so in the Orkney lawbook in 1509, into which formula the term 'ebb' is introduced in the late 15th century as an expedient;¹

(f) that the Norwegians adopted the definiteness as such from the omnipresent ebb limit, as it existed in Orcadian Udal practice, and applied it to another natural phenomenon, ie, the subtidal slope, which, in fact, is often either difficult to discern or absent altogether, thus, creating the marbakki limit;

(g) that the marbakki limit is an artificial and theoretical construction by which a more extensive, allodial ownership of the sea off shore estates was limited, as a prerequisite for establishing the royal prerogative in larger cetaceans salvaged outside the littoral (and private/communal fishing grounds?), and in (other) commons;²

(h) that local customs regulated the extent of shore property in Shetland until they were unified by the introduction, from Orkney, of the Udal limit '... to the lowest (stone) in the sea'; that, similarly, local customs have continued to regulate the extent of shore property in the Faeroe Islands with the marbakki limit being a comparatively late introduction of a secondary character.

¹ It seems to me that Robberstad makes a methodological error by identifying the term 'ebb' with the ebb limit notion or 'concept'.

² In principle it does not exclude that the subtidal slope, as Robberstad (1952: 14f) suggests, may initially have been the border of free traffic, at least where it exists, but the draught of every larger vessel will have offered a simple, omnipresent, traffic limit anyway.
4.7 Foreshore and whales in Danish law

In Denmark the (codified) Jutlandic Law (1241 AD; JL 3-61) states that 'the king owns all foreshores'; the (private law collection) Scanian Law (ca 1202-1216 AD; SKL 166) is not explicit on this point. The Danish Law (1683; DL 4-4-4) stipulates that the crown owns the foreshore and that it may grant 'foreshore right' to others. In modern practice the foreshore is the area between havstokken and the 'sailing depth'. Havstokken is the line where sea and land meet by the usual water level and in tidal areas at daily normal high tide. The havstokken limit corresponds to the English practice and can hardly be older than the late Viking Age. The extension of the foreshore to the sailing depth conforms with the principle in the early mediaeval Norwegian laws.

By statutory order (forordning), 2 January 1740, the (absolutist) Danish-Norwegian monarch stipulates that 'all ... foreshores in our realms and countries only belong to us and nobody else and since olden times have done so'. The geographical scope of application of this feudal principle is noteworthy.

In Denmark the cetacean aspect is as follows: SKL 164 stipulates that 'No fish must be called wreck except sturgeon, fully and wholly, and whale.' JL 3-62 provides that 'Fishes smaller than sturgeon are not wreck. --- fishes which a man can carry, like porpoises or seal and similar, or smaller fishes, they are not wreck, except only sturgeon, because whale, løft [ie,

1 Cf Kroman and Iuul 1968: 187, cf 57f. Into the mid 17th century, Scania, Halland and Blekinge in present-day Sweden were Danish provinces.
2 Cf Iuul 1949: 204.
4 For the history of that régime, cf below.
5 Cf Neergaard 1985c: 32.
6 Cf Kroman and Iuul 1968: 57.
dolphin] and sturgeon and all big fishes which cannot be carried, they are all wreck, and the king owns them. ¹

Both laws (SKL 164; JL 3-62) provide for the finder to receive a load of royal whales, according to his means of transport (ie, indirectly, social status), viz: a man's load for the walker, a horse load for the rider, a carriage load for the carter and charioteer, up to a load of a six-oared ship for the one using a vessel.

Modelled on the absolute royal prerogative, the Danish crown, however, left porpoises, smaller (juvenile) dolphins and seals to private occupation; the maximum size was what a person could physically carry off. The implication is that other cetaceans were not 'movables' and, thus, their allocation followed the right to the ground on which they were found. The royal prerogative in these 'fishes' (or 'wreck') is not mentioned in DL (1683); customary law was apparently considered sufficient to uphold it.

Coinciding with the general reception of Roman law, its principles were gradually adopted in Danish-Norwegian and Swedish maritime and mercantile law because these countries in the course of the 15th-17th centuries developed into major European trading nations with lively economic and political contacts to Germany and the Netherlands. ²

According to Robberstad (1978: 185) the Roman law principle of sea fisheries being free to everybody crept into Norwegian law over a long period, beginning in the 16th century, but in particular during the 19th century. This was caused by the technical developments enabling fishing to be conducted with little or no contact to the adjacent land (in long-distance expeditions) and through pressure from the Romanised feudal legal systems established in western Europe. ³

¹ According to the modern Danish rendering by Kroman and Iuul (1968: 187).
² Cf Härtel and Pölay 1987: 135f.
4.8 Allodial inshore régime in Sweden

In mediaeval Sweden the property in near-shore waters rested with the shore estate, according to the Upplandslag (1296 AD), Helsingelag (ca 1330 AD) and Östgötalag, all of which essentially were translated into king Magnus Eriksson National Code (ca 1350 AD) and remained in force until 1734. Upplandslag (Wb 17 pr) uses the stone's throw as the limit, considered to be 30-75 metres off shore. Östgötalag (Bb 28: 2-8) fixes it at the distance a man could throw the shaft of a boat hook backwards over his shoulder when he stood in the aft of a 9 ell (ca 4.5 m) long boat that touched the shore. Magnus Eriksson's code extended these principles. An axe's throw and a variant of the stone's throw are also recorded. The Fisheries Statute of 1766 established the rule that the proprietor had the right of fishery to the full extent of the shallows. This imprecise formulation was in 1842 replaced by a limit of 100 fathoms beyond the 1 fathom bathymetric contour line. Currently, the limit extends to 300 m from shore or to the 3 m contour line where the shallow extends farther at average tide. In Finland, which until 1809 was an integral part of the Swedish state, the property limit is presently fixed at 500 m from the 2 m contour line.

4.9 Norse farm appurtenances

4.9.1 Pertinences (hlunnendi), in general; servitude pertinences (ítök)

Mediaeval and early modern deeds of conveyance (not to be confused with feudal charters) demonstrate the significance

3 Cf Neergaard 1985c: 3.
of pertinences in Norse allodial right and in the subsistence economy.

The basic term for pertinence is hlunnendi (pl, ON; hlunnindi ON, I; lunnindi (r), F; lunnende, NN)\(^1\) which in later Danish (/Norwegian) is called herlighed(ér).\(^2\)

In the Middle Ages (as recorded from the 13th century and later), Norwegian farms were transferred 'with all pertinences' ('meø öllum hlunnendum');\(^3\) often this was expanded to be 'with all parts and pertinences' ('meø öllum hlutum og hlunnendum'; hlutir = parts).\(^4\) Occasionally, hlutir and/or hlunnendi were replaced by tillægi ('appurtenance') or that word added ('meø [öllum] tillægum').\(^5\) Similarly, a few Norwegian sources use gagn (sg; gögn, pl; ON; I; 'that which is useful and helpful') synonymous with hlunnendi.\(^6\)

The legal formula beginning '... with all (parts and) pertinences' very often continues '... which belong and have belonged (to it) of old and new, within the garth and outside [it]'. Sometimes the deeds deviate from the basic formula and elaborate on the issue of pertinences. Such paragraphs are particularly illuminating for understanding the underlying concept. For example, farms were transferred or sold as follows:

'... with forest and all pertinences which belong and have belonged (to them) of old and new, within the garth

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2 Cf Anon 1939a: 129f; LFI 2, 1853: 701-712.
3 Cf Fritzner 2, 1954: 15; and, eg, DN 1/1, 1847: 99 [dipl 11]; 157 [dipl 188]; DN 3/1, 1853: 369 [dipl 492]; 376 [dipl 504]. Further references must be omitted here.
4 Cf, eg, DN 1/1, 1847: 332 [dipl 441]; 333 [dipl 442]; DN 3/1, 1853: 397f [dipl 539]; 399 [dipl 541]; see also DF 1, 1907: 32; DN 6/2, 1864: 451 [no 424].
5 Cf DN 3/1, 1853: 168 [dipl 189]; 395 [dipl 535]; see Fritzner (3, 1954: 700) who also refers to DN 1, dipl 351; DN 8, dipl 154; DN 10, dipl 53.
6 Cf DN 1/1, 1847: 120 [no 134]; DN 2/1, 1851: 50 [no 55]; Fritzner 1, 1954: 536f.
and outside' (1330 AD); 1 '... with houses and tofts, parts and pertinences that belong and have belonged to it of old and new, outside the garth and inside, to the boundaries of other people' (1343 AD); 2 '... with plots and appurtenances and all part and pertinences which belong and have belonged to it of old and new, within the garth and outside' (1384 AD); 3 '... with all pertinences that belongs and have belonged (to it) of old and new between the mountains [or: mountain summits] and the foreshore' ('... med ollum lynnýndum sæm til ligia ok leget hafva fra forno ok nyiu millium fialdz ok fioru ...'; 1396 AD; Lofoten); 4 '... with all parts and pertinences inside the garth and outside which belong and have belonged (to it) of old and new and with fishery and fowling and all fishing stations ...' ('... med luthum och lunindom innan gardhs och vttan som til liggår och läghet hafuer fra forno och nyio och med fiski och fygle och allæ wæidhstadhæ ...'; 1435 AD; Hitterdal, South Trøndelag?). 5

A witnessed declaration by Katerin, countess of Orkney and Caithness, written in Old Norse and issued in Kirkwall 1329, states that her purchase of various farms in Orkney, was 'with houses such that now are there and all those pertinences which follow them and shall follow them, of old and new'. 6

A Shetlandic deed from 1360 states that the transfer of the (island) farm Eyja, in Unst, was '... with all which belongs and have belonged to (it) of old and new and was in Eyja when Gjafalldr died, within the garth and outside (it), near or far away, on sea or land' ('... jnnan gardz ok vttan ner eda fiarri a sio eda landi'). 7

A judgement passed in Gulathing court, Bergen, 1485,

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1 Cf DN 1/1, 1847: 170 [dipl 207]; see also 335 [dipl 448].
2 Cf DN 1/1 1847: 227 [no 285].
3 Cf DN 3/1, 1853: 342 [no 453].
4 Cf DN 3/1, 1853: 390 [dipl 527].
5 Cf DN 9/1, 1876: 251 [dipl 265].
6 Cf Anon 1839a: 129f.
7 Cf DN 3/1, 1853: 250 [dipl 310]; see also Anon 1839a: 520f.
with the participation of the lawman and a lawrightman from Shetland, reasserted the property rights of certain farms in Shetland 'inside the garth and outside (it), on land and in the fells, in smaller things or larger [things] ...'
("innen gards och utthen, til lands och fialls i mindre luth eder meira med allo thui som til ligger eller til leget hafuer fra forno oc nyio").¹ As lately as 1537, the farm Hamnawog, Lunnesting parish, Shetland, was conveyed '... with seal colonies and appurtenances, with holt and pasture, in fell and foreshore, within the garth and outside, and all that appertains to the said farm or has appertained of old and new, ...

("... medh latrom ok lunnendom medh holthe ok haghe till fiels ok till fyere jnnan gardz ok wtan ok alth then deldh, som forscreeffne gordh tilliggher eller liggith haffwe f[ra] forno ok nyo ...").²

From 1597 we have a deed of pawn, issued in Shetland, written in Norwegian but endorsed in Scots, for rightful odal lands there '... with houses that have appertained of yore, from the highest fell peak to the outmost foreshore stone, with lots and parts, nothing anywise excepted ...'
("... med hues der tiil aff arilds tiid liggit haffuer, fraa høgiste fields tin oc yderste fierre stein, med lottum oc lundom, intet wndertagendis wdi naagen [m]aade ...").³ Here we find the modern Udal limit nicely incorporated into the old formulars, without using the term 'ebb' (cf chapter 4.6). The unusual brief reference to 'land' in the judgement of 1485 (cf above) might therefore constitute the terminus post quem of its inception in Shetland.

From Norway and Shetland we get the following spectrum of references to pertinences in the legal formulars, viz:

¹ Cf Anon 1839a: 510f.
² Cf Johnston and Johnston 1, 1907-1913: 68f; see also Goudie 1904: 113. Johnston and Johnston (1, 1907-1913: 69) appear mistaken when they translate lätr = selver = 'sealing place'; lätr is (seal) 'colony' and selver is 'sealing place' (cf Fritzner 3, 1954: 204, 427f) but the latter presumably goes with the former.
³ Cf Johnston and Johnston 1, 1907-1913: 94-96.
houses and tofts; forests; fishery; fowling; fishing stations; seal colonies (sealing grounds); within the garth and outside it; between the mountain (fell) summits and the foreshore; near or far away; on sea or land; none excepted; to the boundaries of other people.

Sealing grounds (selver) could be private property. The taking of a seal in another man's sealing ground therefore drew the trespass fine (landnám), so did entering it without due permission, 3 June-3 December (cf ÆB 146; FTL xiv 11; GTL 91; MLL vii 65a-c; NLB vi 62a-b; NL 5-12-14,15).

In old and modern Icelandic, separate titles to pertinences (and easements) are called ítak (sg; ítök, pl),¹ with an illustrative term.² GG provides for the buying and 'selling ... ítök in other people's land'.³ A foreshore subject to such servitude pertinences is called ítaksfjara (ítaksfjórur, pl, I) and servitut-forstrand (sg; -forstrande, pl, D).⁴ An estate without such servitudes was said to be ítakalauss (ON).⁵

In 1367, Staður church, in Steingrímsfjörður, Strandasýsla, owned two farms 'with all pertinences, grass, egg collecting (and) sealing ground [selvers], whale comings [hvalreka] and wood comings [vidreka] and ágóði', and at another one 'the full half of whale comings and wood comings, ágóði, sealing ground [selver]'.⁶ In the Icelandic whale division, blubber, rengí, tail and tongue were weighed (called vogarhval(u)r; 'weighed whale'); all

² In (older) Danish servitus, servitut(ter), rettighed(der) (cf LFI 8, 1858: 487; 14, 1868: 188f).
³ Cf GG 1b: 77f; see also GG 1b: 221; 2: 415.
⁴ Cf LFI 15, 1870: 380.
⁵ Cf DI 1, 1857-1876: 507; Fritzner 2, 1954: 968; Hødnebø 1972: 180. Pálsson's (1991: 87) explanation that ítök is a 'collective' right to use particular resources, especially in the commons, seems to be a basic misunderstanding.
⁶ Cf DI 3, 1896: 230 [dipl 182].
other valuables (fémati) which could not be, or were not, weighed (e.g., bones, baleen, intestines, sinews and oil from the head of the sperm whale) were ágóði (ágóðahlutr; 'benefits'). The pertinence renningar shall be considered later.

The range of pertinences in Iceland can be seen from the enumeration, in 1748, regarding 191 benefices, each usually having more than one pertinence: pasture (in 76 instances), foreshore (i.e., including whales; 76), 'forest' (i.e., scrub; 61), sea fishery (59), hay (24), eggs (21), sealing (19), salmon fishery (9), fowls (5) and trout fishery (5).

Under Norwegian law positive prescription falls into three main categories, viz: to odal estates, and general prescription by and from private individuals and the church, respectively. Briefly, one might say that an odal estate was created by possession in 4-6 generations, or 60 years, in the same lineage. The church only required 30 years for prescription while 30-60 years were needed for acquiring prescription to cultivated ground from the church. Way and boat landing (lendistöö) was obtained after 10 years' use; otherwise the usual period of prescription was 20 years for pertinences in outfields and commons (e.g., chalet, strip, house site) and easements (e.g., right of way). NL (1687) replaced prescription by the principle of express agreement (contract). In Iceland, where odal right did not exist, a negative prescription period of 3 years was widely applied, together with positive prescription to land after 20 years, and to pertinences and right of way according to usage of yore (by proof). In the 14th century positive prescription to fishing stations, rivers and lakes was recorded as being 40 years.

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\begin{align*}
1 & \text{ Cf Kristjánsson 5, 1986: 33f.} \\
2 & \text{ Cf LFI 2, 1853: 701-712.} \\
3 & \text{ Cf Bøe 1981; Lárusson 1981d; Robberstad 1978: 193f.}
\end{align*}
\]
years, presumably under the influence of canon law.¹

4.9.2 Fishing/hunting, driftage; alienation of pertinences²

The Norse principles concerning fishing and hunting in inshore waters and the littoral are enshrined in the following provisions:

In Norway, GTL 93: 'Everyone shall have the water and fishing/hunting place which he had in former times' ("Uatn oc veiðistöð skal hverr sina hava. sem hann hever at fyrnsku haft");³ GTL 85: 'Nobody shall ... ban somebody (from a) fishing/hunting place if he has had it of old' ("... ef hann hever haft at forno fare");⁴ and FTL xiii 9: 'Everyone shall own the water and fishing/hunting place off his land unless alienated according to the law' ("Hverr scal eiga vatn oc veiðistöð fyrir íórð sinni nema með lögum se frá comit").⁵

The corresponding provisions under the Icelandic commonwealth were GG 1b: 122: 'Every man shall catch fowl and fish in his (own) land';⁶ and GG 2: 510f: 'Every man owns the comings/driftage off his land, wood and whales and seals, fish and birds and seaweed, unless it has been sold from the land or given or paid to another man, and then everybody owns as he is entitled to' ("Hver maðr a reka fyrir lande sino viðar oc huala oc sela fiska oc fugla oc


² Throughout the rest of this (main) chapter the reader is referred to the figures 4 and 6 for tentative illustrations of the Norse inshore and littoral régimes and the approximate relationship of their main categories.


⁴ Cf NGL 1, 1846: 42.

⁵ Cf NGL 1, 1846: 242.

⁶ See also GG 2: 509.
The three late 13th century codes, MLL, JS and JB, contain the following relevant provisions, viz:

MLL vii 48: 'Everyone owns the water and fishing/hunting place off his land as it has been of old, unless alienated according to the law' ("Hver a uotn oc ueiōistōd fyrir sino lande þa sem at forno hafa uerit. nema meō lagum se fra komit").

This introductory provision was not included in JS 103 which is otherwise analogous. However, JS 92 reads: 'If fishing follows leased land, or fowling, or egg collection, then the tenant owns it all unless it is excepted in their deal and so (also) if there comes/drifts birds or fish, seals or porpoises' ("En ef fiskvæiōr fylger leigolande. eōa fygℓvæiōr. eōa eggver. þa a leigomaōr þat allt nema fræ scilt i kaupi þæirra oc sua ef þar rekr fugla eōa fiska sela eōa níšor"). JB vii 56 has it: 'Every man owns water and fishing/hunting place off his land and owns (them) as has been of old unless alienated according to the law' ("Hvrr meōr á vatn ok veiōistōd fyrir sinni jórůu ok á sem at fornuf hefir verit, nema meō lögum sé frå komit").

In continuation of MLL, NLB vi 44 provides that 'Every man shall enjoy free fishing ["frj fiskeri"] off his own ground: unless it has with judgement lawfully been alienated from him'; similarly, NL 5-11-2: 'Every man

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1 Virtually identical in GG 1b: 123.
2 Cf NGL 2, 1848: 134.
3 Cf NGL 1, 1846: 288.
4 Cf Hallager and Brandt 1981: 142.
5 Cf Halldörsson 1904: 188.
shall enjoy water and fishery ["Vand og Fiskeri"] off his land as it has been of old, unless it has been alienated from it under law and judgement.

Although FTL, GTL, MLL and JB relate 'fishing/hunting places' to rivers and lakes the expressions are rather general for which reason Robberstad (1978: 1978) and Austenå (1985: 6) consider it likely that they also applied to the sea. In fact, GG 1b: 122f; GG 2: 510f, and the Icelandic net limit (netlög) seem, through the link of JB vii 56 with MLL vii 48, to support this view.

Since ancient times fishery along the Norwegian coast has been conducted as far as the continental shelf extends. Sea fishing grounds were, inter alia, called mið (meith), fiskistøð, fiskimál, fiskiklakkr, vözt and vaztamál (ON). Until modern times the coastal farms and settlements in most places owned the fishing grounds for net, handline and longline there. Into the 19th century farms in Sunnmøre (northern West Norway) owned their separate fishing grounds, up to 8 nautical miles offshore, which were called 'fishing field' (or 'fish field'; fiskemark). They were subject to land division (jordskifte) just like estates ashore. Around 1800, fishermen in Nordland also claimed prescriptive property rights to fishing grounds. In modern times each fishing station in Vestfjorden (Nordland) earlier had its own section of the sea, marked by meiths (ie, bearings from landmarks). Until the early 19th century, the lines of division were established in a judicial manner out at sea. The Roman law principle concerning free fishery was introduced in the waters around Lofoten by law in 1857 and was initially met with strong resistance. Varangerfjord was also divided into strips for line fishing. In 1791, the county governor (amtmand) in Finnmark wished, privately, to obtain line fishing rights

1 Cf Anon 1982: 220.
off Vadsø. Upon inspection sufficient space was found for two sea strips (hav-teigar) for him which were then defined by meiths. As late as around 1900, people in Vadsø considered that they owned line fishing strips at sea. Around 1800, such sea strips were inherited by the fisherman’s oldest son; where no heir existed the authorities awarded it anew. These sea strips probably originate in private or communal fishing grounds (for hand lines) which had been modified following the introduction of the long line (up to 2 km long), presumably around the mid 18th century. Fishing stations were usually held in common, with free fishing for those settlements that had rights of commons there. Farms and settlements had a strong sense of ownership regarding these ‘fishing fields’, which may well have been theirs since prehistoric times. Today the preferential right of a settlement to fishing form an important legal basis when the Coast Samis demand protection against outsiders fishing in the fiords of Finnmark.¹

A separate title could refer to one pertinence, or several ones, as a whole or in part, and their boundaries need not correspond to other property boundaries at the place.² In the Faeroe Islands it appears that the main pertinence to be alienated from the shore estate, or foreshore, and become the subject of a separate title, was whales, in practice pilot whales. In Iceland such a title could be to ‘coming’/‘driftage’ (ie, cetaceans, wood, fish, seaweed) in general, or, eg, to ‘whales’ (ie, cetaceans) only, a certain share in whales, or whales above or below a certain size, etc; it could be for the whole of a farm’s shore, part of it, or on an island, and so forth.

The reasons for creating such separate titles and ways by which they developed are manifold, eg: to retain a

² Cf Austenå 1985: 5; Robberstad 1978: 171, 180.
separate income for the holder while otherwise selling or leasing the estate; sale and endowment (eg, to a church or monastery) while keeping the estate as such; and division upon inheritance. In the course of time, a very complex network of intertwined titles and economic transactions developed, often extending over considerable distances,\(^1\) despite the subsistence character of the economy. The same must be assumed to have been the case in Norway, Orkney and Shetland, although the writer is not aware of it having been described in the literature.

4.9.3 'Driftage'/'coming' (reki): wreck proper, drift wood, fish driftage, 'whale coming'/'whale driftage'

We have already seen that the shore proprietor in Shetland around 1536 claimed rec as pertinent to the foreshore.\(^2\) Icelandic law and usage permit us to describe various old Norse concepts relating to the foreshore in some detail.

Reki (ON, I, F; reke, NN; wreke, E) means (a) 'driftage' as such (ON, I, F, NN), in Old Norse and Icelandic with the exception of vágrek (cf below);\(^3\) in Dano-Icelandic it is called sødrift, strandvrag;\(^4\) (b) a place (foreshore) with regular driftage (ON, I);\(^5\) and (c) the right to driftage (I).\(^6\)

In Iceland reki is distinguished from vágrek (ON; vogrek, I; vaagre(c)k D/N; vrag, D), ie, 'wreck' proper, or stranded ships and parts thereof, other worked timber, and personal goods and belongings, which must be announced, and which the shore proprietor holds in trust for three years;

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1 Cf Kristjánsson 1, 1980: 218-244 [incl maps].
2 Cf Goudie 1904: 88.
4 Cf LFI 2, 1853: 88; 12, 1864: 244, 397.
after which time he becomes the owner of it, both according to GG and JB (vii 71). In modern times the royal prerogative to wreck was strictly enforced, as one can see from the Althing records.¹

Unless modified by private agreement, the shore proprietor, or driftage holder, owns drift wood, in general (rekaviðr, ON; rekaviður, I, F; driv(e)tømmer, drivtrae, tømmerdrift D/I), ie, unworked tree boles, except individual pieces (rekatre, ON; I; rekatrae, F), 1 ell long or shorter, which the tenant or proprietor owns, as it may be (GG 1b: 138; 2: 501; JB vii 6, vii 61); this results in the differentiation between 'big wood' (stórviður) and 'small driftage' (smáreki).²

When more than 5 fish proper come ashore per tide it is termed 'fish driftage' (fiskreki, I; drive-fiske, drivfisk D/I; opdreven fisk, D) and belongs to the driftage holder; otherwise it is 'small driftage'.³

Our particular attention concerns hvalreki (ON, I; hvaldrift(er), D/I),⁴ traditionally rendered 'whale driftage'. A drifting or stranded whale (carcass) is called rek(a)hvalr (ON), rekahvalur (I, F), and drivehval (D/I).⁵

A comprehensive study of the Icelandic annals⁶ leads me to modify the traditonal interpretation and translation of

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³ Cf Blöndal 1, 1980: 192; Kristjánsson 1, 1980: 187; LFI 2, 1853: 88; 6, 1856: 367; 8, 1858: 152-154, 156.
⁴ Cf LFI 12, 1864: 245, 399.
⁶ Cf item A.17.2. In the following the mention of particular annals, with year of entry, implies reference to the extracts and translations in item A.17.2. The great amount of information concerning whales and whaling contained in the Icelandic annals, Althing records and other extant documents (diplomata) seems generally not appreciated, cf U. Schnall's (1993: 12) reference to "Different minor sources and hints to whaling: ... Diplomata, Annals etc."
Reka (vb) and hvalreki (sb) as follows: Reka undoubtedly includes the (passively) drifting ashore, or being cast ashore, eg, in the case of shipwreck and marine mammal carcasses; however, one finds reka used in a much wider sense, eg: Fitjaannáll and Setbergsannáll, under 1691, use reka to refer to a natural live stranding ("rak ... hlupa á land"); similarly, in Eyrarannáll, 1694, ("rak ... stórhveli, hvar af ... á land hlupu, en suma dauða upprak"); and in Hestsannáll, also under 1691, the term is used in the context of chasing cetaceans ashore ("rak höfrunga, og voru á land reknir"). A non-prejudicial term seems, therefore, to be 'to come ashore' (rather than 'drift ashore'). This apparently also solves the problem of the interpretation of certain mass strandings described. Whale driftage does not necessarily involve grounding. In order to bring the noun hvalreki into line with the verb reka it will, thus, here be rendered as 'whale coming', unless it can clearly be specified as 'driftage' or 'stranding'.

GTL 149f and MLL vii 64g use the expression 'and runs a whale onto the land ('ok rennir hvalr á land upp', normalised); JB vii 67 has 'whales', in the plural, which reflects GG (GG 2: 533; GG 3: 407; cf GG 1b: 132f); GG otherwise distinguishes between natural live strandings and induced live strandings, cf: 'whales ... that run live ashore except people cause it' ("huala ... er kuikir lavpa a land upp nema menn valide"; GG 2: 515; cf GG 3: 384) and 'whales ... which run ashore caused by men' ("hvala ... er firir mönnom lavpa aland"; GG 2: 514).

Mediaeval Icelandic sources, from ca 1280-1482, mention renningar (pl; 'runnings') but the meaning is not obvious. Neither J. Fritzner (1954) nor F. Hødnebø (1972) record it and the phenomenon seems to have been considered earlier:

About 1280, three farms in Neshreppur, Snæfellsnessýsla, owned jointly 'comings [rea] and renninga and [whale]
transport [flutningar]', according to their valuation.\(^1\)

At the same time, Helgafell monastery claimed pertinences at 3-4 farms in Staðasveit, Snæfellsnessýsla, because at the beginning of that century they were sold so that the former owner

'should own all those things that might come from the sea, including [whale] transport and runnings ["med flutningum oc renningum"], and so also those [whales] which would be killed ["er deyddir yrði"] on this driftage shore, and that although waves and storm throw [them, ie, whales and other things] onto the grass [ie, 'inside the garth']; with so strict provisions that all proprietors and tenants of these farms would be without any claim [thereto].'\(^2\)

In 1398 AD, the monastery also owned a farm in Neshreppur, Snæfellsnessýsla, with 'all driftage and renningar and (whale) transport'.\(^3\)

The inventory for Staður church, Hrútafjarðarhéppur, Vestur-Húnvatnssýsla, from 1360, mentions its rights in 'all driftage' (aullum reka) and 'whale comings' (hvalreka), which 'includes not least renningar and regardless of the way (they) come ashore' ("Ey eru sydur renningar til nefnder og med huourium hætti sem a land kiemur").\(^4\) In 1461, this was repeated as 'in whale comings and wood comings ... not least are these renningar mentioned, or regardless of the manner (they) come ashore' ("j hualreka oc vidreka ... ei eru sidr renningar pessararf nefndar eda med hueriu moti sem a land kemr.").\(^5\)

In 1286, Staður church, in Steingrímsfjörður, Strandarássýsla, inter alia, owned shares 'in all comings ... both wood comings and whale comings: so (also) in renningar and in ágðóahlutr' ("j reka ollum[m] ... bædi

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1 Cf DI 2, 1893: 165 [dipl 75].
2 Cf DI 2, 1893: 164 [dipl 74]).
3 Cf DI 3, 1896: 634 [dipl 526B].
4 Cf DI 3, 1896: 165 [dipl 115-149].
5 Cf DI 5, 1899-1902: 339 [dipl 233-314].
vidreka og hualreka: suo j ren[n]ijn[n]gum oc j åagoda luta") at the farm Asparvik.¹ A later inventory from 1367 reads: '... so also in renningum and ágöði and [whale] transport [flutningum]'.²

The charter for the royal steward and representative (sýslumaður) in Váðlæþing district, North Iceland, 1482, stipulates that he held office 'with comings and runnings, whales and hafreextrum and all ... proceeds ... of old and new' ("med rekum ok renningum[,] huolum ok hafreextrum ok allre þeirre rentu sem greindre syslu fylger ok fylgt hefur ath fornu ok nyiu."),³ this is repeated in a new charter, 1485: "... med ... rekum og renningum[,] hvolum og hafrekstrum ...".⁴

A close reading of these sources show, in my opinion, that 'runnings' refer to naturally live-stranded as well as induced live-stranded cetaceans. An Icelandic folk tale implies that hafrenningar ('sea runnings') are small to medium-sized cetaceans.⁵ Rend (f; I) means, inter alia, a migrating school of small cetaceans.⁶ The renningar seem added in pertinence enumerations in order to make sure that smaller cetaceans are not exempted from 'driftage', in general, and 'whales', in particular.⁷ Its use seem restricted to West, Northwest and North Iceland.

For hafrekstrar, cf chapter 9.4.2.

4.10 Faeroese laws, regulations and littoral régime

In the Faeroe Islands the Norwegian codes were widely

¹ Cf DI 2, 1893: 261 [dipl 132].
² Cf DI 3, 1896: 230 [dipl 182].
³ Cf DI 6, 1900-1904: 545.
⁴ Cf DI 6, 1900-1904: 447 [dipl 406].
⁵ Cf Davfðsson 4, 1980: 22f.
⁷ Other references are, eg: DI 2, 1893: 164f [dipl 74, 75]; DI 4, 1897: 154 [dipl 17-300].
applied until recent times.\(^1\) In an amendment (rétarbót), issued at Tønsberg during the winter 1270/71 AD,\(^2\) king Magnús Hákonsson lagabætir states that in the Faeroe Islands '... shall such law apply as applies in the whole of the Gulathing law district, except that the farming section shall remain unchanged in accordance with what your [ie, law] book previously states'.\(^3\) The Faeroes clearly had their own country code prior to this time but we know nothing about its scope, apart from the 'farming section'. The Faeroe Islands were presumably part of the Gulathing law district long before this and nominally under the Older Gulathing code. The 1270/71 amendment might have been in preparation for the introduction of the new National Code in 1274.

In 1298 AD, duke Hákon Magnússon\(^4\) issued Seyðabrævið* (SB; 'The Sheep Letter'; cf item A.15.3.1) which is addressed to 'all men in the Faeroe Islands'. SB is technically speaking an amendment (rétarbót) to the farming section of MLL but deals with various social relations, sheep rearing, etc, and whale driftage, salvage and drives. When SB was enacted it apparently reflected local Faeroese customary law and statutes which were then codified in accordance with Norwegian legal principles.\(^5\) The durability of SB's farming aspects, continuing virtually unchanged until 1866, may be taken to demonstrate SB's deep roots, apparently reaching back into the early Middle Ages.\(^6\) King Christian 4, in 1637, confirmed and issued a modified, Dano-Norwegian version of SB, including

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\(^1\) Cf Bjørk 3, 1963.
\(^2\) Cf Bjørgo and Bagge 1978: 64.
\(^3\) Cf Jakobsen 1907: 24. Bærentsen (1911a: 3) has doubts about the genuineness, and at least the reliability, of this document but does not mention the reasons for this suspicion; I am not aware of others thinking likewise.
\(^4\) Hákon Magnússon was duke of Hamar, Oslo and Stavanger dioceses, Orkney, Shetland and the Faeroe Islands, 1280-1299, when he succeeded to the throne (d 1319). He ruled this fief with full royal authority. (Cf Anon 1839a: 498).
\(^5\) Cf Bærentsen 1911a: 3; Bjørk 1, 1963: 489f.
\(^6\) Cf Bærentsen 1911a: 3.
the accompanying letter (SB 1637). It no longer contained, *inter alia*, the whaling provisions SB 8 and 11.\(^1\) They are also absent from the subsequent Statutory Order of 1698 (SB 1698) that replaced SB 1637.\(^2\) The Norwegian Law (1687) was by decree (12 May 1688) enacted in the Faeroe Islands as from 29 September 1688\(^3\) but it seems first to have been published there in 1707.\(^4\)

In the Faeroe Islands the outfield (*hagi*), or outfield shares, were traditionally described as extending from 'fell to foreshore' ('"fjaeld til fjære"'). The outer bound of the shore propriety rights has in modern times been defined by the subtidal slope (*marbakki*) where it exists, otherwise by the lowest daily or lowest spring tide (which of these limits prevailed was earlier a matter of uncertainty).\(^5\) Faeroese law recognises no special fishing rights appertaining to shore estates, except for seining. Neither are there traces of the existence of a fishery regalia.\(^6\)

In 1412, bishop Jóan of the Faeroe Islands conveyed the ecclesiastic estate Nikka on Sandoy with 'all pastures, ... and holm and infield and clearing in the hill above the houses of Sandur, in the lower and the upper ["jd nedra oc jd efra"], except that 'we and the church shall own all other pertinences ["oll onnur lunendhe"] to the above mentioned farm'.\(^7\) Around 1781/82, J.C. Svabo (1976: 347) noted that tenants in exchange for paying the rent 'enjoy

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\(^{1}\) Cf Børentsen 1911a: 29; Debes 1963: 263-274; Jakobsen 1907: xxiv. Lundh (7, 1880: 309) gives the impression that only SB 11-12 were abrogated but this is not correct.

\(^{2}\) Forordning om faar og gvxg, samt des græsning og vare-tægt paa Færøe, Copenhagen, 2 April 1698 (cf Børentsen 1911a: 57-62).

\(^{3}\) Cf Bang and Børentsen 1901: 1; see also Bonnevie and Mitens 1, 1932: [11]; Mitens and Sørensen 1953: [1].

\(^{4}\) Cf Anon 1934: 70, 74, 155.

\(^{5}\) Cf Bjørk 3, 1963: 99-104, 112; see also Neergaard 1985c: 39f.

\(^{6}\) Cf Bjørk 3, 1963: 25.

\(^{7}\) Cf DF 1, 1907: 49f.
all incomes, except *grind*. This implies that the main pertinence, *ie*, pilot whales, had generally been separated from tenancy.

### 4.11 Icelandic laws, regulations and littoral régime

With regard to the Icelandic inshore waters and littoral and their resources it is necessary to distinguish between the status of individuals, categorised as follows:

- peasant (*búandi, bóndi*), *ie*, a proprietor or a tenant, respectively;
- free non-servant household member (*griðmaðr, -kona*);
- servant (*vinnumaðr, verkmaðr, vinnukona, etc*); and
- thrall, *ie*, the born slave (*præll*) and the debt slave (*skuldarmaðr*), who disappear around 1100 AD;¹

furthermore,

- proprietor (*land owner*) (*landeigandi*);
- tenant (*leiglendingr*);
- shore holder (*fjörumaðr*), *ie*, a proprietor, tenant or third party possessing the right of beached driftage;
- the driftage owner (*rekamaðr*), *ie*, a proprietor, tenant or third party owning driftage on the foreshore and in the driftage zone.²

The Icelandic inshore régime is more complex than the Norwegian one. In Iceland the shore estate had almost exclusive hunting and fishing rights within the *netlög* ('net limit'), defined as the point by ebb where a seal *netlög* (20 meshes deep stands on the bottom with floats at the surface, *ie*, by a depth of 6.9-7.5 m, whether at skerries

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1 Cf Foote 1982: 17.

2 The distinction between 'shore holder' and 'driftage owner' is my tentative interpretation. According to V. Finsen (3.1974: 609, 660) and P. Vidalín (1854: 169), *fjörumaðr* (GG 2: 519, 520 and GG 3: 385, 391; JB vii 61, 62, 63, 64) and *rekamaðr* (GG 1b: 131; GG 2: 514, 523; GG 3: 384, 395; JB vii 61, 64) are synonyms. This may be correct but a distinction, where possible, might be useful.
Towards neighbours and open waters the rekamark ('driftage limit'; fiskmark, fiskhelgi) also applied. It is located at the point where a split and spread-out cod, 'one ell between the wings' (belly walls), displayed from a boat in the direction of the land could be seen from the lowest ebb on shore, within which limit the shore estate generally held all rights to driftage, notably of wood and whales. In practice, the driftage limit will have been between 300 and 600 m off shore.

In addition, JB (vii 68) states that the shore proprietor had rights to seals, porpoises and 'fish other than whales' above the marbakki. Outside the rekamark were the commons (GG 2: 513, 515). JB (vii 67) puts it as follows: 'Every man owns the catch [veiði] outside the net

1 Cf Finsen 3, 1974: 654; GG 1b: 125, 133; 2: 514f, 533; 3: 384f, 406f; JB vii 61; Vídalín 1854: 22f. Vídalín (1854: 22f) mentions that younger JB manuscripts contain explanatory additions about the depth as being '4 fathoms' (probably 3¾ old Icelandic ells = 14 ells) and '12 ells' (presumably Hamburg ells), both giving 6.9 m; his own experiments gave 12 modern ells (ä 62.8 cm), or 7.5 m.

2 Cf GG 2, 528 (see also GG 1b: 125; GG 3: 402): "Þorskr ... alnar í oxarár pxrom; oc heitir sa fískr gliðingr"; and JB vii 65: "Þorskr ... flattr álarn í oxárparum".

3 Cf Jóhannesson 1948a: 587f (Hóskuldstaðaannáll, 1782).

4 On 3 February 1881, a special court session was held on the ice of Eyjafjörður where a whale was enclosed in the ice. Its distance to the shores of three particular farms was determined to be 320, 320 and 340 (Danish) fathoms, respectively. The court then appointed six men 'to find out whether a flattened fish, 18 [Danish] inches across the wings, could be seen from the water edge when it was hung on the side of a boat by the whale'; 'All these men stated that they saw the fish from the water edge at all the mentioned estates ... but they had not been able to see that it was a fish if they had not known that it was a fish.' (Cf DJSF-SSSE 1881. J. Hjaltason [1993; pers comm] was kind enough to make me aware of this document). The distances can hardly have been measured by another ell standard than the modern one, or 340 fathoms ä 62.8 cm x 3 x 340 = 640.6 m. This seems confirmed by the fact that the court defined the fish to be used as one of 18 inches, or 47.1 cm, across the wings, rather than 24 inches (= 1 ell); this is obviously the most practical approximation to the old Icelandic ell required by JB (19 inches would have been too much while 18 inches are also 3/4 of the modern ell). The question concerning advance knowledge of the fish will have applied to any case where the driftage limit had to be determined by this method so it does not affect the relative position as such.

5 Raestad (1912: 31) speculated about a maximum of ca 2 km which has, thus, been displaced by positive evidence.

6 This appears to be a 'Norwegian' provision which has gone unnoticed in the Icelandic practice.
limit [netlög]; it is catch [veiðir] if a man takes (it) [to the nearest] shore, otherwise it is transport [flutning]. If a man catches [veiðir] a whale in(side) the driftage limit [rekamarki] where a fish can been seen on the gunwale and outside the net limit [netlög], then he who catches [veiðir] owns it all.'  

The shore proprietor, with few exceptions, has the right to fishing and hunting on and off his land, including in the 'net zone' (netlög). The character of the rights of the shore estate in the ground beyond the point of the low spring tide and in the sea, on the one hand, has been found to amount to property rights (Ó. Lárusson), on the other hand, they have also been considered to be particular rights of usage established by law (G. Jörundsson).  

Today the 'net zone' is considered to be private property.  

Fishing grounds (defined by meiths, sometimes with soundings) in the commons have in modern times been declared inviolable (miðafriðlýsing) at the thing or church, thereby becoming private grounds (presumably for a year at a time).  

This is most likely an ancient practice.  

Outside designated private ground, the net and driftage zones are areas in which different common rights exist, viz: almenning(r) ('common') generally designates coastal tracts held jointly by the inhabitants (proprietors?) (fjórðungsmenn) of each 'quarter' (fjórðungr) in the country. It must be distinguished from samreki, ie, private 'co-driftage' (GG 2: 519). GG (2: 515) seems only once to state explicitly that the driftage zone borders on

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1 Cf Halldórsson 1904: 206. Whale flutningr was in the late Middle Ages also subject to non-catcher claims and divisions.  
2 Cf Neergaard 1985c: 42; referring to Ó. Lárusson, 1950, Eignaréttur 1, Reykjavik, p 45 [orig not seen], and pers comm from G. Jörundsson.  
3 Cf Anon 1988a: 100f.  
4 Cf Kristjánsson 3, 1983: 190f, 447.
the common ("fyrir utan netlavg oc fyrir inan almening").\(^1\)
Where the circumstances do not directly show that 'common' implies 'quarter common', common rights will also apply to the area 'outside the driftage limit' concerning driftage and 'outside the net limit' with regard to hunting and fishing.\(^2\)

We shall now briefly look at regalia and feudal law in Iceland. Following Iceland's incorporation into the Norwegian realm (1262/64 AD) Icelandic law recognises the more exotic regalia in falcons (1281 AD)\(^3\) and walrus tusks (1563 AD).\(^4\) Since the late Middle Ages the Danish-Norwegian crown considered the fisheries around Iceland and the Faeroe Islands pertinent to the crown. Until the Icelandic trade was liberalised for all Danish-Norwegian subjects, in 1786, the fisheries, including whaling, were part of the privileges of the Icelandic trade.\(^5\)

In 1728, the Treasury (Rentekammer) unequivocally stated that proprietors in Iceland must 'show whether they have any grant for it, or are entitled to drift whale or other drift fishes or other kinds of shore wreck', 'regardless of whose ground they drift to or fall upon and who has no particular grant ["sær Benaadning"] to enjoy it'.\(^6\) In 1736, the crown also applied the regalia of ownerless goods to unclaimed shooter's shares of whales on allodial estates which had previously fallen to the proprietor after 3 years: By royal resolution the crown then granted to the local sheriff-steward (sýslumaður) one half of that unclaimed share but allowed the other half to follow the shore rights purposes of awarding salvage, trouble and expenses. As from 1808, the former half was transferred to

\(^1\) See also Lárusson 1981h: 169.
\(^2\) V. Finsen (3, 1974: 581) overlooks that certain rights of common extend as far as the net limit inside the driftage limit.
\(^3\) Cf JB vii 58 (cf Halldórsson 1904: 192).
\(^4\) Cf LFI 10, 1861: 250f.
\(^5\) Cf LFI 17, 1877: 438-440; see also LFI 1, 1853: 215f.
\(^6\) Cf LFI 2, 1853: 88.
the Icelandic sagefaldskasse ('fine fund').

The first direct reference to regalia in the Icelandic foreshore seems to be in the 'Conditions for the feuing of the Icelandic trade', 1758. They asserted that stranded ships and wreck found drifting off or beached in Iceland belong to the crown 'in the same way as the right of foreshore in the whole country belongs to His Majesty alone, as a royal regalia.' The octroi of the Icelandic trade, 1763, repeated this provision.

By the 'Decree concerning the right to foreshore in Iceland', 1778, the crown claimed all ship wreck and goods 'as an ungranted regalia everywhere in the country, at the foreshores of public institution, church, ecclesiastical and all other estates.' It is implicit in certain aspects of the decree that other driftage rights (ie, Icelandic allodial practice, etc) was regarded as resulting from royal grants.

4.12 Norse Greenlandic law and whaling regulations

GG (1a: 226; 2: 70) refers to the Icelandic legal district ("í várum lögum") as encompassing the Norse colonies in Greenland. In 1261 AD, the Norse in Greenland became subjects of the Norwegian crown. In the preceding two and a half centuries the commonwealth there had its own 'Greenlandic law' (grænlensk lög) which would probably have continued to exist as a country code, whether or not MLL (or perhaps JB) was formally adopted by the Norse Greenlanders in the late 13th century. Around 1130-1132

1 Cf LFI 4, 1854: 448f; ALDB 15, 1982: 615; LFI 8, 1858: 152-154, 156.
2 Cf LFI 3, 1854: 336.
3 Cf LFI 3, 1854: 475.
4 Cf ALDB 15, 1982: 613-615; see also LFI 4, 1854: 446-449.
AD, Greenlandic law displayed a marked difference from Norwegian and Icelandic law by seemingly lacking any analogous rules about wreck found in the commons and belonging to foreigners. This resulted in a minor war being waged in the Eastern Settlement between Norwegians and Norse Greenlanders.¹ In 1385 AD, the Norse Greenlanders clearly acknowledged the Icelandic principles concerning marked shots and shooter’s money (skotfé) so they appear to have had similar rules and practice in that respect in their own whaling (cf item A.16.11). In the mid 14th century AD, a ‘common whale fishery’ is recorded in Hvalhýr, in Bérfufjörður (wherever that may be), where whales were trapped naturally inside a reef at low tide.² We can say nothing about the inshore and littoral régime in Norse Greenland.

4.13 Comparison of Norwegian and Icelandic littoral and inshore régimes; primal Norse littoral and inshore régime

Above we have postulated that the Norwegian marbakki limit was inserted into a more extensive allodial régime the structure of which shall now be considered.

Especially where terrestrial commons continued to exist, the delineation of private, including communal, property vis-à-vis the commons was in practice gradual and often uncertain because of separate titles to pertinences and easements, and prescription thereto.³

In my opinion, the consideration of the Norwegian régime in relation to mainland Britain, Orkney, Shetland and the Faeroe Islands has established a coherent picture which is independent of the Icelandic evidence. Under the present paradigm of legal historians, and as elaborated upon by Robberstad, the assumed secondary character of the Udal law

1 Cf Sveinsson and Dórðarson/ÍF 4, 1965: 275, 278f, 280, 284, 291, 292.
2 Cf Ø. Halldórsson 1978: 133f; Jónsson 1930: 71.
3 Cf Frimannslund 1982.
tide limit (as derived from the Norwegian marbakki limit) makes it unsuited for inclusion in the analysis in hand. The reversal of the paradigm as suggested by me does not change this circumstance. Avoidance of entering into circular reasoning also requires that the Udal limit be left aside. The question is whether we can add the Icelandic evidence to the interpretation without upsetting it, and preferably strengthening it.

It is submitted that the analysis of the Norse graded allodial ownership versus rights of common can usefully apply the concept of legal and socio-economic 'zones' in simple spatial models. The (early) mediaeval Norwegian and Icelandic allodial/common régimes contain the following main elements,¹ viz:

**Norway:**

On land: private infield; private/communal outfield *(hagi)*; district commons *(almenningr)*; private pertinences in the commons.

In littoral and at sea:

private 'shallow zone' (above the subtidal slope [marbakki]); commons *(djúp, below the marbakki)*; private/communal fishing ground *(miö, fiskimál, fiskiklakkr, vözt, vantamál, fiskistöð, ON; fiskemark, N)* in the marine commons.

**Iceland:**

On land: private infield; private outfield *(hagi)*; private/communal outfield *(afrétt(r))*; quarter commons *(almenningr)*.

In littoral and at sea:

private 'net zone' *(netlög)*; private 'driftage zone' *(rekamark)*; private fishing grounds *(fiskimiö)*; commons *(almenningr)*.

The Norwegian, Shetlandic, Faeroese and Icelandic

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¹ Pertinences, etc, on other private ground are disregarded.
terrestrial systems have maintained until modern times consistent zonal divisions and gradings; the difference lies with the inshore régimes. The Norse terrestrial zones display a very logical structure, centering on the farm and its infield. This student sees no reason why its logic should not also, at least initially, have applied seawards and as such have been part of a primordial Norse inshore legal régime during late prehistoric times (cf figure 5). However, the allodial régime beyond the ebb limit is bound to be different in order to account for the particular character of the marine environment and its resources.

Without realising it the present writer, in 1992/93, reasoned within the paradigm of traditional legal history as described above. This involves a priori assigning a primal character to the (early) recorded Norwegian littoral and inshore régime, and derivative and secondary character to the 'outlying' legal régimes (in an undifferentiated manner). Robberstad’s way of interpreting the Orkney Udal limit I apparently also translated onto the Icelandic régime as follows:

"I find it tempting to explain the difference between the two inshore régimes and their concepts by the circumstance that the Icelanders will have been unfettered by legal convention and restrains ... when they initially formulated regulations and legal concepts, and settled disputes, until it all had become a tradition of its own. Their regulations and concepts may therefore conform much better to the actual hunting and legal practice than the Norwegian ones which surely have prehistoric roots."¹

By considering the terrestrial and inshore régimes together I have now come to the opposite conclusion: There is no reason to assume that the peasant fishermen who settled in Iceland in the late 9th and early 10th century AD were more inclined to modify the inshore, rather than the

¹ Cf Lindquist 1993: 38, see also 40.
terrestrial, legal régime; on the contrary, an important reason encouraging many people to move from Norway is said to have been what they considered to have been royal encroachments upon their allodial rights. In other words, their conservative inclination seems beyond doubt. This student therefore advances the following hypotheses:

(a) that the Norse primal littoral and inshore allodial régime basically mirrors the régime on land by having a 'marine infield' and a 'marine outfield' beyond which lies the commons, and that local people acquire pertinences (eg, fishing grounds) in these tracts by principles similar to those on land;

(b) that the Icelandic 'net zone', 'driftage zone', sea common, and private fiskimið (fishing ground) constitute the primal (late prehistoric) Norse seaward régime;

(c) that the Norwegian marbakki limit involves an unification of these primal netlög and rekamark limits; that the marbakki limit, where it can be established, is usually closer to the former than to the latter by which fact the commons are enlarged; that the introduction of the marbakki limit goes hand in hand with the establishment of the royal prerogative in the commons and the crown's qualified prerogative in cetaceans, presumably in the 9th century AD;

(d) that the marbakki limit is relatively deficient in clarity, generality and applicability compared to the contemporary netlög, rekamark, and wading depth of a horse (apart from the lowest stone in the spring ebb and the daily ebb limit);

(e) that local customs would basically have continued to regulate the rights in drifting cetaceans off Norwegian estates throughout the Middle Ages; that in cases where there was no, or an uncertain, marbakki these local customs may, or may not, have been respected when the royal prerogative was particularly strictly enforced in the 17th-18th centuries.

Whether the subtidal slope, provided it could be
established, would be situated below or above the 6.9-7.5 metre bathymetric contour line (netlög) is not decisive in this context; more importantly, it seems to be well within the rekamark (located 300-600 m offshore), indeed comparatively close to the 7.5 m contour line if the marbakki concept is to make sense at all.

Simple spatial models of the Icelandic and Norwegian régime are offered in figures 6a-b but their limitations and tentativeness cannot be overemphasised and they should not be used as a basis for argumentation.

In the view of this student, these hypotheses are fully compatible with the reasoning extended above concerning the Udal and marbakki limits. The settlers in Iceland presumably brought the practice of the primodial inshore régime with them to Iceland where it then survived indifferent to Roman and feudal law influences until the enactment of the Ordnance concerning transported whale in 1779*1 (cf item A.15.2.5) and, in its main traits, to the present day.2

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1 Cf LFI 4, 1854: 494f.

2 This conclusion does not affect my opinion concerning the questionable usefulness of spear whaling in Orkney, Shetland and the Faeroe Islands (cf ch 10.3 and Lindquist 1993: 18, 39). However, I wish to modify the overall interpretation of the low tide limit, spearing and whale drives in these countries (cf Lindquist 1993: 18, 40) as follows: Because the islanders could not apply spear whaling to any use and relied on driving whales onto the shore they had no practical and economic reasons for opposing the practice of the Udal limit at 'the lowest (stone) of the sea' if it was interpreted in a liberal manner.
5 Cetology: Norse views, knowledge and perceptions of cetaceans

5.1 Synopsis

This chapter is intended, firstly, to outline the wider European scientific, linguistic, mythological and religious background of mediaeval and early modern Norse 'whale lore'; secondly, to present the general body of these views, classifications and perceptions concerning cetaceans and the likely factors which have shaped them; thirdly, to present relevant literary sources, ranging from the late 9th to the late 18th century AD, to outline their mutual relationship, describe their source value, and to acknowledge the scholarly achievements some of them represent. The discourse leads directly into the detailed discussion of identification of species, etc, in the following main chapter. The argument draws much on Old Norse/Icelandic etymology.

5.2 Cetology, in general

In brief, one can say that modern science involves either the study of a body of demonstrated truths or of observed and related facts which, after having been systematically classified, are brought under general principles or laws, and which includes trustworthy methods for the discovery of new truth within its own domain.1

In pre-19th century contexts, science (scientia, Latin, L) generally had a wider meaning of more or less extensive (personal) knowledge or cognisance of something; knowledge acquired by study; a particular branch of knowledge or study; a recognised department of learning.2 Similarly,

-logia (Greek, Gk; L; -logy, E) originally denoted a department and character of knowledge of a person, and the way he/she treats of and presents this knowledge, which in modern usage has been adopted for sciences or departments of study.¹

Cetology and pinnipedology, ie, the bodies of views, knowledge, study and learning regarding cetaceans and pinnipeds, of earlier times were functional entities, in their own right, in specific social and cultural settings, despite being incoherent by modern scientific standards. Presumably it would facilitate a better understanding of the whole theme if one would differentiate between the complexes as, for example, 'popular' (implying, inter alia, incoherence), 'semi-scientific' (implying, inter alia, a certain degree of aspired coherence and systematic study, arrangement and presentation), 'scientific' (implying the modern sense) and 'modern' (in this context meaning 'post-Linnean scientific' rather than post-1500 AD.

Coastal inhabitants have presumably always had more or less indeterminate popular views about, and perceptions of, marine beings, including acquaintance with, and perception of, natural history facts and contexts concerning pinnipeds and cetaceans, ie, knowledge as such about them. However, both 'views' and 'facts' are at any time integral parts of peoples' culture, ie, social, natural and spiritual order, and cognitive frame of mind.² It is only in recent centuries that the cosmological and magico-religious meaning which Europeans attributed to natural phenomena, including animals, has been overcome by widespread secularisation and more matter-of-fact orientations, in a very uneven process.³

¹ Cf SOED 1, 1987: 1233.

² This is closely related to the issue of paradigm which we have already touched upon (cf ch 2.5).

³ The general background of these highly complex matters are described by, eg: Van Baaren 1981; Binder 1979: 326; Cooper 1984: 12f; Coulter 1926; Faivre 1987; George 1969; Glacken 1976; Hicks 1993; Jobes 1962: 97f, 1193; Klingender 1971; Köhler-Rollefson 1985; Manning and Serpell 1994; Mendelson 1972; McCullough 1962a; Metford 1983: 26f;
5.3 Prehistoric Norwegian to early mediaeval Norse cetology

5.3.1 Etymology of hvalr, hval, Wal, quhail(1), whale

The etymology of words is often quite revealing about the origin of phenomena and their earlier associations. In the present case the word 'whale' assumes a central position.

The lexicon is hvalr (Old Norse, ON), hwal (Old English/Anglo-Saxon; OE), wal (Old Saxon, Middle Lower German), wal, walira (Middle High German), hwal, kwal (Shetland Norn, NS), whall (14th-17th English, E), quhail(1), quhell (15th-16th century Scots and northern English), hvalur (Faeroese, F; Icelandic, I), kval (New Norwegian/Norwegian dialects, NN), hval (Danish, D), val (Swedish, S), whaul (19th-early 20th century Scots), whaal (20th century; Shetland, Aberdeenshire, Fife).

J. de Vries (1977: 268f) and Á. B. Magnússon (1989: 392) note great uncertainty about the origin of the Old Norse word hvalr; A. Jóhannesson (1956: 812) considers it derived from the Indo-European primordial word stem of (s)quâlo-s, while Magnússon regards associations by various authorities of hvalr with the Latin (and presumably Indo-European) squalus (used by Ovid and Pliny), for 'Meersau', 'Meersaufish' (German, G), and the Greek skylion, for some

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kind of shark, to be doubtful.¹ Many linguists think that
the Indo-European primordial word stem has been hwaliz-
(hwalaz-) and suppose that the Germanic word was possibly
quite early borrowed from Finno-Ugric *kala, more
precisely, the Samish (Sa) like form *kuolle, both meaning
'fish', presumably in northeastern Europe.² On the other
hand, during the period 200-700 AD, perhaps even 200-500
AD, the Samis in the region of Troms county, northern
Norway, apparently adopted the primordial Norse word hwalaz
(PN) as fâles (Sa).³

E.J. Slijper (1979: 14) writes that 'whale' is "thought
to be related to the modern English wheel, and must have
referred to the characteristic turning motions of whales
when they come up to breathe." Neither Jóhannesson,
Magnússon nor de Vries offer any association of
whale/hwæl/hval(u)r with 'wheel' or 'vault' in any form
(eg, hjól, hvel, hvél, hváll, ON).⁴ Slijper’s
explanation, repeated by Ellis (1992: 39), must thus be
rejected.

5.3.2 Prehistoric Norwegian rock art

In many cultures animals are endowed with souls. Hunters
must, therefore, respect and discourse with the animals.
Killing and eating them may be fraught with spiritual

² Cf Ernits 1995b, pers comm; Jacobsohn 1922: 241-243. Kala
(Finnish); guole (Sa); kal (Mordvin), all mean 'fish' but not 'whale'
as Magnússon (1989: 392) clearly mistakenly states (cf Ernits 1995a,
pers comm; Jacobsohn 1922: 35).
³ Cf Collinder 1981: 319; Fjellström 1985: 59. P. Fjellström even
considers that 'Words which pertain to the sea, the sea shore,
catching at sea (fales [sic] whale hwalaz) indicate that the Samis
during primordial Norse times conducted open sea fishing and whaling'
(cf Fjellström 1985: 59; see also 123): A deduction like this, from
the existence of the word for an animal to the 'catching' of that same
animal, is obviously unsustainable.
⁴ Cf Jóhannesson 1956: 282, 812; Magnússon 1989: 334; 392, 395; de
hazards.¹ In Norway there exists a considerable number of rock carvings, which, on grounds of motives and location, are grouped as so-called hunters' engravings,² and peasants' engravings, respectively. The peasants' carvings are considered to belong to the Bronze Age, ca 1800-500 BC, while the hunters' art has been dated as spanning from the Mesolithic to the late Bronze or early Iron Age, ie, ca 8000-400 BC, with the bulk presumably being Neolithic (ca 4000-1800 BC). The hunters' carvings often form big complexes and cover large rock surfaces which usually face sea, lake or river (preferably moving water). The rock art, inter alia, depicts big game of land and sea, such as reindeer, elk, bear, halibut, all kinds of smaller and medium-sized cetaceans, seals and waterfowl. The figures are naturalistic in outline, often quite lively, with some carrying symbolic patterns of lines. Various complexes which show cetaceans and seals also have boats (even manned). Hunters' art also includes a limited number of miniature carvings, figurines and rock paintings. Changes in northern Norwegian hunters' art might imply that hunter fishermen either adopted new (less 'egalitarian') social and religious ideas from southerly societies that practised agriculture, or that they partly adopted agriculture themselves. In the 'animal ceremonialism' of the rock art, religious and magical motivations cooperate at different levels so we deal with an undifferentiated whole the meaning of which is likely to be very complex. The notions as such, and the social and spiritual role which the rock art played in the lives of the prehistoric people, remain mostly a matter of speculation and depend largely on comparative studies in the fields of ethnography and history of ideas and religion. However, the main purpose of the depictions (including the actual act of engraving) was probably to secure replenishment of prey species and to achieve hunting luck. The localities may have been sacred

¹ Cf Laughlin 1976: 193.
² Previously called 'Arctic'.
places.\textsuperscript{1} E. Wexelsen (1987) demonstrates that there are reasons to review identifications of cetaceans in the Norwegian hunters' art critically.\textsuperscript{2} As to the overall interpretation of the art, Ä. Hultkrantz's (1986: 60f), A. Hesjedal (1992, 1994a-b) and K. Sognnes (1994) seem to offer a new fruitful way forward with an integrated ecological, topographical, stylistic and semantic-religious analysis.\textsuperscript{3}

It is quite likely that the rock carvings in Norway do not form a continuum;\textsuperscript{4} moreover, the ethnic and cultural identity of the people who made them remains unknown\textsuperscript{5} so we are unable to link these aspects to later developments in our own era.\textsuperscript{6} We assume that the taking and


\textsuperscript{2} This actually also concerns other zoological aspects: For example, P. Simonsen (1959) rightly draws attention to the porpoise group of Kirkely (Balsfjord, Troms), from ca 1500 BC, of which one animal is clearly pregnant, with a foetus whose head points towards the mother's tail; Simonsen (1959: 17) correctly observes that cetacean calves are usually born tail first 'but this the Stone Age people have probably not known'. In my opinion this is fundamentally erroneous: the Stone Age hunters will have cut up so many pregnant cetaceans that this difference to land mammals cannot have escaped their attention although reversed foetal position is not entirely unknown with cetaceans (cf Collett 1911-1912: 584f, 605, 618f, 620). My presumption is that it is indeed the rare head-first position which caused our Kirkely hunter to depict the foetus: Was he just recalling it as a particular (natural history) event?; was it an omen?; was he remorseful?

\textsuperscript{3} See also Jacobsen 1984 and Tilley 1994.

\textsuperscript{4} Cf Hesjedal 1992.

\textsuperscript{5} Cf Hultkrantz 1986: 60f.

\textsuperscript{6} E. Neumann and H. Voigt (1973: 43f) note that only in a few cases it has been possible to recognise documented mythological motifs in peasants' rock carving, eg, Baldur, and 'Man with hammer/axe' (who might have a wider Indo-European reference than merely Thor).
utilisation of marine mammals has occurred along the Norwegian coast since Mesolithic times; however, 'catching', other 'taking' and 'utilisation' of marine mammals only refer to basics of the way of life of hunters everywhere and at any time so they can hardly be interpreted as implying cultural continuity proper. Below we shall consider methodological-technical aspects of catching which seem to reach quite far back, but because we know nothing about the cultural patterns behind and surrounding them they cannot be taken to imply cultural continuity in a wider sense. Only if one acknowledges this it will be possible to accept the challenge of closing the gap between the hunters' rock art concerning marine mammals and the historical evidence.

5.3.3 Animal style, World Serpent and whales

Between the 5th and 11th centuries AD one finds on the European continent north of the Alps, in Scandinavia and the British Isles the decorative so-called Germanic animal style. This style developed from rather simple abstract forms to half-naturalistic animal figures, often embedded in complex frameworks. To begin with it was used on smaller items such as jewellery and weapons, later it was also applied to ships, monuments, crosses, churches, etc. In the British Isles it was adopted in the Anglo-Celtic Christian decorative art. The influential Nordic animal style falls in two main periods, ca 450-850 and ca 850-1100 AD. The serpent, occasionally also perceived as dragon, is a prominent element in the Nordic animal style in which it was used for decorative as well as symbolic purposes. Serpent and dragon notions have deep prehistoric roots, also in Scandinavia. In Norse mythology they are

Otherwise, it must be remarked that the rigid categories 'Stone Age' and 'Bronze Age' rock carvings, which these authors apply, and the assumption of the latter following upon the former, is now considered simplistic and no longer valid.
represented as Midgarðsormr (World Serpent), Niðhöggr and Fáfnir.¹

The Biblical monster Leviathan, the primeval dragon or serpent living in the ocean (Isaiah 27, 1; Psalms 103 [104], 25-26),² was from the 8th century AD by Christian commentators described as encircling the whole world, holding the tail in its mouth.³ The same motif in relation to the Midgarðsormr is variously attributed to late prehistoric Oriental or early mediaeval Christian influences.⁴ In Christian contexts serpents and dragons are strong symbols of evil powers.

Around 850 AD, the Nordic animal style developed new characteristics which 'undoubtedly must be seen in connection with the great number of different stimuli that during this major period of expansion reached the Nordic countries.'⁵ After the 9th century, the Christian serpent and the heathen Midgarðsormr (Niðhöggr; Fáfnir) blended which 'has probably given the motif a strong appeal'; 'In the 11th century the interwoven serpent motif merges with the Christian serpent-in-battle one' and conforms easily with the decorative tradition.⁶

Evil (wicked) whales (illhveli), or 'troll whales' (tröllhveli, troldhvaler, etc), are prominent in Norse mediaeval and modern Icelandic, Norwegian and Faeroese popular beliefs. The subject is so comprehensive that it requires a treatise of its own but a few remarks are necessary to introduce later deliberations in this thesis. It seems to me that the evil (wicked, troll) whale notion(s) operate at least at four interacting levels, viz:

⁴ Cf Gschwantler 1968: 159f.
⁵ Cf Moe 1980: 408.
(a) real cetaceans (and other natural phenomena), experienced by fishermen and mariners; (b) fishermen’s and mariners’ perceptions of such real cetaceans and other natural phenomena at sea; (c) popular (folkloristic) tradition; and (d) religion (cosmology and ‘authoritive’ myth). The Leviathan notion is certainly omnipresent in Christian belief and will as such have been influential in northern Europe into modern times. After having looked rather closely at the issue I am, however, of the opinion that the Norse traditions of evil (wicked, troll) whales in mediaeval and modern times form a strong, differentiated, cultural complex with Norse peasant fishermen which is indigenous, prehistoric in origin, and remained comparatively autonomous through the 19th century. My hypotheses are

(a) that since prehistoric times the Norse believed the sea was inhabited both by wicked (troll) whales, friendly whales, the World Serpent and, of course, numerous other beings (and spirits);

(b) that evil (wicked, troll) whales of various denominations were initially ‘ad hoc’ metamorphoses of persons and gods, some of which the popular (prehistoric and mediaeval) tradition perpetuated individually (at different times) and which, thus, became ‘permanent’ inhabitants of the sea, with a particular role there and even in the world order (be it as separate demons incarnate, the devil of the Christians, some evil force in general, or a Christian transposition of old Norse gods);

(c) that as from the 10th century AD the blending of heathen and Christian serpent notions was transposed to whales giving rise to some distinct evil (wicked, troll) whales, or possibly a succession of differently denominated evil whales, in lieu of the World Serpent; and

(d) that the World Serpent possibly also has some direct ‘descendants’ in Nordic, particularly Norwegian, sea serpents.

The old Norse mythological complex of Thor’s line fishing
for the World Serpent, using an oxhead as bait, is comparatively well known.\(^1\) Stone carvings with the fishing scene, together with the version found in the lay Hymiskviða of the Poetic (Elder) Edda, appear to be crucial points of departure regarding the hypotheses above.

Hymiskviða, in its extant form from the mid 13th century,\(^2\) clearly distinguishes between whales (hvalir: stanzas 21, 26; brimsvíðn, stanza 27), which the giant Hymir catches as others would draw ordinary fishes, and the World Serpent (ormr, 22; umgjörð allra landa, 22; úlfs hnitbróðir, 23; físcr, 24) which Thor attempts to catch on his baited hook;\(^3\) one might add that Hymir's whales are not considered in negative terms.

Four stone carvings presumably show Thor's fishing;\(^4\) Sørensen (1986: 262) remarks

"that the Gosforth stone, in its surviving form, possibly does not depict the World Serpent, and that the Ardre stone only has an indistinct figure, which may possibly be interpreted as a sea monster, then these two representations must be regarded with a certain amount of scepticism."

On the other hand, we find that both the Swedish Altuna stone and the Danish Hørðum stone unmistakably show the World Serpent. As to the Gosforth stone (cf figure 7), P.A. Bibire (1984: 93) observes:

"Various large fishes are sniffing at the bait; one

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1 P. Bibire (1984: 87-93) and P.M. Sørensen (1986) present the myth and its various sources and offer excellent analyses which need not be repeated here. See also Gschwantler 1968: 148, 150, 161.


3 Cf Briem 1968: 193f; Kuhn 1968: 56f, 99, 104, 160, 208; Neckel and Kuhn 1983: 91-93. The different interpretations of the kenning brimsvíðn as either 'ship' or 'whales' (cf Briem 1968: 194; Kuhn 1968: 33) does not affect this distinction; personally, I regard the whale kenning to be in the tradition of some similar cetacean denominations.

4 At Altuna, Uppland (dated to early 11th century), and Ardre (viii), Gotland (8th century), both Sweden; Hørðum, northern Jutland, Denmark (8th-11th century); and Gosforth, Cumbria, England (10th century) (cf Bronsted 1955: 95, 98; Sørensen 1986: 260). Sørensen offers good illustrations of them all but for the Hørðum stone P.V. Petersen's (1993) clarifying illustrations should be taken into account.
Figure 7

Fishing panel of the so-called Gosforth stone, from Gosforth, Cumbria, England (10th century AD).

(Sketches from Bibire 1984: 92; and Haussig 1973: 99).

Figure 8

Whaling-spear head, as used by Matthías Ásgeirsson á Bauluhúsum, Arnarfjörður, Northwest Iceland, until the mid 1890s. Overall length 45 cm; tang 6 cm long; point 5 cm long and 4 cm wide between the barbs. Kept by Fiskífélag Íslands, Reykjavik. (Sketches from Kristjánsson 5, 1986: 52).
of these is almost certainly a whale. A large, curling serpent appears to be about to bite at the bait. This scene appears to confirm the motif of Hymir cutting Dórr's fishing-line, and also probably that of Hymir fishing for whales."

This student agrees with Bibire's and R.N. Bailey's (1980: 131) interpretation of the lower right corner figure of the Gosforth fishing stone being the World Serpent, similarly, of Bibire's identification of the whale in the lower left corner.

The notion about Leviathan (cf above) and God's question to Job (41, 1): 'Canst thou draw out Leviathan with an hook?'\(^1\) gave rise to an ancient Christian allegory quite similar to the Norse myth about Thor's fishery. In the Icelandic sources Niðrstignarsaga (the apocryphal Nicodemus gospel; ca 1100 AD) Leviathan is explicitly called Miögarðsormr; this is also the case in the (Stockholm) Homily Book (ca 1200) where Satan is also said to assume the shape of a dragon lying around the whole world and takes the hook of God who uses Christ as bait (an ancient Christian motif).\(^2\)

O. Gschwantler argues that the Christian allegory about Leviathan being hooked by God and the Norse myth about Thor's fishery of the World Serpent existed side by side for a long time, most likely influencing each other. Because the strength of the Norse world view, which in Iceland lasted into the 12th century, Christian missionaries and preachers seem, into the early Middle Ages, to have linked the two.\(^3\) The Gosforth stone is generally placed in this context.\(^4\)

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In my opinion, one can take the analysis a step further: We see the World Serpent in one corner, opposite a whale which clearly displays its great tail flukes. There is artistic symmetry in the composition. The two other big 'fishes' of a similar shape and size as the whale, whose tails fall beyond the edge of the stone, I also perceive to be whales. All three whales may be taken as partly referring to those which Hymir caught but this is hardly a sufficient explanation. Firstly, a clearly identifiable whale virtually mirrors the World Serpent the connotation of which is unlikely to be incidental and to have gone unnoticed by the artist and sponsors; secondly, as I perceive it, we have three whales which clearly dominate the sea and the World Serpent plays a minor part; thirdly, at the level of the myth, Thor's fishing line and oxhead bait is indeed at the centre of the depiction but Hymir's whale fishing is displayed at least as prominently, if not more so, than Thor's fishing for the World Serpent. In my opinion the composition and symbolism of the fishing panel of the Gosforth stone constitutes a shift in emphasis away from the World Serpent, as embodiment of the principal evil force in the sea and the world, toward whales, with the secondary reference to the ocean as such, and only a tertiary reference to the world order. This also conforms with the rise of the popular notion of 'the whale' of the Physiologus and the bestiaries (cf next sub-chapter).

With the Viking Age settlement in Britain, Ireland and Normandy, increased overseas trade and Christianisation, the Norse became embedded in the continental European and British cultural development in areas such as religion; church and monastical organisation; classical and mediaeval learning; and feudal ideology, although the actual cultural processes in question remain largely obscure. Only against this background one can hope to identify knowledge, views and notions of basically Norse origin, and influences which the Norse tradition received from outside, respectively.
5.4 Greek-Roman, mediaeval and modern cetology; Physiologus/bestiaries

Classical Greek and Roman culture in general, and learning in particular, had a profound influence on mediaeval to early modern European culture: natural history and zoology, in general, cetology and pinnipedology, in particular, were no exceptions. Western scientific tradition in this field, as in so many others, commence with Aristotle in the 4th century BC. He characterised cetaceans and seals as fully aquatic and amphibious mammals, respectively, and offered quite detailed descriptions of the Mediterranean monk seal, the common dolphin and the harbour porpoise while he only mentioned the sperm whale (phalæna) and 'the baleen whale' (balæna) in passing. The descriptions are generally correct although he stated that cetaceans discharge water through the blowhole.\(^1\) In continuation of Aristotle, the encyclopaedist Pliny the Elder (1st century AD) presented both zoological details and stories about 'the baleen whale' (balæna), the sperm whale (physeter), the orca and dolphins.\(^2\) Into the late Middle Ages, zoological knowledge about cetaceans in southern, central and western Europe was largely based on Pliny's work. The late Classical Physiologus, and when elaborated upon called 'bestiary', blended legend, folklore, rudimentary scientific observation, Christian symbolism and didactics. It was very popular in the Middle Ages and through translations into many languages and attractive illuminated manuscripts, especially in the 11th-13th centuries AD, its influence was considerable. In Physiologus and the bestiaries, 'the whale' symbolises the deceitful intentions of the Devil.\(^3\)

There exist two Physiologus/bestiary fragments of free

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3 Cf Hermannsson 1938: 19; Schenda 1965: 434; Treu 1981: 36-38.
translations into Old Norse. They date from ca 1200 AD or, in the case of fragment 'B', from the early 13th century, and are probably copies of originals dating from the 11th century AD.\(^1\) While the fragments certainly reflect an 'Icelandic Physiologus', this hardly means, as Hermannsson (1938: 7) thinks, that the lost version of the original could not have been Norwegian.

In the 12th-13th century, natural history experienced a scientific revival related to the assimilation of the Graeco-Arabic tradition and, inter alia, the recovery of Aristotle's 'History of animals' for the learned world in Europe. It brought back the spirit of enquiry and experiment, which had largely been absent since the end of the Greek era, and so formed a bridge to the naturalism of the Renaissance (14th-16th century). At the same time the Physiologus/bestiary tradition was transformed.\(^2\) The text and iconography concerning marine beings in Olaus Magnus's *Carta marina* (1539) and his 'History of the Nordic peoples' (1555) was still largely in the Plinian and bestiary tradition.\(^3\) At the same time many minor prints in West Europe illustrated stranded whales in a quite naturalistic, although somewhat stylised, manner, and attributed a religious meaning to their stranding.\(^4\) The details of the subsequent development in scientific cetology need not concern us here.\(^5\) In the 17th century individual scholars began collecting skeletons of, and field information about, cetaceans but it became widespread practice with natural history museums in the 18th and 19th centuries which also

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\(^1\) Cf Hermannsson 1938: 5-8.


\(^4\) Cf Barthelmeß and Münzig 1991.

\(^5\) Cf Guldberg (1894) deals exclusively with the history of cetology; J. Spix (1811), I.V. Carus (1872) and A. Steir (1912: 234-236; 1913: 6-10) all deal with cetaceans and pinnipeds in the context of zoological history, in general (for Spix and Carus, cf Burckhardt 1905-1908).
collected foetuses as relatively handy samples of the animals. The so-called Greenland whaling for bowheads, the Yankee sperm whaling and the Modern whaling for larger rorquals all augmented the biological knowledge of these animals that could otherwise only be studied in the form of stranded specimens. Previously, observation of live cetaceans was limited to sea passages and to those species that periodically came inshore. Pelagic whalers provided additional information on behaviour and presence of whales but it was essentially limited to the whaling season and area.¹

5.5 Early 17th century Basque-English cetology

Separate from the high to late mediaeval learned tradition in Europe there apparently existed with the Basques a rather comprehensive body of knowledge about larger cetaceans which, in my opinion, involves a semi-scientific taxonomy.

On 31 March 1611, the Muscovy Company (Worshipful Society of Muscovia Merchants of London) issued a commission for Thomas Edge as factor on the Company's two vessel expedition to Spitsbergen that year. It, inter alia, offers a blend of practical biological, production and trading particulars obtained from Basque sources which was clearly entirely new knowledge to the English master Edge and the expedition members. When Edge, around 1622/23, wrote his own account of the English whaling activities in Spitsbergen 1611-1622, including the ten expeditions he himself took part in, he closely followed

¹ Cf Collett 1911-1912: 557; de Jong 1983: 84; Jonsgård 1972: 6f; Watson 1985: 14-16, 285f. By benign research techniques information on biology, ethology, migration patterns and population dynamics can now be obtained during the whole circle of the year and throughout the migratory range of species.
the descriptions, the whale names, etc.\(^1\)

D.F. Eschricht and J. Reinhardt (1866: 34) seem correct when they write:

"... it cannot be doubted but that the description of the different Cetaceans procured by the company for Mr. Edge's information had originally been given by Basques. This is also proved by the names of the whales, even though they may have been somewhat modified by having been written in English; and the circumstance that Mr. Edge afterwards, although on his voyages he had so much opportunity of procuring additional information from his Basquean harpooners, only repeats the former list that had been communicated to him, with one or two slight alterations, seems to show that it really did state correctly the whole amount of the knowledge of whales of which the whalers were in possession at that time."

However, the underlying purpose of the Basque-English enumeration and descriptions must be kept in mind, viz 'to know the better sorts of whales from the worser, whereby they may choose the good, and leave the bad'. The arrangement applied is clearly based on economic considerations, beginning with the 'first sort', also being the 'best sort', and moving down the line. The presence of three rorqual species on the list does not imply that the Basques actively pursued them; on the contrary, they would have been avoided in the hand harpooning operation but would, of course, have been taken and processed if it could happen without risk (eg, in the case of stranded animals or drifting carcasses). The observations with regard to baleen and oil yields are those of the whaler merchant, and not those of a naturalist. Moreover, the oil yield depends greatly on the physical shape of the animal, especially on

\(^1\) The commission and relevant information from Edge's account are presented in item A.18; they offer an interesting comparison with the Norse cetology of *Konungsaskuggsjá* (mid 13th century AD) and concern the Atlantic gray whale issue (cf ch 6.2).
where in its migratory cycle it is taken and whether it is a lactating cow.

The information about the whales may be summed up as follows:

The 'first sort of whales', the bearded whale, is designated is by Edge (1622/23) as 'Grand-bay' (whale), which he says takes this name from the Grand Bay in Newfoundland, ie, the northern Gulf of St Lawrence/Strait of Belle Isle, where it had first been killed by the Basques.\(^1\) It is the bowhead whale.\(^2\) The Basques, however, had an even older name for the bowhead, \textit{sardaco baléac} (or \textit{sardaco baleac}), which means a right whale (\textit{sarda}) that 'moves in flocks'; they called the bowhead so upon their encounter with it on the Bank of Newfoundland, in order to distinguish it from the \textit{sarda}, ie, the (black) right whale, they knew from Europe.\(^3\)

Eschricht and Reinhardt (1866: 22) are of the opinion that the appellation bearded whale also prior to 1611 AD designated the bowhead whale, presumably in English and in a wider European context. I have doubts about this and could imagine that bearded whale was instead the mediaeval English (and possibly wider European) name for the black right whale, being the only right whale (\textit{balæna}) species (also with comparatively long baleen plates) then known to any degree in western Europe. With knowledge of the bowhead (having even longer baleen than the black right whale), coming in with the Basques in the (late) 16th century from Newfoundland/Labrador, and possibly from Iceland during the first years of the 17th century, the directors of the Muscovy Company may have thought the name bearded whale more appropriately applied to the bowhead while, at the same time, introducing the Basque term \textit{sarda} for the black right whale.

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1 Cf Edge 1906: 30f; Eschricht and Reinhardt 1866: 8f, 22, 24; Purchas 1906b: 31; Tuck 1981: 69.

2 Cf Lubbock 1978: 62.

3 Cf Eschricht and Reinhardt 1866: 23.
The second sort of whale, the sarda, is the black right whale.  

The third sort of whale, the trumpa, is the sperm whale.  

The fourth sort of whale, the otta sotta, is thicker than the trumpa but not so long; it has two blowholes, is grey and has white baleen which are no longer than half a yard; it yields up to 30 hogsheads of good oil. Not having the benefit of recent discussions, B. Lubbock (1937/1978: 63) concludes that "The Otta Sotta one cannot put a name to." Pursuant to the discussion at the end of chapter 6.2, I agree with J.G. Mead's and E.D. Mitchell's (1984: 50) identification that this is the Atlantic gray whale.  

The fifth sort of whale, the gibarta, is most likely the fin whale.  

The sixth sort of whale, the sedeva, can hardly be anything but the blue whale.  

The seventh sort of whale, the sedeva negro, is the humpback whale. The English Pilot. Describing the sea-coasts, capes, head-lands ... in the whole Northern Navigation, published in London 1708 (p 40), calls it

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1 Cf Edge 1906: 30f; Purchas 1906b: 31.  
2 Cf Lubbock 1978: 62.  
3 Cf Edge 1906: 30f; Purchas 1906b: 31-33.  
4 Cf Lubbock 1978: 62.  
5 Edge 1906: 30f.  
6 F.C. Fraser (1970) seems unaware of this Basque-English source.  
7 Cf Edge 1906: 30f.  
8 Cf Lubbock 1978: 63.  
9 Cf Edge 1906: 30f.  
10 Cf Lubbock 1978: 63.  
11 Cf Edge 1906: 30f.  
12 Cf Lubbock 1978: 63.
sedeva negro while the edition from 1780 (p 60) speaks of sedava negro.¹

The **eighth sort of whale**, the *sewria*,² is the white whale.³

The Basque-English whale list only mentions the species that were most prominent from the point of view of a late 16th-early 17th century whaler merchant, viz: 1: bowhead whale; 2: black right whale; 3: sperm whale; 4: Atlantic gray whale; 5: fin whale; 6: blue whale; 7: humpback whale; and 8: white whale. It follows, virtually as a matter of course, that contemporary Basques would also have been familiar with other species, such as pilot whales, orcas, dolphins and harbour porpoises. During the Middle Ages, Basque whaling was restricted to West European waters; in the early 16th century it expanded to Newfoundland and Labrador⁴ and it must be here that the Basques first came to know bowhead and white whales because these species are subarctic to arctic and can only be encountered near the Arctic ice edge: generally speaking, they ranged south to Newfoundland/Labrador, southern Greenland, Northwest and North Iceland, and East Finmark. Even leaving these two species aside, late mediaeval Basque cetology obviously holds a considerable body of natural history knowledge, of at least the black right, sperm, Atlantic gray, fin, blue and humpback whales among the larger species. The Basque and Basque-English cetologies, as we learn about them here,

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1 Cf Djurhuus 1976: 487.
2 Cf Edge 1906: 30f.
3 Cf Lubbock 1978: 63.
4 Cf Proulx 1993: 9, 14-17; Tuck 1981: 69. J.-P. Proulx (1993: 14) and his source seem wrong in associating the year 1412 with the arrival of Basque whalers in Iceland. Around this time English fishermen began fishing there (cf Laxness 1, 1974: 76; Thorsteinsson 1985: 119). Basque whalers are first recorded in Iceland 1608 (Ballardzánnáll, 1608; cf Dorsteinsson 1930b: 191). Consequently, Proulx's (1993: 14) and R. Gørgensen's (1994: 33) interpretation that Basque whaling at Newfoundland/Labrador followed upon their whaling in Icelandic waters cannot be sustained; Basque whaling in Icelandic waters seems instead related to a northward expansion from West Europe which includes northern Norway.
do not contain elements of a zoological systematisation for which reason they must be characterised as popular, rather than semi-scientific. In the (non-French and non-Spanish) literature I have so far found no indication of a connection between the late mediaeval/early modern Basque cetology and the contemporary learned book tradition. Because I am ignorant of the French and Spanish literature and research concerning the history of cetology in these countries I must leave this issue with a few unanswered questions: How much more is known about mediaeval Basque cetology? and to what degree did this cetological knowledge disseminate beyond the Basque language barrier?

5.6 Norse mediaeval nomenclature, classification and taxonomy of cetaceans and pinnipeds: Previous research; present approach

The historical, etymological and zoological discussion of the Old Norse and older Icelandic names of cetaceans, pinnipeds, etc, and their identification with modern names and species began with Jón Eiríksson (1768), D.F. Eschricht (1845) and G. Guldberg (after 1884). K. Maurer (1873) discussed the names in Konungsskuggsjá (KGS; Speculum regale; Royal Mirror, from the mid 13th century AD; cf ch 5.7.4) but attempted no identification. In this century notably Guldberg (1905a); F. Jónsson (1921, 1926), O. Nordgaard (1902-1903; 1916; 1921), H. Hermannsson (1924: 34-38) and I. Whitaker (1986) have studied the issue.¹ Scholars seem to consider the issue as basically settled: for example, recently, Whitaker states that he "leaned heavily on the work of two scientists who earlier undertook the same task, Guldberg (1905[a]) and Nordgaard (1921)."

¹ H. Hermannsson (1924: xxvii) lists the pre-1924 literature; no significant literature has been added on the topic since then (cf Whitaker 1986: 12f). It serves little purpose to treat L.M. Larson's (1917: 119-126, 139-141), Jónsson's (1926: 26-30, 48f) and Whitaker's (4-7) name translations and identifications in detail, nor their translations as such, about all of which I often have reservations.
although, on "the present incidence of sea-mammals in the North Atlantic", he dismisses an obviously unreasonable identification with Steller's sea lion of the North Pacific.¹

To be brief, these scholars, in my opinion, generally:

(a) each draw on a rather limited number of sources which are often widely separated in time;

(b) attempt to match directly old and modern names,² which means dealing with the issue as essentially nomenclatural, in a rather simplistic and static manner, - ie, assuming that the old classification/taxonomy conforms to our modern one, and disregarding problems that arise from drawing on sources that often lie many centuries apart (despite all socio-economic and intellectual continuity), similarly, disregarding modifying factors that are inherent in the recurring naming process itself; and

(c) leave the taxonomic, world view and cognitive aspects aside and offer no theoretical approach to the issue, especially regarding the various dynamic factors involved.

Moreover, I consider that information about marine mammals (eg, size measures) have frequently been interpreted in an ahistorical manner and that the etymologies are occasionally questionable.

My premises and approach to the analysis and 'identification' of the marine beings of the Norse mediaeval to (early) modern sources may be outlined as follows:

(1) My basic assumption is that the categorisation and designation of, eg, marine mammals, at any time reflect the

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¹ Cf Whitaker 1986: 4. This does not harmonise with Whitaker (1986: 5) rendering the rauðkembingr as "sea-lion [?]". To judge by the absence of works like Holm-Olsen (1983), Fritzer (1954), Blöndal (1980), or the earlier editions, from the bibliography, Whitaker seems not to have researched primary sources in ON/Icelandic for the article.

² For example, Whitaker (1986: 8) directly speaks of "'unallocated' terms" (see also Ellis 1992: 41).
social and cultural reality within which they occur. As popular (informal) classifications, learned and scientific (formal) taxonomies,¹ and nomenclatures,² respectively, they develop from one another but also exist side by side. Although closely related and interacting, one must distinguish between, on the one hand, classification and taxonomy, which define the entities (beings) and arrange them in a more or less hierarchical system of categories, and, on the other hand, the designation (nomenclature) of such entities and categories. Nomenclatures seem to be more conservative than the classifications and taxonomies which causes ‘discrepancies’ over time.³

(2) If we look behind S. Körner’s (1981: 693) word ‘theory’ and read ‘world view’, I think we have here a valuable theoretical framework from which to set out: "The history of the transition from Linnaean to Darwinian and post-Darwinian theory illustrates the dependence of nomenclature on taxonomy and of taxonomy on theory. At the same time it also shows how an established nomenclature tends to preserve established taxonomical principles and thus indirectly to perpetuate the theory on which they are based."

(3) ‘Popular’ and ‘learned’ classifications are arbitrary; the difference between them is the degree of systematisation. The popular classification is reflected in folklore in the widest sense. As to Icelandic folktales S. Sigfússon (6, 1945: 5) notes that regarding ‘the animal monsters of the sea ... it is difficult to distinguish

¹ Any taxonomy is, of course, a classification. In this context, however, I wish to use the expression ‘popular classification’ (rather than folk taxonomy), at the one extreme, and reserve ‘taxonomy’ for the scientific systematisation, at the other extreme; between them I wish to place ‘learned classifications’ and ‘learned taxonomies’, depending on their main characteristics.

² Popular classifications also make use of a "system or set of names" (cf SOED 2, 1987: 1409).

between what is called monster or little known animals and the well known animals'. Whether the information originates in traditional 'folklore', 'literature' or 'natural history' they are part of the same body of views and none should be played down on formalistic grounds. The basic world view of mediaeval and early modern peasant fishermen and learned persons was that the natural and supernatural were equally real and closely interrelated. Because fiction and fact widely blend the assigning of an old Norse marine creature to a real species depends on natural features mentioned or indicated, and the etymology and continuity of the name evidence available. It then makes no difference whether a name is considered to be a proper term (subject to taboo under certain circumstances), a noa (permitted) term or periphrastic expression.\(^1\) For analytical reasons one must distinguish between the real species (identified or unidentified), the name as such, and the old 'species' notion the 'real' life of which occasionally extended through the 19th century.

(4) The explanation of natural phenomena by teleological causes (final causality), rather than by efficient causes, was innate to approach and thought in the Middle Ages and into the 16th-17th centuries.\(^2\) Other guiding principles and categories will also be quite alien to us. The Linnean taxonomic system is hierarchical and each generic and specific category is exclusive. The Norse popular and learned classifications may well be of a non-exclusive structure and lack the congruity which is a basic element of modern scientific taxonomy. We may therefore possibly encounter natural 'trans-species' (of what we perceive to be two or more species) in addition to creatures that belong to the supernatural world. An earlier notion is that life in the sea corresponds to life

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1 Cf Webster's 2, 1957: 1656, 2564; see also Holtsmark 1981a: 652.
2 Cf Enc Br, Mic 9, 1981: 869.
on land.¹ This affects the classifications of both natural as well as supernatural marine beings because it may result in the 'creation' of 'species' (names) to 'balance' the terrestrial and marine classifications. Other creatures may play a role in the cosmic order and thereby perhaps reflect ideas about teleology and providence.

In cases where an observer, mediaeval or modern, will easily notice some unique attribute(s) in an animal, the identification (i.e., "to refer a specimen to its proper species")² should be possible; however, such an identification cannot be taken to mean that the animal in question has approximately the same position within the classifications concerned. This requires illustrations from various classifications, e.g:

The author of KGS (ca 1250 AD) remarks that the Norse Greenlanders count the walrus (rostungr) among the 'whales' and 'fishes' but to him it 'ought rather be classed with the seals'.³ Jón Guðmundsson laðrói (JGl; [1639/44] 1924b: 28), inter alia, classes the walrus and the fabulous marbendill (merman) with the 'seals' and in his subsequent work ([1640/44] 1924a: 5f) counts the Greenland and basking sharks with the 'whale fish species'. P.H. Resen ([ca 1688] 1972: 60f, 66f) mentions three genera of 'fishes', viz: minores pisces (small fishes); phocas (seals), including the walrus; and cetos (whales). Jón Ólafsson frá Grunnavík (JÓfG, 1737*), at the order/family level, divides 'fishes', inter alia, into 'rough-skinned fishes' (skrápfiskar), 'hair fishes' (hárfiskar) and 'smooth-skinned fishes' (hveljufiskar). While the 'hair fishes' correspond to our pinnipeds, the last category (also called

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¹ Cf Einarsson 1929: 55; 1971: 113; Sigfússon 5, 1945: 5. Jón Ólafsson frá Grunnavík writes (1737): 'Some people are of the opinion that in the sea are imitations of all perfect animals (animalium perfectorum) which people call terrestrial animals, horses, cattle, dogs, cats, and even man himself.' (Cf LBS-JS ms 247: 46; see also KBK Rostgaard ms 111: 37r).

² Cf SOED 1, 1987: 1016.

'big fishes', 'whales') explicitly includes 'not warm-blooded' shark species (which we would rather place in his first category). Vicar Magnús Arason (b 1667, d 1738), who compiled the latter part of Malifellsannáll, 1728, also classes sharks (háskerðingar) with 'small(er) whales' (smáhvalir). Furthermore, KGS, JGl, etc, class species as being 'edible' or 'inedible', having teeth or baleen, having a smooth back or a dorsal fin, having ventral grooves or not, etc. 

(6) For these reasons I regard it essential to try to look into the Norse classification system of marine beings and attempt to analyse it and its categories 'from within', ie, on its own (mixed) premises, in order to gain an understanding of its arrangement and principles, and to follow it through to modern times, rather than to force it into our modern taxonomic system and nomenclature. The most comprehensive Old Norse source in the field, KGS, and its structure has been chosen as the basis and framework for the study to which earlier and later sources will be related.

(7) Although a cross-examination and comparison of the Norse sources from different times and places allow gaps in the sources to be filled in, it must not be forgotten that these popular and learned classifications (systems) have changed over the centuries: names disappear, new ones emerge, yet others move between categories with a similar connotation or in a new meaning and, finally, categories are reshuffled. A progressive approach, which involves a conceptual and nomenclatural step-by-step analysis at the 'species' (and 'trans-species') level, presumably mitigates the differences and changes in the nomenclature over time and between places, and should not be as susceptible to deficiencies in the source material as the approach and methodology employed by the scholars mentioned above. At

1 Cf KBK Rostgaard ms 111: 22v, 24r, 27r, 35r; LBS-JB ms 247: 14, 28, 30, 42; Thoroddsson 2, 1898: 315-317.

a later stage it should be possible to structure the evidence and suggest particular sets of names as belonging to certain domains, levels and possibly systems.

Real cetaceans, the walrus and mythical 'whales' must all be considered in the wider context of the Norse folkloristic world. S. Sigfússon writes about Icelandic supernatural beings that the human-like land wights are álfar, dvergar, jólásveinar and tróll; the corresponding sea inhabitants resembling humans are mainly (in the same order) marmenn/hafmenn, marbendlar/mardvergar, marstrambar/margyggjar/hafgygjar and martröll (all pl). Certain sea inhabitants are able to live on land just as some land wights can live in the sea and in lakes (eg, álfar); from the latter probably originate tales about gentle sea inhabitants. The human-like sea wights are also said to keep domestic animals, notably sænaut and vatnahester (nykrar), which in most respects are similar to bulls and horses on land. These sea wights form a class of their own. Besides them we find a quite large group of skrímsli (monsters) in the sea, rivers and lakes. They are beings which people actually know nothing about. Mostly they are described as having the shape of animals but sometimes also partly that of humans; they usually appear in numerous forms, are hideous and malevolent; some may also come ashore. It is likely that various skrímsli were animals that horrified people and of which people had particularly limited knowledge; thus they became distorted in peoples' imagination.¹ These beings are known in the whole of the Norse area and accompanied the (heathen) Norsemen to their new settlements in the Viking Period.²

The present student advances the hypothesis

(a) that an ancient complex of Norse popular knowledge and beliefs regarding cetaceans, pinnipeds and mythical

¹ Cf Sigfússon 5, 1945: 5.
² Cf Hermannsson 1924: xix.
whales\(^1\) extends into modern times;

(b) that in the high Middle Ages, probably the mid 13th century AD, these views (knowledge and beliefs) about the most conspicuous marine beings were systematised;

(c) that their partial 'codification' in KGS established a Norse learned tradition\(^2\) which, for example, in Iceland extended into the late 18th century while in the meantime reinforcing the corresponding popular tradition;

(d) that the KGS tradition reflects the Greek-Roman, Physiologus/bestiaria and mediaeval Christian learned traditions only in a limited way;

(e) that the ancient Norse popular and KGS traditions basically reflect the old Norse religious and mythological world view and only display a reluctant and limited response to Christianity; and

(f) that the great variety of names for real cetaceans and mythical whales, as compared to those for pinnipeds in general, reflects that the former were subjects of taboos to a far greater extent than the latter, thus leaving relatively more (noa) names with the language and tradition.

We can here only survey the Norse aspects, i.e., their character, interrelations and relative weight, from which their position in the overall European context may be deduced.

A good introduction to the marine species and class issue we get from the Icelandic 'Christian law' which contains general food and specific fasting regulations. They exist in nine Grágás manuscripts (GG 1a: 36; GG 3: 83, 182, 222, 226, 354) and Bishop Árni's Christian law (BAK 39), from 1275 AD,\(^3\) which is the parallel legislation to (the secular) Jónsbók (JB; 1281/83). The codified version

\(^1\) This might be called 'popular tradition' for short.

\(^2\) It may conveniently be termed 'Konungsskuggsjá tradition'; it actually includes certain weather, wave and optical phenomena at sea.

\(^3\) Cf Storm and Hertzberg/NGL 5, 1895: 51.
of BAK 39 is as follows: A fasting person may (at Lent) eat vegetables, fruit and all earth products ... Then it is also right to eat fishes of all kinds and whales [hvala/hvali] all others than walrus(es) [rostungr/rostungar] and seal [selr]. Hrosshvalr shall never be eaten, neither narwhal [náhvalr] and rauðkembingr.1

We here encounter various classes and species of marine creatures, viz.:2

All kinds of 'fishes' (fiskar) and 'whales' (hvalir), in the meaning of cetaceans, may be eaten during Lent, while walrus (rosmhvalr [GG 3: 83, 182, 222, 266, 354; see also GG 2: 43, GG 3: 39, 220]; rosmal [GG 1a: 36]; rostungr [BAK 39]) and seal (sel) may only be eaten on ('red') meat days.3 In terms of diet we have here a clear separation of the 'fish class', i.e., fish proper and cetaceans proper, from pinnipeds which, apparently because of their amphibious character, are classed with the terrestrial animals.4

When BAK 39 reads: 'it is also right to eat fishes of all kinds and hvala/hvali all others than rostungr/rostungar', it seems illogical5 unless it is recalled that the compatible GG texts use the term rosmhvalr (GG 3: 83, 182, 222, 266, 354), with one exception which reads rosmal (GG 1a: 36). We, thus, encounter a class of 'whales' which includes the rosmhvalr and is not merely a 'name class' because both GG 1a: 36 and BAK 39 observe it despite

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1 Cf Storm and Hertzberg/NGL 5, 1895: 51 (normalised).
2 Nordgaard (1903: 13) observes that 'our ancestors' called baleen tálkn (ON) which also means 'gills'; I think that this may be a figurative use which, thus, need not be of classificational significance.
3 Cf also Vídalin 1854: 441.
4 Cf GG 1: 34; GG 2: 43; GG 3: 39, 220.
5 The same applies to GG 1a: 36 ("fiska allz kyns. oc hvala. apra en rosmal oc sel").
terming the walrus rosmal and rostungr. Bishop Oddur Einarsson (1588/89) describes rostungur as an 'intermediate' kind of 'fish', much like the seals, and bishop Gíslí Oddsson (1638) considers rostungur to be a fish species between seals and whales. JGl, in Um hvalfiskakyn í Íslandshöfum (1639-1644), presumably reflecting popular classification, handles the issue in the most logical way of all: he counts the rosmhvalur among the 'whales' and the rostungur with the 'seals'. In Ein stutt undirrietting um Íslands adskillianlegar náttúrur, which presumably is later (1640-1644), he 'merges' the 'species', generally using the name rostungur and keeping it separate from both the whales and seals, which is equally logical. This demonstrates how a species may move between popular categories. In JB vii 68, we read: 'If somebody finds a seal or porpoise or other fishes except whales ...'; here the seals are included in the fish class.

The variability of earlier class and species concepts is considerable and great caution is required in that respect. Earlier we encountered the 'dietary' and 'non-dietary fish classes'; 'à prendre [taking]' and 'non-à prendre fish (whale) classes' do not necessarily correspond with the former because products (eg, blubber and oil) may be used

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1 P. Vidalín (1854: 441) notices the ambivalence in the old legal sources '... whether this creature is to be counted with the seals or whales ...'. If rosmal and rostungr constitutes an attempt to separate the walrus from the whale class one sees it reversed in the term rostungshveli (I, neuter; = -hvalur, m) (Höskuldsstadaannáll, 1779; cf Jóhannesson 1948a: 570).


3 "... pisces qvidam rostungr, qvi inter phocas et balenas prorsus videntur intermedii, ..." (Oddsson 1917: 47; cf 1942: 78).

4 Cf Guðmundsson 1924b: 28.

5 Cf Guðmundsson 1924a: 13f.

6 "Nú hittir maðr á sel eða hnísu eða aðra fiska utan hval ...' (cf Hallórsson 1904: 207).

7 The use throughout of the coordinating conjunction 'or' seems to exclude that a comma has been left out after 'seal' which would change the meaning radically.
for other purposes than food. Similarly, I think that one should not a priori consider taboo and noa classes as corresponding with the 'non-à prendre' and 'à prendre classes, respectively.

GG and BAK 39 contain a general prohibition on eating hrosshvalr, narwhal (náhvalr) and rauðkemberg;¹ they seem to form a class of their own, or be part of such a class. By analogy² one might assume that the character of these three, and (later?) related, creatures have to do with aversion and taboo concerning carcasses, corpses and the death of humans.³

It is illuminating to look at terms (specific and generic) which Icelandic legal sources from the 12th-13th centuries AD use in different contexts, viz:

hvitasbjörn,⁴ rosmhvalr,⁵ selr⁶ (GG 2: 43; GG 3: 38f);
hvitasbjörn, rosmhvalr, hvalr,⁷ fiskr⁸ (GG 2: 40);
rostungr,⁹ selr, hnísa,¹⁰ háskerðingr,¹¹ fiskr (GG 2: 514);

¹ GG 1a: 36; GG 3: 182, 222, 266, 354, mention all three creatures while GG 3: 83 omits the narwhal.

² The Christian law also prohibits the eating of horses, dogs, foxes, cats and other animals with claws (except brown and white bears), and taloned birds, with carrion claws, such as eagle, raven, falcon and hawk. If a swine has eaten from dead human flesh it must be leaned and may then first be consumed after six month, if it gets into horse meat it must be leaned and then held for three month before it is fit for human consumption. Cattle that have killed a person are also unfit for consumption. (Cf BAK 39; GG 1a: 34; GG 2: 42f; GG 3: 38f, 81f, 179f, 220, 263f).

³ The wider implications of this (in physical and spiritual terms) will be considered with each species.

⁴ Ie, 'white bear'.

⁵ Ie, 'rosm whale' = walrus.

⁶ Ie, 'seal'.

⁷ Ie, 'whale'.

⁸ Ie, 'fish'.

⁹ Ie, walrus.

¹⁰ Ie, harbour porpoise.

¹¹ Ie, Greenland shark.
rostungr, selr, hvalr, hnísa, háskerōingr, fiskr (GG 3: 384);

selr, hvalr, hnísa, háskerōingr, fiskr (GG 1b: 131);
selr, hvalr, fiskr (GG 1b: 123; GG 2: 510; GG 3: 378, 440f; JB vii 60);¹

selr, hvalr, hnísa, fiskr (JS 92);²

björn,³ rostungr, selr, hafhrvalr (vars: hafr, háfr), hnísa (JB vii 68);⁵

rostungr, selr, hnísa, háskerōingr (JB vii 61);⁶

selr, hnísa, other fiskar except hvalr (JB vii 68).⁸

To a modern observer this seems a mixture of species designations (polar bear, walrus, porpoise, Greenland shark) and generic terms (seal, whale, fish), but the appearance could be deceptive. JB vii 68 clearly subsumes 'whale' under the class of fishes; on the other hand, GG 2: 40, keeps the categories 'rosmwhvalr, hvalr and fiskr fully separated (despite the nominal '-whale'/'whale' linkage).

Old Norse poetic language is imbued with periphrastic expressions. According to A. Olrik (in 1897) and S. Solheim (1940) scaldic kennings pertaining to the marine environment have been borrowed from the specific 'sea language' of Norse coastal inhabitants which will be

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¹ Cf Halldórsson 1904: 194.
² Cf NGL 1, 1846: 288.
³ Íe, 'bear'.
⁴ 'Hafr whale' is presumably the orca and/or one or more dolphin species.
⁵ Cf Halldórsson 1904: 207.
⁶ Cf Halldórsson 1904: 197.
⁷ Íe, 'other fishes except whale'.
⁸ Cf Halldórsson 1904: 207.
primary.¹

'From several places in the Norse area we have both direct and indirect evidence that the fishermen would not use the proper names for the various kinds of whales but made use of secret names. The information is indeed limited and scattered but at the point where the tradition fails we may comparatively safely fill in by comparing with other fields where the sources are more abundant and circumstances are more evident. This pertains in particular to the background of the prepossessions.'²

'We now know that name taboos have to do with, and are part of, certain complexes of beliefs and/or customs that surround the object concerned.' So with birds because people obtained presage from them, wild beasts because they were dangerous and injurious for people's lives and welfare and, finally, any good object of catching. 'The antipathy against the proper name was here often related to the excitement during the hunt and to various ritual customs during the slaughtering and eating of the hunting object. The tradition about the halibut is here particularly informative ... As to the whale there is no doubt that all these motives ... have contributed towards creating antipathy to the proper name - all according to time, place and other circumstances.'³

The issue at hand can hardly be approached from a better basis than Solheim's (1973: 28-31) comprehensive work *Kvalen i folketru og diktning*, first published in 1942, supplemented by J. Jakobsen's (1911) observations on the subject. Solheim surveys many old and modern Norwegian sources (including GTL and KGS) regarding the 'herring whale' or 'fish whale' and writes:

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¹ Cf Solheim 1973: 26f.
² Cf Solheim 1973: 27.
³ Cf Solheim 1973: 27f.
'The whale and the fish shoals were mostly one and the same, they came together and came also to be inseparable in people's thoughts. It was an old public belief that it is the whale that chases the herring and the capelin cod [loddetorsken] inshore.'

Solheim (1973: 28) is of the opinion that 'The popular notions about the whale have to a great degree their basis in that this animal was, and is, a reliable indication of fish arrivals.' This is probably correct with regard to some rorquals but certainly not 'the whale', in general.

Otherwise, Solheim concludes:

'The prepossession against killing the whale in the fish shoals has presumably been combined with the prepossession against calling it by the usual name. ---. The use of periphrastic names may have helped to create the illusion that it did not involve the same animal which people otherwise hunted and killed when they had the opportunity of doing so. We have no direct evidence about what secret names were used about the whale in this case' but it can be inferred that they somehow must have expressed the common perceptions about the animal and the evidence gives good indications in the direction of "Gods envoy" or "The overseer", etc., while the fishermen must have called this whale the "herring" or "fish herd". This corresponds both linguistically and in substance to the old Norse names sildreki [ie, 'herring driver'] and fiskreki [ie, 'fish driver']. In this context it


2 Solheim speaks throughout of 'the whale'. This lack of differentiation gives the impression that all aspects (fish driving, molestation, supernatural powers, etc) relate more or less equally to all cetaceans. Such a view cannot form a methodological point of departure in further studies. If a differentiation between species is not possible, one of baleen versus toothed, and big versus small cetaceans should at least be attempted. However, Solheim's analysis and conclusions regarding kennings and noa names, in general, are at a level unaffected by this observation.
should then not be unreasonable to interpret these names as primal secret names.‘¹

‘In the same way as the fishermen had prepossession against mentioning the halibut, because they feared that it should tear itself away if it heard its correct name we might suppose that the hunters used particular names for the whale in order to prevent it from escaping.’²

Solheim sees this confirmed in similar modern expressions recorded in the Antarctic whaling operations which he thinks originated in the old prepossessions.³

‘With name prepossessions it is a rule that the fear for using the normal names relates to the fear that others, the object of the hunt or dangerous "powers", may hear them. It has, thus, been a widespread view with the fishermen that various things ought not be mentioned by the correct name on account of all kinds supernatural beings.’ People assumed that trolls and wights had their own names for them and that people then had to use other names which the wights either did not understand or which were ‘stronger’ than the names used by the pursar [pl; ie, trolls/half-trolls]. ‘When we therefore in the coastal settlements meet with stories in which the whale by trolls and the like is called by periphrastic and strange names then this is also an indication that the whale has been an animal which people were used to designate by secret names.’⁴

Solheim convincingly demonstrates that the sea terms and the poetic kennings are congruous and that the kennings

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¹ Cf Solheim 1973: 30f.
² Cf Solheim 1973: 32.
³ Cf Solheim 1973: 32f.
⁴ Cf Solheim 1973: 33.
originate in the noa names.\textsuperscript{1} He suggests that the kennings were not merely picked by the scalds from the sea language because they suited their poetry in particular cases but that they may even have deeper roots, ie, in 'ritual ceremonies aimed at furthering good fishing and hunting fortune.'\textsuperscript{2} Averting evil forces must play an equally important role in this respect.\textsuperscript{3}

The situation with Orkney and Shetland Norn, as described by J. Jakobsen (1911), is very revealing for us. A characteristic trait of Shetland Norn is the very many taboo words, mostly periphrastic expressions, which the haf fishermen preserved since they were used during the haf fishery, 'as a tabu language, spoken out at sea in protection against the feared sea wights and for securing a rich catch', long after Norn ceased to be vernacular. Violation of the taboos could foil the catch and, I would add, endanger the lives of the fishermen. Because the Orcadians relied far less on peasant fishing than did the Shetlanders, the taboos which ultimately relate to the fear of sea wights disappeared earlier in Orkney than in Shetland.\textsuperscript{4}

Knowledge by Norse peasant fishermen of cetaceans obviously varied greatly between districts. This seems illustrated by sysselmand (sheriff-steward) D. Scheving's report in 1778 (cf item A.16.3) which reveals a striking contrast between the outstanding knowledge about cetaceans by the peasant fishermen in Arnarfjörður and, conversely, ignorance about them by the peasant fishermen in the neighbouring Breiðafjörður district.\textsuperscript{5}

\textsuperscript{1} Cf Solheim 1973: 33-39.

\textsuperscript{2} Cf Solheim 1973: 39f.

\textsuperscript{3} Cf Solheim 1973: 31, 33. M. Kristensen (1917) draws attention to the fact that the scalds are concerned with poetic mode, rather than zoological classification; however, because we draw on a variety of sources and the scaldic nafnapulur, or fiskapulur, are not decisive in our conclusions we may generally disregard this aspect here.

\textsuperscript{4} Cf Jakobsen 1911: 330, 333.

\textsuperscript{5} Cf Scheving 1787: 210f.
5.7 Literary sources relevant to Norse cetology

5.7.1 Old English Orosius (late 9th century AD)

The earliest Norse account of marine mammals and hunting thereof is found in the *Old English Orosius* (OEO) which is a late 9th century AD translation into Anglo-Saxon of Paulus Orosius' world history ('Seven books of histories against the pagans') from the 5th century AD. OEO is among the many scholarly works commissioned and directed by king Alfred the Great, of Wessex, south England, (reign 871-d 899 AD). By way of introduction it contains a description of northern Europe of which an account by the chieftain merchant Ohthere from Hålogaland (Nordland), northern Norway, forms a part (cf item A.18)\(^1\). OEO is extant in four manuscripts; Ohthere's account is preserved fully in two of them, only partly in one of them and is missing in the fourth one. The dating of the composition of OEO itself and of the visit of Ohthere to the court of king Alfred can only be narrowed down to the reign of king Alfred, *ie*, 871-899 AD.\(^2\)

5.7.2 Historia Norwegia* (end 12th century AD)

The Latin *Historia Norwegia*\(^*\), apparently dating from the late 12th century AD, and possibly written in Britain or Denmark,\(^3\) contains a passage the meaning of which is approximately like this:

... merchants on their way to Greenland ... There are also many different kinds of great whales which break even the strongest ships to pieces, swallow the sailors or submerge them. Here the one-eyed horse whales with their big manes ['*equini ceti monoculi

\(^1\) Cf Bately 1980: 14f*.

\(^2\) Cf Bately 1980: xxiii-xxvi; lxxxvi-lxxxix; Lund 1983b.

\(^3\) Cf Holtsmark 1981b: 585f.
jubis diffusis" plough the deep sea, ferocious and searching; there is the sea monster (/shark, sawfish) [pistrix]; there is the great monster hafstrambus that has neither head nor tail, rising and sinking in the waves as a branched tree trunk, and when it appears to the sailor it is a sign of danger. There is the hafguva and hafkitta, the largest of the sea monsters, and otherwise there exist countless of the same kind.¹

Pistrix is by Pliny the Elder associated with the Indian Ocean (Natural History ix, 3): ‘Maximum animal in Indico mari pistrix et balæna est, in Gallico oceano physeter ...’), distinct from the 'baleen whale' and sperm whale.² So far, I have only noticed that information from Pliny occurs with the Icelanders Oddur Einarsson (1588/1589) and Gísli Oddsson (1638) who relate Pliny's assertion about whales being 600 feet long and 360 feet in circumference to Norse sea monsters.³

The other creatures, hrosshvalr, hafstrambr and hafkitta, belong to the Norse tradition, as we shall see. Only Historia Norwegia describes the wicked hrosshvalr as being one-eyed.⁴ G. Storm (1973: 80) notes that in Örvarodds saga, hafgufa is a large sea monster but the slightly younger KGS considers hafrkitti to be a harmless fat whale; for that reason Storm thinks that the text should either read "hafkitta et hafguva" or "hafkitta vel [ie, 'or'] hafgufa", or that "et hafkitta" is altogether an unauthentic addition.

¹ Cf Storm 1973: 79f. For the reading I have partly relied on Salvesen's (1984: 645) translation into Norwegian.
² Cf Pliny 1940: 168f; Storm 1973: 80.
³ Cf Einarsson 1928: 57; 1971: 114f, 161; Oddsson 1917: 46; 1942: 77. I have been unable to verify editorial references to Pliny's Natural history xxxii 1, 10, given here.
5.7.3 Hvalapulur (13th century AD)

There exist Icelandic whale name enumerations, Hvalapulur (HÐ), from the 13th century AD (cf item A.16.4 (a)). They offer no descriptions but the range of names, their variants and etymology are of great importance for the interpretation of KGS and later Norse sources. It is useful to have access to the Hvalapulur terms in systematic and comparative tables: such tables are presented in item A.16.4 (b) and at the end of the excursus, HÐ and KGS names are juxtaposed (cf item A.16.4 (c)). HÐ names will be indicated as such in the following discourse but only some names will be given particular attention.

5.7.4 Konungsskuggsjá (mid 13th century AD)

The Norwegian work Konungsskuggsjá (KGS; Speculum regale; Royal Mirror) dates from the period 1240-1263 AD.¹ It is the only Old Norse work which gives a comprehensive description of the natural phenomena of the Northeast Atlantic Ocean, including real and imaginary (legendary, mythical) beings to be found there.² KGS offers "a good example of what knowledge people possessed of those things, although this has been scantily recorded in writing."³ Maurer emphasises that KGS contains the oldest systematic list of cetaceans in Occidental literature.⁴ One might add that it is also quite comprehensive regarding pinnipeds in the Northeast Atlantic.⁵ Guldberg (1905a: 35) writes ‘that the unknown author was not loaded with the burden of

³ Cf Hermannsson 1924: i.
⁴ Cf Maurer 1873: 81; see also Whitaker 1986: 9.
ancient erudition and prejudices' which presumably refers to the virtual absence of Plinian and Physiologus/bestiary traditions. Admittedly, one finds wrong information and interpretations blended with correct observations but against the background of European natural history in the 13th century AD, KGS stands out. It is a didactic work which follows an international model of a dialogue usually between Master and Disciple, here between Father and Son, apparently for the instruction of a prince about his future duties, realm, etc. KGS is rather special in its genre because it contains comprehensive accounts of, eg, trading, shipping, natural history of the Northeast Atlantic Ocean and the geography of the lands there.¹

From the time of its compilation to the mid 18th century, KGS only circulated in the Nordic countries in manuscript form. In 1763, some passages (not those on marine creatures) were included in Hannes Finnsson's Tentamen historico-philologicum circa Norvegiae jus ecclesiasticum ..., a work on Norwegian ecclesiastical law. In 1768 the entire Old Norse text, with Latin and Danish translations, was published in Sorø, Denmark (cf J. Erichsen). The next full edition appeared in 1848 (Christiania [Oslo]) and various editions have since followed.²

Into modern times KGS was by scholars in the entire Norse area considered to be authoritative about marine beings, occasionally with additions and modification, cf Oddur Einarsson (ca 1588/89);³ Peder Claussøn Friis (1599);⁴ Arngrímur Jónsson (1622/1688);⁵ Gísli Oddsson

1 Cf Holtsmark 1981c; Whitaker 1985: 615f.
2 Cf Holm-Olsen 1983: xxi; Whitaker 1986: 8. This student works directly from the Old Norse text as edited by Holm-Olsen (1983).
3 Cf Einarsson 1928: 54-60; 1971: 111-119; see also Rischel and Skårup 1972: xxxix.
4 Cf Friis 1881a: 61-67; see also Rischel and Skårup 1972: xxxix. According to Storm (1881: 61) Ole Worm (Musæum Wormianum, 1655, pp 279f) states that he has translated the whale section directly from KGS into Latin but this is not correct; he draws on Claussen Friis. Bent Jenssøn, in 1648-1660, copied Claussen Friis's KGS section (cf
(1638);¹ Peder Hansen Resen (ca 1688);² and Thormod Torfæus 1706 and 1706-1719.³ Its authority was no less with Norse peasant fishermen into the 18th-19th century. Through works in Latin (eg, Einarsson; Torfæus; Hansen Resen; Worm), KGS information on cetaceans was disseminated beyond Norway, Iceland, the Faeroe Islands and Denmark.⁴

Nordgaard (1903: 16) is certainly correct that most information in KGS, and by later scholars, about marine mammals, etc, 'was not based on their own experience; they only gave a presentation of the knowledge by the coastal inhabitants of the various whale species.'⁵ When one considers the species dealt with in KGS (eg, the bowhead, which was not endemic to Norwegian waters) and various other hints, the work must be characterised as a Norwegian-Icelandic work, ie, compiled in Norway but with much input from Icelanders, a little from Greenland and even less from the Faeroe Islands.

In my opinion the present state of research is as follows: L.M. Larson's (1917) translation is restricted in scope as compared to the manuscript text offered by L. Holm-Olsen (1945/1983) and his renderings of marine creatures and phenomena (cf pp 119-125; 135-140) are often questionable and not related to the proper Old Norse terms. It can therefore only give a general impression of the relevant parts of KGS. A new translation which balances scientific reliability with readability seems necessary. Whitaker

Nordgaard 1903: 15, 79).


2 Cf Resen 1972. See also Rischel and Skårup 1972: xxxix, 66-68, 70.

3 Cf Torfæus 1706: 87-97; 1927: 63-73.

⁴ When we in the following speak of KGS in general terms it basically refers to the sections on marine beings and phenomena.
(1986) reproduces these parts of Larson's translation, incorporating his own identifications. While these parts of the translation are otherwise serviceable, I think that Whitaker's article, even considering his reservation "that many of the identifications are tentative", does not improve on the identification aspect to the extent desirable and possible. In fact, I think that the technical discussion (centering around the notes, pp 9-12) perpetuates the confusion in the field because of a deficient methodological approach in combination with too limited a scope of the historical, linguistic and zoological-ecological reference material used by the author.

Whitaker (1984: 257) considers that "the precise descriptions" of cetaceans in KGS derive "from direct observation at sea". In my opinion such a view disregards important aspects of the issue. Behavioural aspects, as a matter of course, certainly originate from observation at sea, but various zoological details can only be obtained in the process of flensing. Moreover, size (not necessarily length) measures presumably derive from the measuring of the animals in the littoral, in relation to appraisals and divisions. Such information will have been given great attention because of the great, and widely dispersed, vested interests (ftök) in whales on behalf of individuals, farms, churches, monasteries and the crown.

5.7.5 Scholars, 14th-18th century

5.7.5.1 Oddur Einarsson (1588/89); Gísli Oddsson (1638)

It is appropriate to indicate the main milestones in 14th-18th century Norse knowledge about cetaceans, pinnipeds and related marine phenomena and give the reader some

information concerning the interrelation of the sources. The Icelandic abbot Arngrímur Brandsson, about 1345, in his Guðmundar saga biskups Arasonar offers a concise geographical account of Iceland in which the mention of household sea fisheries is the closest we come to our topic. ¹ With the late Renaissance, in the second half of the 16th century, a scholarly interest in astronomy, geography and natural history developed in, and about, Iceland. ²

Hermannsson (1924: i-ii) considers that since the high Middle Ages much natural history and geographical knowledge in and about Iceland "was doubtless gradually forgotten, or lived in oral tradition in more or less garbled form" and cites to that effect the decline of trade and seamanship and the superstition of the age. However, noting that knowledge of, eg, the KGS cetacean and pinniped sections continued in Iceland into modern times I consider it difficult to subscribe to any suggestion of a 'decline' in this respect.

Oddur Einarsson (studied in Copenhagen; rector of Hólar grammar school, 1586-1588; bishop at Skálholt, 1589-d 1630) concluded (re-edited) Qualiscunque descriptio Islandiae in 1588/89³ of which the cetacean and pinniped sections are reproductions from KGS. ⁴ It is known that Oddur Einarsson also summarised the first part of Qualiscunque. This summary Resen (ca 1688) used and referred to by the name of the author. However, Resen was unaware that the Anonymous Icelandic text of his was basically from the same work and by the same author.⁵

¹ Cf fA 1, 1990: 70; Sigfússon 1981a: 543; Vigfússon and Jónsson 2, 1878: 5f.
² Cf Hermannsson 1924: ii-iii.
³ Cf Benediktsson 1971: 10, see also 11f; Burg 1928: xi.
⁴ Cf Benediktsson 1971: 15.
⁵ Cf Benediktsson 1971: 11.
Regarding cetaceans, pinnipeds and marine phenomena Gísli Oddsson’s (bishop at Skálholt, 1632-d 1638) work De mirabilibus Islandiae (1638) in detail corresponds to KGS. On the other hand, his father’s Qualiscunque could also be its main source.¹

5.7.5.2 Jón Guðmundsson lærði (1639-1644)

Jón Guðmundsson lærði (JGl; b 1574, d 1658) was a gifted Icelander, of no formal education but of insatiable curiosity and uncommonly widely read, though he shared the superstitions and views of his contemporaries.² He was born in Strandasýsla and lived there, at Húnaflói, Breiðafjörður and on Snæfellsnes until he was convicted of blasphemy and witchcraft in 1631. The Danish scholar Ole Worm presumably appreciated Jón’s knowledge (eg, about runes) and during his imprisonment in Denmark, Worm seems to have urged the chancellor to have his case reconsidered. In 1637, Jón was returned to Iceland where the sentence from 1631 was confirmed but because JGl was absolutely destitute his passage abroad could not be arranged and he was given a place of retreat in East Iceland. Jón remained shielded until his death by the sympathy and friendliness of Brynjólfur Sveinsson, bishop of Skálholt, 1639-1674. In the period, ca 1638-1649, JGl wrote most of his works.³

JGl is a main source about the Basque whaling at Strandir, 1613-1615, but here we shall be concerned with his ‘Natural history of Iceland’ (Ein stutt undirrietting um Íslands adskilianlegar náttúrur, from ca 1640-1644,⁴ and his summary ‘On the whales in the Icelandic seas’ (Um

¹ Cf Burg 1928: xvi.
² Cf Hermannsson 1924: iii. D. Thoroddsen (2, 1898: 73-93) also presents JGl and his works.
⁴ Cf Hermansson 1924: xxiii.
Regarding JG1's íslands adskilíanlegar náttúur, Hermannsson (1924: xxvi-xxvii) writes:

"The most important chapter in the work is that on whales. It is, to be sure, based to a large extent on the Speculum regale, but it contains many new things and the author's own observations. Jón had a very good opportunity to make these; lived for a long time near Steingrímssfjord which of all bays was most frequented by whales, and ... he was on good terms with the Basque whalers, and doubtless acquired from them information on the subject. ---. The chapter has been widely copied as the many manuscripts of it show, and with the exception of what Eggert Ólafsson² wrote in his book of travels, it is the most important Icelandic contribution to cetology down to the times when more scientific investigations began.³ All Icelandic treatises on whales far into the nineteenth century are in a smaller or larger degree based on Jón's work."

JG1 was quite occupied with elves and other supernatural beings (mountain folk).⁴ However, he does not write much about monsters or fabulous animals presumably because he "hesitated to tell about such things to an incredulous age, as he often calls his own times; he reserved all such thing for himself. He even did not include certain items which he found in his sources, like the Konungs skuggsjá, and which he personally believed to be true; and as to monsters he confesses

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1 Cf Hermannsson 1924: xix-xx.
2 Cf Olafsen 1772.
3 Hermannsson seems unaware of the official inquiries about and presentations concerning whales in the late 18th century (cf Scheving's report, 1778*).
4 Cf Hermannsson 1924: xviii-xix.
that he has seen many but that they had all disappeared in the severe winter of 1602."\(^1\)

5.7.5.3 Peder Hansen Resen (ca 1688); Thormod Torfæus (1706-1719)

Peder Hansen Resen (b 1625, d 1688) compiled the Atlas Danicus, a handwritten description in Latin of the Danish realm including Gotland, the Faeroe Islands, Iceland and Greenland, with illustrations, totalling 39 volumes in folio. Only one volume (for Samsø, Denmark) was printed and burned in the town fire in Copenhagen 1728. Because of the magnitude of the material, Johan Brunsmand was engaged to prepare a shorter Latin version which was ready and fair-copied in 1688 but was never published because of Resen's death.\(^2\) The Faeroe and Iceland descriptions are preserved in a draft from Resen's own hand, an authorised fair-copy and several other copies, in Latin. A Danish translation of the Faeroe description cannot be older than 1746.\(^3\)

The first 17 whale species in Resen's Iceland description (hnyðingur, vagnhvalur, hvítiringur, svínhvalur, andhvalur, hrosshvalur, nauðhvalur, skeljungur, norðhvalur, steypireyður, búrhvalur, hafurkitti, sléttbakur, stókkull/springhvalur, fiskreki, náhvalur),\(^4\) together with the hafgufa,\(^5\) hafstrambur and margýja are mostly described according to Oddur Einarsson's (1588/89) Qualiscunque\(^6\) which, in turn, often reflects KGS. Resen took the

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1 Cf Hermannsson 1924: xxv.
2 Cf Benediktsson 1991: 12, 14-18; Rischel and Skårup 1972: i.
3 Cf Rischel and Skårup 1972: ii, iv-v, xvi; see also Benediktsson 1991: 17f, 25f.
description of the whale species number 18-25
(sandæta/sandlægja, skötumóðir, geirreyður/geirhvalur,
barðhvalur, skjaldhvalur, hrafnreyður, höddunefur)\textsuperscript{1} from
Thomas Bartholin’s *Historiarum anatomicarum centuria III-IV*, 1657, pp 272-285.\textsuperscript{2}

In the Faeroe description Resen draws on KGS for, inter alia, the pilot whale, harbour porpoise, orca and partly the walrus. For the walrus he relies on KGS, Oddur Einarsson’s *Qualiscunque*, an *Anonymus* Faeroese source and possible other ones (eg, Olaus Magnus, Claussøn Friis and/or Arngrimur Jónsson). The Faeroese *Anonymus* may also have been used for the black right whale.\textsuperscript{3} Regarding the bottlenose whale and seals Resen refers to L. Debes.\textsuperscript{4}

*Thormod Torfæus* (Þormóður Torfason; b 1636, d 1719), is an Icelander wo was royal historian. Most of his works seem to have been written while he lived at the farm Stangeland, on Karmøy, West Norway. Those from 1706 and 1706-1719 generally present the KGS text here under discussion, however, with various interpretations and insertions, including new natural history information which presumably came from Iceland.\textsuperscript{5} He conveys the stories about the merman and mermaid (*hafstrambr, margýgr*) and the enormous ‘whale’ *hafgufa*, which ‘some people’ also call *lyngbakr*, and relates it to the story of St Brendan’s cook leaving the pot behind on the whale’s back. Only regarding the huge waves, *hafgirðingar*, he notes the possibility of people exaggerating somewhat.\textsuperscript{6}

\begin{itemize}
\item \textsuperscript{1} Cf Resen 1991: 162f.
\item \textsuperscript{2} Cf Benediktsson 1991: 31, 162.
\item \textsuperscript{3} Cf Rischel og Skårup 1972: xxxix-xxx, see also xlviii.
\item \textsuperscript{4} Cf Resen 1972: 64-71.
\item \textsuperscript{5} Cf Torfæus 1927: 228.
\item \textsuperscript{6} Cf Torfæus 1706: 97-101; 1927: 70-73.
\end{itemize}
5.7.5.4 Jón Ólafsson frá Grunnavík (1737)

Jón Ólafsson frá Grunnavík (JÓfG; also called Jón Grunnvíkingur, Grunnavíkur-Jón; b 1705, d 1779) was one of the best informed Icelanders of his time. He drafted numerous writings in the fields of natural history, history, archaeology, folklore, linguistics and literature.\(^1\) Being secretary to Árni Magnússon in Copenhagen from 1726, Jón registered Magnússon's manuscripts after his death (1730). In 1731 he excellently passed the examination for the degree in divinity. He lived in Iceland 1743-1751 after which he settled in Copenhagen where he worked as a scholar and as a secretary for various persons and institutions (mainly the Arnamagnean Collection) from whom he received sustenance, a moderate pay or a grant and remained a poor man all his life.\(^2\)

JÓfG’s works have generally been neglected except for the use and (partial) presentation made of them by Thoroddsen (1892-1904) and J. Helgason (1926).\(^3\) The most complete work, and the most prominent of JÓfG’s natural history treatises, is *Ichthyographia Islandica eòur tilraun um Íysingu á sjóar- og vatnadýrum á Íslandi* (ie, ‘Icelandic fish lore’) which he wrote in Copenhagen, 1737.\(^4\) In that year he also translated it into Danish to give to the Danish senior civil servant, archivist, etc, F. Rostgaard. This manuscript (in JÓfG’s own hand), reflecting the *Ichthyographia* in an early stage, is held at the Royal Library, Copenhagen (KBK, ms Rostgaard 111, 2º).\(^5\) Jón rewrote the Icelandic text five times until he was

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1 Cf Helgason 1926: Contents; Thoroddsen 2, 1898: 314f.
2 Cf Helgason 1926: 1; Thoroddsen 2, 1898: 313f.
3 Cf Jósepsson and Steindórsson 4, 1983: 161; ÍA 2, 1990: 214f.
4 Cf Helgason 1926: 171; Thoroddsen 2, 1898: 315.
5 Cf Cf Helgason 1926: 171, 361.
satisfied with it.\footnote{1} He brought the manuscript with him to Iceland in 1743 where it seems lost sometimes after 1800. A copy of it is held by Hið Íslandska bókmenntafélag, Reykjavik (HÍB ms Viðbóti B 115); it lacks, inter alia, the introduction, has additions (mainly from Mohr) and contains various misreadings. All manuscripts of Hið Íslandska bókmenntafélag were copied twice; both copies are now held by the Manuscript Department of the National Library, Reykjavik, viz: LBS-H ms 294, 4°, which is complete (although the third section [Dríjðja deiling] of the first part has been moved forward ahead of other sections). The other copy is in the Library's Jón Sigurðsson’s Collection of Manuscripts (LBS-JS ms 247, 4°).\footnote{2}

Ichthyographia Islandica is divided into three parts; in addition the Danish translation has a special introduction (inter alia, naming and describing the outer and inner body parts of the fishes), viz: Part 1, 'Concerning sea fishes'; Part 2, 'Concerning fresh water fishes'; Part 3 presents relevant texts from the (Edda) Fiskapula and KGS but was also intended to contain JGl's Islands adskilianlegar náttúrar which, however, is lacking.\footnote{3}

Only casual extracts (not entirely without error) have hitherto been published from Ichthyographia.\footnote{4} J. Helgason recommends that Ichthyographia be published in full because it is very valuable for the study of Icelandic folklore and the history of natural history as such.\footnote{5}

In item A.19 tentative transcriptions of the relevant parts of the Danish text (KBK Rostgaard 111, 2°) and the corresponding parts of the Icelandic text in ms LBS-JS 247,\footnote{1 Cf Helgason 1926: 174.}

\footnote{2 Thoroddssen worked with mss HÍB Viðbóti B 115 and LBS-JS 247, 4°; Kristjánsson only refers to the latter. (Cf Helgason 1926: 171f, 361-363; Kristjánsson 1, 1980: 25; 3, 1983: 26; 4, 1985: 29; 5, 1986: 23; Thoroddssen 2, 1898: 315).}

\footnote{3 Cf Thoroddssen 2, 1898: 317.}

\footnote{4 Cf Helgason 1926: 176; Thoroddssen 2, 1898: 315-324.}

\footnote{5 Cf Helgason 1926: 176.}
4°, are offered. An editorial list of contents is included with the latter. The two texts are complementary. Many parts are nearly identical but the Danish text contains a special 'Introduction' in which we learn about JófG's sources and scholarly intentions while the Icelandic text is occasionally elaborated upon.¹

Dr. Thoroddsen (1898) is of the opinion that JófG draws to a large extent on JGl for the whale and seal sections.² Helgason, however, demonstrates that JófG had possessed a copy of JGl’s ‘Natural history’ but lost it in Iceland, in 1735, and never managed to get a new copy of it. Therefore, JófG cannot have drawn directly on it for the Ichthygraphia and his references to it must be according to memory. Other works (eg, Debes’s 'Faeroese description'; Arngrímur Jónsson’s ‘Greenlandic description’) can only have been of indirect help to him. ‘Most of the material is obtained from other sources and its disposition Jón had to find out by himself’.³ JófG did not grow up at the seaside and his own experience with fish and marine mammals was thus limited. In the 'Introduction' he writes that he therefore inquired of his fellow countrymen in Copenhagen, particularly those who had lived at the seaside and went fishing in their younger days. He merged their accounts into a comprehensive description. The work shows that JófG’s informants came from different parts of the country.⁴ Ichthyographia, thus, deserves to be considered a natural history work in its own right.

In the 'Introduction', JófG mentions that he only includes things which are certain or generally considered to be true and leaves strange stories out. Although he considers some traditional sea creatures ‘whose existence is uncertain’ in a separate chapter and dismisses stories

1 Cf Helgason 1926: 172, 176f.
2 Cf Thoroddsen 2, 1898: 317.
3 Cf Helgason 1926: 173.
4 Cf Helgason 1926: 174.
that derive from the similarity of the bones in humans and seals he treats seriously many other beings such as mermen, mermaids, sea cows, sea bulls and various wicked whales, and offers fantastic stories about actual cetaceans. He also reports on the various remedies which the Icelandic fishermen used for keeping wicked whales at bay. So far JófG is in line with previous presentations of real and mythical whales, etc, but his tone is cautious and his expressions are moderate. JófG also appears to show greater understanding of the nature of cetaceans as animals than his predecessors.

JófG's description of the lower animals and fishes in Iceland is much more precise than is the case with earlier Icelandic naturalists.¹ The pinniped chapter of *Ichthyographia* adds nothing to JG1's descriptions.² As to JófG's cetology it may be mentioned that he counts the basking and Greenland sharks among the whales (on ground of their skin, although they are cold within and do not blow); attributes teeth to the rorquals, in general, and the blue whale [*steypireyður*] in particular; groups the northern bottlenose whale (*andarnefja*) with the baleen whales; and offers characteristics of both the bowhead and black right whales with the *sléttbakur/höddunefur*.

The *Ichthyographica* chapters about pinnipeds, cetaceans and related marine beings seem to be the last work that maintains both form and, despite considerable modifications of the natural history and 'folklore', also the contents laid down in KGS. While *Ichthyographica* does not perpetuate various (individual) KGS elements, other ones continue to exist beyond JófG's days. As he gathered much of the information from contemporaries, his work shows the vitality of the KGS tradition into the mid 18th century. On the other hand, the folkloristic elements in *Ichthyographica* resemble Icelandic folktales as they were

¹ Cf Jónsson 1, 1988: 31.
² Cf Jónsson 1, 1988: 34, 36.
recorded around the mid 19th century and later. N. Horrebow (1752: 222) used the *Ichthyographia* which, in his words, treats of the Icelandic fishes 'quite beautifully'.

It must be added that since at least 1736 and into his old age JófG compiled material on, and drafted, an Icelandic dictionary. The dictionary consists of nine manuscript volumes (AM ms 433, 2°) held at the Arnamagnæan Collection, Copenhagen, but due to numerous additions which are often placed outside their direct context, and nonsense which originates from modifications made by Jón when he apparently had become senile, it is difficult to use. However, it is an extraordinarily rich source about Icelandic popular beliefs, literature and cultural history, in general. Helgason points out that there are virtually no limits for the information one can find in the Dictionary, 'much of which one would not dream of searching for in such a work'.¹ It is occasionally referred to concerning cetaceans but has not been systematically studied in that respect, as far as I understand. It seem a priority to search for information on the sandlægja/sand Syna/snegja (the Atlantic gray whale) in it (cf at the end of ch 6.2).

5.7.5.5 Snorri Björnsson (1792)

Snorri Björnsson (b 1710, d 1803), author and poet, was a vicar at Húsafell, Hálsahreppur, Borgfjarðarsýsla, 1757-1796.² In 1792, he composed the 'Natural history: Pictures of exotic creatures. Icelandic natural history based on the work of Jón Guðmundsson lærði' (*Náttúrufræði: Myndir af framandi skæpnum. Íslands náttúrufræði byggð á riti Jóns Guðmundssonar lærða*). In this he rearranges the text of JGl's *Íslands adskiljanlegar náttúrar* (ca 1639/44),

¹ Cf Helgason 1926: 103f, 106f, 113, 117f, 120f.
² Cf ÍA 3, 1990: 266.
partly shortening it, partly adding to it. The manuscript also contains two long chapters on fishes (including whales) and birds, with illustrations, which are totally independent of JGl’s text. The whale chapter is titled ‘On the commonly known whale species around Iceland and the most famous sea animals’ (Um þau alkenndu hvalakyn kringum Ísland og nafnkunnugstu sjódyr) and has 38 illustrations. D. Valdimarsdóttir considers it to be among the most interesting parts of the manuscript.¹ The scope of the present work has not permitted me to study Björnsson’s manuscript (including illustrations) but it may indeed be most useful to do so (cf the gray whale issue, below). To judge by Valdimarsdóttir’s discussion of Björnsson’s Natural History as a whole he seems not to have drawn on JÓfG’s Ichthyographica (1737) which gives his additions to JGl’s text as well as his ‘Commonly known whale species, etc’ particular value as an independent source. Snorri Björnsson’s natural history (1792) seems to be the last comprehensive work in the ‘KGS tradition’, as this student sees it.

¹ Cf Valdimarsdóttir 1989: 296, 307, 313, 314 [ills]; referring to ms LBS-JS 246, 4° [orig not seen].
6 Identification of cetaceans and other marine beings in Norse sources

6.1 Synopsis

In this chapter the most significant Norse names and notions concerning cetaceans, the walrus, and related marine beings will be examined by making use of, inter alia, etymological, zoological, ecological and ethological information. Identifications of the real animals or fictitious beings behind the names will be suggested. The analysis gives an impression of how Norse peasant fishermen perceived the beings and the forces in the sea, demonstrates the logic of the naming process and how terms may differ regionally, change over time and shift between species or beings.

6.2 Identification of old Norse marine beings, mainly cetaceans: K1 Hnýðingr; K2 Hnís; K3 Leiptr; K4 Vögnhvalr; K5 Andhvalr/K6 svínhvalr; K7 Hrafnhvalr; K8 Hvitingr; K9 Skjaldhvalr; K10 Geirhvalr; K11 Barðhvalr/K12 búrhvalr; K13 Fískrekí; K14 Sléttibaka; K15 Hafurkitti; K16 Hrosshvalr/K17 rauðkembíngr; K18 Náhvalr; K19 Skeljungr; K20 Norðhvalr; K21 Reyðr; K22 Hafgufa; K33 Rostungr; North Atlantic gray whale

We shall now turn our attention to the identification and cultural history of various KGS 'species' (and 'trans-species' as it may be), real and imagined, mainly of the whale sort. This student has surveyed them all and their ramifications in a historical progressive manner by drawing on the etymology of their names, 'species' descriptions, including size, and characteristics of the real species. However, space only permits the presentation of such 'species' ('trans-species') and related issues pertain to fundamental questions of identification and Norse peasant
whaling and interaction with cetaceans.

The methodology of this study is to set out from the earliest descriptions available and follow them and aspects related to them through the centuries.¹ For that purpose I have devised a 'KGS nomenclature' (K#) according to the first mention of the 'species' in KGS. For the relevant passages the reader is referred to the Old Norse text and my tentative translation of it in item A.18. Hvalaþulu (cf item A.16.4) cannot form the basis for a nomenclature as they lack descriptions but names and related terms occurring there will be indicated by 'Hþ' in the discourse. New evidence is dealt with chronologically and either related to the KGS tradition or entered as an item in its own right and followed from then on. The reader should regularly consult the appendices regarding species' names and synonyms (cf item A.14); overall length of cetaceans (cf item A.16.2); and stated size of marine mammals (cf item A.17.3) which are referenced, inter alia, to provide the historical context.

**K1 Hnýöingr (Hþ):** Into the 19th century the whale names hnýöing(u)r (ON/I) and níðing(u)r (ON/I) were not distinguished on grounds of etymology and were spelled in various ways (eg, also hnfóingur; nýöingur), apparently giving rise to confusion.

Hnýöing(u)r seems related to hnúði and hnúð(u)r, probably in the meaning of 'ball-shaped' and 'hunch'.² This could allude to the rounded forehead in various cetacean species. Hnúð(u)r also means 'pole', a sense that must imply the male orca³ on grounds of its high dorsal fin. Only descriptions and traditional usage permit the

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¹ The question of the measures of size, etc, will be treated in detail in chapter 7. For reasons explained there we shall not use absolute size figures in the identification process in hand but only the evidence of continuity and relative size where appropriate.


identification of the species in each case. Nǐðing(u)r ('nithing', E) means one that causes enmity, malice and affliction. The occasional aggressive behaviour of orcas towards other cetaceans singles them out for this designation. Pronunciation and (non-standardised) spelling are presumably the main causes for the confusion of the two names. On the other hand, it is possible that the orca sometimes was (intentionally) called by both names.

This student agrees with the generally accepted opinion that hnýðingr (K1) is the pilot whale. Whether hnýðing(u)r, in the sense of 'ball-shaped' and 'hunch' and applied to other species, is secondary and/or of more recent origin is so far an open question.

In modern Faeroese a very large pilot whale is termed nýðingur while a (very) small, or newborn, one is called leiftur. In the early 17th century, the name grindahvalur (F) was apparently adopted for the pilot whale, in general, while nýðingur retained the meaning of a large pilot whale. The Faeroese leiftur appears to me to be secondary (cf item K3).

The Icelandic annals (1373-1773) use all imaginable spellings of hnýðing(u)r and níðiung(u)r (cf K4), namely: nýðingur/höfrungur (orca), 1691; níðiungur/hnýðingur, 1442; nýðingur, 1733; hnydingur (pilot whale?), 1373; and hnýðingur, 1693. It is impossible to disentangle the species behind these names except perhaps in 1373 and 1691. The confusion is complete in Setbergsannáll, 1442, where one reads: 'In the autumn 12 small(er) whales, which some

2 Cf Sämundsson 1932: 309.
4 Cf Jacobsen and Matras 1961: 300; Magnússon 1989: 354; Müller 1883: 2; 1884b: 19.
people call nýðingar or hnyðingar, came in at Ærney in Mosfellssveit and were cut there."

The nýningar (pl) mentioned in the Faeroes accounts of the crown incomes, 1584,1 are a mixture of Faeroese and Danish; the normalised form can only be nýðingur (hnyðingur) (sg; -ar, pl).

In 1588/89, Oddur Einarsson essentially repeats the KGS passage (hnydinga, pl), including that they have neither teeth nor baleen.2

Gísli Oddsson (1638) enumerates among 'The larger fishes or animals in the ocean' "geirhualer, bardhualer, hnjýðýngar, höffrungar, minimum genus cetorum."3 Because he describes the dolphins as the smallest species (sg) we may infer that the hnjýðýngar are middle-sized.

JGl (1639/44; 1640/44) uses the KGS size measures for the hnjýdingar in both his works; in the former he repeats that they have neither teeth nor baleen and are edible; in the latter he (erroneously) says that they are smooth-backed.4

Bartholin (1657) mentions that the hnyðingur is of a smaller and larger kind, ranging between 10 and 20 ulnas, that it has teeth like a dog and hunts large whales to death, and that people chase it ashore on ships.5 While adhering to the KGS measures, Bartholin seems to be the first author to offer a description that implies the orca.

Around 1688, Resen refers to the hnyðingur by the KGS measures.6

Torfaeus (1706; 1706/19) in the case of the hnídingr/

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1 Cf Müller 1884b: 18; see also Müller 1883: 1f; Björk 3, 1963: 182. See item A.16.7.
3 Cf Oddsson 1917: 45. Rafner (1942: 76) has forgotten hnjýðýngar in his translation.
5 Cf Bartholin 1657: 273. Regrettably I am unable to read the Latin text thoroughly.
hniding generally repeats the KGS description (including the size), adding that it has no (dorsal) fin. A comparatively low dorsal fin is found in pilot whales as well as orca cows but the latter seems irrelevant. For a second hnidingr/hniding species he mentions the synonym vognuhvalr/wognu hvalur, says the animal grows to 12 ells and characterises it in the same way as Bartholin does. This would be the female orca, in contradistinction to the male orca (háhyrningur) which he also mentions.¹

JÖfG (1737) states that hnýöingur/hnyyding is the second smallest cetacean, 4-5 ells long and is perhaps a kind of dolphin; it chases large whales and bites them to death, eventually eating them. People consider them to be blind in August because then they often run ashore by their own accord, or they are chased ashore with stones. At least some people consider them to be 'sea dogs' (sjóhundar, söehunde).² This must be the (female?) orca. JÖfG in the same context enumerates háyrningur and háyrna which would be the male and female orcas, respectively, but offers no details about them. However, JÖfG's hnýöingur/hnyyding is a mixed affair: Its small size and association with dolphins, behaviour and characterisation as 'sea dog' (cf vandhund, D, N) imply the orca; the blindness is usually attributed to the stókkull ('jumper') and stókkhvalur ('jump whale') while drive hunts of hnýöingur typically involve pilot whales.

In his description of hundfiskur ('dog fish'/'dog whale'), E. Ólafsson (1772) repeats much of what JÖfG writes, including the blindness which he attributes to its mating dance. However, he states the animal’s size to be 10 ells and raises the possibility of it being identical with the Faeroese grindehval (ie, longfinned pilot whale).³ This size would be consistent with the

¹ Cf Torfæus 1706: 89f; 1927: 64.
² Cf KBK Rostgaard ms 111: 29r-30r, 37r; LBS-JS ms 247: 35, 46.
³ Cf Olafsen 1, 1772: 360.
historical measures (cf chapter 7) for the pilot whale but
some blending with S. Magnússon's hundfiskur and D.
Scheving's hundhvalur (cf item K4) seems possible.

KGS states that hnyðingar 'have neither teeth nor
baleen'. Nordgaard (1921: 107), followed by Whitaker
(1986: 9), explains this by the pilot whale's teeth being
small and thin, often worn down in older animals, making it
difficult to notice them. The longfinned pilot whale has
admittedly only 8-12 'rather small, short' teeth in each
jaw\(^1\) but with the great number of such whales of all ages
that have been taken, presumably since prehistoric times,
I consider Nordgaard's and Whitaker's explanation
implausible. The KGS statement may rather rest on a
misunderstanding on behalf of the author of KGS or he may
have drawn his own conclusion from the silence of his
sources.

K2 Hnīsa (HD) is without doubt the harbour porpoise.\(^2\)

Gísli Oddsson (1638) classes the porpoise (hnīsa) with
the sharks but remarks that some people count it among the
cetaceans.\(^3\)

JGL (1640/44) writes that the smallest cetaceans consist
of three kinds of porpoises: the 'smallest porpoise' is
similar in size to the smallest kind of seals (ca 1½ ell
long); 'The second kind of porpoise' grows to a length of
5 ells and he explicitly states that these have dorsal
fins. 'The third kind of porpoise', also called hōfrungshnīsa, reaches 8-9 ells.\(^4\) The last two hnīsa
kinds will be dolphin species, as Hermannsson (1924: 34)
points out, but little more can be said about them.

Bartholin (1657: 272) also enumerates three hnīsa
species, 2, 4 and 7-9 ells long, respectively; for the

\(^{1}\) Cf Collett 1911-1912: 698.

\(^{2}\) Cf Holm-Olsen 1983: 167; Nordgaard 1903: 13, 87; 1921: 107;

\(^{3}\) Cf Oddsson 1917: 46; 1942: 78.

\(^{4}\) Cf Guðmundsson [1640/44] 1924a: 5f.
largest one he offers hnísa, höfrungshnísa and höfrung as synonyms.

Torfaeus (1706/1706-1719) only mentions one kind of hnísa (5-7 ells long).1

JófG (1737) uses the word höfrungur both in a specific (species?) and a generic sense. He characterises the hnísa as a 'kind of höfrungur' (i.e., dolphin). In the Icelandic text of Ichthyographia he mentions that some people call the porpoise klakksekkur.2

In 1677, Sjávarborgarannáll mentions that a peasant fisherman at Byjafjörður caught "hnisur, höfrunga, klassekki".3 The terms klakksekkur, klasserkur, klassekkur, first recorded in 17th century, denote a food bag, carpet bag, knapsack or some clumsy (heavy) thing or person4 but in the Byjafjörður area they also signified a small porpoise.5 It looks like the author (in Skagafjörður) of Sjávarborgarannáll did not knew the propoise connotation of klassekkur. The terms may have been noa terms.6

Skúli Magnússon (1785) clearly distinguishes the hnísa/marsvin from the orca (háhyrningur, niöingur/spákhugger) and, presumably, the pilot whale (hundfiskur).7 Other authors also consider this (K2) species.8

K3 Leiptr (HĐ): The size offered by KGS shows the leiptr to be a dolphin species, perhaps even two or more. It seems to be the lyft (OD), løft (D), which the Jutlandic

1 Cf Torfaeus 1706: 89; 1927: 64.
2 Cf KBK Rostgaard ms 111: 29r-30r; LBS-JS ms 247: 34r-35r.
3 Cf Jóhannesson 1942: 305.
4 Cf Blöndal 1, 1980: 433f; Magnússon 1989: 472.
5 Cf Magnússon 1989: 472.
6 Kristjánsson (5, 1986: 84) does not enumerate this cetacean term.
7 Cf Magnússon [1785] 1944a: 50.
Law (JL 3-62), from 1241 AD, mentions as a royal fish (that could not be carried by a man).¹

Löptur, meaning a dolphin, is recorded in Samish (Folden);² presumably this was adopted from Old Norse before the high Middle Ages as the name seems not to occur among later Norwegian cetacean names.

In Torfæus's (1706/1706-1719) descriptions höfrungur has changed KGS position with vögnhvalur but it seems, in fact, to be the leipt(u)r.³

Björn Halldórsson (1785/1814) explains leiptr as (1) lightning; "2) balæna qvædam velocissima, Tumleren, (delphinus delphis?)".⁴ Halldórsson, thus, associates the name with speed (of the lightning).⁵ Early in this century, leiftur (I) was also used for the harbour porpoise.⁶ Its use for designating the whitesided dolphin⁷ is presumably more recent.

V. U. Hammershaimb (1891) concludes that leiftur (F) is identical with KGS leiptr, the primary sense of which he considers to be a smaller kind of pilot whale, in contradistinction to nýðingur (F) (cf K1).⁸ The Faeroese sense is not supported by other evidence or usage, neither can it easily be reconciled with the etymology of leptr.

Norwegian names offer no help as to identification of the species. Etymologically, Magnusson considers the leiftur name to be closely related to the meaning of flash, gleam and lightning, and associates it with the very swift

² Cf Qvigstad 1904: 348; Nordgaard 1912: 66.
³ Cf Torfæus 1706: 90; 1927: 65.
⁴ Cf Halldórsson 1992: 299.
⁵ His species references make little sense.
⁶ Cf Bløndal 1, 1980: 485.
movements and the bright colour patches of the animal(s). Halldórsson does not mention the colours so swiftness stands out in the (old) meaning of leiptr. At the surface of it, neither swiftness nor bright colours seem to be reflected in the Faeroese usage; I therefore think that its Faeroese meaning is secondary.

Leiptr has been suggested as a collective term for the whitesided and whitebeaked dolphins which are temperate to subpolar species and common in both Norwegian and Icelandic waters. However, if swiftness is the key notion both bottlenose and common dolphins are equal candidates but in modern times they only occur infrequently in Norwegian and Icelandic waters, preferring subtropical to temperate habitats; in addition, the common dolphin has elaborate grey and yellow flank patterns. In this context we should not forget that KGS is written at the end of the mediaeval Little Climatic Optimum. Although it cannot be supposed that the North Atlantic Ocean was much warmer than it is today, this milder climate might nevertheless have extended the northern range of these marginal species somewhat, making them more common in Norse waters around 1250 AD than in modern times.

Leiptr/leiftur, etc, was obviously a term used from Jutland (Denmark) to Finnmark (North Norway) and Iceland. It is reasonable to assume that it is a generic term basically referring to dolphins for their swiftness. Whether the species covered by the name in the various Norse regions were all the same we cannot tell but I consider it to be rather unlikely. In the course of the late Middle Ages and modern times we presumably see a (further) regional differentiation in the usage of the name

1 Cf Magnusson 1989: 552; Nordgaard 1921: 107.
3 Cf Collett 1911-1912: 675, 696; Sigurjónsson 1993: 105.
4 Cf Lamb 1977a: 374, 435, 438.
and its disappearance in Norwegian. Over this 750 year period one should also allow for the name to shift between species, etc, at a regional level.

**K4 Vögnhvalr (HD):** According to the KGS description as well as Norse usage, vögnhvalr (vagnhvalr, vögnuhvalr, vögn) is the orca.¹

The description in KGS is essentially repeated by Oddur Einarsson (1588/89) (vagnhualur)² and his son, Gísli Oddsson (1638), though under the name of magnhualer.³ The name, or the spelling, magnhvalur, is unique. Neither Hermannsson, in his publication of the Latin text, nor J. Rafnar, in his Icelandic translation, have comments about it. This student suggests that a Gothic 'w'/'W' in a manuscript may sometime have been misread for 'm'/'M' and that this mistake has been perpetuated.

JGl (1640/44) tells about a drive hunt of vagnhvali or vögnuhvali, allegedly in 1607;⁴ Hermannsson (1924: 34) considers that the account does not fit the usual description of the orca and suggests the pilot whale instead. However, in addition to the name, JGl's measures agree with those of the orca which also lives in pods (of up to 20-40 animals, occasionally 100 or more).⁵ JGl's (confusing) remark that 'Large whales disperse or kill them' presumably hints at large whales defending themselves, rather than being an erroneous reversal of roles.

The first recording of hähyrningur (ie, 'one with a high horn', being the orca, of which the bull has the highest dorsal fin) seems to be by Gísli Oddsson in his annal

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³ Cf Oddsson 1917: 46; 1942: 77.
⁴ Cf Guðmundsson (1640/44) 1924a: 6f.
JG1 (1640/44) offers three synonyms, ie, háhyrningur, hafurhvalur (ie, 'he-goat whale') and barberi, for the (male?) orca, of which the first two refer to the high dorsal fin.²

Bartholin (1657) mentions, on the one hand, that (his 5th species) vognuhvalur is a kind of vagna and, on the other hand, that (his 2nd species) haa hyrningur is in the lawbook (ie, JB vii 68) called hafuehual; the former is said to be slightly smaller than the latter.³ One gets the impression that vögn/vögnuhvalur and háhyrningur/hafurhvalur could be the cow and bull, respectively, but the evidence is not conclusive, in my opinion.

In 1676, D. Brinch enumerates some vernacular cetacean names from Lofoten, among them langhorn.⁴ At face value 'long horn' could apply to the narwhal (because of the tusk in the males) as well as the (male) orca but because the narwhal would have been a very rare creature in Lofoten one is bound to interpret langhorn as designating the (male) orca, thus being equivalent to háhyrningur.

Resen (ca 1688) follows Bartholin in his description of the vagnhvalur.⁵

In 1698, Lilienskiold gives a vivid and detailed description of the staalhmnning ('steel-horn'?), 'the right adversary and envier of the whale', which is different from those descriptions that draw directly or indirectly on KGS. He, inter alia, mentions 'that on its back one sees a stick of one ell's length, bigger than that which the whales have.'⁶ Solberg explains the name as staurhyrning,⁷ but

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1 Cf Grímsdóttir 1988a: 493.
2 Cf Guðmundsson 1924a: 6; 1924b: 28.
3 Cf Bartholin 1657: 272, 274.
6 Cf Lilienskiold 1, 1942: 212f.
Despite the similarity, staalhønning might be a designation in its own right (noa term?). In the same work but in another context Lilienskiold gives another description of the aggressiveness of the orca, then under the name of vognhund.¹

The Icelandic annals use various spellings of (normalised) hnýðingur (cf K1) and niðingur ('nithing'), viz: 1373 (hnydingur; pilot whale?); 1442 (niðingur/ hnýðingur); 1691 (höfrungur/nýðingur, ie, normalised niðingur, orca); 1693 (hnýðingur); and 1733 (nýðingur). As we have already mentioned (cf K1), it is impossible to disentangle the species behind these names, except perhaps in 1373 and 1691. On the present evidence I only see the name 'nithing' for the orca reaching back to the late 17th century but nothing stands against it being older.

Torfaeus's (1706/1706-1719) vognuhvalr/wognu hvalur alias hnidingr/hniding² must be the orca.

In the Danish text of Ichthyographia Islandica (1737) JófG describes among the small whales (normalised) (1) háhyrna (f) and (2) háhyrningur (m); the former is said to be the larger one and the latter the male.³ JófG here implies that the gender of the names corresponds to the sex of the animals which indeed may be so; on the other hand, he reverses the sexual dimorphism in the species. In the (revised) Icelandic text of the Ichthyographia the dimorphism is not mentioned.⁴ In both texts he mentions that they are harmless to ships and people. This is possibly said with a view to the 'harmful fish' and 'wicked whale' sverðfiskur ('swordfish', also called einbæxlingur, 'an one-finned one') which is swift, leaps out of the water and has an extraordinarily high dorsal fin which JófG also

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¹ Cf Lilienskiold 1, 1942: 207f.
² Cf Torfrus 1706: 90; 1927: 64.
³ Cf KBK Rostgaard ms 111: 29r.
⁴ Cf LBS-JS ms 247: 34r-35r.
shows in a fine drawing in the Danish manuscript (cf figure 14); apart from the high dorsal fin it is described similarly to the (wicked whale) stökkull ('jumper').\footnote{Cf KBK Rostgaard ms 111: 34r; LBS-JS ms 247: 41-42.} Sverðfiskur/einbæxlingur is apparently an old male in which the dorsal fin may reach a height of 1.8 m.\footnote{Cf Collett 1911-1912: 707, 711; Leatherwood, Caldwell and Winn 1976: 84; Stonehouse 1985: 114; Watson 1985: 213.} In later Icelandic folklore (1862/64) the sverðfiskur is described as an evil and wicked whale which beats the sea to both sides with the dorsal fin when it is in bad temper.\footnote{Cf Arnason 1980: 628.} JÖfG has earlier described the stökkull as a (big) savage creature. Whether his háhyrna/háhyrningur notion possibly contains a vague reference to the (small) whitebeaked dolphin, the colour pattern of which is not dissimilar to that of the orca,\footnote{Cf Watson 1985: 212f [ills], 230f [ills].} is difficult to say. Under item K1 we have already considered JÖfG's nöingur and 'sea dog'.

E. Pontoppidan (1753), in his 'Natural history of Norway', gives various pieces of information that, at first glance, are inconsistent: (a) The spekhugger ('blubber cutter') or vahu (ie, vandhund = 'water dog') is 'a small fish a few ells long' but aggressive towards large rorquals; it leaps free of the water;\footnote{Cf Pontoppidan 2, 1977: 199.} (b) the spekhugger/vahu 'is created nearly as a springer [ie, 'jumper'] but only a few ells long';\footnote{Cf Pontoppidan 2, 1977: 242.} (c) after the spekhugger/vahu has attacked a whale fishermen find a lot of torn-off blubber 'as the springer does not eat it but has only pleasure of tormenting the large (whale)'; they pursue the herring into the fiords where they are sometimes seined;\footnote{Cf Pontoppidan 2, 1977: 242.} (d) in January great numbers of spring-hval comes inshore, 'as the forerunner of the big whale', chasing all

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1 Cf KBK Rostgaard ms 111: 34r; LBS-JS ms 247: 41-42.
3 Cf Arnason 1, 1980: 628.
4 Cf Watson 1985: 212f [ills], 230f [ills].
5 Cf Pontoppidan 2, 1977: 199.
other fish away in preparation for the arrival of the herring which the big whale drives;¹ (e) spring-
hval/springer, being only a few fathoms long, coal black above and white on the abdomen; they are caught in drive
hunts in Sunnmøre.²

The aggressiveness and association with the herring in items (a)-(d) identifies the orca; in item (e) the
colouring pattern seems to exclude the whitebeaked and whitesided dolphins but fits the orca;³ moreover, on
grounds of their size the whitebeaked and whitesided dolphins are less likely to be called 'whales' than is the
(male) orca. We may consider all these names as pertaining to the orca. The inconsistency in Pontoppidan's accounts
could then reflect regional differences originating in his sources. However, this does not preclude that springer may
also have been used for other species (eg, dolphins).

With H. Strøm (1762) the identification of the orca is uncomplicated: spek-hugger, stub, staur-hynning, kobbe-
herre ('seal master'), nise-herre ('porpoise master');⁴ so also regarding J. E. Gunnerus's (1768) stour-vagn
(presumably meaning 'big vagn', rather than 'pole vagn').

E. Ólafsson (1772) writes about the small spekhugger/ hnyding (ie, nîöingur) as the 'naughty dolphin' and about
the big haa-hyrningur, with the high dorsal fin, which occasionally is simply called höfrungur.⁵

S. Magnusson's (1785) hâhyrningur, spekhugger/nîöingur
(normalised) are obviously the orca. The hundfiskur ('dog fish' [= 'dog whale']) he only describes as 'a kind of
Delphinis or a Phocæna' but it is most likely identical with Scheving's hundhval and N. Mohr's hundfiskur (cf next
paragraphs). Magnusson seems to follow E. Ólafsson which

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1 Cf Pontoppidan 2, 1977: 236.
3 Cf Watson 1985: 212f [ills], 229 [ill], 230-232 [ills].
4 Cf Strøm 1, 1762: 298f, 309.
5 Cf Olafsen 1, 1772: 544.
indirectly defines his *høfrungur* (cf preceding paragraph) although he treats it as a species different from the *haahyrningur*.¹

Scheving (1778) (cf item A.16.3) mentions that the *hundhval* ('dog whale') is of two kinds, 10-12 and 5-6 ells long, respectively. They enter Arnarfjörður all year round and cause anxiety with the larger whales in the fiord.² The account itself certainly indicates this to be the orca. Scheving’s measures agree also far better with the historical measures for the orca than with those of the pilot whale (cf item A.17.3).

Mohr (1786: 14) presents two orca 'species', ie, *spækhugger/hunding(u)r* and *háhyrning(u)r/hundfisk(u)r*, respectively, both characterised as aggressive.

**K5 Andhvalr** (Hb) and **K6 svínhvalr**: KGS describes the *andhvalr* ('duck whale') and *svínhvalr* ('swine whale') in similar terms: they are of the same size, both are inedible because their oil generates diarrhoea and it cannot be contained in wooden or horn casks. It therefore, at least initially, seems appropriate to consider them together although KGS states them to be 'two species'.

Oddur Einarsson (1588/89) essentially repeats the KGS account of the *andhual* and *swynhvalur* (apart from his size for both being ≤ 5 ells). He explains the former’s name as originating in the similarity of its beak with that of a duck but does not know whether *svínhvalur* refers to the mouth and rostrum or curved back of a swine.³ Oddur Einarsson is the source used by Resen (ca 1688) where these whales are said to reach a maximum size of 6 ells.⁴

Gísli Oddsson (1638) repeats his father’s etymology of *andhvalur* ('duck whale') and adds that it has much

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¹ Cf Magnusson [1785] 1944a: 50.
³ Cf Einarsson 1928: 56; 1971: 114.
⁴ Cf Resen 1991: 155; see also Benediktsson 1991: 32, 34.
'virulent' blubber; he has no mention of the other species.\textsuperscript{1} JG1 (1640/44) uses andhvalur and andarnefja (‘duck-nose’; 16 ells long) synonymously, repeats and elaborates on the KGS description about the oil: it is 'permeative like that of the svínhvalur' but more quickly so. He mentions that andhvalur/andarnefja blubber is traded because of the oil and that such deals include some meat 'despite Norse books consider this species absolutely inedible.'\textsuperscript{2} In the earlier work from 1639/44 he states the andarnefja/andhvalur (5 ells long) to be 'similar to the svínhvalur, not better but edible.'\textsuperscript{3} As to the svínhvalur, JG1 operates with three different descriptions: In 1639/44, one svínhvalur, ca 5 ells long, and another kind 28-30 ells long;\textsuperscript{4} in 1640/44 he describes a svínhvalur, being 35 ells long, which must be the sperm whale.\textsuperscript{5} Bartholin (1657: 275) follows the same pattern. His 6th species is the andhvalur/andarnefja (15 ells long) and the 7th is the svínhvalur (30-35 ells long) which he also calls durnir. Durnir is one of four synonyms used by JG1 for the sperm whale (however 60 ells long),\textsuperscript{6} so here we have come full circle. JÓfG (1737) also mentions durnir as a synonym for the sperm whale.\textsuperscript{7} Svínhvalur, thus, appears to have (also) been used for the sperm whale, at least from the early 17th century. Oddur Einarsson’s 5 ells, becoming 6 ells with Resen, are presumably also the basis for JGL’s 5 ells in his early

\begin{flushleft}
1 Cf Oddsson 1917: 45; 1942: 76.
4 Cf Guðmundsson 1924b: 28.
5 Cf Guðmundsson 1924a: 7.
6 Cf Guðmundsson 1924a: 8.
7 Cf LBS-JS ms 247: 38.
\end{flushleft}
work (1639/44) which he then revises in the treatise from 1640/44. The list of the 'Northern bottlenose whale' measures (cf item A.17.3 (B)) demonstrates that these figures were later not accepted. The 5 ells are apparently an error¹ that has originated with Oddur Einarsson in his early drafting (error in his source?; misreading of KGS?).

Torfæus (1706/1706-1719) mentions both the andhvalur (15 ells long) and svínhvalur (25-30 ells), describes the permeation of their oil and mentions that the latter is toothed.²

JÖfG (1737) only mentions the andarnefja. Its beak is wide and concave like the bowl of a spoon and the beak of a duck; it has a fin on the back; the train oil is used as ointment for painful joints and other medication and 'goes through the person who consumes it, also through dogs.'³ He notes that Debes tells the same about the Faeroese döglingur.⁴ However, it is notable that JÖfG presents the andarnefja under the chapter heading of 'Concerning other edible whales'.⁵

According to Scheving (1787: 210) the andarnefja occasionally entered Arnarfjörður.

E. Ólafsson (1772) mentions that the andarnefja is often found drifted (dead) ashore as well as live-stranded at western Snæfellsnes and at the Westfjords, but it is most commonly seen in Eyjafjörður where in the 17th century it was harpooned and driven ashore.⁶

Mohr (1786: 13f) reports that in North Iceland the andarnefja is said to have a white spot under each flipper which is cut out together with the blubber from which flows a fine oil that removes pain merely by being rubbed onto

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1 Resen ([ca 1688] 1991: 155) was aware of the problem.
2 Cf Torfæus 1706: 90, 92; 1927: 65f.
3 Cf KBK Rostgaard ms 111: 32r; LBS-JS ms 247: 38.
4 Cf LBS-JS ms 247: 38.
5 Cf KBK Rostgaard ms 111: 31r; LBS-JS ms 247: 37.
6 Cf Olafsen 1, 1772: 543f.
the spot.

S. Magnússon (1785) also offers the duck beak etymology of andarnefja and states it to be the Norwegian nebbehval and the Faeroese dögling.¹

For the identification of KGS's andhvalur and svínhvalur we shall begin by considering the meat, blubber and oil issue. Debes (1673) explains that döglingur meat and blubber is unfit for human consumption: it secretes through the sweat glands colouring clothes yellow and requires strong barrels for storage.² Olafsen (1, 1772: 543f) also explains that the oil is unfit for human consumption but that the meat was eaten in Iceland. This was the case as late as 1914.³ From the Hebrides, M. Martin (ca 1703) mentions that the common people eat meat and blubber from various whales taken there: "The bigger whales are more purgative than these lesser ones, but the latter are better for nourishment".⁴ The 'bigger whales' seem to have a nature similar to the KGS andhvalr and svínhvalr, etc. Bottlenose oil is particularly acknowledged as generating diarrhoea.⁵

H.E. Høst (1875: 352) objects to the view that neither bottlenose meat nor blubber can be eaten as sweat colours the clothes yellow and is malodorous, 'because this is not correct as far as concerns the meat. It is in fact considered to be at least as good as pilot whale meat and is eaten either dried or pickled with potatoes; the blubber, on the other hand, has the effect already mentioned when it is eaten, for which reason it is usually only consumed by poor people.' Sysselmand (sheriff) H.C.

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¹ Cf Magnusson 1944a: 49.
² Cf Debes 1963: 164f.
³ Ógmundsson 1981: 177.
⁵ Cf Guldberg 1886: 162; Nordgaard 1903: 14f; 1921: 108. In the Faeroese folktale about Tórur rami (Thor the strong) its meat is scorned because of this. Svabo's dictionary also mentions this phenomenon. (Cf Matras 1960: 181f).
Müller (1884a: 51), probably the highest authority on the subject, states that bottlenose blubber and the fatty meat is inedible; the lean meat is not harmful and is eaten although it is far from being as good as pilot whale meat.

There is general agreement about the andhvalr being the northern bottlenose whale. However, Whitaker (1986) regards svínhvalr "a little difficult to identify"; it "might suggest a bottle-nosed variety. In Iceland the term is used today [sic] to designate the ... black right whale", apart from F. Jónsson (1926) having indicated this as a possible identification. Whitaker considers this identification implausible and leaves the question open.

Concerning the inedibility of the KGS andhvalr, Whitaker (1986: 10) argues: the "bottlenose has been regularly hunted in the Denmark Strait and the waters of Jan Mayen, and is apparently edible". Whitaker here refers to the commercial bottlenose hunt, as of 1877, where the whales were taken for their blubber and oil only, and the krengs (qv) dumped in the sea. This argumentation seems therefore to be beside the point although the KGS description indeed needs to be qualified.

The integrated description of andhvalr and svínhvalr in KGS, and all common characteristics, at the outset indicate the possibility of the two names being synonymous. This notion was advanced long ago.

Around 1900, the bottlenose had three names in Norwegian, viz: andhval, svínhval and nebhval. Following information from Iceland


3 Cf Risting 1922: 589, 595.

4 Cf Guldberg 1886: 162; Hermannsson 1924: 35; Nordgaard 1903: 14f; 1921: 108.

5 Cf Nordgaard 1903: 15.
by the Norwegian whaler, M.C. Bull, Nordgaard (1916) concluded that svínhvalur might also denote the black right whale.\(^1\) Holm-Olsen (1945/1983: 168) adopts this view for his KGS identifications. This student considers, however, that recent usage has very limited retrogressive validity because of potential shifts in designations.

Hermannsson (1924: 35) suggests that JG1's andarnefja and svínhvalur are different species and that the latter could be Sowerby's beaked whale on grounds of the "likeness to a boar's head, with the teeth showing".\(^2\)

To say that, eg, andarnefja and svínhvalur are synonyms implies general identity,\(^3\) which to me is an unacceptable simplification: Differentiated appellation of animals according to sex and age, existing in parallel with the common species denomination, seems to be a common feature in most languages. In my opinion there is no basis for (explicitly or implicitly) assuming that, eg, all historical cetacean names belong to the species level. Consequently, 'synonym' and 'synonymous' must be considered in the context of the possible level(s) of reference.

If the names andhvalr and svínhvalr indeed refer to the northern bottlenose whale the relationship between them remain to be established, eg, by demonstrating their association with some marked sex and/or age specific characteristics. In fact, the bottlenose whale is characterised by marked sexual and age dimorphism, which causes spectacular changes particularly in the males which are also bigger than the females.\(^4\) Until 1882, zoologists

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1 Cf Nordgaard 1916: 214; 1921: 108.

2 In the illustrations I have access to I see no such likeness. In his reasoning Hermannsson (1924: xxviii, 35) overlooks the facts that JG1 actually has several svínhvalur species and that JG1's nickname tannsmiöur ('teeth cutter'; Hermannsson) must refer to sperm whale teeth.

3 Cf SOED 2, 1987: 2224f.

thought there existed two bottlenose species:¹ The forehead, or melon, is small (low) in young animals while it becomes bulbous in all adults but highly pronounced in old bulls. Furthermore, the colour of the back of younger animals is brownish to greenish/greyish black, lightening progressively with age, making older whales, particular bulls, altogether cream-coloured, with distinctive white heads.² Norwegian bottlenose (næbhval, bottlenose, N) whalers called old bulls by special names, ie, tøndebundere ('barrel bottoms') and okser ('bulls').³ It would therefore not be surprising if Norse people in the Middle Ages had two names for the species. Lists of the size measures (cf item A.17.3 (B)) for 'Northern bottlenose whale', 'Andhvalr', and 'Svíňhvalr') give, in my opinion, no clue as to a differentiation in the use of the names. One must therefore resort to less tangible arguments: Presumably people would designate a species more according to the characteristics of the adult rather than juvenile animals. Swine apparently have a lower forehead than ducks have; if this difference is applied to Collett's drawings (1911-1912: 642), svínhvalr would be juveniles of both sexes and adult cows (with less marked melons) while andhvalr would designate adult animals with marked melons, notably bulls. The older sources which mention both 'species' (KGS; Resen; Oddur Einarsson; Claussoon Friis) state their size to be similar; only Torfæus seems to differentiate their size and, admittedly, in the invert direction of my identification (based on the sexual dimorphism). However, I regard this as insufficient to invalidate the conclusion in principle.

Whitaker (1986: 8) suggests that the gray whale "is perhaps the species indicated by one of the 'unallocated' terms, svínhvalr [sic] ... or skjaldhvalr ...". Firstly,

¹ Cf Guldberg 1886: 164.
³ Cf Collett 1906: 10f; 1911-1912: 639; 642.
I consider this (schematic) approach to be simplistic and highly inadequate for dealing with the issue. Secondly, noting that the gray whale was a cherished quarry among American Northwest Coast aborigines who, in C.M. Scammon's (1874/1968: 30) words, "greedily feed upon the fat and flesh till their appetites are satisfied", it is implausible as the old Norse svínhvalr.

The term svínhvalur seems to have been used occasionally for the sperm whale (cf JG1, Bartholin, Resen). Bull appears to be the only source (1903) about the Icelandic use for the black right whale. This whale was so rare in the 19th century that the Norwegian whalers in Iceland did not even know the name of it when they caught the first specimens in 1890.1 Bull's svínhvalur name could therefore originate with the Norwegian whalers as an ad hoc naming, or it could be an Icelandic noa term (alluding to the stoutness and blubber of the whale).

At the end of items K16-K17 we shall briefly touch on the Faeroese bottlenose name døglingur.

**K7 Hrafnhvalr:** Nordgaard (1903: 15) remarks that KGS offers no description of the hrafnhvalr so one must rely on the name itself for the identification. This is not entirely correct as we shall see. In the years 1903-1921, Nordgaard suggests that the 'most likely' identification of hrafnhvalr ('raven whale') and hrafnreyðr (HÐ; 'raven rorqual') is the sei whale. He does so on grounds of this rorqual having a black back (allegedly), although its lower surface is lighter in colour.2 Holm-Olsen (1945/1983: 167) adopts Nordgaard's identification without his qualification. Whitaker (1986: 4, 7) repeats Nordgaard's tentative identification and argument.

In my opinion Nordgaard's identification is very weakly based. The sei whale is certainly steely dark grey or blue-black on the back but that feature is not exclusive to

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1 Cf Tønnessen 1967: 20.
this rorqual; for example, the minke whale is also dark grey to black above,\textsuperscript{1} and so are other species.

\textit{ÆB} 145 and FTL xiv 10a mention rafnhvalr (raumhvalr) in a like context where GTL 149; MLL vii 64a; and NLB vi 61a mention ‘whales’ sized 18 ells (and half of that). At this stage we shall assume that the size of the hrafnhvalr is approximately 18 ells but will return to this issue in chapter 7. Adult minke whales have an average length of 8-8.5 m and reach a maximum of 10.3-11 m\textsuperscript{2} while the corresponding figures for the longfinned pilot whales are 4.6-5.5 m and 8-8.7 m.\textsuperscript{3} It is striking that 18 short Norwegian ells (à 47.4 cm) make 8.53 m; this must be considered circumstantial evidence of hrafnhvalr being the minke whale and being synonymous with hrafnreyð(u)r, as is also indicated by the historical (Icelandic) lexicon.

KGS implies that hrafnhvalr may have been eaten freely. JÖfG (1737) mentions that hrafnreyður is well edible.\textsuperscript{4} E. Ólafsson (1772) writes that hrafnreyður/hrefna often ‘drifts’ ashore in the Westfjords and occasionally runs live ashore. People avoid ‘harpooning’ it because it is considered to be a ‘friendly fish’ which the Lord has created to protect the fishermen and their small and frail boats from evil whales. Indeed, when the latter are near, it stays within an arm’s length and swims under the keel and oars, keeping the evil whales away until the fishermen have reached the shore.\textsuperscript{5} Swimming under the boat is a detail which fits the minke whale particularly well.\textsuperscript{6} Ólafsson’s names hrafnreyður/hrefna conform with modern

\textsuperscript{1} Cf Collett 1911-1912: 563; Evans 1987b: 75; Southwell 1881: table between pp 81 and 85; Stonehouse 1985: 142; Watson 1985: 88.


\textsuperscript{4} Cf KBK Rostgaard ms 111: 30r-31r; LBS-JS ms 247: 36-37.

\textsuperscript{5} Cf Olafsen 1, 1772: 542f\textsuperscript{*}.

Icelandic usage regarding the minke whale but the other aspects of his account are usually associated with fin and blue whales.

**K8 Hvíttingr:** In the context of cetaceans hvíttingr is generally accepted to be the white whale.\(^1\) Hvítíng(u)r (ON, I) literally means 'a white one'\(^2\) and in Icelandic it also denotes any white creature, human or non-human.\(^3\) The term might, therefore, be used for any creamish to white individual cetacean, including albinos, and not merely the *Delphinapterus leucas*. The Icelandic lexicon for the white whale is hvítungur, mjallur, mjaldur\(^4\) but it quite rarely occurred there.\(^5\)

Gísli Oddsson (1638) seems to reflect two different traditions about the white whale: In his chapter 8, hvítungur is listed among the smaller whales\(^6\) while it in chapter 7, then called mjaldur, is described as a monstrous, i.e., deformed, however inoffensive, creature (akin to the marbendill, margýgr and hafstrambur). It is useful because it seems to appear where good fishing may be expected, an occurrence which many people have experienced. From this experience stems the proverb 'Seldom mjaldur leaves the fishing ground'.\(^7\) JG1 (1640/44) presumably hints at this when he writes that some people will hardly count the hvítungur/mjaldur among the whales. He says that the proverb has to do with the animal being 'very wise and

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5 Cf Guðmundsson [1639/44] 1924b: 28; see also Fitjaannáll and Skarðsdránnáll, 1641.

6 Cf Oddsson 1917 45; 1942: 76.

7 Cf Oddsson 1917: 42; 1942: 71.
curious' and, if mistreated, implacable and vengeful.\textsuperscript{1} JÖfG (1737), however, groups the mjaldur among the evil whales without qualification.\textsuperscript{2} Mohr (1786: 14f) reports that in East Iceland people speak much about the 'harmful whale' hvithvalur/mjaldur.

**K9 Skjaldhvalr** (HD) is in KGS said to have spots or blotches and to be edible. Its name means 'shield whale', 'blotched whale' and 'whale with patches'.\textsuperscript{3}

Nordgaard (1903) thinks that skjaldhvalr refers to the whitesided dolphin, the whitebeaked dolphin, or both, but does not exclude that it pertains to the orca.\textsuperscript{4} Holm-Olsen (1983: 168) writes that skjaldhvalr possibly is one of the dolphins (leiptr) or the orca (vognhvalr). Whitaker (1986: 5) leaves the identification open. He writes that skjaldhvalr "is difficult to identify" and that the KGS reference to it being "spotted is also confusing". He rightly rules out Risso's dolphin (which as a southern species is only marginal to the Northeast Atlantic) "but the spotted dolphin Stenella attenuata may possibly be indicated ... Only about ten specimens have ever been collected."\textsuperscript{5} The spotted dolphin is, however, a tropical, Central Atlantic and offshore, species,\textsuperscript{6} being an even less likely candidate than Risso's dolphin. Moreover, invoking a very rare species in relation to a popular enumeration seems highly questionable. For Whitaker's (1986: 8) suggestion that skjaldhvalr could be the gray whale, cf items K5-K6, above, and North Atlantic gray whale, below).

\begin{thebibliography}{9}
\bibitem{1} Cf Guðmundsson 1924a: 7.
\bibitem{2} Cf KBK Rostgaard ms 111: 32r, 34r; LBS-JS ms 247: 39, 41.
\bibitem{3} Cf Fritzner 3, 1954: 353; Hermannsson 1924: 34; Nordgaard 1921: 108f; see also Bartholin 1657: 274; Oddsson 1917: 45; 1942: 76.
\bibitem{5} Whitaker 1986: 10.
\bibitem{6} Cf Evans 1987b: 48, 97, 109, Rice 1977: 8; Stonehouse 1985: 129; Watson 1985: 268f [incl map].
\end{thebibliography}
JGl (1640/44) writes that 'skjaldhvalur, which is often seen among höfrungar and háhyrningar, has white-yellow shields on both cheeks' and is 18 ells long.1 Bartholin (1657: 274) repeats the measure. JGl is alone in widening the description of the colouration to become 'white-yellow' which I take to mean 'white and cream-coloured'.2

Torfaeus (1706, 1706-1719) mentions the orca by the names of háhyrningur, hafyrningur and haf[r]hvalr, being 16-18 ells long.3 He follows the KGS order rather closely but does not mention skjaldhvalur; however, accounting for a slight displacement, the háhyrningur seems to be K9: skjaldhvalr.

Prior to 1920, skjaldhvalur and skjöldungur ('a blotched one') are recorded as Icelandic names for the orca.4

Hermannsson (1924: 34) thinks that JGl’s description implies the orca although their white spots "have not the roundness of a shield, but are elliptical". However, the roundness is not compelling: J. Fritzner offers skjöldr (ON) in the figurative sense of a shield and a gold coin. The ancient Norse shields were triangular so that they could be placed in the ground.5 Skjöldóttr (I, adj; 'with blotches'), used to describe cattle, indicates a dark colour with white blotches, or the reverse.6

Based on the historical lexicon, on the one hand, and

1 Cf Guðmundsson 1924a: 6.

2 If the yellow colour is taken literally only the common dolphin would be relevant (cf Leatherwood et al 1976: 116; Stonehouse 1985: 120 [ills]; Watson 1985: 271 [ills]). However, Iceland is at this species' northern-most range and strays are very rare there (cf Einarsson 1980: 22; Sigurjónsson 1993: 105; Skirnissón 1979: 48). For that reason alone it can hardly have been included in a popular taxonomy. The common dolphin is further disqualified by the fact that JGl notes that the species in question occurs regularly.

3 Cf Torfaeus 1706: 91; 1927: 65.


5 Cf Fritzner 3, 1954: 360f.

6 Cf Blöndal 2, 1980: 733; see also Magnússon 1989: 851.
the size measures, on the other (cf item A.17.3 (B), for 'Orca' and 'Skjaldhvalr'), I can only conclude that skjaldhvalr is the orca. The sense of the name corresponds well with the orca's black body and conspicuous round white blotch behind the eyes and the curved white patches on the throat and the hind flanks indeed fit this.\(^1\)

As a matter of course it must be mentioned that Björn Halldórsson (1786/1814) defines skjaldhval(u)r as skeljung(u)r, ie, 'a whale covered with scales.\(^2\)

**K10 Geirhvalr (HD):** The historical evidence shows that geirhvalr and geirreyður are synonyms and may be used interchangeably.\(^3\) KGS only mentions that it is black with spots and is edible. Geirr means spear (cf gar, OE).\(^4\) Magnússon (1989: 237f) is of the opinion that compounds like geirfugl, geirlauk(u)r (garleac, OE; garlic) and geirhval(u)r (ON/I) 'probably derive the name from a particular shape' while geirfálki (gerfalcon) has its name from the shaft-like dark stripes on the white plumage. Which feature geir- refers to we cannot say for certain (eg, lengthy body shape as such, rostrum, or something else). While the reference to spots is very subjective (colour pattern, scars), 'edible' essentially means that the animal is not an evil whale.

Mohr (1786: 17) notes that he has been unable to identify the geyr-reyður and Fritzner (1, 1886/1954: 572) only states geirhvalr to be some kind of whale. Initially, Nordgaard (1903: 17f) concludes that it would be the minke whale, on the grounds that it had been hunted with spears (in whaling voes) and that its English name was 'pike whale'. Later, with 'more experience ... in the principle of naming' he questions this: 'The name is usually deduced

\(^1\) Cf Stonehouse 1985: 115 [ill]; Watson 1985: 212f [ills]).
\(^2\) Cf Halldórsson 1992: 423.
\(^3\) Cf item A.17.3 (B) and Nordgaard 1903: 17f; 1921: 109.
from a feature in the animal and in the present case one is bound to search for a whale which is equipped with a spear. There is then only one species which is relevant, namely the narwhal.' Nordgaard notes that this contradicts Torfæus' s description about the geirhvalr having baleen and being palatable like the síldreki, and that KGS considers the narwhal to be inedible: 'Possibly the name has been used for both the minke whale and narwhal.'\(^1\) Finally, Nordgaard (1921: 109) returns to the minke whale as the most likely species, with essentially the same arguments as he used in 1903. Holm-Olsen (1945/1983: 164) presumably adopts this view because he explains KGS geirhvalr as the minke whale only. Whitaker (1986) mentions Nordgaard's (1921) suggestion of the minke whale but thinks that "The geirhvalr ... is almost certainly the narwhal Monodon monoceros."\(^2\) Hermannsson (1924: 37) approaches the issue from another angle: He considers that only the dorsal fins differ in JGl's drawings of the geirreyður and síldreki/fiskreki, respectively; for that reason he concludes that these names are probably synonyms for the fin whale. B. Sæmundsson (1903: 135) considers it possible that geirreyður in Arnarfjörður, Northwest Iceland, designated the sei whale ("Sejhval?"); later (1932: 374), he states this to be certain. S. Blöndal (1920-1924/1980) records it as 'a kind of rorqual' with the additional definition of sei whale.\(^3\) D. Thoroddsen (1911: 489) mentions geirreyður, síldreki and langreyður as being synonyms. Recently, Á. Böðvarsson (1985: 275) defines geirhvalur as minke whale and geirreyður and sei whale but a contradistinction like this seems unsustainable.

All historical descriptions show that the geirhvalr must be found among the rorquals. A comparison of the lists 'Geirhvalr' and 'Minke whale' (cf item A.17.3 (B)) must lead to the exclusion of the latter. In Iceland, the sei

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1 Cf Nordgaard 1916: 214.
2 Cf Whitaker 1986: 10, see also 5.
3 Cf Blöndal 1, 1980: 245.
whale is an offshore species and is unlikely to be regularly found inshore there,¹ let alone in the fiords. The fact that the situation is different in northern Norway, where it moves inshore with the saithe to feed on the same plankton as this fish does, is irrelevant here. We seem, thus, to be left with the blue and fin whales.

In the sources I have found two references with direct identifications in the form of synonyms, viz:

Dr. Markusson (d 1736), in Sjávarborgarannáll, under 1727, unequivocally explains geirreyður as being the steypireyður, ie, blue whale.²

In 1778, D. Scheving presents the whales in Arnarfjörður in decreasing order: geirreyðarhvalur (60 ells long), fin whale (40 ells), humpback (30 ells), minke whale (14-15 ells). The offshore nature of the sei whale explains its absence from the list. The inescapable conclusion is that Scheving’s geirreyður must be the blue whale.

The list 'Geirhvalr' (cf item A.17.3 (B)) indicates continuity in the measures in the 17th-18th centuries and descriptions show continuity since KGS. However, bearing in mind the real possibility of different and changing denotations, a retrogressive inference back to JGl (ca 1640) - let alone to KGS (ca 1250 AD) - that geirhvalr/geirreyðr is the blue whale must be made with considerable reservation, but I see no other possible interpretation of the evidence.

It may also be mentioned that JGl (1639/44) characterises the geirreyður as 'a good fish';³ this expression has connotations with fighting off wicked whales and is primarily associated with the blue whale, less so with the fin and minke whales.

K11 Barðhvalr and K12 bührhvalr (HB): The main manuscript of KGS, from ca 1270-1300 AD, has barðhvalr in this

¹ Cf Sigurjónsson 1993: 105, 129 [map].
² Cf Jónhannesson 1942: 344f.
³ Cf Guðmundsson 1924b: 28.
passage, while three contemporary Norwegian fragments and one from ca 1638, together with eight Icelandic ones from the early 15th century to ca 1690, all have būrhvalr.\(^1\)

In HD, būrhvalr, byrhvalr, kurhual, kvrhval occur as variants for what is considered the original kyrhvalr. An extension in a single HD 1848 manuscript includes būrhvalr (with no variants). Burúngr and bunúngr as HD names apparently belong in this context.\(^2\)

De Vries (1977) mentions neither barōhvalr nor būrhvalr. Fritzner (1, 1954: 216) only defines būrhvalr as some sort of whale. Nordgaard (1903: 79f) initially considers barōhvalr and būrhvalr to be synonyms for the sperm whale, with barō- referring to the edged head of this animal while būr- would refer to the high-rising head like a small house or larder. In 1916 (p 215), he maintains the būrhvalr definition but thinks that barō- relates to 'baleen' (barde, D, N). After he realised that this was historically unsustainable (baleen = tálkn, ON) he (1921: 109) returned to barōhvalr being the sperm whale. He (1921: 109f) revises the būrhvalr identification as follows: Certain Norwegian sources mention nauthval ('bull whale'), which is characterised by its bellowing, as a synonym for the sperm whale. After having learned that the humpback 'growls' and the sperm whale is 'silent' (allegedly), he suggests the former to be KGS's būrhvalr. Holm-Olsen (1945/1983: 163f) follows Nordgaard's final identifications (barōhvalr = sperm whale; būrhvalr = humpback). Whitaker (1986: 5, 10) does similarly for barōhvalr but defines būrhvalr as "sperm whale, or perhaps, humpback-whale". F. Hødnebø (1972: 44) only lists būrhvalr (sperm whale).

Barōhvalr is mentioned by Gísli Oddsson (1638) and\(^3\)

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1 Cf Holm-Olsen 1983: xii-xiv; 148.
3 Cf Oddsson 1917: 45; 1942: 76.
Resen (ca 1688) while Bent Jenssøn (writing 1648-1660) uses the term bordhual for it. All have direct KGS references.

As a general observation I do not see the rationale by which Nordgaard, Holm-Olsen and Whitaker accept barðhvalr in the 'sperm whale context' in one (albeit the main) manuscript only, while dismissing búrhvalr in the same 'sperm whale context' in three contemporary and several other fragments. This student concurs with the identification of barðhvalr being the sperm whale; in fact, I take the KGS variant búrhvalr and description, together with modern Icelandic usage (búrhvalur, búrhveli, búri) as sufficient evidence that the búrhvalr is the same species. Departing from Nordgaard's, Holm-Olsen's and Whitaker's approach to the identification of búrhvalr I venture the following explanation: KGS and HÐ indicate the possibility that búrhvalr does not belong among the oldest Norse cetacean names and that this name first became current in the 13th centuries and for some undefined time was used side by side with barðhvalr; the KGS barðhvalr/ búrhvalr constitutes, so to speak, the historicial pivot on which the matter turns.

The 'Sperm whale' list in item A.17.3 (B) offers a selection of the modern Icelandic synonyms, based on descriptions; it is not possible here to present them and, eg, Norwegian synonyms, in further detail.

The etymology of barðhvalr and búrhvalr may be summed up as follows: Barð (ON/I) essentially relates it to rim, edge, hill, (lower part of) prow. Barð (F) means the bow of a vessel and, in place names, promontory, prominent point or edge of a cliff, while the related word bard (NS)

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1 Cf Resen 1991: 162.
2 Cf Nordgaard 1903: 79.
3 Cf item A.17.3 (B), 'Sperm whale', extended by later usage (cf Blöndal 1, 1980: 120; Einarsson 1980: 20; Erichsen 1768: 127; Magnússon 1989: 93f; Thoroddsen 1911: 487f).
only retains a similar place name meaning.\(^1\) Bard (NN) means edge, side of boat, and upper shipboard plank.\(^2\) A.B. Magnússon concludes that bard probably derives from Indo-European bher-, bhers- (‘to protrude’, ‘stand out’).\(^3\) The meaning of bard as ‘to protrude’/‘stand out’ indeed offers a satisfactory explanation of the name bardhvalr by referring to the huge, ‘squarish’, steeply rising and ‘overhanging’ forehead of the sperm whale. The primary meaning may also have been reinforced by, and/or associated with, the meaning of the bow of a ship and the overhang of the upper prow of a vessel.

The etymology of bürhvalr follows two to three lines which may indeed reflect interacting traditions: Magnússon (1989) considers the origin of bürhval(u)r (sg), bürhveli (pl) and bür to be uncertain. He is doubtful that the usual connotation of bur- is shed, outhouse, food storage (larder), storehouse or room, which would refer to the oil stored in the head of the whale;\(^4\) he argues that bur- may just as well derive from bhuri (Old Indian) for ‘big’. The word býri/bíri exists in Icelandic, with the possible primary meaning of ‘bulky’ or ‘large’; búra (‘to bowl’, ‘bellow’) and buril, burul (‘bull calf’, ‘bull’) in NN may be of the same origin. Búrhvalur, bürung(u)r and bunung(u)r are probably synonyms, all with the primary meaning of bulky and large. The connotation with ‘bull’ seems reflected in the more or less fictitious Icelandic and Norwegian nauthval(ur) (‘bull whale’) which, through bellowing, perplexes cows and causes them to rush into the sea.\(^5\) A. Jóhannesson (1956: 633) explains búri to stem 

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\(^3\) Cf Magnússon 1989: 41.

\(^4\) J.E. Gunnerus (d 1773) advanced this interpretation (cf Nordgaard 1921: 109f).

from Sanskrit bhūr(o), being the name of a giant, meaning 'the bellerower', but he seems unable to extend this interpretation.

With reference to all these connotations it is highly risky to propose a translation of the two names. With all reservations, however, one might perhaps circumscribe barēhval(u)r as 'edged whale'/'whale with overhang'/'whale with stem' and būrḥval(u)r as 'bulky whale'/'large whale', perhaps in the meaning of 'bulky-headed whale'/'largeheaded whale', with the secondary meaning of 'storehouse whale'. The 'bull whale' can hardly be brought into this picture unless through a reference to its bulky/large body. One can hardly be surprised that Norse peasant fishermen and learned persons had diverse ideas about the sperm whale.

Oddur Einarsson (1588/89) and Gísli Oddsson mention that nauthvalur is distinguished from the wicked hrosshvalur only by its incredible bellowing; both rush around the sea attempting to swallow fishermen.¹

E.H. Schönneböl (1591) mentions that when a particular whale cannot pass against the current in Moskenesstraumen, Lofoten, it leaps out of the water and bellows as a big bull.²

JGl (1639-1644) describes the būrḥvalur as 'peaceful and not dangerous for ships. Some (people) call it nauthvalur because it sometimes seems to bellow like a bull; others call it búri or durnir.'³

As far as I understand Bartholin (1657: 275) the būrḥvalur/nauthvalur does not emit horrible sounds.

Resen (ca 1688) mentions that nauthvalur are so called because of the incredible bellowing they produce when they are hungry and which echoes from the nearby shores. They are very hostile towards humans and rush around the sea in order to capture and eat them; for that reason fishermen

¹ Cf Einarsson 1928: 56; 1971: 114; Oddsson 1917: 45; 1942: 76.
² Cf Schönneböl 1978: 311f/189f.
³ Cf Guðmundsson [1640/44] 1924a: 8; see also [1639/44] 1924b: 28.
avoid going fishing when they hear this bellowing.\(^1\)

JÖfG (1737) mentions the nauthveli among the evil whales which are either of strange creation or possibly do not exist at all. He adds that further evidence of its evil nature is that terrestrial cattle, upon hearing its bellowing, turn crazy, rush into the sea and are swallowed on the spot by it.\(^2\)

Mohr (1786: 17) records that in North Iceland the bellowing nauthveli is also called fjósi but he was unable to identify it. Fjósi (‘byre inhabitant’) is a noa name and known as an Old Norse nickname.\(^3\)

According to Icelandic folklore in the mid 19th century nauthveli/fjósi is the second-largest of all wicked whales, after the lyngbakur, with the same nature as described by JÖfG.\(^4\) From the late 19th century a detailed story is told about the bellowing of a nauthveli off Flatey, Dingeyjarsýsla, North Iceland, and the interception of three crazy cows before they went into the sea.\(^5\) This incident, in an area well known for earthquakes, suggests the possibility that in Iceland earth and seaquakes (submarine earthquakes) could partly explain the nauthval(ur) notion. Perhaps it even spread whence to Norway? Cetacean underwater sounds could then have contributed to its maintenance.

**K13 Fiskreki (HD):** The KGS description is complemented by the slightly later MLL (vii 64f), from 1274 AD:

'A man may hunt whales [hual] wherever he can except *silldreki* [vars: *hval* (2 mss of 40); *fiskreka* (1 ms of 40)] at the herring fishery. And if a man shoots a *silldreki* at the herring fishery or other such

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2 Cf KBK Rostgaard ms 111: 36r; LBS-JS ms 247: 44-45.
3 Cf Magnússon 1989: 182; see also Blöndal 1, 1980: 198.
4 Cf Árnason 1, 1980: 628.
5 Cf Björnsson 1977: 244.
God's gift, he is liable for 8 ertogar and 13 merkur of silver to the king.'

The KGS and MLL descriptions of the fiskreki ('fish driver') and sildreki ('herring driver') can only be linked by circumstantial evidence but it seems permissible to consider the names to be mid 13th century synonyms or fiskreki to be more comprehensive than sildreki.\(^1\) The MLL manuscript variant "hual ... silldreka ... fiskreka", from the late 14th century, appears to confirm this by internal evidence.\(^2\)

Johnsen compares the wording of GTL 149f: 'If a man shoots at a whale in a fish/plankton shoal [áta] ...' with that of MLL vii 64f: 'if a man shoots a sildreki in herring fishery [í síldfiski] ...' and concludes that MLL 'is more precise on this point'. As to KGS, Johnsen thinks that "The author believed that there existed a total ban on catching such whales while the ban clearly enough only applied where fishery took place.'\(^3\)

This student questions Johnsen's reasoning: GTL and KGS seem to concur; indeed, noting the initial purpose of KGS it would be extraordinary if it contradicted the law of the land at the time it was composed. My interpretation is that the situation which GTL and KGS describe reflects an ancient tradition which is being modified in MLL vii 64f (prolongated by NLB vi 61d and NL 5-12-5). In anticipation of the survey of the 'fish driver' tradition (below) I wish to mention that my impression is that the common notion into modern times is more along the KGS line than along the legal line pursuant to MLL vii 64f (etc). In other words, I think, firstly, that the KGS author has not misunderstood the character of the whaling ban and, secondly, that the coastal population in Norway continued

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1\ Johnsen (1981: 162) only considers the former possibility by describing the two names as being undoubtedly 'identical'.

2\ Cf Keyser and Munch/NGL 2, 1848: 3f, 147.

3\ Cf Johnsen 1981: 161f; see also Anon 1890: 91; Fritzner 1, 1954: 85; Storm and Hertzberg/NGL 5, 1895: 82.
to nourish the notion of inviolability of the 'fish driver' into very recent times, well beyond the legal provisions stipulated in MLL, etc.

Neither GG, JS nor JB contain provisions similar to the Norwegian ones about the protection of 'herring drivers'/'fish drivers'. JG1 (1640/44) explicitly writes that the old Norwegians and the Faeroes thought that the sildreki/fiskreki chased herring and all other kinds of fish to the fishermen as long as they did not make strife in which case it chased the fish away into the ocean again.¹ He mentions that this species is 60 ells long, quite stout and has baleen 1½ ells long; this fits the fin whale.² Despite both names being current in Iceland, presumably since the high Middle Ages (cf item A.17.3 (B): 'Fiskreki') we are bound to conclude that the fish driving notion was weak, possibly absent, in Iceland into the late 19th century. The Norwegians conducted herring fishery in Iceland, 1868-ca 1890, and the Icelanders did so as from 1881. The Norwegians also began Modern whaling in Iceland 1883.³ This is clearly the background for the enactment of law no 6, 19 February 1886, which, inter alia, protects baleen whales in Icelandic inshore waters from 1 May through October.⁴

Nordgaard (1903: 80f) identifies fiskreki/sildreki as the minke whale (synonymous with geirhvalr/geirreyður); later he adopts the view that they are generic names for species that accompany herring shoals, ie, minke and fin whales,⁵ which Holm-Olsen (1945/1983: 164) follows. Hermannsson (1924: 37) regards it as probable that síldreki/fiskreki and geirreyður are synonyms for the fin whale because the only difference between them in JG1's

¹ Cf Guðmundsson [1640/44] 1924a: 11.
² Cf Guðmundsson 1924a: 11; 1924b: 28; Watson 1985: 60.
³ Cf Laxness 2, 1977: 134.
⁴ Cf Anon 1886.
drawings seems to be the shape of the dorsal fins. Others consider the fiskreki to be the minke whale only.\(^1\) Whitaker (1986: 5, 10) rules the minke whale out on grounds of its small size and considers the fin whale to be the most likely species but in the translation he explains fiskreki as 'rorqual'. Einarsson (1987: 124) defines KGS fiskreki as blue whale.\(^2\)

In my opinion, the list 'Minke whale', in item A.17.3 (B), indeed excludes this whale from consideration as KGS fiskreki (/síldreki) at the species level. At face value, and in isolation, the historical measures for 'Fiskreki' and 'Geirhvalr', respectively, as shown in item A.17.3 (B), demonstrate the latter on average to be slightly bigger than the former but this alone is hardly sufficient to distinguish between, or associate, the two.

We shall now survey further descriptions of the fiskreki, síldreki, etc, and follow the related notions and lexicon.

According to Oddur Einarsson (1588/89) God placed a unique kind of whale, the fiskreki, to counterbalance the incredible monsters and savage enemies of the seamen (ie, the hrosshvalur, nauthvalur, rauðkembingur, skeljungur and springhvalur). The fiskreki defends the fishermen against all assaults by malignant whales which usually fear it and flee. It also gathers great quantities of useful fish from the deep of the sea so people may catch them. It performs this service as if it were decreed by God and in such a wonderful manner that if discord or fighting occurs between the fishermen it chases the fish away so they may neither be caught in nets nor by line and hook. As it is considered more useful to man alive than dead, Icelanders abstain from taking it except when it drifts dead ashore.\(^3\)

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1 Cf Wexelsen 1985: 10; Vollan 1982b: 246.

2 This does not originate in the KGS edition which Einarsson refers to; neither does the relative size of the KGS species suggest so, nor has the blue whale ever been associated with fish.

Here we see the notion of 'good whale' added to the KGS description. According to Gísli Oddsson (1638) the fiskreki/sildreki is 'thought to be the mate of the great steypireyður.'\(^1\) It seems unlikely that people thought of the minke whale as the mate of the blue whale (steypireyður); thus, the fiskreki/sildreki would here be the fin whale.

Jón Ólafsson indlafari (1661) describes how drunk Danish and Basque whalers in 1618 engaged in a disastrous attempt in a Spitsbergen fiord to harpoon 'a great sildreki which they called tröllhvalur'.\(^2\) Whether this was a fin or a humpback whale I am not sure.

Resen (ca 1688) repeats the dual role of the fiskreki as protector of fishermen and fish driver. 'A particular kind of this species is thought to be the sildreki, about 60 ells long, which drives herring to the fishermen.'\(^3\) Resen's distinction between 'fish driver' (generic term) and 'herring driver' (specific term) shows that the reference level of synonyms is topical.

JófG (1737) seems to be the first Norse scholar to present the 'rorqual species' (reyðarkyn) in a systematic way (cf items A.19 and A.17.3 (A)). He writes, inter alia: Sildreki/fiskreki 'is the male and mate of the steypireyður'; it is in all aspects like her except 'that he is somewhat shorter and stouter than the female'; his name comes from herding the herring in the sea. 'People say that he digests his food over two years. After that he belches it all forth which attracts herring and other small fish, and when they are concentrated he swallows it all. Some seamen say that when he is alone he plays with fishing boats on the sea but when she is with him, he defends them.'\(^4\)

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1 Cf Oddsson 1917: 45; 1942: 76.
2 Cf Ólafsson 1908-1909: 133.
4 Cf KBK Rostgaard ms 111: 31r; see also LBS-JS ms 247: 36-37.
Within JÖfG's scientifically structured presentation of the rorquals as such the *fiskreki/sildreki* description is very complex. We find here zoological details which identify the real animal as the fin whale combined with folkloristic notions of the blue whale-fin whale companionship, the 'herring driver' and the *hafgufa* (cf K22), good whales and even a touch of the wicked ones, - all at the same time. The presentation is probably JÖfG's product, resulting from his combining of several differing descriptions.

T. von Westen Angell, in 1753, mentions that whales drive great quantities of spring herring and saithe inshore.¹ Pontoppidan (1753) writes that at Norway's westerly coasts the whales arrive in January, not as enemies but as allies and helpers, 'sent by the careful Creator ... to drive numerous shoals of herring, saithe, cod and other fish' inshore for the sustenance of many thousands of people and the great commercial profit of the country.² First come the small *spring-hvale* (orcas, dolphins?), then 'the big *Balæna vulgaris*', 50-70 feet long (ie, up to 15.7-22 m, being the fin whale); 'from the use it does' it is called *silde-qval* ('herring whale').³ One might even read Pontoppidan so that he includes the *springhvaler* under the term 'herring whale'. Strøm (1, 1762: 298f) describes the *sildhval* as a kind of small whale, much like the *rorhval*, which drives herring inshore; the former seems to be the minke whale, the latter the fin whale. K. Leem (1767) notices that there exist several rorqual (*rørhval*) species but in Norway people only distinguish between two, 'namely the big and the small rorqual' (ie, *den store rørhval; den lille rørhval*); both are counted among the *sildhvale* ('herring whales') and are said to be the most prominent ones which drive the herring into the fiords. In Finnmark the very big *storhval* drives

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¹ Cf Frølich 1924: 201f.
² Cf Pontoppidan 2, 1977: 193f.
cod and other fish inshore 'according to God's wise economy and fatherly care'.\(^1\) A. Christie (1785/86) mentions that *silderør/stor rørhval* (ie, fin whale) and *kuglhval* (humpback) are only seen in Hordaland during the spring herring season. 'It is prohibited to catch these (whales) as they are those which drive the herring inshore.'\(^2\) This last remark possibly includes the minke whale, under the name of *small rør whale* (ie, outside designated whaling voes). In a comment to Pontoppidan (2, 1977: 194) Christie writes that in Hordaland whales are not seen with other fish than herring;\(^3\) moreover, 'never has it been believed here' (ie, in Hordaland) that the small rorqual (*lille rørhval*) drives the herring into the fiords because most of its food is haddock.\(^4\)

Amtmand (county governor) Sommerfeldt (1799) speaks of hundreds of whales enclosing East Finnmark fiords to keep the fish there 'until time and weather allow the inhabitants of the country to catch their share thereof.'\(^5\) Writing about Ryfylke bailiwick, J. Kraft (1830: 148) mentions 'the whale' both driving the herring inshore as well as out to sea again. Rev I.A. Heltzen (1834), in his description of the Rana district, Nordland, speaks of the *sildhval* driving as well as guarding the herring.\(^6\) N. Hertzberg (1840: [2]) mentions that *den store sildehval* chases the spring herring inshore in January and February. According to H. Lilienskiold (1698) the harbour porpoise drives fish inshore\(^7\) and Pontoppidan (1753) writes that the summer herring is driven inshore 'by sturgeons, harbour

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1 Cf Leem 1767: 296-299.
2 Cf Christie 1785/86, UBB 221: f2r; see also f5r.
3 Cf Christie 1785/86, UBB 221: f29v.
4 Cf Christie 1785/86, UBB 221: f31v, f32v.
5 Cf Juel 1890: 214; referring to Sommerfeldt, 'Topographisk journal' 7, 1799 [orig not seen].
7 Cf Lilienskiold 1, 1942: 214.
porpoises and small whale fishes'. 1 In 1764, two Samis from Ofoten, Nordland, were indeed summoned because they had fired at porpoises in a herring shoal. 2 On the other hand, in the same district (and indeed more widely) whales are also recorded as being caught during the herring fishery, apparently without repercussions. 3 The difference presumably lies in the method: 'shooting' (spearing, harpooning, firing) versus seining.

As late as around 1990 some fishermen at Steine, Lofoten, did "believe that the killer whale chase[s] the herring into shallow bays where they are easily caught." 4 It is apparently not before the mid 18th century that scholars begin to challenge the 'fish driver' notion and the legal protection of the whales concerned. The earliest I have so far discovered is E. Jessen who, in a work on the Kingdom of Norway (1763), dismisses the 'superstition' that whales drive herring inshore. 5 In 1781/82, Svabo questions the inviolability which laws since ancient times offer to the sildrekji (fin whale) because it allegedly drives the herring inshore. He suspects the whale to pursue the herring which in turn moves inshore by its own nature in order to spawn. Herring also occurs in great quantities near the shore where this whale is not seen, so, in his opinion, people might enjoy the benefit of taking this whale together with at least the same, if not a bigger, herring catch. 6 J. Landt (1800) follows Svabo and doubts that the Faeroese have ever enjoyed the service of the fin whale (silrekji). He therefore urges them to become its

1 Cf Pontoppidan 2, 1977: 238.
2 Cf Kolsrud 1947: 117.
3 Cf Kolsrud 1947: 117; referring to Lendingbergsting 1759, tingbog 9b, p 418, for such a take at Rombaksbotn in 1749.
5 Cf Juel 1889: 170.
6 Cf Svabo 1976: 75.
master and so reap a secure harvest rather than hoping for an uncertain one. He also mentions the rojur, or rørhvalen, as if it were a particular 'species', but it could pertain to both blue and fin whales. H.B. Melchior (1834: 265) notes that herring also comes to Danish shores without a sildedriver.

In Hordaland, Christie (1785/86) observes: 'The big whales which come with the herring could presumably be subject to fishery; but many (people) wish the ban that hinders this lifted first.' It is not clear whether these 'many' who advocated NL 5-12-5 be revoked were merchants and/or peasant fishermen, neither is it clear how they thought these large rorquals could be caught.

Høst (1875: 355f) remarks that the Faeroese call sildehval (fin whale) and vägehval (minke whale) by the generic name of sildrekji. They are very common but are rarely caught because of their swiftness. He doubts that the prohibition by NL 5-12-5 could be applied in the Faeroe Islands, presumably because of the lack of herring there.

J. Grieg (1889a: 259f) mentions that in Finnmark the fin whale was called loddehval ('capelin whale') because of its association with the spawning spring capelin. He does not elaborate on the context (seasonal/circumstantial name only?). In the 18th to early 19th century the name seirør ('saithe rorqual') is recorded from Troms, apparently preceding the late 19th century sei whale name. Both names lie in the ancient naming tradition.

We are only able to follow the 'fish driver' notion since the 11th-13th centuries but there is every reason to assume that it is far older, presumably prehistoric, in origin.

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1 Cf Landt 1800: 240; 1965: 137; see also Jacobsen and Matras 1961: 338.

2 Cf Christie 1785/86, UBB 221: f34v.

3 In present-day Faeroese sildreki denotes minke whale only while nebbafiskur is the fin whale (cf Jacobsen and Matras 1961: 293, 358).

4 Cf Bratrein 2, 1990: 176.
The Christian interpretation of it would be a matter of course after the 10th-11th century (cf chs 8.2 and 8.5). At the more concrete level of daily life, the fiskreki could be associated with herding in domestic animal husbandry, indeed sometimes shepherding, using a dog (= the whale), as T. Einarsson (1987: 124) suggests.

Solheim (1942/1973) writes that 'The whale and the fish shoals were mostly one and the same, they came together and came also to be inseparable in people's thoughts.' In Norway indications of herring, cod and saithe migrations (by birds, cetaceans and stomach contents of preying fishes) were called 'sign' (syn, sildesyn). Before technical aids became available their importance to Norse fishermen cannot be overestimated but, in my opinion, the 'fish driver' notion should not be reduced to this aspect: The 'fish driver' is also embedded in, and forms a vital part of, the ancient Norse and mediaeval world views (cosmic orders). Solheim (1973: 30f) concludes:

'... The prepossession against killing the whale in the fish shoals has presumably been combined with the prepossession against calling it by the usual name. ... The use of periphrastic names may have helped to create the illusion that it did not involve the same animal which people otherwise hunted and killed when they had the opportunity of doing so. We have no direct evidence about what secret names were used about the whale in this case but it can be inferred that they somehow must have expressed the common perceptions about the animal and the evidence gives good indications in the direction of "Gods envoy" or "the overseer", etc, while the fishermen must have called this whale the "herring" or "fish herd". This


3 'The popular notions about the whale are based to a great extent on the fact that this animal was, and is, a reliable indication of fish arrivals.' (Cf Solheim 1973: 28).
corresponds both linguistically and in substance to the old Norse names sildreki and fiskreki. In this context it should then not be unreasonable to interpret these names as primal secret names.'

The 'fish driver' notion was part of the controversy between the north Norwegian fishermen, the Modern whalers and the authorities, after ca 1870, which led to the whaling ban in northern Norway in 1905, and indeed extended to Shetland and Iceland.¹

The survey above demonstrates, in my opinion, that it is essential to differentiate between the 'fish driver' notion as such; fiskreki, sildreki (etc) as proper and noa names at the generic and species levels; and general designations, partly as 'circumstantial names' (applicable to various species).

Before we leave this topic we must touch upon Francesco Negri’s account about his visit to Finnmark, 1664/65. He asked the fishermen there 'about the kind of small fish which move in front of the whale and follow it so that the big animal shall not fall into distress. People call it musculo or Mugil. But I [ie, Negri] have been unable to learn anything certain about it.'² If one considers Negri’s fish name it could be the grey mullet (family Mugildae) but it is a southerly inshore species not found in Nordic waters.³ Otherwise, it serves no purpose to speculate about which kind of (shoal) fish could be involved. Whether Negri reflects a southern European notion of 'fish accompaniment' of whales, I cannot say. The mullet could have entered the scene because it was

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² Cf Negri, in Daae 1887: 154; here translated from Norwegian.

known to Negri and his readers, but in a 'fish driver' context he has clearly misunderstood the parts. He seems to have pursued his version firmly with the Finnmark fishermen who, in turn, did not recognised it. The available evidence gives no reason to think that the fishermen would have concealed such general information from him.

**K14 Sléttibaka (HĐ):** This student agrees with the widespread opinion that sléttibaka, sléttbaka, sléttbakk ('smooth back') is the black right whale,¹ ie, the temperate right whale species, in contradistinction to the bowhead whale (cf K20 norðhvalr). Schönneböl (1591) apparently calls it sletqvall (D/N)² while Brinch (1676) mentions sletbaker among whale names in Lofoten.³ Gísli Oddsson (1638) mentions it (sléttibaka)⁴ while JG1 (1639-1644) gives detailed information about it (sléttbakur/höddunefur/vatnshvalur) and concerning foreign whaling of it in Iceland.⁵ Negri (1664/65) witnessed the landing of a stocky black right whale in Finnmark and mentions its very narrow throat. He states the (Basque/Dutch) whaling season there as April to August.⁶

Resen (ca 1688), in his Faeroe description, probably following the Anonymus, calls (presumably) the black right whale troldhual and sottebak because the description corresponds in most details to that by Debes of the troldhval and to Svabo's regarding the slattubøka's harmfulness to the fishermen, its habit of playing with the

¹ Cf Collett 1911-1912: 547; Hermannsson 1924: 36; Holm-Olsen 1983: 168; Nordgaard 1903: 82; 1916: 215; 1921: 110f; however, Whitaker (1986: 5, 10) interprets it as the generic term 'right whale'.

² Cf Schönneböl 1978: 322/211.


⁴ Cf Oddsson 1917: 45; 1942: 76.

⁵ Cf Guðmundsson 1924a: 9f; 1924b: 28.

⁶ Cf Negri, in Daae 1887: 148f, 152f; see also Slijper 1979: 285.
boats and the use of castoreum to drive it away.\textsuperscript{1} J. Rischel and P. Skárup (1972: xl) are of the opinion that sottebak is a copying error; this may be true but the similarity with the Basque name otta sotta in Thomas Edge's commission, 1611\textsuperscript{*,2} probably designating the gray whale, is striking. Indeed, I see the possibility that the gray whale in Iceland, under Basque influence, might have been called sottebak, along with troldhval ('troll whale'), the latter name for which any feared whale would be eligible. Sottebak might then with Resen end up as synonym for troldhval designating another species.

In West Finnmark, around 1694, "de store runde thlord huale" there seem to have been black right whales. The whales sometimes got entangled in handlines; if it then suited the fishermen to enjoy a free ride inshore they had the whale pull them until it dived or took an undesired course, then they would cut the line.\textsuperscript{3}

H. Lilienskiold, in 1698, mentions that the Basques at that time still came inshore in the Northcape area for whaling and trying out the nor-caper, also called stub(ben) on the grounds of it being short and 'stubbed in the foremost part of the head'.\textsuperscript{4} Morphologically the stub reference seems not very plausible here. Leem (1767: 299f) also mentions it.

There exist two Basque-Icelandic vocabularies, from the late 17th century.\textsuperscript{5} The relevant entries are:

\begin{itemize}
\item \textsuperscript{1} Cf Resen 1972: 70f; see also Debes 1963: 167f; Svabo 1976: 75f.
\item \textsuperscript{2} Cf Edge 1906: 31\textsuperscript{*}. See also ch 5.5.
\item \textsuperscript{3} Cf Anon 1938: 40f.
\item \textsuperscript{4} Cf Lilienskiold 1, 1942: 207.
\item \textsuperscript{5} Vocabulary I (AM 987 4to) appears, on the evidence of the beret (I 153), to date from the very late 17th century (cf Guðmundsson 1979: 83). Vocabulary II (LBS JS 401, Jón Ólafsson úr Grunnavík, 53; being a copy of an original that burned in the fire of Copenhagen, 1728) seems to be written 1726-1728 (Jón Ólafsson became secretary to Árni Magnússon in 1726) (cf Deen 1937: 3; Guðmundsson 1979: 75; see also ÍA 2, 1990: 214).
\end{itemize}
I 30: balia ('Bsq') [balea] (Bsq): hvalfishur
[= hvalfiskur] (I): 'whale fish';

II 127: balia ('Bsq') [balea] (Bsq): hvalur (I):
'whale';

II 128: ascho balia ('Bsq') [asko-balea = bale aundia]
(Bsq): sliettbakur [sljëtbakur = slëttbakur]
(I): black right whale.¹

II 224: "Christ Maria presenta for mi balia, for mi
presenta for ju bustana" ('Bsq'); presenta (Sp),
balea (Bsq), buztana (Bsq); for mi, for ju (E):
The accompanying Icelandic translation reads:
'(If) Christ and Mary give me (a) whale, I shall
give you the tail.'²

At Spitsbergen the tail was cut off the whales before they
were towed; thus, when whaling inshore in Iceland the
Basques could without much hesitation give the tail away as
it had no economic value for them.

Under the names of slëttbakr and höddunefr, JÖfG
describes the two right whale species, with zoological
details, though as if they were a single species.³

J. Eiríksson (1768: 253f) mentions French slëttbakur
whaling in Ísafjarðardjúp in 1752; furthermore: 'It is
also probable that this whale fish breeds inside the fiords
of Ísafjarðarsýsla and Barðastrandarsýsla, and ... raises
there its young during the summer, in ... May, June and
July, and leaves them late in the month of August, when
then some of these abandoned ones occasionally fall prey
to the inhabitants.' Eiríksson could be referring to the,
mainly, humpback calf whaling in Arnarfjörður.

Halldórsson (1785/1814) explains slëttbakr and norðhvalr
as the bowhead; he also mentions hafkikki as 'a sort of
short and roundish whale fish', which is certainly a right
whale, and could well be the black one, but refers the
reader to norðhvalr for it.⁴

¹ Cf Deen 1937: 45, 96.
² Cf Deen 1937: 104, see also 45, 96f, 102; Guðmundsson 1979: 84.
³ Cf KBK Rostgaard ms 111: 31r-32r; LBS-JS ms 247: 37-38; see also
Jónsson 1, 1988: 36f; Watson 1985: 69.
⁴ Cf Halldórsson 1992: 197, 344, 437f.
In the 17th-18th century the distinction between black right and bowhead whales appears obscured to the Icelanders, probably because of the decline in both stocks in Icelandic waters.

Various scholars have asserted that the capture of the black right whale "was a comparatively simple matter, since the animal was sluggish and non-combative" (Ashley 1938: 65); that it is "comparatively docile and can be taken with quite simple tackle" (G. Clark 1947: 86; J.G.D. Clark 1974: 66); and that 'It has such a docile nature that it is possible - without greater danger to life - to catch it with a harpoon and kill it with a lance' (Gjessing 1955: 54). This has been used for postulating the existence of an old Norse hand harpoon whaling tradition involving the black right whale but as a premise I must consider it to be invalid. Apart from KGS, there is ample evidence of the black right whale being very active, swift in movements, having staying power and being dangerous and difficult to take.¹

K15 Hafurkitti: The KGS form of the name is hafurkitti (hafrkitti). In Historia Norwegiae one reads that 'There is hafguva and hafkitta, the largest of the sea's monsters'. With a view to KGS, Storm questions the order of the two creatures or the authenticity of hafkitta here.² The names are complex. We have two prefixes haf(u)r- ('he-goat') and haf- ('sea'), and the suffix -kitti/-ketti (n) and -kitta (f) the meaning of which is uncertain. Magnússon suggests (on weak grounds, I think) an association with 'kid' or (more plausible) kött(u)r ('cat') and ketta ('she-cat'; trolless; wicked troll mother).³

¹ Cf Anderson 1747: 219; Eschricht 1845: 153; Guldberg 1889b: 5; 1907: 261f; Leem 1767: 299f; Magnússon 1944a: 49; Melchior 1834: 255; Nordgaard 1921: 110; Reeves 1992, pers comm.

² Cf Storm 1973: 80; see also Anon 1984: 645.

³ Cf Magnússon 1989: 457, 464, 539; see also JófG/KBK Rostgaard ms 111: 32r.
The haf(u)r- prefix clearly contradicts the suffix while haf- is neutral towards it.Magnússon (1989: 297) is also of the opinion that haf- is the correct prefix which has been corrupted under the influence of hafhrvalr/hafurhvalur. Hafhrvalr/háfrhvalr (Hô) is also mentioned in JB vii 68 (hafrhval/hafr/háfr), referring to some small(er) cetacean; later Icelandic usage confirms this (cf item K4). Similarly, the historical measures listed in item A.17.3 (B) show 'Hafurkitti' (etc) to be of a different class. The haf-kitti interpretation seems supported in Claussn Friis’s (ca 1599) translation and extracts of KGS where he renders hafurkitti as 'haffkiete or háffkat' (N/D). We should therefore be able to leave behind speculations about the prefix in the sense of 'he-goat', 'male whale', etc. The corruption of the prefix from haf- to haf(u)r- is presumably a 12th-13th century phenomenon which has been perpetuated, inter alia, under the authority of KGS.

Halldórsson (1785/1814) states hafkikki to relate to -kökkur ('clot', rounded lump) (cf item K14). Hafurkerti ('-candle') is also recorded once. Magnusson (1989: 297) considers both these names to have corrupted suffixes while I tend to interpret them as noa names.

The animal behind the hafurkitti (etc) name is by most scholars identified as a shark, mainly basking or Greenland sharks, or they consider the name to be generic for some shark species; however, Hermannsson (1924: 37) objects and sees this contradicted by Icelandic usage.

1 It is not found in the corresponding paragraph MLL vii 65, so it might be an Icelandic name.

2 Cf Friis 1881a: 64.

3 Cf Hermannsson 1924: 37.


5 Cf Magnusson 1989: 297.

Indeed, Oddur Einarsson (1588/89) says that hafurkitti has abundant fat and blubber.\footnote{Cf Einarsson 1928: 58; 1971: 115.} Gisli Oddsson (1638) mentions hafurkitti along with sléttibaka and that neither has 'a hump' (\textit{ie}, dorsal fin).\footnote{Cf Oddsson 1917: 45; 1942: 76.} JGl (1640/44) describes it as having very much tallow in the abdomen and being the best rorqual of all.\footnote{Cf Guömundsson 1924a: 11.} This is repeated by Bartholin (1657: 281), Resen (1991: 159) and Torfæus (1706/19).\footnote{Cf TorfTus 1706: 93f; 1927: 67.} JÖfG states hafurketti to be a short and stout whale.\footnote{Cf KBK Rostgaard ms 111: 32r; LBS-JS ms 247: 38.} Furthermore, Desjarmýrarannáll, 1687; Djäknaannáll and Höskuldsstaðaannáll, 1758, describe it as a whale (60-80 ells long). M. Stephensen mentions that a hafurkétti, which came ashore at Málmyey, Skagafjörður, around Easter, 1802*,\footnote{Cf Stephensen 3/1,1808b: 116*.} was 'approximately 40 ells long and nearly as bulky'. This is indeed a characteristic of the black right whale\footnote{One caught in the Hebrides, 1908, 'was so fat that its circumference was nearly exactly equal to the length of the animal, namely 45 [English] feet'; it was nearly ball-shaped. (Cf Collett 1911-1912: 551).} although KGS also states the length to equal the circumference of the bowhead (K20). Stephensen continues by speaking of 'another good sléttbæku-hvalur'\footnote{Cf Stephensen 3/1,1808b: 115*.} so both names here refer to the black right whale.

Sæmundsson (1903: 135) writes that in Arnarfjörður, Northwest Iceland, the black right whale was called hafurkekki (\textit{ie}, -kökkur);\footnote{Cf Magnusson 1989: 453.} Thoroddsen (1911: 492) uses hafurkitti and sléttbakur synonymously while Blöndal (first published 1920-1924) uses sléttbakur generically ('right whale') and distinguishes between hafurketti, hafurkitti,
haf(úr)kikki (black right whale), on the one hand, and
norðhvalur (bowhead), on the other.\(^1\)

In my opinion, there is no doubt that etymology,
descriptions and Icelandic usage identifies the KGS
hafurkitti as the black right whale. Their stated size (cf
item A.17.3 (B): 'Black right whale'; 'Hafurkitti') also
appears to be nearly the same into the early 17th century
and continues to be so with some modification.

In Historia Norwegia, hafkitta is stated to be
malicious. In KGS, sléttibaka and hafurkitti are dealt
with consecutively; the former is explicitly stated to be
annoying and dangerous; presumably the latter was
considered to be comparatively peaceful. Despite the
strong authority of KGS, Setbergsannál, 1606, explicitly
counts the sléttbakur among the 'good fishes'. My
tentative interpretation of the two (main) names for the
black right whale is that there existed, at least since the
12th century AD, two notions about the innate disposition
of the black right whale.

**K16** Hrosshvalr (HD) and **K17** rauðkembingr (HD):
Nordgaard (1902) argues convincingly that the termination
of walrus hunting in northern Norway in the early Middle
Ages resulted in the Norwegian names hrosshvalr and
rauðkembingr to be replaced in Old Norse by other names for
the walrus (rosmhvalr, rostungr) from Iceland and Greenland
where the hunt continued. However, the ancient names
hrosshvalr and rauðkembingr continued to live in the
popular tradition but came in the course of time to
represent fabulous creatures.\(^2\) S. Bugge explains the
etymology of hrosshvalr in the meaning of 'walrus' and how
the inversion of the compounds results in our modern
'walrus' word.\(^3\) By the high Middle Ages both hrosshvalr
and rauðkembingr certainly belonged to the supernatural

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2 Cf Nordgaard 1902: 788-792; 1903: 84; 1921: 112.
3 Cf Bugge 1883: 4-7, 20f.
world but natural species seem nevertheless regularly implicated.

*Historia Norwegiæ*, from the late 12th century AD, has a passage about a 'long-maned one-eyed horse whale' ("equini ceti monoculi jubis diffusis") which roams the seas and apparently belongs to those large whales which crush even the strongest ships, swallow the seamen or submerge them.¹ *Hrosshvalr* also existed with the Irish, as *rosualt* and *ruasuall*, being a sea monster which belches death and famine.² It seems likely that they adopted this notion from the Norse no later than in the 11th century AD.

*KGS* offers an integrated description of the *hrosshvalr* ('horse whale') and the *rauðkembingr* ('red-comb', 'red crest'), as very evil whales, dangerous to seafarers and 'enemies of mankind'. Because they are associated with the evil of the world and death of humans it is no surprise that they may not be consumed. The older and younger Christian laws of Iceland, from 1122/33 and 1275 AD, respectively, stipulate that *hrosshvalr*, *náhvalr* (narwhal) and *rauðkembingr* should never be eaten.³

*Kormáks saga* (ch 18), presumably from the early 13th century AD, mentions a metamorphosis which haunts a ship crew in the shape of a *hrosshvalr*; it was killed with a heavy spear (pálstafr).⁴

According to Oddur Einarsson (1588/89) the *hrosshvalur* and the *nauthvalur* (which bellows incredibly) rush around the sea attempting to swallow fishermen, and the *rauðkembingur* (reddish in colour) is no less wicked and malevolent.⁵

Schönneböl (1591) mentions that at Lofoten and

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¹ Cf Storm 1973: 79f; see also Koht 1950: 15; Salvesen 1984: 645.
³ Cf GG 1a: 36; GG 3: 83, 182, 222, 266, 354; BAK 39 (cf Storm and Hertzberg/NGL 5, 1895: 51). See also ÍA 2, 1990 316.
⁵ Cf Einarsson 1928: 56; 1971: 114.
Vesteralen there 'come here many large and terrible kinds of whales from the wild sea and move back and forth here off the land' which the fishermen, according to kind, call trolldqvall (var: trolldhval), röergvall (var: rörhval), slet qvall (var: slethval), taag qvall (var: tung qvall) and 'rödkindben [ie, 'red cheek-bone'], because it has some long red stripes around the mouth'. Of the hundred sorts of whales some 'lie on the water, just as other skerries, and they are overgrown with shells and seaweed as other stones, they are 100 fathoms long, and even longer.'¹ Storm suggests that Schönneböl's explanation with the 'red cheek-bone' is his own guesswork.²

Clausson Friis (1599) explains the KGS rauökembingr to be a ferocious, mad and harmful fish, also called trolldhval ('troll whale').³

Setbergsannáll, 1606, mentions that in the isolated Öræfi district, southeast Iceland, a 'hrosshvalur had ... come ashore and people had eaten from it.'

Gísli Oddsson (1638) writes that the hrosshvalur shakes its back and has a horse mane while the rauökembingur is similar to, but much smaller than, the skeljungur which is overgrown with shells and kelp.⁴

JGl (1639/44), in Hvalfiskakyn í Íslandshöfum, writes: '16. Hrosshvalur (rauökembingur) moves around the seas in order to destroy people, 29 ells, not bigger, inedible. Hrosshvalur 20 (ells long), it is by some called stökkull, it is hairy according to the disc of the sun ["lodinn eptir sólhvelium", ie, season?]. 17. Rauökembingur, 30 (ells).'⁵

In Islands aðskiljanlegar náttúrur (1640/44) he writes: 'Hrosshvalur or stökkull [ie, 'jumper']. The most

¹ Cf Schönneböl 1978: 322/210f.
² Cf Storm, in Schönneböl 1978: 322/211.
³ Cf Friis 1881a: 64.
⁴ Cf Oddsson 1917: 45; 1942: 76.
malicious of all evil whales. Some call it blökuhval and think they have read that the Holy Brendan, the sailing bishop, has received from God through his prayer that blaka\(^1\) should grow over the eyes of this whale and drop down over its sight when it would leap and hit ships; earlier it had been too harmful. It reaches not 20 ells.' Then follows a reference to KGS.\(^2\)

In the Ichthygraphia chapter on evil whales or monsters the existence of which is doubtful, JÖfG (1737) writes: 'Hrosshvalur is also said to exist, has a mane like a horse and neighs.'\(^3\) On the other hand, JÖfG considers rauðkembingur in serious terms:

'Rauðkembingur, is extraordinarily big and the (very) worst evil whale. Has its name from the red colour over all; is like coffee-brown on the back but pale on the abdomen, with a small fin on the back which it holds still. Others say that it is long and slender and for that reason very swift and gets its name from a red comb, or bristles, (projecting) from the back.'\(^4\)

Ólafsson (1772) writes that the character of the whale rødkam is still uncertain.\(^5\) Magnússon (1785) lists eight toothed whales, among them rauðkembir which he describes as being bigger than the sperm whale (búri) but not having such a steep forehead.\(^6\)

Mohr (1786: 17) was unable to identify the hrosshvalur and rauðkembingur during his visit to northern Iceland.

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3 Cf LBS-JS ms 247: 45; see also KBK Rostgaard ms 111: 36r.
4 Cf LBS-JS ms 247: 44; see also KBK Rostgaard ms 111: 36r.
5 Cf Olafsen 1, 1772: 545.
6 Cf Magnússon [1785] 1944a: 49.
Numerous Icelandic folktales from the 19th century describe incidents at sea involving illhveli ('evil whales') and, in some cases, also göðhveli ('good whales', ie, baleen whales harmless to fishermen and often protecting them). In these folktales we occasionally find hrosshvalur and rauðkembingur mentioned by name, often treated as one and the same creature.¹

Although the central motif stays the same throughout the centuries we notice that the descriptions of hrosshvalr and rauðkembingr vary considerably, so do their numerous ramifications.

Oddur Einarsson (1588/89) writes that Icelanders have reservations against eating whales that have teeth or in some way pursue humans, like hrosshvalur, nauthvalur, rauðkembingur and skeljungur.² Horrebow (1752: 227) explicitly states that as 'a general rule' meat of odontocetes 'is unsuitable but the meat from the others can be eaten'.³ The basic notion seems to equate evil, toothed and carnivorous in real and imagined whales, but neither the inclusion of the skeljungur (humpback) in the category of wicked whales nor consumption of porpoises, dolphins, orcas and pilot whales are consistent with this notion.

In Setbergannáll, 1606, a real cetacean is called hrosshvalur. The term demonstrates that a taboo was broken by eating from it. Magnússon's (1785) linking of büri and rauðkembingur indicates that, at least occasionally, the latter was considered to be a large sperm whale. The Öraefi hrosshvalur could therefore well be a sperm whale, which sounds plausible to me. In item A.17.3 (B) the 'Hrosshvalr', 'Rauðkembingr' and 'Búrhvalr' (sperm whale) series appear to correlate more closely than 'Hrosshvalr'/

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² Cf Einarsson 1928: 57; see also 1971: 115.

³ See also Jónasson 1961: 43.
'rauðkembinger' with 'Rostungr' which indicates a transfer of the former two old Norwegian walrus names to the sperm whale. Indeed, behind the central motif of hrosshvalr/rauðkembinger one might see 'ferocity' and 'malignity' of sperm whales acting in self-defence, even a kind of Norse 'Moby Dick motif'. These conclusions diverge radically from the hitherto accepted views which I shall now outline and partly discuss.

Despite his own discoveries, Nordgaard (1921: 112) still argues that KGS's hrosshvalr is the walrus, however, with fabulous traits, and that 'The author of Konungsskuggsjá apparently did not know that hrosshvalr [ie, K16] and rostungr [ie, K33] is the same animal.' This identification is followed by Holm-Olsen (1983: 167) and Whitaker (1986: 5, 11). The present author is of the opinion that Nordgaard contradicts himself here; secondly, I see no basis for questioning the clear differentiation by KGS of the two species; and, thirdly, it still remains to be explained how the two species acquired their new descriptions or, conversely, what meaning the names came to designate. We shall look at these aspects as a whole:

According to JG1, hrosshvalur, rauðkembinger, stókull and blökuhvalur are more or less the same kind of creature. Halldórsson (1785/1814) with both blökuðiskr and blæuhvalr refers to léttir, implying that they have the appearance of the sperm whale or orca. In fact, blæjuhvalr is mentioned in HD. The etymology shows blökuhvalur/blökuðiskur and blæjuhvalr to be the same creature. According to JG1, a membrane grows over the whale's eyes and drops down over them when it leaps. It is somewhat contradictory but the modern Icelandic notion is

1 Cf Ujházy 1982: 85.
2 Cf Halldórsson 1992: 76f, 298.
3 The ON/I prefix blaka means 'curtain', 'veil', 'fan', 'flap' (cf Blöndal 1, 1980: 84; Fritzner 1, 1954: 148; de Vries 1977: 42); similarly, ON/I blæ(g)ja is '(thin) cloth', '(linen) sheet', '(head)scarf', 'veil' (cf Blöndal 1, 1980: 91; Fritzner 1, 1954: 160f; Magnússon 1989: 67; de Vries 1977: 46).
approximately 'flap whale'. In Suðuroy, Faeroe Islands, C. Matras (1960: 182) records that the bottlenose whale (daglingur) was considered by some people there to have two eyes (rather than one), however of different size, and that a membrane covers the smaller one. This is clearly the blæjuhvalr notion. It points to the Icelandic 'flap' notion being secondary. This writer therefore cannot accept Nordgaard's (1916: 217) interpretation of blæjuhvalr (HD) as 'leaf-fat whale' (isterhval) and it being the same as hafrkitti (K15). Blæjuhvalr (HD) must be an early mediaeval Norse creature. Although sources do not mention it during the high and late Middle Ages is seems nevertheless to have survived into modern times. This student tentatively suggests that its nature, in the 11th-12th century AD, was transferred to the old walrus names hrosshvalr and rauökembingr; ie, giving these ('vacant'? ) names in the Norse marine mammal nomenclature new subjects, in the process suggested by Nordgaard (1902).

Nordgaard (1921: 112) chooses to follow bishop J.E. Gunnerus (1718-1773) and O. Fabricius (1744-1822) in assuming the rauökembingr to be a sea lion, notably Otaria stelleri or Otaria ursina. In the zoological standard literature I have nowhere found suggested that otariidae have sometimes inhabited the North Atlantic Ocean. Nevertheless, Holm-Olsen (1945/1983: 167) also defines rauökembingr as possibly being the Steller's sea lion or the northern fur seal. Whitaker (1986: 5, 11) sensibly rejects Nordgaard's speculations, and indirectly Holm-Olsen's identification, because "there is no record of either of these creatures being seen in the North Atlantic" but, on the other hand, he enters the tentative identification "[sea-lion?]" with rauökembingr in the KGS text! O. Vollan (1, 1985: 65) explains rauökembingr as being the bowhead whale. It follows from the analysis that I am bound to consider these identifications, etc, to be entirely unsupported.

In northern Norway, hrosshvalr and rauökembingr seem to have a relative in Lilienskiold's (1698) malignant sea
serpent (40 fathoms = 120 ells long), with a mane one fathom long, which chases boats and is accompanied by a irritating stench.¹ Leem (1767: 332f) describes a sea serpent with the same characteristics and indeed suggests it to be the same creature as the KGS rauðkembingr. De Capell Brooke (1823: 296) describes vividly how, in 1822, "much fear of real or imaginary danger had been excited" with fishermen in Nordland and Troms "from a whale, which was described with a large black tuft of hair upon its forehead, having pursued two boats near Tromsøe, one of which it dashed to pieces, and the other escaped with considerable difficulty by running ashore." It fits that an Icelandic mythical whale of folktales is called rauðgrani² ('red grani'). Grani is a horse name, meaning 'one with a hair tuft on the muzzle', while rauðgrani is also one of Odin's (several) names.³ This all brings us close to hrosshvalr and rauðkembingr. One could imagine that the KGS (etc) notion of hrosshvalr and rauðkembingr might be the principal heathen Norse god Odin incarnate, presumably in a Christian making. When we recall that Historia Norwegiae (late 12th century AD) speaks of the long-maned horse whale as being one-eyed⁴ I see this thought verified: Odin is one-eyed because he pledged one eye to Mímir (cf Völuspá 27-28; Gylfaginning 8 [15]).⁵ In Ólafs saga Tryggvasonar, the early editions of which were written by Icelandic monks, ca 1190-1218 AD, Odin appears several times in the shape of the devil; also Thor is called diófull ('devil') and fiandi ('enemy').⁶ The horse plays a big role in Norse heathenism, inter alia,

¹ Cf Lilienskiold 1, 1942: 211f.
⁴ Cf Storm 1973: 79.
associated with Odin, who is thought to be 'the human hypostasis of an earlier animal demon in the shape of a horse.'\(^1\) This, I think, establishes a reasonable interpretation of the character of the hrosshvalr and rauðkembingr in KGS and other sources, similarly, of related (derived) creatures, and places them in a cultural context that might go back at least to the Early Iron Age.\(^2\)

Only Historia Norwegia\(x\) states that the hrosshvalr is one-eyed.\(^3\) In Iceland a poisonous one-eyed whale is recorded in Gottskálk’s annals, 1393, and in other sources.\(^4\) In the Faeroe Islands, as from 1584, we indirectly encounter a one-eyed whale in the name døglingur (F; variously spelled as deuling, delling, dölling, D/N; cf döglingr, ON). It is an ancient sacral name (by Snorri Sturluson explained as ‘descendent of Dagr’) which as scaldic kenning means ‘king’, ‘prince’, implying Odin, and, on grounds of him having given away one eye, it also acquires the sense of ‘a one-eyed one’.\(^5\) The issue is excellently treated by V.U. Hammershaimb (1991: xxix) and Matras (1960). Modern Faeroese popular beliefs have also steadfastly maintained that the northern bottlenose whale has only one eye but it is not considered to be a malevolent beast, only its oil (and meat) being unsuitable for consumption (which is a fact). Whether the name døglingr and the notion of one-eyed-ness went hand in hand we cannot tell. Matras (1960: 183) concludes that the application of the name døglingur to the bottlenose whale will be ‘a secondary development’ compared to a main

\(^1\) Cf Ropeid 1981: 275f.

\(^2\) Cf Ropeid 1981: 276.

\(^3\) Cf Storm 1973: 80.

\(^4\) Cf Storm 1977: 368; see also Einarsson 1928: 59f; 1971: 117-119. Oddur Einarsson (1928: 59f; 1971: 117-119) is presumably wrong when dating it to 1397 and identifying it as a narwhal.

tradition about a one-eyed whale. This seems correct but the question is when the døglingur/bottlenose tradition began: As we know it, the Faeroese døglingur/Odin tradition is devoid of all connotations with the ancient Norse demonic sea horse but it is thoroughly heathen. The Icelandic main motif has been steady since the 12th century AD, and by implication beyond that. If one assumes a similar permanence in the Faeroese døglingur tradition it presumably reaches back to at least the 10th century AD. We find no traces in Norway or Iceland of such a clean one-eyed-whale/Odin notion so I tend to infer that we have to do with a separate Faeroese development of the first two centuries of the Norse settlement in the Islands. The Faeroese *blæjuhvalur obviously refers to Odin’s (inferred) eye patch which presumably also is the etymology of HD’s blæjuhvalr and the Icelandic blökuhvalur, etc.

X18 Náhvalr (HD) (náhvalur, I, F; náhveli, I; ‘corpse whale’) is the narwhal in which the male displays the magnificent tusk (cf ‘unicorn’). The name is usually explained by the narwhal’s coloration resembling that of a corpse,¹ which is probable.² Jóhannesson and de Vries consider the name containing nár (‘corpse’) as a prefix while Magnússon does not think this compelling although he acknowledges that it from Old Norse has come into Danish, Swedish, German, French and English with the nar- prefix.

Neither KGS, Oddur Einarsson, Gísli Oddsson, JG1 nor other traditional sources elaborate on why consumption of narwhal meat and blubber is considered lethal for humans and animals. On the other hand, they generally praise the tusk for its beauty and magical qualities (even as God’s


JG1 (1639/44) mentions that the inedibility of the various whales is 'according to books', which indicates some doubts about the statements. Such reservations become more explicit in the second half of that century (Bartholin, Resen). In 1800*, a narwhal (with tusk) was not recognised in Northwest Iceland and (for that reason?) boiled and eaten. Neither seem Samis in East Finnmark in 1801 to have observed such a (Norse) taboo. Through the 18th century all sources describe the narwhal as a timid animal so the consumption taboo must be sought elsewhere. J. Árnason (1862/64), the original collector of Icelandic folktales, seems to offer the explanation: '... I have not heard mentioned that it destroys ships at sea but people consider it to be certain that it eats corpses ["leggist ánái"] where men have drowned at sea and for that reason is it called náhvalur or náhveli.' The ramifications of this are considered in chapter 5.6. From the same time it is also recorded that the náhvalur always accompanies the 'the raðkembingur which does nothing but destroy while letting the náhvalur eat.'

**K19** Skeljungr (Hb) is the humpback whale. The main development of the lexicon is shown in the list 'Humpback whale' in item A.17.3 (B). The KGS description as such needs no clarification. The humpback has a complex cultural history regarding names and attributes, with many

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1 Cf, eg, Einarsson 1928: 59; 1971: 117; Gúmundsson 1924a: 8f; 1924b: 28; Oddsson 1917: 45; 1942: 75; Resen [ca 1688] 1991: 161; referring to Bartholin.


4 Cf Stephensen 2, 1799-1806: 420*.

5 Cf Rathke 1907: 140.

6 Cf Árnason 1, 1980: 628.

7 Cf Dørkelsson 1899: 89.

ramifications, which, regrettably, cannot be considered here.

**K20 Norðhvalr (HD)** is the bowhead whale. Its Norse cultural and economic history is comparatively uncomplicated. However, KGS's passage about it merely subsisting on darkness and rain, etc, seems not to have been considered in the literature, except for a humorous remark by Nordgaard (1902: 794): He contrasts the passage with the bowhead also being described as 'a fat fish and well edible' and considers the author of KGS having had a better knowledge of commerce than nutritive physiology. Nordgaard is also of the opinion that the bowhead whale must have been rather common along the Norwegian coasts in the early to high Middle Ages since the author is so well informed about its size. This requires a few comments.

Firstly, the bowhead lives in polar and subpolar waters, staying close to the ice edge and making only shorter seasonal migrations south to winter along the ice edge; secondly, historical evidence shows that it wintered off North and Northwest Iceland before the Northeast Atlantic population was destroyed. Similarly, it seems reasonable to allow for it having wintered off, or migrated past, the Norse Western Settlement in Greenland. However, it can hardly have visited other parts of the Norwegian coast than East Finnmark, and this perhaps only irregularly. This student is of the opinion that the information in KGS about the norðhvalr will primarily come from Icelandic, secondly from Norse Greenland. The description about the whale's empty stomach reflects ecological facts: As an exclusive feeder on zooplankton the bowhead simply finds no food in

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3 Cf de Jong 1983: 86.

its southerly wintering grounds and is compelled to fast while there. F. Martens (1675) is correct when he notes that the bowhead feeds on 'small sea snails' and he objects to the notion that it lives 'only by the wind but if it were so it would give off nothing but wind which we have found to be otherwise, [ie,] as a dung which one could smell, feel and handle.'¹ This, however, refers to the whale in its summer feeding grounds.

The old Russians seem to have a parallel tradition. The apocryphal legend 'Conversation between three holy men' (according to the Synodical manuscript from 1665, under no 908, sheet no 288; from a certain Buslaev) contains a passage which reads approximately like this: '... the Earth is founded on three large whales and on thirty small ones; when these whales come to the paradisal sweet scent they take one tenth from it and become satiated with it ...'.²

K21 Reyðr (HD): Initially Nordgaard defines reyðr as the fin whale³ but changes it in 1921 (p 113) to a generic name for the rorquals (balaenopteridae). Holm-Olsen (1983: 167) and Whitaker (1986: 6, 11) adopt this latter view. A survey of the sources shows two decisive things: Firstly, the reyðr, etc, is always the largest of rorquals; secondly, the unbroken naming tradition in Iceland, continuing to the present day, also identifies it as the blue whale. This is summed up in item A.17.3 (B), list 'Blue whale'. In my opinion this conclusion is beyond doubt.

Authorities state that reyð(u)r (ON, I) is derived from rauð(u)r and *rauðio ('red') 'and refers to the red flesh

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¹ Cf Martens 1923: 107; see also 1855: 114.
³ Cf Nordgaard 1903: 86; 1916: 217.
of the animals'.¹ Lockwood (1994: 33f) thinks the sense of '(red) blue whale meat'/'meat whale' reflects a noa name. In the mediaeval to early modern sources we find hrafnreyðr, hafreyðr and reyðr/steypireyðr.² The red flesh etymology raises with me the question why only these 2-3 cetacean species should be characterised by their red flesh or why the blue whale should be considered the 'only' meat provider. Secondly, this etymology does not refer to the (outer) appearance or behaviour of the animals as is mostly the case with whale names, including noa terms. From all circumstances I think that JófG (1737) is correct when he writes that 'Reyðr appears not to draw its name from the red colour, rather size and speed (it has) in excess of other fishes, that it pushes forward and rushes forward ["ryöst á og brunar fram"] surpassing others [var: other whales].³ The root would then be ryðja and the primal meaning 'to clear (away)'.

KGS characterises the reyðr as 'a gentle fish', 'not dangerous to ships although it comes close' which, for exactly that reason, 'is often caught by hunters'. JGl (1640/44) writes:

'Steypireyður ... The best and holiest of all whales which have been created in the sea. When evil whales seek to harm men and ships then the solution is to flee to it if it is near and stay as close as possible to it; though, it has often been proved that it defends ships and men of its own accord when it notices and knows that people need it.'⁴


² Lockwood (1994: 33f) does not include the following compound terms in the consideration of the reyðr name which must influence the reasoning seriously.

³ Cf LBS-JS ms 247: 36; see also KBK Rostgaard ms 111: 30r. According to Blöndal ([1920/24] 2, 1980: 649) JófG's expressions are rendered as follows: ryðjast að: "trænge paa, trænge frem"; ryðjast fram/ryðjast áfram: "bryde frem med Magt, bane sig Vej, trænge frem".

⁴ Cf Guðmundsson [1640/44] 1924a: 11.
JófG gives a similar description\(^1\) while Gísli Oddsson presents the story about a steypireyður aiding 11 fishing boats in fighting off a sea serpent at Vestmannaeyjar, South Iceland, about 1598.\(^2\) The protector notion is widespread in Icelandic folklore, sometimes referring to steypireyður\(^3\) but mostly to a 'good whale'.

From KGS to E. Ólafsson (1772) it is stated that the reyðr/steypireyður is hunted. To a modern mind it is difficult to reconcile this with its role as the main protector of the fishermen, especially when people avoided 'harpooning' the minke whale for exactly the same reason.\(^4\)

\[K22\] \textbf{Hafgufa (Hb)}: Oddur Einarsson (1588/89) interprets hafgufa ('sea-steam', 'sea-smoke')\(^5\) as reflecting the 'warm eructation or impure vapour' this monster emits into the sea in order to deceive the fishes.\(^6\) This explanation seems to be the best we have; in fact, it can be sustained when juxtaposed with the lyngbakur of other sources.\(^7\)

\textit{Historia Norvegii}, KGS and 16th-18th century Icelandic sources mention, and some describe, the \textit{hafgufa}. Icelandic sources also mention the \textit{lyngbak(u)r}. Hafgufa and lyngbak(u)r have given rise to considerable speculation in the course of time but Hermannsson (1938: 10f) has beyond doubt demonstrated that the (Norwegian) hafgufa lies directly in the \textit{Physiologus} tradition of the fabulous Aspidochelone and that its Icelandic counterpart (Aspedo) split and assumed the life of an Icelandic hafgufa and a

\[1\] Cf KBK Rostgaard ms 111: 30r-31r; LBS-JS ms 247: 36.

\[2\] Cf Oddsson 1917: 41f; 1942: 70.


\[4\] Cf Olafsen 1, 1772: 542f.


\[6\] Cf Einarsson 1928: 21; 1971: 58.

\[7\] Whitaker (1986: 8, 12) leaves the identification open; he apparently overlooks the central work by Hermannsson 1938.
specific Icelandic creature called lyngbak(u)r, respectively.\(^1\) Other Physiologus/bestiary influences on the Norse cetology are not evident.

\(K23/hafstrambr\) (HD) and \(K24/margýgr\) are the merman and mermaid, respectively. \(K25/hafgerðingar\) ('sea fences') seem to be waves caused by seaquakes (submarine earthquakes) or some (related?) optical phenomenon.\(^2\) \(K26-K32\) are various seal species.

\(K33\) \textit{Rostungr} (HD): We have already considered the old Norwegian names for the walrus, \textit{hrosshvalr} and \textit{rauðkembingr} (cf items K16-K17). \textit{Rostung(u)r} and \textit{rosmhval(u)r} (ON/I) designate the walrus.\(^3\) The prefixes stem from Germanic \(*ruðsta-\) and \(*ruðsma-\), meaning reddish and tawny which presumably refer to the colour of the animal:\(^4\) indeed the walrus's "grayish skin ... is covered with short, reddish hair".\(^5\)

The colour was already noted by Lilienskiold (1698). He writes that those walruses 'which are caught in Finnmark are all of a dark grey colour and short-haired with a rather drooping mane along the neck although those which are taken in Greenland are said to be more red-brown in colour.'\(^6\) \textit{Hrosshvalr}, in the primary sense of walrus, passed into Old English as \textit{horshwæl} while 'walrus' and

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1 On this evidence Lehn's and Schroeder's (1981: 365) interpretation of the \textit{hafgufa} as submarine volcanic activity in Icelandic waters appears to be unsustainable.


5 Cf Enc Br, Mic 10, 1981: 531; see also Bugge 1883: 6f.

similar names in modern times developed by inversion of the two compounds.¹

**North Atlantic gray whale:** Outside the KGS taxonomy it is appropriate to consider the now extinct Atlantic gray whale. In 1970, F.C. Fraser published his, in my opinion, epoch-making study of zoo-historical records on the Atlantic gray whale,² especially JG1's *sandlægja*³ and P. Dudley's (1725: 258) 'scrag whale'. The scientific discussion continued with D.W. Rice and A.A. Wolman (1971) while the current state of research is presented by J.G. Mead and E.D. Mitchell (1984). They explain that the Atlantic gray whale, which is conspecific with that of the North Pacific, is now known from 7 northwest European specimens and 9 northeast American ones. The dated samples in Europe are from around 4000-6000 BP (2) and 1400 BP/500 AD (1) while the oldest American one is ca 10,000 years old and the two youngest date from ca 1405-1585 AD and 1675 AD, respectively.⁴ These authorities state that "There are three accounts in the literature that we interpret to be reliable records of gray whales in the North Atlantic", viz: (a) the Muscovy Company commission (of Basque origin) for Thomas Edge, 1611 (otta sotta) (being a new contribution); (b) JG1, 1640/44 (*sandlægja*); and (c) Dudley, 1725 (*scrag whale*).⁵

Rice and Wolman (1971: 20) consider that the summer grounds of the Northeast Atlantic gray whale stock 'probably were in the Baltic Sea' on the basis of *Ampelisca macrocephala* (the predominant food of the stock in the Bering Sea) being abundant there while "Their winter

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² His discussion of many aspects is by now outdated, however.
³ Fraser (1970) erroneously spells it *sandlægja* and Mead and Mitchell (1984: 37, 50) regretfully perpetuates this mistake as *sandloegja*.
⁴ Cf Mead and Mitchell 1984: 42, 44, 47f, 50. See also Rice and Wolman 1971: 6, 20.
⁵ Cf Mead and Mitchell 1984: 50.
grounds were perhaps along the Atlantic or Mediterranean coasts of southwestern Europe or northwestern Africa. In their view, it is now considered certain that "a moderately large population was exterminated by human activity by the late 17th or early 18th century" which at some time has been common in (one might add: at least) east North American waters and there known to whalers as the *scrag* whale.¹

Dr M. Klinowska (1992, pers comm) expresses strong scepticism regarding Mead's and Mitchell's conclusions: Firstly, after having read the bits of JG1's description about the *sandlægja*, in translation as quoted by Fraser, she is not at all convinced that JG1 describes a gray whale; secondly, because the subfossil material is very limited and temporally widely scattered; and, thirdly, because archaeological evidence for Atlantic gray whale hunting apparently is lacking (in contrast to what is the case in the Pacific). On the present evidence she thinks that individuals or small groups of animals feeding in the Beaufort Sea may occasionally have strayed into the North Atlantic.

It must be mentioned that B. Muus's, F. Salomonsen's and C. Vibe's (1982: 452) discussion of the Atlantic gray whale seems fundamentally mistaken: There is no basis for linking the peaceful behaviour of KGS's reyðr to the gray whale (the 'devil fish' of Americans); nor is it 'easy to catch' as these authors assert; neither are the 5 foot long baleen in the Greenlandic so-called *Osterboygds fisk* compatible with those in the gray whale, being 50 cm long at the most.² Moreover, Vibe (1981: 205) states:

"The former area of distribution of the grey whale in the North Atlantic-Arctic region is not known. The grey whale was an easy whale to catch. Most likely it was the first whale to be caught offshore. It may

1 Cf Mitchell 1973: 12f; Mead and Mitchell 1984: 50.

have been taken by the Basques in Biscaya Bay in winter - and maybe, by the first Dutch whalers at Smeerenburg [ie, Spitsbergen] in summer. To-day we do not know."

'Easy to catch' and 'offshore' are not features of the gray whale so these speculations, despite all qualifications, should not be perpetuated. Whitaker's (1986: 8) suggested gray whale identification has been rejected under item K5-K6. His statement (p 8) about the extensive hunting of it "in the Atlantic between 1100 and 1200" is a misrepresentation of Muus's, Salomonsen's and Vibe's text, which in itself is unfounded speculation about the beginning of the gray whale hunt. Let us now return to the primary sources.

Fraser (1970) only draws on JGl's Íslands aðskiljanlegar náttúrur (1640/44), not his Hvalfiskakyn í Íslandshófum (1639/44) which contains information about the whale's size. Commencing with that latter source it is possible to establish a series of references to the sandlægja, etc, dating from 1639/44 to 1792, as presented in list 'Gray whale', item A.17.3 (B). This series is continuous on grounds of size, naming and, in fact, also descriptions.

JGl's descriptions read (in my translation) as follows: 'Sandlægja. Good eating. It has white baleen plates which project from the upper jaw, instead of teeth,¹ as in other baleen whales ... It is very tenacious of life and is able to lie on land as a seal for a whole day. But in sand it never fails.'² 'Sandlægja, reaches 30 ells [álnir], has baleen and is well edible.'³

Sandlægja means 'one lying in the sand', 'sand-lier',⁴

¹ This is a parenthetical remark.
² Cf Guðmundsson 1924a: 9.
³ Cf Guðmundsson 1924b: 28.
⁴ Cf Fraser 1970: 17; Magnússon 1989: 562; 592.
which conforms with Scammon’s (1968: 25) description of the habit of gray whales cows and calves resting quietly on the bottom in very shallow waters. However, there is every reason to acknowledge that this description is only indicative for the identification.

The next description available is by Bartholin (1657: 280f*; cf item A. 18) which is entirely independent of JG1. With all reservations as to the translation, I venture to sum up Bartholin’s Latin text as follows:

15th kind, sandlæja [sic], which rests calmly in the sand, 20 or up to [nearly] 30 cubitus long; in the sand it forcefully and with pleasure sifts the minute small fishes, which it eagerly tries to obtain. It is provided with horn plates, nevertheless it is consumed by people, neither is it a pleasant delicacy nor particularly fat [or: nutritious]. It is difficult to take its life, indeed it dies slowly just like seals perish. It rests calmly on land with pleasure. When taken [apprehended] in the sand it is inaccessible because it struggles and stirs up the sand; it is remarkable how it moves around. Even when restrained in the water it curves and beats strongly; the spears [spiculum, sg, L] not seldom penetrate it and it lies dead.

Around 1688, Resen (1991: 162) essentially repeats this description of the ‘sandæta or sandlægja’ but he also states that it is often seen at the coast where it searches for the small fishes that swim in the sand and are its main food.¹

In my opinion the descriptions by Bartholin and Resen of the feeding habits of the sandlægja, alias sandæta, prove that the species indeed is the gray whale. Moreover, sandæta means ‘sand eater’² and is a most appropriate name to reflect the gray whale’s unique bottom-feeding,

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¹ I am so far not convinced that Bartholin is Resen’s only source as Benediktsson (1991: 31) indicates.

² Cf Erichsen 1768: 123; Magnússon 1989: 1217.
sediment-skimming, habits.¹

One finds various mistaken identifications of sandlægja and sandæta² but also a modern use of sandlægja as a proper (parallel or secondary?) name for turbot and dab,³ similarly, as a secondary whale name for the sperm whale.⁴

In the late 19th century a legend existed in Iceland about a very perilous and dangerous whale called klakkur (klakkhvalur, klakkfiskur), 'which at some places is called sandlægja because it seems ... mostly to stay at the bottom of the sea' at sites of wrecked vessels.⁵ In Faeroese and Norwegian dialects klakk(ur) has preserved the sense of 'shallow' in the sea while it seems lost in Icelandic.⁶ One is therefore permitted to consider that klakkhvalur (klakkur, etc) means 'whale of the shallow' and to be of some antiquity. The association with sandlægja makes it even more likely that it is an old (noa) name of the gray whale in Iceland.

Olaus Magnus (1555; OM 21, 9) has a passage about a whale, clearly distinguishable from the walrus, which comes onto the beach in the sunshine where it sleeps soundly and which people frequently managed to capture by tying it with ropes.⁷ This would make some sense in the case of the gray whale although the method does not sound convincing.

Conversely, English fishermen around the year 1000 AD, as described in Ælfric's Colloquy (cf item A.18),


² Cf Blöndal [1920-1924] 2, 1980: 677, 765 (sei whale); Erichsen 1768: 123 (bottlenose whale); Jakobsson 18, 1975: 316 (sei whale). The word sandreyöur is first recorded used by Thoroddsen (1911: 489) for the sei whale, as has since been customary. Whether it is older in the language one cannot say (cf Guðjónsdóttir 1992, pers comm).

³ Cf Davíðsson 1891: 50.

⁴ Cf Dórkelsson 1908: 70.

⁵ So according to the edited version by S. Sigfússon (6, 1945: 25); the earliest version (cf Sigfússon 4, 1982: 194f; see also 1: xviii) does not have the reference to sandlægja.


⁷ Cf Granlund 4, 1976: 221f.
occasionally went down the river to the sea (estuary?) for fishing and catching merswine, presumably porpoises and/or dolphins. At the same time other fishermen regularly engaged in hunting larger hwæl(as), or hranas, but Ælfric’s fisherman considered it being too risky a business. In the glossary, Garmonsway (1939: 58) translates both hwæl and hran as ‘whale’. However, I venture the hypothesis that Q10, first sentence of A11, and Q13 (in my presentation) indeed refer to ‘whales’ as such while hran(as) in the second sentence of A11 is a species denomination, in fact for the gray whale. The internal logic of the dialogue permits hran(as) to be a specific name. My reasoning is as follows: Sandæta and sandlægja both occur in HD and we have seen that they are synonyms. Interestingly enough, HD mentions hrannlægja as a variant name of sandlægja. Hrani (ON, I) means rough and awkward, possibly of the same origin as Old English hran for ‘whale’, ‘perhaps comparing it with a pole or a bole of a tree’.1 This could refer to the gray whale’s rugged surface, colour and vertical lookout position.2 However, to me, this etymology does not result in a viable whale name, although the sense could play a secondary role. Instead I consider another line of thought more promising: hranna (vb, I) means to heap up, pile up (accumulate), and is related to hrönn, meaning wave, sea, oblong heap or pile.3 By analogy with sandlægja (‘sand-lier’), hrannlægja could therefore mean ‘ridge-lier’/‘reef-lier’ and hran (OE) be short for a similar name. Bede has a reference to the taking of ‘seals, dolphins as well as whales’4 which, in its brevity, conforms with Ælfric’s Colloquy; perhaps it takes Ælfric’s hran whaling back to about 700 AD?

4 Cf Baeda 1, 1962: 12f.
Off Iceland gray whales would have found an abundance of all species that are known to form their diet in the Pacific (amphipods, decapods, polychaetes, clupeid fish, kelp and other algae), except mysids (off Vancouver).\(^1\) The gray whale is represented in HD with three names (sandlæga, sandlægja, hrannlægja). Why it is absent from the KGS enumeration, as Whitaker (1986: 8) rightly observes, is not obvious. With a view to the situation in the North Pacific I consider it likely that the eastern North Atlantic stock of gray whales\(^2\) migrated between breeding grounds off West Africa and feeding grounds around Iceland, along a well-defined south-north route west of the British Isles. In summer a part of the population may have stayed, for a shorter or longer time, in the shallows and estuaries around the English Channel and the southern North Sea. Such a migration pattern could explain why the Norwegians (KGS) did not know (or at least not record) the gray whale.

6.3 Concluding remarks

Ethnographers and anthropologists attribute the body of taboos which Norse whaling and fishing proper basically shares to the perceived dangerous transition from one physical and cognitive domain to another as well as the psychological and practical adaptation to the perilous and unreliable marine environment, especially when relying on comparatively simple technologies.\(^3\) Van Ginkel (1987: 65f) explains the avoidance of certain categories of words, acts and creatures, etc, by "the ambiguous or incompatible character of that which is tabooed in certain contexts."

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2 Ellis (1992: 41) does not distinguish between an eastern and western North Atlantic stock which seems appropriate. When he suggests Greenland and Iceland as the northern range of the species I think that Greenland can only be relevant in the case of the western North Atlantic stock.

He (p 63) mentions seals as an example of the former. Superficially (cf item A.14), it seems to me that in the Norse area there exist relatively few vernacular names for each pinniped species in comparison with those for cetaceans;¹ if this impression is correct, it presumably implies that the Norse considered the 'incompatibility' aspect to be more important than 'ambiguity' in the land/sea dichotomy, as they saw it. Whether this, in turn, can be linked to the land/sea dichotomy which A. Hesjedal (1992: 43) has observed in the spatial arrangement of depictions of terrestrial mammals (mainly reindeer, elk) versus marine mammals/fish in northern Norwegian hunter's rock art is another thing.

Norse fishermen employed a wide range of remedies in order to keep wicked whales and other evil marine beings away when out at sea, an aspect which is worthy of a separate study.

¹ This is said without having defined what constitutes a separate name as such, without having established the names accordingly, their representativeness and how one might measure their relative occurrence.
7 Mediaeval to early modern Norse whale measures and appraisements

7.1 Synopsis

Mediaeval Norse and modern West Nordic traditional size measures (in 'ells') of cetaceans have hitherto been subject to considerable confusion and scholars have generally dismissed them as being 'exaggerated' and unreliable, effectively giving up understanding them. Faeroese pilot whale appraisements and divisions have been studied systematically but other Norse whale appraisals and divisions have been described, rather than interpreted, on an ad hoc basis. There exists no theoretical framework on the basis of which to pursue the study of Norse whale measures, appraisements and real divisions (following upon appraisal).

To begin with the Norse whale measures, the units of measurement and the object of measurement are examined. Based on a systematic study of the marine mammal size data in Norse historical sources and on the Faeroese whale appraisement it is then argued that the ell measures offered in many sources do not denote the (old) Norse standard short ell of ca 47.4-49 cm but rather a distinct 'whale ell', theoretically being half that length and in many respects similar to the Faeroese whale skinn unit; that the 1:2 ratio of the old standard ell to the 'whale ell' corresponds to the ratio of the whale's trunk (basically the distance between the eye and the genital slit) to the overall length of the animal; and, thus, that the resulting size (not length) figures are realistic. From this basis it becomes possible to reconstruct the principles and scales of the old Faeroese and old Norse whale appraisements and to confirm the existence of a particular old Norse whale appraisement unit called alín (sg; 'ell'; álnir, pl), probably short for *hvalsalín (sg; 'whale ell'; *hvalsalnír, pl). It becomes clear that the
allegedly 'exaggerated' whale measures, as of the mid 13th century AD, reflect this old Norse appraisement scale and that they are generally very exact. Furthermore, a secondary old Faeroese whale appraisement scale is identified which presumably relate to the different categories of whale appropriation under Norwegian odal right since the 9th century AD.

In chapter 7.6 the origin and history of the Faeroese money, land and whale gyllin\(^1\) is critically examined. Contrary to the presently accepted opinion that the gyllin is a 15th-16th century introduction from the Continent into the Faeroe Islands, including the land appraisement there, it seems possible to place it in the broader context of early to high mediaeval Norse currencies and land measures. It is also argued that the Faeroes gyllin, together with the Shetlandic *gildin and Bergen gylden, descent from an old Norse unit of value called *gildingr, initially valued at \(\frac{1}{2}\) mark burnt silver (*mørk brend*). Because the skinn unit probably is as old as the Norse Settlement in the Faeroe Islands, it is furthermore suggested that the Faeroese land reckoning in *mørk, gyllin and skinn may have formed in the 11th-12th century AD and that it in the course of the late Middle Ages became the dominant form of land reckoning in the Islands; moreover, that it concurrently was being applied to the appraisal of whales (in *hvalsalnir*) in order to facilitate their division.

\(^1\) The Norse terms which are traditionally associated with, and rendered as, gulden and guilder in English, etc. are spelled as follows: gyllen (sg), gyllene (pl), in Dano-Norwegian; gylden, in Danish; gyllin, in modern Faeroese; and since 1600, sources in Shetland mention gudling, guiding, guildling, gullion, gulyeon which in normalised Shetlandic Norn are gilder, gelder, gollen, *gildin (cf Jakobsen 1, 1985: 221, 249f; see also Donaldson 1958: ix). Whenever reasonable the terms used are differentiated, namely: *gildin (NS); gyllin (F); and gylden (D/N, D).
7.2 Norse mediaeval to early modern measures of marine mammal specimens

The information about the size of marine mammals, especially cetaceans, offered in Norse mediaeval to modern sources (cf item A.17.3, Table A) is not readily understood as the literature clearly demonstrates. The size figures mentioned by the Norwegian chieftain merchant Ohthere from Hålogaland (Nordland) to king Alfred the Great, of Wessex, in the late 9th century AD (as passed on in the Old English Orosius) that in his own country whales 'are forty-eight ells long, & the largest fifty ells long',¹ and those presented in KGS (Speculum Regale), dating from the period 1240-1263 AD,² have generally been dismissed by the scholars who have discussed them. For example, H. Hermannsson (1924: xxvii) writes: "In all early works on whales from the Spec[ulum] reg[ale] down, the length of the whales is exaggerated, and can rarely be depended upon for identification of the animals. This applies to J[Gl]'s work as well", from 1639-1644.³ According to K. Maurer (1873: 82), the whale measures, obtained from an Icelandic vicar, which T. Bartholin published in 1667 were similarly 'initially treated with indifference, later nearly with disdain', by zoologists.

Norse ell measures as such are complex and varying entities (cf item A.16.5). Some scholars⁴ have (as T. Sjøvold 1974: 350 points out) uncritically and ahistorically applied the recent Danish-Norwegian ('Sealandic'/'Danish') standard of ca 63 cm to mediaeval measures. Other scholars take it for granted that in Norway the statutory ell of ca 63 cm was applied to whales in the 17th-18th centuries and that in 18th century Iceland

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¹ Cf Bately 1980: 15.
³ Cf Guömundsson 1924a-b.
the semi-official Hamburg/Lübeck ell (ca 57 cm) was used. Indeed, JófG in the introduction to the Danish version of his 'Icelandic Fishlore' (Ichthyographia Islandica; 1737) emphasises that the reader should be aware that all references to the ell size of 'fishes' imply the Icelandic ell which agrees with the Hamburg one, namely one seventh shorter than the Danish Seelandic ell.' J. Jónsson (1988: 15-17) applies the longer old Norse ell of 55.7 cm to KGS measures. K. Robberstad (1969: 367) explains that the alin of GTL 149a (concerning whales 18 ells long, etc) is 'either 47.4 cm ... or 55.3 cm' long. S. Karlsson, K. Sveinsson and M. Árnason (1992) write that the whales 20 ells long in GG are measured by the old Icelandic ell of 49 cm. H.D. Bratrein (1, 1989: 174) considers Ohthere's 48-50 ells to equal ca 20 m which results in an ell of ca 41 cm, a standard which hardly existed. According to J. Bately (1980: 188), Anglo-Saxon texts usually use eln (sg; elna, pl) for the Latin cubitus which probably varied in length between 18 and 22 inches (45.7-55.9 cm) but the Anglo-Saxon ell may actually have been between 22 and 24 inches (55.9-61 cm) long.

Scholars generally realise that even the application of the shorter old Norse ell of ca 47.4 cm (Norway) and ca 49 cm (Iceland) does not solve the problem of the whale measures. The whale size in the Old English Orosius is considered to be exaggerated and Ohthere to have been bragging. Similarly, most measures in KGS are regarded as, often major, overstatements. L.M. Larson (1917: 119) states that 'an ell was approximately eighteen inches' (ie, ca 45.7 cm) but he remains otherwise silent on the issue.

2 Cf KBK Rostgaard ms 111: 5r. JófG here ends up with an ell of ca 54 cm.
3 Cf Karlsson, Sveinsson and Árnason 1992: 345, 516; see also 356.
4 Cf Ellis 1992: 39; Guldberg 1889: 27; Juel 1888: 130; Næss 1951: 11; Risting 1922: 96; Stoltz 1957: 135. Proulx's (1986: 11f) considerations of Ohthere's account, etc, are based on outdated sources and entirely misunderstood, including the ell issue.
In the 19th century it was seriously suggested that part of the explanation could be that whales had decreased in size since the days of Ohthere and KGS.\(^1\) Another (partial) explanation has been sought in optical illusion in the water\(^2\) which, however, overlooks the role of stranded animals in providing data. The same may be said about I. Whitaker’s (1986: 8) explanation that "there is ... a clear tendency to exaggerate the size of many of the creatures described, and this fact alone leads me to support the view expressed by others (eg, [F.] Jónsson 1921 ...; [P.G.] Foote 1952 ...), that the author(s) of K[G]S gained information from other seafarers." Furthermore, he (p 4) thinks that a less knowledgeable person has meddled with the KGS manuscript. However, noting KGS’s history and the widespread use and continuity of ‘exaggerated’ measures this view must be rejected straight away.

As to Ohthere’s ell, J.G.D. Clark (1952/1974: 66) and Sjøvold (1974: 350) consider it to be quite uncertain what is meant by this unit of measurement.\(^3\) ‘Possibly he has mistaken ells for feet’, is N. Juel’s (1888: 130) bottomline. Regarding the ell measures in KGS, G.A. Guldberg (1886: 162; 1905b: 30, 38) plainly states that the old Norse ell is ‘not much more than’, or equal to, the (old Norse) foot (ie, \(^{\frac{2}{3}}\) ell). O. Nordgaard (1902: 790, 792) clearly demonstrates the whole dilemma: On the one hand, he twice states that the KGS ell must approximately equal the foot (ie, be divided by 2) while, on the other hand, he writes that ‘one gets reasonable figures in metres by dividing by 3’. Nordgaard appears here to mix the old Norwegian standard (factor 2) and the modern one (factor 3). Then, when this arbitrary reduction is not sufficient, as with the (mythical) hrosshvalr and rauðkembingr (30-40 ells) versus the (real) Icelandic-Greenlandic walrus (rostungr; 14-15 ells), he (1902: 790) attributes the

\(^{1}\) Cf Fellman [1820s] 1, 1906: 187; Juel 1888: 130.
\(^{2}\) Cf Fellman ([1820s] 1, 1906: 56); Guldberg 1905b: 35, see also 30, 38f.
\(^{3}\) See also G. Clark 1947: 86; Gjessing 1955: 54; Fraser 1970: 19.
double size of the former to 'the inclination of the popular imagination for exaggeration' because it has not been checked by reality. Interestingly enough, Nordgaard does not relate the 15 ells of the rostungr to the 7 ells of Ohthere's walruses which he mentions on the preceding page. Many whales in KGS are acknowledged as being real animals and generally to be properly described but allegedly nevertheless with an 'exaggerated' size: This hardly supports the argument that the 'popular imagination' had a free scope. K.E. Schreiner (1927: 304) directly suggests that 'ell' in Ohthere's whaling account and in KGS be 'translated' as 'foot'. P. Clausson Friis, who in 1599 faithfully presented the KGS information on cetaceans and pinnipeds, writes: 'Regarding the length of the whale one has to note that the whale ell [Hualsalen] is one fathom [Fafln]', i.e., 3 ells. This, presumably first ever, attempt to explain the measures indeed contains the ratio 3:1 but makes the 'whale ell' equal to 1.42-1.47 m, which seems misguided, in the other direction.

All in all, it is clear that there exists basic uncertainty, if not outright confusion, regarding the old ell standard, or standards, applicable to cetaceans, the walrus and possibly other pinnipeds, and the interpretation of the size figures in the old sources. If the old Norse short ell is accepted as the standard, the size of the animals becomes totally out of proportion with reality; on the other hand, by taking some 'maximum' size data (the arbitrary character of which everyone should acknowledge) some scholars suggest pragmatic solutions (1 ell = 1 foot; dividing by 2 or 3) in order to reach 'sensible' length measures in metres. In my opinion both ways are equally unsatisfactory.

Ohthere's and KGS's measurements form part of a greater body of data extending far beyond these two sources, a fact already indicated by the references to GTL and GG, but

1 Cf Friis 1881a: 68; see also Blangstrup 1915-1926, 5, 1916: 55.
generally not acknowledged. All sources, from the late 9th century to modern times, without exception, apply the term 'ell' to the unit of measurement, in addition to displaying great consistency in size figures over time (cf item A.17.3). Contrary to most scholarly opinions about Ohthere's and KGS's data and, by extension, of other sources, the present author considers:

(a) that the data are sound and established by direct measurements of specimens, essentially in an economic context of appraisal and division;

(b) that they were initially gathered and communicated by appointed peasant representatives, royal and church officials whence tradition formed, with written tradition only playing a secondary role; and

(c) that although data show differences, inconsistencies and, at first glance, appear outright unreasonable to a modern reader, they will, in principle, have a rational explanation, including mistakes and misinterpretations in the course of time, especially by scholars far removed from the practice of Norse peasant fishermen.

In an inventory of Kálfafell church, Fljótshverfi, Vestur-Skaftafellssýsla, Iceland, from 1343 AD, we read concerning wood and whales in which the church owned shares that 'tree ... shall be measured in feet ... whales shall be measured in ells' ("... tra ... skal fetum mæla ... hvala ... skal alnum mæla ... ");¹ this was repeated in an inventory from 1397 AD.² These stipulations offer a glimpse of the daily practice which is otherwise not recorded or preserved, they strengthen the assumptions above and dispel speculations of the ell-translate-foot sort. My basic assumptions are therefore that we either (a) deal with an application of the ell measure alien to, and unrecognised by, us, or (b) 'ell' in the whale and walrus measures is of a particular standard/kind, or (c)

¹ Cf DI 2, 1893: 779 [dipl 502B], cf 778 [dipl 502A].
² Cf DI 4, 1897: 235 [dipls 17-300].
This author began studying the size measures of cetaceans and the walrus in KGS and related sources in the 'traditional' way of handling these measures, i.e., by making numerous conversions of the ell figures in the diverse (isolated) sources according to the three main Nordic standards (of ca 48 cm, 55.5 cm and 63 cm, respectively) and drawing up tables of them; by establishing 'average maximum lengths' of the species within today's taxonomy; and by attempting somehow to make sense of these sets of figures, with a view to earlier and my own identification of species in KGS, etc. The long and the short of these efforts is that they complicated, rather than clarified, the whole issue. However, the intense occupation with all these measures demonstrated that only the shortest, and obviously oldest, ell standard (in two variants) is relevant. In certain cases the size matched reasonably well with the length of the assumed real species, while in other cases the measure was approximately double that size, as already recognised by various authorities. Sometimes both happened with one and the same species. After realising that this 'traditional' approach of 'direct' comparison of length measures contained too many uncertain mediating factors so as to offer a sound way forward I sought a new approach to the issue. Basically, it could only be by relying on the historical body of original measurements itself which, extending from the late 9th through the 18th century AD, in its structure and internal logic, might offer clues to its interpretation. Consequently, the new point of departure became a rigorous systematisation of original size data relating to marine mammals species and specimens (cf item A.17.3), and a cautious interpretation of the internal evidence (eg, 1 The possibility of applying the term alin in another sense than the standard ell is demonstrated by the existence in Icelandic of hnefalin ('fist ell'), being a little longer than a span (cf Blöndal 3, 1981: 70; Lárusson 1958: 242). Ásgeirsson (1946: 298) uses the form hnefaalin.
ratios and series of absolute figures) within this body of information, later to be compared with particularly revealing cases.

When interpreting and comparing size, measures and units of measurements, many aspects must be taken into account: Measures are historical and dynamic entities; units that (apparently) carry the same name have under pre-metric circumstances developed in different directions between countries and regions and each of them has in turn been modified over time in interaction between custom and official standards; new units have been introduced from outside (by trade or decree); and (unrecorded) local and regional customs have shaped the application of particular measures for particular purposes.¹ Even where we know of official standards it is far from certain that common people have accepted and applied them except when they necessarily had to do so, eg, in direct exchange with officials and (foreign) merchants; use and wont in the various fields of life will have been strong conservative factors. Furthermore, if divisions and deductions could be made on a pro-rata basis or by customary measures there would have been no reason for changing the old ways.

Measurements have two aspects: the unit of measurement and the subject measured. In item A.16.5 is described how the former is a dynamic factor with temporal and geographical aspects. Where the subject is not unequivocally defined one should, in my opinion, be mindful of not thinking about cetacean size in terms of overall body length only, ie, not reading 'overall length' into the expression 'length', and not 'length' into 'size', etc, because the reference might possibly be to something else. Similarly, one should also be aware of the distinctiveness of modern statistical notions in zoology and avoid superimposing them on past circumstances from which they

¹ For general introductions and particular aspects, cf, eg, Aakjær 1936; Chisholm 1981; Doursther 1976; Rasmussen 1975, together with several articles in Fladby, Imsen and Winge 1981, and KLN M.
7.3 Standard whale measures in old Norwegian and Icelandic legal sources

7.3.1 Standard measures of cetaceans in old Norwegian legal sources

The old Norwegian laws grade people's and the king's (crown's) rights in drifting and stranded unshot cetaceans according to the size of the animal, the legal status of the finder and the circumstances of the find. The first two aspects concern our deliberations. The relevant provisions in GTL (ca 1100 AD), MLL (1274 AD), NLB (1604) and NL (1687) may be summed up as follows:

An unshot drifting whale found inside landkenning and in fjords is the property (ie, einfyndr; 'finder's whale') of an odaller or a person of higher legal rank if it is no longer than 18 ells and of free sub-odallers if it is half that size or less. If an unshot whale is longer than 18 ells an odaller or a person of higher rank receives only the 'finder's blubber' (finnandaspik) of it while free persons of sub-odal rank do so from such ones that are half as big; in both cases the crown owns the whale as such. (Cf GTL 149a, 150a; MLL vii 64a,h; NLB vi 61a,g; NL 5-12-1,8).

When a whale is grounded on private property outside the farm garth an odaller or a person of higher legal rank owns a whale 18 ells long or less and a free person of sub-odal rank owns such a whale if it is no more than half of this size. If in these circumstances whales exceed the size of a 'finder's whale' the crown in each case owns half of it. (Cf GTL 149a,d; MLL vii 64a; NLB vi 61a,b,h,j; NL 5-12-1,8).

1 Cf Anon 1982: 223f; Hallager and Brandt 1981: 157f; NGL 1, 1846: 59; NGL 2, 1848: 146f.
ÆB (late 12th century AD) and FTL (mid 13th century AD) have a different approach to the issue: They stipulate that an odaller or a person of higher legal rank shall have the 'finder's blubber' from found unshot whales bigger than the raum-/rafnhvalr, ie, minke whale, while the crown owns the whale as such. In a private fishing station, and presumably on other private ground, an odaller or person of higher rank owns (eingyndr) a found unshot raum-/rafnhvalr or any smaller cetacean while a free person of sub-odal rank owns (eingyndr) half of such a raum-/rafnhvalr, or a cetacean half the size of a raum-/rafnhvalr, as it may be. (Cf ÆB 145; FTL xiv 10a,d). It is reasonable to assume some congruity regarding the size limits in GTL, ÆB and FTL in which case the raumhvalr/rafnhvalr means a size of about 18 ells.

7.3.2 Standard measures of cetaceans in old Icelandic legal sources

Icelandic legal sources refer to standard measures for whales in two respects, namely 'finder's blubber' (finnandaspik) and 'load whale' (hlasshvalr), viz:

'Finder's blubber': GG 1b: 132; 2: 531; 3: 404 and JB vii 66 state that people who in the commons first fasten to a whale which, as a species, 'is' (presumably in its adult stage) 20 álnir (ells) or longer, and alone or with others tow it ashore shall have 30 vættir (à 34.24 kg = ca 1027 kg) randomly in 'finder's blubber' to be taken from the transporter's one-third share.

'Load whale': When a tenant occupies a farm which

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1 Cf Anon 1982: 223f; Hallager and Brandt 1981: 157f; NGL 1, 1846: 59, 146.

2 Cf NGL 1, 1846: 252, 330. According to GTL 145, 150f the crown owns unshot whales in the commons, less the finder's share. Other laws (ÆB 145; FTL xiv 10d,e; MLL vii 640; NLB vi 61p; NL 5-12-13) provides for adjacent free peasants owning half of such whales and the crown the other half, after the deduction of the finder's share.
includes the foreshore he shall secure all whales there. From uncut and cut whales of species measuring 20 álnir or more, the tenant receives 'load whale' (6 vættir = ca 205.4 kg), while in the case of species sized less than 20 álnir he shall fasten and bring the whales above the high water mark (úr flæðarmáli) but receives nothing from them (GG 1b: 138; 2: 516f; 3: 387, 441; Járnsíða/JS 92). The hlasshvalr is quite often mentioned in diplomas and existed at least through the 15th century.¹

Specific references to whales sized 20 ells or more occur in Sæmundur Oddsson’s municipal whale statute, from about 1245 AD (cf item A.15.2.1), and many church inventories, in 1343, 1394, 1397 and about 1461-1510.² The inventory in 1394 states that Laufás church, Norður-Þingeyjarsýsla, receives a certain share 'from whales twenty ells long, or if there is one hundred [ie, 100 or 120] vættir or more on it'.³ It, thus, seems that a whale 20 álnir long provides 3400, possibly 4100 kg, of meat and blubber. A deed from 1379 indicates that 20 ells distinguish 'larger whale comings' from 'smaller' ones.⁴

There is every reason to consider the Norwegian 18 ells and hrafnhvalr legal limits and the Icelandic 20 ells limit to be closely related and of the same character. The Laufás linkage of size and weight permits us to verify the ell and hundred standards involved. Interpolations from Norwegian whaling data show that minke whales with an overall length of 18 Norwegian short ells (8.53 m) yield an average total of approximately 4100 kg meat and blubber while those 20 Norwegian short ells (9.48 m) long yield ca 5250 kg meat and blubber. The latter size is about the

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¹ Cf, eg, DI 5, 1899-1902: 278, 304, 634; DI 6, 1900-1904: 178 [dipl 177].
³ Cf DI 3, 1896: 566 [dipls 419-498].
⁴ Cf DI 3, 1896: 336f [dipl 280].
absolute maximum size recorded in Norwegian minke whaling.\(^1\) The difference is, in other words, ca 1150 kg or ca 22 %, while a reduction from 10 to 9 ells results in a difference of about 400 kg.\(^2\) Allowing for better utilisation of products in the modern whaling industry we can conclude that the 18 and 20 ells legal limits refer to the standard short ell and the overall length of the animals; furthermore, the Icelandic hundred vättir must be a long hundred. For comparison, a very large pilot whale (ca 6.25 m long) yields ca 1500 kg of meat and blubber.\(^3\)

7.3.3 Ancient Norse legal limits for whale appropriation

The list 'Minke whale', in item A.17.3, Table B, indicates that the minke whale traditionally has been assigned a size of ca 14-18 ells, however, the Icelandic limit of 20 ells just manages to accommodate the very largest minke whales. This makes it highly likely that the Norwegian legal limit of 18 ells for the hvalr (GTL 149a; MLL vii 64a) pertains to the minke whale, the more so as ÁB 145 and FTL xiv 10a in the same context refer to it by name (hrafnhvalr/ raumhvalr). In chapter 4.13 this author argued that the Icelandic inshore and littoral legal régime is more traditional than the Norwegian one, which, by the same token, would make the Norwegian 18 ells limit secondary to the apparently related Icelandic limit of 20 ells.

ÁB 145 and FTL xiv 10a define the size of the finder's whale (einfynndr) of odallers and persons of higher legal rank by reference to the minke whale (raum-/rafnhvalr). Defining the legal categories of appropriation by way of reference to particular whale species is presumably the most ancient way. If the finder's whale of persons of subodal status initially was also defined in this way the

\(^1\) Cf Jonsgård 1992: 40, fig 27; see also Christensen and Stensholt 1992 ms: table 2; figs 1-2.

\(^2\) Cf Christensen and Stensholt 1992 ms: table 2; see also figs 1-2.

\(^3\) Cf Bloch and Zachariassen 1989: 45, fig 8.
longfinned pilot whale (KGS's \textit{hnýðingr}) renders itself the most likely candidate in the circumstances (cf chapters 7.4 and 7.5). It seems that by the 9th century AD, in the Gulathing law district, the references to the pilot and minke whales as such had been superseded by exact measures, at 20 and 10 ells, respectively. The Gulathing law district encompassed West Norway, Orkney, Shetland and the Faeroe Islands, and its laws formed the basis of the earliest laws of the Icelandic commonwealth (\textit{Ulfljótslög}, ca 930 AD).\textsuperscript{1} These size limits were apparently employed in the Atlantic island communities but, for example, in Iceland where free peasants were not distinguished on grounds of odal right and odal ownership\textsuperscript{2} they came to be applied to, \textit{inter alia}, the appropriation of proprietors and tenants, respectively, presumably under the designation of 'smaller' and 'bigger' whale comings. In anticipation of the analysis below it may be mentioned that in the Faeroese Islands, where odal right applied,\textsuperscript{3} the 5 ells/20 (whale) \textit{skinn} appraisal corresponds to the postulated ancient Norse 10 ells legal limit for the appropriation of unshot cetaceans by persons of sub-odal rank, and that this size/evaluation in fact turns out to be pivotal in Norse whale appraisements.

In maintaining the reference to the minke whale by name, ÆB and FTL appear to have upheld the limits of finder's whales (\textit{einfyndr}) at 20 and 10 ells, respectively, until the enactment of MLL, in 1274 AD. In West Norway (GTL) the reduction to 18 and, it seems, 9 ells, respectively, must have occurred in the 10th-11th century.

\textsuperscript{2} Cf Lárusson 1980b: 95; see also 1981k: 499.
\textsuperscript{3} Cf Robberstad 1981: 498.
7.4 Faeroese whale appraisement

7.4.1 Faeroese appraisement of dolphins, pilot whales and bottlenose whales

Until 1790, mørk (F; mark, D), gyllin (gylden) and skinn (skind) were the universal standards of value in the Faeroe Islands. A gyllin is 1/16 mørk or 20 skinn. ¹ Mørk and fractions thereof have continued to be denominations of land measurement in the Islands, and ever since the first recorded pilot whale take, in 1584, at least small and middle-sized cetaceans have been appraised to gyllin and skinn. ²

Until 1832, the pilot whale hunting in the Faeroe Islands was merely regulated by custom. It was then made subject to the Pilot Whaling Statute (Grindereglement; GR) of 1 November 1832. ³ The appraisement to gyllin and skinn is also applied to northern bottlenose whales, orcas and dolphins. On grounds of the blubber and oil contents, the bottlenoses fetch an appraisement far beyond that of pilot whales; correspondingly, orcas and dolphins only fetch a fraction of it. ⁴ The appraisement procedure has stayed the same from GR 1832 (§ 16) to the present day (GR 1986, § 16), cf item A.15.3.2.

Traditionally the whales were assessed visually, with 5 ells equalling 1 gyllin and, in the early 19th century, 5 skinn were added for every ell the whale exceeded 5 ells. ⁵ Wordings like this are customary but it is important to notice that they refer to the trunk of the whale, not its overall length. In 1832, a wooden appraisement rod (metingarstong, F; earlier also called málistong) was introduced to make division easier and more uniform. Most

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¹ Cf VTKL 5, 1938: 18; Svabo 1779: 48; Østberg 1934: 95.
² Cf Lyngbye 1826: 215; Møller 1884b: 18.
³ Cf Møller 1883: 6; 1884b: 25.
⁴ Cf Høst 1875: 347, 351; 353. See also Bloch 1994: 8.
⁵ Cf Bjørk 3, 1963: 239.
Original whale assessment rod from Vágar, Faeroe Islands, 1832. (Historical Museum, Thorshavn, Faeroe Islands). (Traced from Bloch and Zachariasen 1989: 42, fig 3).
**Ells**: Cetacean eye-genital slit distance.

*Hvalsálnir (Skinn)*: Appraisement sums.

(a) Old Faeroese (old Norwegian) scale, prior to 1807/1832. (Cf Bjørk 3, 1963: 239).


(c) Average calibration of 3 historical and 37 currently used Faeroese assessment rods, since 1832. (F.F. Tillischch). (Cf Bloch and Zachariasen 1989: Appendix 1. Converted to ells à 62.8 cm).

(d) Reconstructed old Norse appraisement scale.
rods have a minimum length of 314.5 cm (5 Danish ells), equalling 20 skinn or 1 gyllin. They are calibrated with a mark (metingarmark) for each skinn and show decreasing intervals by increasing whale size (cf figure 9; and figure 10, graph (c)). The scale is intended to produce approximately equal meat/blubber parts whatever the size of the whale. A few rods (of unknown age) extend to 30-31 skinn. The rod is placed alongside the whale to measure the distance from the eye to the galdbor/got. In the 19th and 20th centuries it is said that a male pilot whale may reach 23 skinn, seldom 24 or 25 skinn, as an absolute maximum; a female may reach 8-9 skinn, occasionally 10 skinn; the smallest appraisal is ¼ skinn, and the average is 7 skinn. J. Dalsgaard (1957: 152f) cites several aged Faeroese persons who recall various pilot whale appraisals of 29-30 skinn. A very large bottlenose whale has fetched 2 gyllin and 10 skinn (= 50 skinn) while dolphins only fetch ½-¾ skinn. Because the appraisal to skinn also involve the considerations of the whales' quality (fatness), skinn data only approximately reflect the size of the (pilot) whales.

The Faeroese whale appraisement is likely to contain ancient traits the full understanding of which presumably may help elucidate the mediaeval Norse whale appraisements and whale measures.

D. Bloch and M. Zachariassen (1989) "attempt to estimate the reliability of official assessment procedures" by relating them to existing appraisement rods and biological data from recent pilot whale takes. To that end all rods

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3 Cf Bjørk 3, 1963: 240; Høst, 1875: 330; Østberg 1934: 95; see also Bloch and Zachariassen 1989: 43f [figs].
4 Cf Høst 1875: 347.
5 Cf Høst 1875: 353.
6 Cf Kåk 1993, pers comm.
used today, including an original one, and two held by the Historical Museum in Thorshavn, were remeasured (in centimetres and millimetres) and the various calibrations presented in a detailed table (cf figure 10, graph (c)). \(^1\) Their analysis demonstrate "that the skinn values on the different rods differ so much that it may influence the skinn assessment up to several skinn, especially for big whales." \(^2\) "The differences between the rods are historical and caused by the fact that small differences will always occur when a new rod is made as a copy of the old one." \(^3\) The researchers also observe that "Often the job as assessor is passed from father to son and this should give a continuity in the assessments. But in small, isolated villages, differences in assessment methods can also continue to exist. In fact, during biological sampling, differences were observed" which the authors attribute to the "individual assessment by assessors" \(^4\) and "inherited habits which can survive for generations, especially in the most isolated whaling bays". \(^5\) Bloch and Zachariassen conclude: "For its time the old method of assessment was precise and good but today it is possible to make it more in accordance with the biological parameters." They propose that a new rod, with a somewhat different calibration, be adopted. \(^6\)

Conversely, the present writer doubts that inaccuracies in the copying of the wooden assessment rods matter at all. Great care will have been taken on the few occasions it in each case has been necessary to make a new rod during the past 150 years or so. K. Østberg (1934: 95) also remarks that the appraisers are so competent that they hardly need to use the rule in the whale appraisal. In other words, I

3 Cf Bloch and Zachariassen 1989: 47.
4 Cf Bloch and Zachariassen 1989: 48. Þóslumaður (sheriff) Marni av Kåk (1993, pers comm) seems also to be of this opinion.
am not satisfied that the suppositions implied in Bloch's and Zachariassen's analysis are fully valid and that appraisement rod/skinn variations, if they are real, rather than perceived, reflect inherited inexactness in carrying out appraisals and technical deficiencies in the rules. However, before we enter into the details of the argument the extraordinary correlation of the Faeroese whale appraisement, as it was established in 1832, with the biological parameters determined by modern statistical methods (cf Bloch and Zachariasen 1989: figure 14 [p 48]) should be acknowledged. It testifies to the high precision with which people around 1800, and by extension, in earlier times could carry out whale appraisals and divisions.

7.4.2 Fixed points in the Faeroese whale appraisement

To begin with, let us look at what is actually supposed to be measured in the Faeroese whale appraisals.

The fixed points in the pilot whale assessment are defined in the various Pilot Whaling Statutes as follows: "fra Øiet til Gadboret" (GR 1832, § 16; GR 1857, § 18); "fra Øjet til Gatboret" (GR 1872, § 18; GR 1909, § 17; GR 1940, art 17);¹ and "úr eyga í got" (GR 1955, § 16; GR 1986, § 16).² This has been taken to mean "from the eye to anus"³ and, in an official Faeroese document to the IWC, "from the eye to the anal opening";⁴ similarly, Bloch and Zachariasen base their statistical analysis of the rods and skinn values on the "eye to anus" distance.⁵

For etymological reasons serious doubts developed with me about this interpretation and I began to favour the

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¹ Cf Anon 1832: 9; Anon 1857: 14; Bang and Barentsen 1901: 198; Bonnevie and Mitens 1932: 383; Mitens and Sørensen 1953: 729.
² Cf Anon 1989a: [39]; Hoydal 1986 ms: 34; see also Dalsgaard 1957: 151.
⁵ Cf Bloch and Zachariassen 1989: 39f, 40, 42f, 48f.
notion that, at least initially, the posterior fixed point
would be the genital opening:¹ Gadbor (D/N; D), gatbor
(D) and got (F) mean 'genital opening';² all three words
are related to gotrauf (I), inter alia, meaning the genital
organ in a whale cow.³ In 1780, Olavius distinguishes
"Intestinum rechtum eller Ende-Tarmen" from gadbor (in
sharks).⁴ On etymological grounds the gatbor spelling
will be used in the following where appropriate.

For these reasons I approached the sýslumaður (sheriff)
in Vága sýsla, traditionally the most prominent pilot
whaling district in the Faeroe Islands, Marni av Kák, with
the question: 'What is in fact (more recent) Faeroese
practice? Is it anus or the genitalia which constitute the
posterior fixed point?'. Sýslumaður Marni av Kák's kind
reply is crucial: He remarks that according to GR the
sýslumaður appoints appraisers for which reason he himself
has not paid attention to these details but after having
looked closer at the issue he realises that it indeed
'contains interesting aspects'. His inquiries about the
fixed points gave the following results: In Miðvágur,
Vágar sýsla: 'If it is a female whale the posterior fixed
point is half-way between the genital opening and anus. If
it is a male whale the whale's genitalia/penis constitute
the posterior fixed point.' In Vestmanna, Streymoy sýsla,
and Sandur, Sandoy sýsla: 'Anus is the posterior fixed
point in both sexes.' In Hvalba, Suðuroy sýsla, and
Hvalvík, Streymoy sýsla: 'The anterior fixed point is the
cut immediately behind the eyes; the posterior fixed point

¹ The earliest authority I am aware of which defines gadbor as anus
is 'Dansk ordbog' but it refers, inter alia, to Icelandic for the
origin of the word (cf Anon 1802, 2: 332, see also 348. H.C. Lyngbye
(1826: 219, see also 221) also defines gadbor as anus.
² Around 1903-1906, Falk and Torp (1992: 1036) consider gadbor and
gatbor to be synonyms.
³ Cf Blöndal 1, 1980: 265; Falk and Torp 1992: 211, 1036; Jacobsen
and Matras 1961: 122; ODS 6, 1924: 585, 716; Trap 1879: 537. A.
Helland (1921: 333) also, apparently incorrectly, defines gatbor as
the anus concerning the Skogsvág shooter's share.
⁴ Cf Olavius 1780: 559. S. Steindórsson translates this duly as
endaparmur and gotrauf (I), respectively (cf Olavius 2, 1964: 191).
is the anus. ¹

Bloch and Zachariasen (1989: 42) note that "Today the assessment varies from the general rules in two places, in Hvalba, (Suðuroy) and Hvalvík, (Streymoy). There the measurements are taken from the killing cut in the neck instead of from the eye." The neck cut is made somewhat behind the blowhole. The ear opening appears to be situated directly below the blowhole while the eye is farther forward, half-way between the ear and the forehead. ² Much points to the Hvalba and Hvalvík anterior fixed point being in the vicinity of the pilot whale’s ear.

The main sections from which the subdivision of pilot whales proceed are: the head (kúla; in front of the neck cut made behind the blowhole), the trunk, and the tail section (hamarstjórlur). ³ In reply to an additional question, Marni av Kák writes that in all the places mentioned hamarstjórlur is considered to begin at the anus. ⁴

The conclusion must be that neither eye nor anus are uniform fixed points in Faeroese pilot whale assessments, cf:

- Hvalba, Suðuroy: ca ear - anus;
- Hvalvík, Streymoy: ca ear - anus;
- Miövágur, Vágar:
  - females: eye - half-way between genital opening and anus;
  - males: eye - genitalia/penis;
- Vestmanna, Steymoy: eye - anus.

The supposition that the gatbor/gadbor/got fixed point initially was the genital slit seems, thus, supported, partly by etymology, partly by the extant Faeroese practice.

J.C. Svabo (1779: 48) gives a description of the Faeroese

¹ Cf Kák 1993, pers comm.
² Cf Andreasen and Magnussen 1989: [27] [ills]. This bears resemblance to the head, trunk and tail sections and moiety-moiety division of whales with the Anglo-Saxons (cf ch 4.4).
³ Cf Andreasen and Magnussen 1989: [27] [ills].
⁴ Cf Kák 1993, pers comm.
pilot whale appraisement which seems not to have been discussed before:

'The appraisement value is determined for each whale individually. The highest any whale is appraised to is 3 gylden and then it shall be 9 alen from the head until some vertebrae from the gadbor; it is then called a nying. The medium ones are valuated at ½, 1, and 2 gylden. The young which always accompany the school count only some skind, according to their size, but never less than 1 skind. The smaller ones that not yet have teeth are given to the poor. A gyldensfisk [ie, 'gylden fish'] is considered to provide 1 barrel of train oil; 1 tregyldensfisk [ie, 'three-gylden fish'] approximately 3 barrels, etc. A gyldenhval may therefore on the spot be paid with 5 to 6 gylden in money ...'.

Svabo apparently regards this to be the general Faeroese appraisement practice. In his work from 1781/82 he indirectly confirms it by referring to this paragraph regarding the appraisement.¹ How representative it is must remain an open question. The passage about the fixed points is ambiguous: '... until some vertebrae from the gadbor' presumably hints at a point between the genital slit and the anus although it is not certain; it is even more uncertain what 'from the head' means.

My tentative conclusion is that the current appraisement rod/skinn variations basically reflect old local traditions of, inter alia, different fixed points and other local appraisement practices which have either been accommodated within GR since 1832 or superseded it.

7.5 Norse whale appraisement scales

7.5.1 A Norse 'whale ell'

We shall now return to the issue of historical size (ell) measures of cetaceans in the wider context of Norse sources since Ohthere and KGS. My initial hypotheses are (a) that these size measures basically reflect the distance between the eye and genital opening, on the one hand, and the overall length, on the other; (b) that a natural ratio of ca 50:100 between these entities has given rise to the application of a particular 'ell' unit of measurement being nominally half (1:2) of the old standard ell; and (c) that this postulated 'ell' may find secondary application with regard to pinnipeds. In order to differentiate between both ell units I have chosen to speak of 'standard (short) ell', or simply 'ell', on the one hand, and 'whale ell' (derived from Clausson Friis), on the other. The 'whale ell' hypothesis may be illustrated by examples (with simplified measures) of three whales, 10, 15 and 20 m in overall length, víz:

a) overall length, 10 m: 20 standard ells (à 50 cm); 
eye-genital opening: 20 'whale ells' (à 25 cm); 
overall length: 40 'whale ells' (à 25 cm);
b) overall length, 15 m: 30 standard ells; 
eye-genital opening: 30 'whale ells'; 
overall length: 60 'whale ells';
c) overall length, 20 m: 40 standard ells; 
eye-genital opening: 40 'whale ells'; 
overall length: 80 'whale ells'.

For the present we shall consider this hypothetical 'whale ell' in terms of a linear, equisegmental, measure but the reader should be aware that the volumetrical dimension of cetaceans might be reflected in calibrated measures like in the Faeroese whale appraisement since 1832 (cf chapter 7.5.3).

Average and maximum overall length in cetaceans is generally available in the standard scientific literature
(cf item A.16.2) but it only offers a few unsystematic data about eye-genital slit and eye-anus measures in single specimens of various species.\(^1\) Dr J.G. Mead (1993, pers comm) was kind enough to provide additional selected data. The number of samples are also in these cases very low and therefore prone to bias caused by age and sex dimorphism. Concerning an eye-genital slit/overall length ratio of 0.5 suggested by me, Dr Mead (1993, pers comm) concludes that "It looks like your hypothesis was right, with some reservations." He mentions that in some species (eg, black right whale) the genital opening of males is far anterior to the position in the females. Moreover, it seems to me that the huge mouth in black right, bowhead and sperm whales may also influence ratios. Isolated eye-genital slit ratios are in the sperm whale 0.43 (n=2), black right whale 0.39 (n=1),\(^2\) bowhead 0.38 (n=1), humpback whale 0.48 (eye-anus 0.54; n=2) and gray whale 0.43 (n=1).\(^3\) More representative data were helpfully provided by G.A. Vikingsson (1993a-b, pers comms):

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Average length m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye-genitalia</td>
<td>Eye-anus</td>
</tr>
<tr>
<td>Longfinned pilot whale</td>
<td>0.50</td>
</tr>
<tr>
<td>Minke whale</td>
<td>0.54</td>
</tr>
<tr>
<td>Sei whale</td>
<td>0.49</td>
</tr>
<tr>
<td>Fin whale</td>
<td>0.48</td>
</tr>
</tbody>
</table>

The blue whale is likely to have ratios in the range of those in other rorquals. Bloch and Zachariassen (1989: 43) note that the eye-anus distance is 58 % of the total length in small pilot whales which decreases to 53 % in large specimens.

The conclusion must be that the eye to genital opening distance in longfinned pilot whales and all rorquals is on

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1 Cf Grieg 1897: 7; 1906: 5f; Scammon 1968: 20f, 34, 39f, 40, 50, 54, 86, 94-96, 100. Neither the International Whaling Commission (cf Duff 1993, pers comm) nor British Museum (Natural History) (cf Jenkins 1993, pers comm) were able to provide eye-genital opening data.

2 Cf Mead 1993, pers comm.

3 Cf Scammon 1968: 20f, 39f, 54.
average approximately half the total length of the animals, furthermore, that the eye to anus distance cannot be considered to be so. In other words, there exists a conspicuous natural 1:2 ratio in such species which Norse peasant fishermen regularly took, namely, pilot, minke, fin and blue whales (cf chapter 10). However, if indeed the 0.5 eye-genital slit ratio is accepted as an explanatory aspect with the hypothetical ‘whale ell’, bowhead, black right, Atlantic gray and sperm whales seem not to have been the ultimate reference species which is plausible.

All relevant historical size data known to this author are compiled and ‘standardised’ in item A.17.3 from which both ratios and series or changes in ell figures may be obtained directly, without any conversion and comparison with uncertain objects. Ratios of size figures may be revealed by:

(1) primary evidence, found in the same source, or with the same scholar, for the same animal, natural species, name class, or ‘species’ of assumed identical origin;

(2) secondary evidence, found in different sources (separated in time and/or space) pertaining to the same species, etc.; and

(3) indications from internal comparisons between ranges of figures.

The conservative application of these criteria to the series in item A.17.3, Table B, gives the following picture:

Various ‘species’ offer no data for comparison, others display mixed data with no visible pattern and a number show slightly mixed but approximately conforming data. None of these series are helpful with regard to ratios; if anything, these ‘species’ (so arbitrary as they are) indicate that seals and smaller cetaceans are less involved with different ell standards than the larger cetaceans and the walrus. Otherwise, I find:

indications of a 1:2 ratio with the bearded seal (6-7 ells/12-15 ells) and the black right whale (20:40; 50:100,
and 20-28:50/60);

**secondary evidence** of a 1:2 ratio in the case of the blue whale (50:100 ells; 60:120 ells; 120 feet: 120 álnir); *fiskreki* (30:60); *hafreyðr* (50:100); *hrosshvalr* (20:40); longfinned pilot whale (10:20; 9:18); minke whale (15:30); northern bottlenose whale (15:30 ells; 8/12 ells:30-50 feet); *rauðkembingr* (20:40); sperm whale (30:60); and walrus (7:14);

**secondary evidence** of both 1:2 and 1:4 ratios seems to occur with the Atlantic gray whale (14-16:30; 20:40:80) and humpback whale (30:60:120; 40:80); and a 1:4 ratio with the bowhead whale (50 feet:100 ells [cf also ‘yards’]);

**primary evidence** of a 1:2 ratio, with the same person referring to the same kind, is found with JG1’s *hafurkitti* (30:60), together with secondary evidence of the 1:2 ratio (30:60; 20:40);

**primary evidence** of a 1:2 ratio with kinds of assumed identical origin or reference, within the same source, occurs in Resen’s Icelandic description of *búrhvalur* (sperm whale), *hrosshvalur* and *rauðkembingur* (20:40; 30:60) and one of them with Torfæus (22:40); regarding *sléttbakur* (black right whale), *hafurkitti* and *höddunefur*, JG1 (1640/44) is close to the 1:2 ratio (35:60) while this (35:60) and a clear-cut 1:2 ratio (30:60) is found with Resen (Iceland).

Being aware of the cognitive rule that one usually only finds what one looks for, I am nonetheless unable to see any other pattern behind the size data than the 1:2 ratio and, in three cases the 1:4 ratio.

It might be argued that the listed measures could reflect a schematic (scholarly) tradition which initially was ‘constructed’ around the 1:2 ratio and which in the course of time has become indistinct so that these results only form part of a circular reasoning. However, because (a) compatible measures are found in sources directly related to the daily practice of peasant fishermen; (b) a natural 1:2 ratio has been independently confirmed, and (c) the Faeroese *gyllin* and the listed pilot whale measurements
agree in virtually every detail since the days of KGS, such argumentation seems disproved.

GR 1832, § 16, stipulates that pilot whales 'in the future, as it has been in the past' shall be appraised 'so that a whale, the length of which from the eye to the gatbor is 5 alen, is rated at 1 gylden'. Earlier, amtmand (provincial governor) F.F. Tillisch also stated that 'A whale of the said size has always been fixed at one gylden, and this fixing has always been the basis for the appraisal of the other whales.' However, it is not until GR 1955 that the formulation 'so that a whale which is 3,14 m = 5 alin long ...' is adopted, ie, that the (Danish) ell standard is directly mentioned in the Statute.

Sysselmand (sheriff) H.C. Müller (1884b: 35) mentions that in his days an eight-oared boat carried 'ca 16 skind of whale ... In older times an eight-oared boat should carry 1 gylden' (ie, 20 skinn). He attributes the 'discrepancy' to the use in the past of a shorter ell then the Danish one; actually, he speaks of a 'Dutch ell' which seems entirely misplaced. Müller sees the proof of the application of a shorter ell in higher appraisement sums in earlier days compared with the number of whales than was the case in his own time, ie, in effect presumably after 1832: Earlier, 1 gyllin was not equivalent to more than 2 whales, in the mid to late 19th century it was usually 3. Müller does not mention Svabo’s account from 1779 (1781/82) but it apparently belongs in this context. The high skinn values mentioned by Dalsgaard (1957: 152f; cf chapter 7.4.1) are possibly also reminiscent of such different appraisals, despite their very late date. If we convert the 62.8 cm of the Danish ell according to Müller’s 20:16

1 Cf Bjørk 3, 1963: 239.
2 Müller (b 1820, d 1899) was sysselmand 1843-1898 (cf Bloch and Lastein 1994: 4).
3 The ancient Dutch and Amsterdam ells are 69.03 cm and 68.78 cm long, respectively (cf Doursther 1840/1976: 32, 36).
ratio we get 50.2 cm.\(^1\) The conclusion must be that the Faeroese before the enactment of GR 1832 used the old Norse ell, at ca 50 cm, in whale appraisals and that the whale gyllin was then ca 250 cm.

The safeguarding, by statutory law, of the most effective driving of the pilot whale pods and their ruly division\(^2\) was presumably a major reason for the enactment of GR 1832 but I surmise that the introduction of the appraisement rod as such\(^3\) could have to do with the introduction of the Danish ell in the whale appraisals.

The pilot whale measures (cf item A.17.3, Table B) seem to fall into three groups: (a) as from 1669, some authorities state these whales to reach an explicit maximum size of 10 ells (L. Debes, E. Ólafsson, E. Pontoppidan, V.U. Hammershaimb) with others mentioning 8-9 ells; (b) around 1688, P.H. Resen in one context mentions that adult pilot whales reach 10 and calves 3 ells while he in another context says they are 10-20 ells; in 1592, Claussøn Friis states them to be 18-20 ells long but in 1599 that they are 10-20 ells; (c) KGS, Oddur Einarsson, Claussøn Friis, JGl, T. Bartholin, Resen and T. Torfæus, spanning the period ca 1250-1719, describe the size as being '10-20 ells'.

This author considers that the younger (a) data reflect the notion of overall length, being double the eye-genitalia distance (ie, 2 x 5 ells = 10 ells). The (b) group of information presumably shows that Resen and Claussøn Friis had two sets of ell measures in front of them, ie, ell figures as just explained and such in 'whale

\(^1\) This seems to disprove that the Hamburg/Lübeck ell of ca 57 cm was involved in the pre-1832 whale appraisals as Bloch and Lastein (1994: 7) suggest: "Before the grind regulation was adopted in 1832, the whales were assessed by eye and another unit of value seems to have been in use, possible the previous unit of length, the Faeroese alen (= 57 cm) instead of the Danish alen (= 63 cm)". Because of the uncertainty the authors only use data as from 1832 for the calculations in their paper.

\(^2\) Cf Landt 1800: 398; Svabo 1779: 51.

\(^3\) Cf Bjørk 3, 1963: 239; Bloch 1994: 8; Dalsgaard 1957: 151.
ells' (equivalent to half a standard ell). Actually, this may have been the case all the way back to KGS, cf group (c).

If this is related to the whale appraisement in the Faeroe Islands the similarity between the postulated 'whale ell' and the Faeroese whale skinn is striking: if they are not identical they could be of the same character.

The wider reference of the 'whale ell' and fixed point issues becomes clear from the following two instances.

The Nordland fief accounts in Norway contain a testimony about a whale found off the island Vanna and brought into Torsvåg (Vanna, Karlsøy municipality, Troms), on 20 May 1665, for flensing: The appraisers state '... which whale was ... by us measured and we found the length with Sealandic measures (to be) thirteen ells from the blowhole to Spreuoellenn'. 1 Bratrein (1, 1989: 473) is uncertain about the meaning of the word spredvold (as it will be in normalised Dano-Norwegian) and adds a question mark without attempting an interpretation of it. The compound strongly implies it being the genital slit; 2 the anus would hardly be described in this way. The conclusion must be that in 1665 the 'length' of the Torsvåg whale was measured to be 8.16 m from the blowhole to the genital slit; consequently its overall length must have been ca 16.3 m.

Concerning whales taken in Karlsøy municipality and vicinity in the periods 1713-1787 and 1818-1830, Bratreim (2, 1990: 176) writes:

'The size is often mentioned but it is difficult to compare the figures. Some [whales] are measured with head and tail, others only with regard to the part that offered blubber, ie, from the ear bone [ørebein] to the gatbor. Most whales for which measures are

1 Cf Riksarkivet 1665 ms.
2 In Danish vold is, inter alia, used "om langartig forhøjning paa gjenstand, legemsdel" (cf ODS 27, 1954: 398); sprede, inter alia, is applied "m.h.t. (bevegelige) dele, led, lemmere o[g] 1[en]de, der normalt ligger samlet ell[er] tæt op ad hinanden: skille ad (saa at der dannes en aabning, en vinkel)" (cf ODS 21, 1943: 470).
offered are between 7-12 ells [alten] while a few were 21-24 ells [alten]. The two largest were 43 and 49 ells [alten], which is full 30 metre, but of the latter it was only the half part that was found.'

Gatbor is Bratrein's rendering; exactly what expression the originals use remains to be found out but this writer considers that it most probably signifies the genital slit. The unrealistic length of 30 m shows that the Sealandic/Danish ell cannot have applied in this case of 49 ells; by the short Norwegian ell (47.4 cm) it is 23.2 m which is indeed large but within the overall size of blue whales in the North Atlantic. This indicates that the old Norwegian short ell may have been used through the 18th century in various whale appraisals in North Norway where the Sealandic/Danish ell is not explicitly referred to.

The parallel application of the short Norwegian and the Sealandic ell in the second half of the 18th century regarding minke whales can be seen with Andreas Christie (UBB ms 221: f18r) in his description of the peasant fisherman whaling in Sotra, Hordaland, West Norway, from 1785/86.

The continuation to the late 19th century of a conspicuous heathen sacrificial custom related to the catching of minke whales in Kvalvåg, Skogsvåg, Sotra, implies a long tradition of whale division there (cf chapters 8.2 and 9.7.6). On the occasion of the cutting up of the last minke whale taken in Skogsvåg, on 20 June 1960, Svamle Sangolt (Tinen) demonstrated the beginning of the traditional division. Bergens Tidende writes:

'The same method is ... also used in the Faeroe Islands, it is told ---. Tinen began by finding the ear opening, here he thrust the knife in deeply. Then he searched backwards to the "ear wing" [ørevinge], cutting here a triangle in the flesh. Thereafter he fathomed backwards and here he measured three hand lengths and one handbreadth forward, less
Although there are reasons to be sceptical about the reference to the Faeroese pilot whale appraisal and division we here learn that the ear opening was used as the traditional anterior fixed point in the Skogsvåg minke whale division. It seems to be identical with the ear bone fixed point used in northern Norway (cf Bratrein) but there people also used the blowhole as the anterior fixed point (cf the Torsvåg whale). So far the eye seems absent from Norwegian appraisals.

In Arnarfjörður, Iceland, the shooter's share was a little wider than a span (hnefaalin) in three directions from the blowhole, cut all the way to the bone, a similar piece around the genital opening (gota), together with the tail flukes. This might indicate that the blowhole and genital opening would have been fixed points if the whale had to be appraised but according to detailed accounts of this whaling in the 19th century it was then divided without appraisal.

However, until further evidence is forthcoming this author considers the anterior fixed points at the blowhole (Troms; Arnarfjörður?) and the ear (Troms; Skogsvåg; Faeroe Islands) to be secondary to the eye (Faeroe Islands). This view is based on the seemingly particular strong traditions in the Faeroese whale appraisement and, as I perceive it, the relative conspicuousness of the eye on the side of the whale and its being more definite than the ear and the blowhole. How far these three fixed points differ in practice only a table of the relative position of the blowhole, eye and ear in the relevant species can reveal. It seems also clear that studies of Norwegian whale appraisals are likely to advance our knowledge about the fixed points and whale divisions in general.

1 Cf Anon 1960b.
2 Cf Ásgeirsson 1946: 298.
7.5.2 Whale division methods

GG stipulates that 'a shot whale shall be appraised [virða] by 5 neighbours by the Book [ie, Bible], weighed [a pundara veginn] on scales, and assessed [virða] to wadmal' (GG 2: 522; 3: 394); other variants (GG 1b: 127f; 2: 521; 3: 393) are less comprehensive but they all use the pair of terms 'appraise' and 'weigh' which seems to be the main aspects of the (Icelandic) whale division. In the Rosmحلaness-hreppur whale statute (ca 1270 AD; RsmnWS; cf item A.15.2.2)\(^1\) and later Icelandic practice\(^2\) one finds products that were traditionally weighed and such that (implicitly) were not, although the latter must have been part of the overall appraisal (to 'whale ells?') and will have been divided just as meticulously as the former. JS (1271-1281 AD) mentions nothing about whale appraisal and JB (1281/83 AD) merely stipulates that 'A shot whale shall be appraised to wadmal by 6 sensible men' (JB vii 64).

Whether shot or not, a blue whale (reyðr) which peasants in Skagafjörður, North Iceland, sometime between 1299 and 1313 AD 'brought ashore' was appraised to 60 hundruð (vaðmála) and yielded 350 vættir (= 11,984 kg) of meat and blubber.\(^3\)

In Skogsvág, Sotra, Hordaland, West Norway, in the late 18th century, the blubber of minke whales was weighed while the meat was measured in baskets or kipes.\(^4\)

JGl (1640/44) describes the construction of 'whale division scales' of the pundari kind: First erect a stem which is branched at the upper end, then place a cross beam on it and hang boards from its ends and adjust the cross-beam to balance.\(^5\) This crude but effective instrument may have been developed in the early Iron Age (ie, the

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1 Cf DI 2, 1893: 79f [dipl 26].
3 Cf Bagge and Nedkvitne 1983: 252 [no 813]; DI 2, 1893: 346 [dipl 183].
4 Cf Christie 1785/86, UBB 221: f18v.
5 Cf Guðmundsson 1924a: 13.
centuries after 500 BC). According to JB viii 28 and the farming regulations called Büalög it was not permitted to weigh more than two vættir of 9 fjörðungar each, or ca 77 kg, on the pundari and it should, in effect, have no bigger limit of error than 1 fjörðungr (4.280 kg). From about 1200 AD, the Icelandic vætt was defined as 8 fjörðungar ('fourths'), or ca 34.24 kg. According to MLL (1274 AD) the skippund contained 123.45 kg (ie, 576 merkur à 214.32 g). Under the influence of the Cologne weight mark (à 233.8 g) the Norwegian weight mörk increased to 257.18 g in the second half of the 16th century and the West and Mid Norwegian skippund became 148.14 kg; an identical skippund existed in Iceland. In both countries the skippund was divided in 24 lispund (à 6.17 kg) while the division in 4 vætir (à 37.04 kg) and 8 vágr (pl, ON; vág, N; à 18.52 kg = 72 merkur) only existed in Norway. Since the late 16th century it is documented that the Faeroese used a vág of 80, rather than the usual 72, marks. L. Zachariasen (1961) argues that this particular 80 mark vág was introduced into the Faeroe Islands through the trade with Hamburg about 1500 and came about as an approximation of 79.2 Cologne weight marks to the 18.52 kg of the Norwegian 72 mark vág but, in fact, he has no evidence about the weight mark which was used in this context. Conversely, I consider the 80 mark vág to be a traditional Faeroese weight which is identical with 4 fjörðungar (à 20 merkur), eight of which the Icelanders about 1200 AD defined as their vætt, eg, in relation to the hlasshvalr (GG 2: 516). The unit of 4 ‘fourths’ (fjörðungar) clearly predates one of 8 ‘fourths’, and the former is preserved in the Faeroe Islands but seems not recorded in Iceland. The conclusion

1 Cf Jansson 1936: 1f.
2 Cf Benediktsson 1982h; Halldórsson 1904: 234; Lárusson 1958: 224, 241; see also Jónsson 1936: 159.
3 Cf Bjørkvik 1982b; 1982e; Fladby, Imsen and Winge 1981: 297; Steinnes 1936: 97, 106f, 151.
4 Cf Zachariasen 1961: 393f, 412.
must therefore be that the Faeroese 80 mark vág, equalling 17.15 kg, dates from the 12th century the latest.

It has been established that the modern Faeroese (pilot) whale skinn on average contains 38 kg of meat and 34 kg of blubber, or a total of 72 kg. Initially the detailed Faeroes whale appraisal calibration, with equal parts, must have been established by weighing and adjusting the parts. The Icelandic pundari regulations indicate that such scales were traditionally used to weigh up to about 77 kg. One might therefore surmise that the Faeroese whale skinn was initially determined as 4 old Faer clauses vágir, or 68.6 kg, or perhaps half of that, ie, 2 vágir = 34.3 kg. The modern whale skinn has usually been considered to weigh 75 kg which presumably reflects the modern vág standard (ie, 4 x 18.52 = 74.08 kg). By extension, in Iceland whale products were presumably weighed in standard parts of 2 vættir (68.6 kg) or perhaps 1 vætt (34.3 kg). On the assumption that the whale skinn denomination reflects the old Norse skinn unit of value (cf below) the great difference between 34.3 versus 68.6 kg should permit a conclusive comparison with sheep and lamb skin values in order to establish which weight the whale skinn initially referred to.

Whale division using weighing and/or measuring in containers of the products on an ad hoc basis is clearly more work and time consuming than the appraisal to standard parts (eg, skinn/’whale ells’) by means of a calibrated rod. The latter is a very sophisticated manner and the question of its age arises. Its invention is attributed to the vicar of Vágar, 1822-1838, Niels Johnsen Struer, possibly in cooperation with a peasant at Ryggi, Miðvágur, but amtmand Tillisch seems to have been involved with the details of the scale (cf next subchapter). Indeed, neither the previous visual appraisal nor the old equisegmental ell-based scale (cf chapter

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3 Cf Dalsgaard 1957: 151.
7.5.4) required a special appraisement rod. It is, however, possible that such a rod may earlier have been applied on the basis of local communal regulations.

7.5.3 Faeroese whale appraisement scales

In 1807, landfoged (bailiff) W. Hammershaimb and amtmand (provincial governor) E.N.G. von Løbner submitted a report concerning a whaling statute in the Faeroe Islands in which they, inter alia, criticised as 'entirely incorrect' the custom of simply adding 5 skinn in the valuation for every ell a whale exceeded 5 ells (i.e., eye-gatbor distance/20 skinn), because such an equisegmental extension of the scale (cf figure 10, graph (a)) favoured disproportionally those who got the biggest whales. 'The earlier appraisement has thus given rise to strife and quarrel because everybody has tried to appropriate the biggest whales'.¹ Their proposal for an appraisement scale is like this:

```
a whale 3 alen (from the eye to the gatbor),  2 skind;
  -  4 alen         -  -  -  -  -  -  , 10 skind;
  -  5 alen         -  -  -  -  -  -  , 20 skind;
  -  6 alen         -  -  -  -  -  -  , 35 skind;
  -  7 alen         -  -  -  -  -  -  , 55 skind;
  -  8 alen         -  -  -  -  -  -  , 80 skind;
```

(cf figure 10, graph (b)), however, providing for due consideration of the quality of each whale.²

This proposal was repeated in 1819 but later rejected by amtmand F.F. Tillisch because 'the smaller whales are ... fixed all too low and the larger ones all too high' in respect to their train oil yield. He then proposed the rules which were enacted in GR 1832,³ apparently including some standard calibration for the appraisement rod (cf figure 9; and figure 10, graph (c)). On the above evidence

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1 Cf Bjørk 3, 1963: 239.
2 Cf Bjørk 3, 1963: 239.
3 Cf Bjørk 3, 1963: 239f.
it seems possible that this standard calibration from the very beginning was matched somewhat differently with the local traditions in the various pilot whale districts.

In the opinion of Bloch and Zachariassen (1989: 48) "the old [i.e., 1807] calculation is not intended for pilot whales, but perhaps for bottlenose whales." Indeed, very large bottlenose whales may possibly fetch an appraisal of about 50 skinn (cf chapter 7.4.1) but the Hammershaimb/Løbner scale seems rather intended to cover the whole range of cetaceans, 9 ells long or less, which free sub-odal persons since the early Middle Ages were permitted to appropriate according to Norwegian law which was also statutory law in the Faeroe Islands.

Appraisement of cetaceans in the Faeroe Islands is traditionally associated with pilot whales and, to a lesser degree, dolphins and bottlenose whales. Appraisal of larger (drift) whales is bound to have occurred although I have so far seen no mention of it in Faeroese sources. The explanation could be that such takes generally did not involve communal efforts and occurred outside the (communal) whaling bays, for which reason the division between the ground, finder, crown, church, transporters (salvagers) and shooter, as appropriate, would have taken place according to Norwegian and related customary law (as distinct from the pilot and bottlenose whaling regulations, statutory or not) and been less conspicuous than the whale drives. The data which could be obtained on that basis are likely to have been limited. If the Hammershaimb/Løbner scale turns out to be reasonably correct, it is likely to have been based on (additional) statistical data about the meat and blubber volume in smaller and larger cetaceans, presumably from Norway. On the other hand, the detailedness and accuracy of Tillisch's scale which we have already mentioned involves a comprehensive collection and analysis of (skinn) weight and eye-gatbor distance data which seems to have taken place between 1819 and 1832.

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1 For fin whale parameters, cf Víkingsson 1993: 178, 180f.
7.5.4 Old Norse whale appraisement scale

We shall now attempt to reconstruct the old Norse whale appraisement scale and its way of functioning. The premises we build on and the relevant, independently obtained, information we make use of are as follows:

(a) the assumption that many historical cetacean size figures are appraisement sums, not length measures;

(b) the Faeroese principle of referring to the (5 ell) eye-gatbor distance as extent reference;

(c) the verified 1:2 eye-genital slit/overall length ratio in most relevant cetacean species (cf chapter 7.5.1);

(d) the internal Faeroese evidence that an (old Norse/Faeroese) ell sized ca 50 cm was probably used in the Faeroese whale appraisals until 1832 (cf chapter 7.5.1);

(e) the old Faeroese custom of adding 5 skinn in the valuation for every ell a whale exceeded 5 ells in eye-gatbor distance;¹

(f) the overall body length in the smallest and the largest of cetaceans: in newborn harbour porpoise calves, ca 0.7-0.9 m;² harbour porpoise adults up to ca 1.5 m; in blue whales, up to ca 25.9 m (cf item A.16.2); and

(g) the historical size data for these two extreme species, cf item A.17.3, Table B: 'Harbour porpoise' and 'Blue whale'.

The old Faeroese whale appraisement scale, presumably used until 1 November 1832, involved adding 5 skinn in the valuation for every ell a whale exceeded 5 ells in eye-gatbor distance to the 5 ells/20 skinn (cf figure 10, graph (a)). We learn nothing about its scope but when it is extended in the other direction we see that it begins with 1 ell eye-genital slit distance, or an overall body length of ca 1 m. The lowest and highest eye-genital slit measures a comprehensive whale appraisement scale must

¹ Cf Bjørk 3, 1963: 239.
comprise are ca 0.8 ells for newborn harbour porpoise calves, and ca 25.9 ells for full-grown blue whales. Indeed, according to graph (a), 1 ell corresponds to the eye-genital slit measure in juvenile harbour porpoises while blue whales with an eye-genital slit extent of 25.9 ells would fetch an appraisal of 124.5 *skinn*. Both are plausible and permits the old Faeroese whale appraisement scale to function well.

However, according to KGS (cf item A.17.3) the harbour porpoise and the blue whale are sized up to 5 álnír and 130 álnír, respectively, which we already know cannot refer to the animals' overall length measured by the old Norse short standard ell of ca 47.4 cm (cf chapter 7.2). If the alin is considered to be an appraisement unit identical to the whale *skinn* and these sums are applied to graph (a) in figure 10, both cetaceans receive an overall body size slightly above the approximate maximum, *ie*, 2 m and 27 m, respectively. Correspondingly, the actual maximum body length in harbour porpoises of 1.5 m would result in an appraisal of only 2½ *skinn*/álnír, rather than 5. It seems possible to find the reason for these discrepancies.

If the appraisement scale would begin with zero ell eye-genital slit measure (rather than with 1) and involve adding 5 *skinn*/álnír throughout to the valuation for every 1 ell eye-genital slit distance (cf figure 10, graph (d)), we get the following lengths and appraisals: a 1 m long (juvenile) harbour porpoise, 5 *skinn*/álnír; an adult harbour porpoise of 1.5 m overall length, 7½ *skinn*/álnír; and a 26 m long blue whale, 130 *skinn*/álnír. This confirms that the KGS figure of 130 álnír is a genuine appraisement sum. On the other hand, if KGS would have used a figure to signify something like 'the largest of all whales' it would also rather have been the long hundred (120). Later sources also mention 130 álnír which, at least partly, reflect KGS although actual appraisals may have reinforced this sum. The 120 álnír which are mentioned in the 17th-18th century presumably refer to other blue whale appraisals. Other blue whale size figures cannot be
considered here.

The difference between the appraisement sums of adult harbour porpoises according to KGS and the assumed old Norse whale appraisement scale, ie, 5 álínir/skinn versus 7½ álínir/skinn, remains to be explained. Early modern Icelandic sources (JG1; Resen; and Torfó; cf item A.17.3, Table B: 'Harbour porpoise') mention the harbour porpoise as being up to 7 álínir. There is every reason to consider this to be appraisement sums, the more so as graph (d) offers a corresponding sum of 7½ álínir. For some unknown reason, KGS appears to state a too low appraisement sum for the adult harbour porpoise.

We cannot here analyse in detail the historical size data of the various species and name categories listed in item A.17.3, Table B; however, the appraisement scales (a) and (d) in figure 10 should be put to one further text.

Ohthere states that the walrus has a size of 7 ells while KGS and other sources mention 14-15 ells, occasionally also 12 and 16 ells (cf item A.17.3, Table B: 'Walrus'). Walrus bulls and cows reach a maximum nose to tail length of about 3.7 m and 3 m, respectively.1 Ohthere therefore refers to the walrus by the old Norse short ell (à ca 47.4 cm). If we consider the other historical size figures to be appraisement sums in terms of scales (a) and (d) in figure 10 we get the following (Y axis) 'whale ell' sums and overall body length according to the 1:2 ratio of the 'whale ell' (which here, however, has lost its eye-genital slit reference):

<table>
<thead>
<tr>
<th>Scale (a) 'Whale ells'</th>
<th>Body</th>
<th>Scale (d) 'Whale ells'</th>
<th>Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 ells/skinn</td>
<td>3.4 ells</td>
<td>3.4 m</td>
<td>2.4 ells</td>
</tr>
<tr>
<td>14 ells/skinn</td>
<td>3.8 ells</td>
<td>3.8 m</td>
<td>2.8 ells</td>
</tr>
<tr>
<td>15 ells/skinn</td>
<td>4.0 ells</td>
<td>4.0 m</td>
<td>3.0 ells</td>
</tr>
<tr>
<td>16 ells/skinn</td>
<td>4.2 ells</td>
<td>4.2 m</td>
<td>3.2 ells</td>
</tr>
</tbody>
</table>

It seems clear that the old Faeroese appraisement scale (a) does not apply because the main references (ie, 14-16 ells)

1 Cf Enc Br, Mic 10, 1981: 531; Stonehouse 1985: 68.
fall outside the natural scope; conversely, even Clausøn Friis's 16 ells (1599) are well accommodated in the appraisement scale (d).

We have seen that only scale (d) of figure 10 conforms to critical marine mammal appraisement data in KGS and other Norse sources so this scale apparently constitutes the general old Norse whale appraisement scale. It may also be concluded, firstly, that the old Norse appraisement unit was termed alin, probably being short for *hvalsalin (cf Clausøn Friis's hualsalen, 1599, D/N); secondly, that this (whale) alin/alen continued to be used as an appraisement unit into the late 18th century; and, thirdly, that the Faeroese sometime in the Middle Ages renamed the *hvalsalin (whale) skinn.

It is appropriate to return briefly to the speculations by scholars in the past about the old whale measures (cf chapter 7.2) and to the 'whale ell' hypothesis with which we set out (cf chapter 7.5.1).

The scholars considered the old cetacean 'ell' measures to be length measures and suggested an arbitrary reduction of them the factors 2 or 3 in order to get reasonable length figures in metres. Expressed in these terms, ie, by leaving the character of the 'whale ell' aside, the hypothesis in effect involved an (explained) reduction by the factor 2. The factor turned out to be 2½. Nevertheless, the hypothesis proved instrumental in solving the problem of the old whale measures.

The old Faeroese scale (a) apparently does not have the scope of an all-inclusive appraisement scale because it does not accommodate properly the blue whale, the harbour porpoise and the walrus. On the other hand, it has demonstrably been applied to pilot whale appraisals. This raises the question as to its character and history which we shall now consider.

Since KGS, historical sources generally state that the pilot whale is sized 10-20 ells (cf item 17.3, Table B:
'Longfinned pilot whale'). These appraisement sums can easily be applied to the old Norse appraisement scale (d): eg, whales sized 20 álnir/skinn would have an eye-genital slit (gatbor) measure of 4 ells (à ca 50 cm = ca 2.0 m) and those with an eye-genital slit distance of 5 ells (ca 2.5 m) would fetch an appraisal of 25 álnir/skinn. However, the early 19th century practice was to reckon 5 ells eye-gatbor (genital slit) distance as 20 whale skinn which cannot be reconciled with scale (d); it requires a scale of its own, namely scale (a).

Tillisch stated that a pilot whale measuring 5 ells from the eye to the gatbor 'has always been fixed at one gylden', 1 or 20 skinn, which is perpetuated in GR 1832 (§ 16) and the appraisement rods. However, both Svabo (1779: 48) and Müller (1884b: 35) give information which is at great variance with this alleged traditional practice. The issue is highly complex and presumably involves various translations of, eg, the 4 and 5 ells fixed points and 10 and 20 skinn appraisement sums between the scales (d), (a) and (c), in addition to increased ell standards from ca 50 cm to 62.8 cm. Only directed archival and statistical research is likely to clarify the issue. Fortunately, the Faeroese Country Archives (Føroya Landsskjalasavn) hold comprehensive records on one third of all whale appraisals after 1709. 2

Theoretically, the old Faeroese appraisement scale (a), which is only reported about 1807, could be either a Faeroese modification of the old Norse general appraisement scale (d) or a reflection of another old Norse appraisement scale, perhaps for some special purpose.

In chapter 7.3.3 it has been argued that in the 10th-11th century AD the legal limits of odal appropriation of whales in the Gulathing district were reduced, from 20 to 18 ells in overall body length, with the sub-odal

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1 Cf Bjørk 3, 1963: 239.
2 Cf Bloch 1995, pers comm.
appropriation in each case being half of it, or as one tentatively perceives it, from 10 to 9 ells in overall length, respectively. The performance of the two whale appraisement scales in these circumstances could perhaps elucidate their history. It looks like an underlying idea is the nominal doubling and halving of either the extent or the appraisal sum. The key data from figure 10 are as follows:

<table>
<thead>
<tr>
<th>Overall length [legal limit] ells</th>
<th>Eye-genital slit, ells</th>
<th>Appraisal skinn/*hvalsálnir Scale (a)</th>
<th>Scale (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>10</td>
<td>45</td>
<td>50</td>
</tr>
<tr>
<td>18</td>
<td>9</td>
<td>40</td>
<td>45</td>
</tr>
<tr>
<td>10</td>
<td>5</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>9</td>
<td>4½</td>
<td>17½</td>
<td>22½</td>
</tr>
</tbody>
</table>

In scale (d) the postulated ancient limits of 20 and (assumed) 10 ells overall length limits correspond to 50 and 25 skinn/*hvalsálnir, respectively, which are functional entities as such. However, a limit reduced to 18 ells results in 45 skinn/*hvalsálnir in relation to which 25 and 22½ skinn/*hvalsálnir as well as 4½ ells eye-genital slit extent seem cumbersome entities.

In scale (a) the postulated initial 20 and (assumed) 10 ells overall length limits correspond to 45 and 20 skinn/*hvalsálnir, respectively. A lowered limit to 18 ells overall body length results in an appraisal of 40 skinn/*hvalsálnir half of which is 20 skinn/*hvalsálnir, all apparently very functional units. The strikingly impractical figures which the 9 ells overall body length everywhere result in suggest that a legal limit of that extent may not have existed in the Middle Ages. The explicit mention by NLB vi 61g (1604) and NL 5-12-8 (1687) of the 9 ells limit permits no retrogressive inference. It rather suggests that in the period 1300-1600 the appraisement to huvalsalen decreased in Norway and was little used and known around 1600 (cf Clausen Friis's confusion about it, 1599; cf chapter 7.2).

The question is whether this interpretation agrees with
the fact that GTL 149a and MLL vii 64a, in theory at least, base themselves on extent measures, and how using the appraisement sum influences the 'half' allocation to persons of sub-odal rank. The relevant passages of the laws read in detail like this:

ÆB 145 and FTL xiv 10a: The minke whale is the finder's whale for any odal-born man and if a (non-odal) free man finds it '... then owns the one who finds [it] half' (of it); 'all other smaller whales [ie, than minke whales] are finder's whales for any free man' ("Rafnhvalr [var: Raumhvalr] er einfynndr hauldi. En ef ættborin maðr finnr [var: hittir.] þá á sá hálfan er finnr. En allir minni hvalir eru einfynndir friálsúm manni hverium.");

GLT 149a: '... 18 ells long, and all other persons half less' ("... atian alna longum. En holfu minna hverr annara manna.");

MLL vii 64a: '... 18 ells long ---, and every other person ... a whale half as short' ("... xviij. alna langum ---. En halfu skemri hualr er einfynndr huerium manni annara.");

In my opinion, it is perfectly reasonable to interpret ÆB's and FTL's references to the sub-odal allocation in terms of an appraisement sum, rather than an extent measure. If this is so, it is doubtful that another meaning can be attributed to GTL 149a although it initially refers to whales '18 ells long'. MLL vii 64a seems indeed to stress the smaller allocation in terms of an ell measure but with the appraisement sum apparently being in 'hvalsálnir' the expression becomes understandable and would then mean the same as in the other laws.

What has then actually happened? It would appear that GTL 149a reduced the odal rank allocation from 45
*hvalsálnir (20 ells overall length) to 40 *hvalsálnir (18 ells), while the sub-odal allocation of 20 *hvalsálnir (and corresponding extent measure) remained unchanged. In other words, the nominal 1:2 ratio between sub-odal and odal rank allocations was shifted from the extent measure to the appraisement sum. Be it a step to somehow 'harmonise' odal and sub-odal whale appropriation (which nevertheless remained inherently disproportional), a move by the Norwegian crown to increase its revenues, or both, it seems to coincide with a contemporary trend towards increased crown rights in whales in the commons and even on allodial ground.

The circumstantial evidence show that the postulated and manifest Norwegian legal limits of whale appropriation only function numerically and logically within scale (a). On the other hand, the old Norse whale appraisement scale (d) appears to be meticulously adjusted to cetacean and walrus appraisals, in general. This suggests the scales being of different character and with different domains. My tentative interpretation is therefore that

scale (a) pertains to the legal appropriation of cetaceans under Norwegian odal right, from the 9th century AD to 1832, with only its (illustrated) lower half, effectively, being operative; and that

scale (d) is the all-inclusive old Norse general appraisement scale for cetaceans and partly pinnipeds which basically underlies the size figures of KGS, from 1240-1263 AD,¹ and many other sources, into the late 18th century.

This frame of reference should enable the analysis and interpretation of all Norse historical cetacean and pinniped size data (eg, in item 17.3 and otherwise). It involves differentiating between the relevant ell standards and categories like appraisement sums, eye-genital distance measures, overall length measures, in addition to mistakes

and misunderstandings.

Both old linear, equisegmental, appraisement scales involve the disproportional apportion of products to those who get the bigger whales, ie, firstly, the Norwegian crown and, secondly, odal-born persons and such of higher legal status over those of sub-odal rank. In a legally ranked society such a disproportional apportion of products will generally have been considered a natural thing, the more so as it applied equally to all persons of the same status. However, in circumstances where the legal ranking had lessened in importance or was questioned and, on top of it, many whales were divided simultaneously, offering a direct comparison, the old equisegmental scale was bound to raise sentiments. Therefore, it is hardly coincidental that Hammershaimb and Løbner proposed their functional scale in 1807 at the background of the Enlightenment, the French Revolution and the hardship which the Napoleonic Wars inflicted on the Faeroese population.

### 7.5.5 Origin of the whale appraisement *hvalsalin and skinn*

In principle there seems to be two ways in which the whale appraisement units alin and skinn got their names, namely, from calculation and payment units or from denominations of land measurement with similar names, or perhaps from an interaction of the two. In fact, denominations of land measurement often derive their name and extent (value) from the calculation and payment denominations (cf chapter 7.6).

In the old Norse whale appraisement scale, 5 ells units are integral features both on the extent and the appraisement sum side. We should therefore primarily look for quinary contexts.

The basic Norse mediaeval unit of calculation and payment alin vaðmáls ('ell wadmal') is generally reckoned as 1/6 (lög)eyrir ('law ounce'), but the earliest Norwegian
laws also mention (lög)aurar (pl) of 9, 10 and 12 ells wadmal\(^1\) (cf items A.16.5 [Alín, 2], and A.16.6). The aurar of 6 and 12 ells wadmal existed in both West and East Norway, the 9 ells eyrir occurred only in the east Norwegian inland districts of Heidsævislög while the 10 ells eyrir is merely recorded in the west Norwegian Gulathing district (cf GTL 235: "x. alna eyris. ef haulldr veðr veginn").\(^2\) The 6, 9 and 12 ells aurar seem neither directly nor indirectly compatible with the structure of the old Norse whale appraisement scale as such nor the skinn/gyllin calculations presented in chapter 7.6. The only alin vaðmáls which could possibly be involved in the old Norse whale appraisement scale appears to be the 10 ells wadmal eyrir which only existed in West Norway.

Corresponding measures for land and whales would facilitate whale divisions between two or more (shore) proprietors because they generally took place according to land holding and, in the course of time, complex shares in estates. Standard extents in Norse land valuation are therefore particular interesting.

In Norway the mediaeval stang (mælistöng, stöng, ON; stang, Old Norwegian) that was used for measuring land appears initially to have been 8 short ells (à 47.4 cm = 379.2 cm) long. In the late Middle Ages it was reckoned as 7 long Norwegian ells (à 55.3 cm) and in early modern times yet again changed to 6 Sealandic ells (à 63.3 cm).\(^3\) On the other hand, an old Sealandic rod (sjællandsk rode, also called jordalen, D, 'land ell'), being 6 ells long is known from the Middle Ages but a rode of 5 ells was probably earlier in widespread use all over Denmark before being put on the statute book for Denmark-Norway in 1698, specifically defining the rod as 10 feet or 5 ells.\(^4\) The

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1 Cf Steinnes 1936: 130, 136; Storm and Hertzberg/NGL 5, 1895: 168.
2 Cf NGL 1, 1846: 80 (see also 78 [GTL 235]); Steinnes 1936: 130; Storm and Hertzberg/NGL 5, 1895: 168.
3 Cf Steinnes 1936: 124f, 128. See also Bjørkvik 1982c.
modern correspondence of the Faeroese gyllin and the jordalen is interesting but clearly accidental. In Sweden the dimension of the mediaeval stang varied considerably. In Östergötland and Småland (adjacent to the old Danish provinces on the Scandinavian Peninsula) stangs of 5 and 6 ells are recorded, in addition to one of 8 ells in Småland.¹ In Finland the stang was nearly always 6 ells long.²

The postulated use in the 9th century of the 5 and 10 ells eye-genital slit distances, corresponding to 5 x 5 and 10 x 5 *hvalsálnir according to the old Norse whale appraisement scale (d) in figure 10, of all possible figures (despite the species references), is, in my opinion, so explicit that it can hardly be explained otherwise than by implicating an ancient Norse *jarðaralin ('land ell'), 5 short ells long, possibly in some interaction with the 10 (2 x 5?) ells wadmal eyrir in West Norway. The extant mediaeval 5 ells stangs could be the descendants of such an ancient Norse *jarðaralin. As a 5 ells stang seems not recorded in mediaeval Norway it should clearly be looked for in the 9th century and earlier.

The whale skinn aspect can only be considered in anticipation of the discourse in chapter 7.6. As in the Faeroe Islands denominations of land and whale appraisement conform, L. Zachariasen suggests, that the whale skinn reflects the money skinn, basically in its 16th century form (cf chapter 7.6, item (g)). This view I find implausible for the following reasons. The skinn calculation and payment unit is likely to play an early and prominent role in the Faeroe Islands and it may have been reflected in an early corresponding skinn denomination of land measurement. In a mediaeval and early modern subsistence economy like the Faeroese one, whale products (mainly meat and blubber) hardly entered exchange or trade upon division; only a lesser part did so at a later stage

¹ Cf Jansson 1936: 45f.
² Cf Oja 1982.
in the form of train oil. In my opinion, this little exchange or trade hardly provides sufficient reason for renaming the basic unit of the old Norse appraisement scale which applied to everything from the harbour porpoise to the blue whale and often involved considerable amounts of blubber and meat that never left the households to which they were allotted. Therefore, rather than reflecting the calculation and payment (money) *skinn*, I consider that the whale *skinn* reflects the land *skinn*, with the rationale already explained.

7.6 What is the origin of the Faeroese *gyllin*?¹

Prior to the enclosure of the commons in the Faeroe Islands in this century, land was reckoned as 1 *mørk* (sg; *merkur*, pl) = 16 *gyllin* = 320 *skinn* (ie, 1 *mørk* à 16 *gyllin* à 20 *skinn*. *Markatal* (*gyllinatal*) designates the infield share of land owned by a proprietor to which is attached (in principle) a corresponding part of the outfield and other pertinences ‗in the fells and in the foreshore‘, inter alia, whales. A similar *gyllin* and *skinn* reckoning is used in the Faeroese whale division.² In modern times the Faeroese *gyllin* is reckoned as 4 times 5 *skinn*,³ a practice which could be ancient. The Faeroese *mørk* land is of no uniform standard; it conforms within each settlement but varies strongly between them.⁴

This particular land and whale division must be considered in the context of the Norse value reckoning and, as the argument has been in the past, also that of the

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¹ I am grateful to Archivist Brian Smith, Lerwick, for his critical comments and information concerning the Shetlandic aspect of an earlier version of this chapter (cf Smith 1995a-b, pers comm).  
⁴ Cf Anon 1911a: 329; Børrentsen 1911b: 466; Zachariasen 1961: 382.
development of the main currencies in northern Europe to early modern times (cf item A.16.6). In our analysis we need to differentiate between the levels at which the gyllin and skinn (etc) denominations may have been operative, namely, as (a) value, (calculation) currency and payment unit; (b) land measurement unit; (c) whale appraisement unit; and (d) the gulden coins as such, etc.

L. Zachariasen (1961) presents the most comprehensive historical analysis of the Faeroese gyllin and skinn denominations this author is aware of.1 At the outset it is relevant to note, in his words, that 'The source material tells us nearly nothing about the development of the Faeroese value units during the latter part of the Middle Ages. We therefore have to consider them on the basis of the historical circumstances' of the time.2

Zachariasen views the origin and early history of the Faeroese gyllin and skinn denominations like this:

(a) 'The Norwegian settlement in the Faeroe Islands in the 8th and 9th century not only gave the country the old Norwegian language but the people as a matter of course also reckoned in the old Norwegian units of land and value which they were accustomed to in Norway before they moved to live here' (ie, in the Faeroe Islands).3

(b) After the Faeroese commonwealth ceased to exist, ca 1035 AD, and the country became a fief of the Norwegian crown, Faeroese lands were probably (re-)valued for the purpose of taxation, most certainly 'in ancient silver marks, occasionally perhaps also the unit eyrir'.4 This does not exclude that reassessments were made later.5 Seyðabrævið (SB; 1298 AD) does not mention 'land mark' (mörk jarðar, ON), merely the sauðamörk ('sheep mark')

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1 Cf Zachariasen 1961: 385-389, 392-396, see also 410-412.
3 Cf Zachariasen 1961: 383; see also 410.
outfield pasture unit for rent purposes. 'This does not mean that infield land in the Faeroe Islands then not at all was valued in marks [merkur]; but if it has been so, it may possibly have been very new', perhaps 'up to a 100 years old.' The rent on the sauðamörk was 20 álnir (vaðmála; 'ells wadmal'). 'Without doubt ... the sauðamörk has its origin in the ancient silver mark.' From the year 1412, we learn that in Sandoy at least the outfield was appraised in mork jardar; whether this signifies the sauðamörk, burnt silver or mork forgild cannot be said. As late as 1584, infield land seems to have been valued and divided in álnir vaðmala because the bailiff that year entered '15 ells of land' in his accounts which he equates with 15 skinn in money.

(c) 'When Seyðabrævið was issued in 1298 it is unlikely that 20 álnir of wadmal had received a fixed price according to the gulden coin [gyllinsmynt] as the translater of this law 1637 has perceived it. That we can leave out of account. ---. Gyllin was then unknown in the Faeroe Islands.'

(d) The Faeroese mørk is anciently Norse but the gyllin division stems from the Rhine gulden which came 'to the Faeroe Islands via Bergen where it was much used for a long time during the 14th century. It is certain that a long time will have passed from the time the gulden was coined in Florence in 1252 until the Faeroese became so familiar with this coin that they made it a unit of land appraisal. In Seyðabrævið, which is from 1298, the gulden for obvious reasons cannot be mentioned.'

(e) '[T]he origin of the Faeroese gyllin seems to be

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1 Cf Zachariasen 1961: 388; see also 384.
4 Cf Jakobsen 1907: 49.
7 Cf Zachariasen 1961: 386; see also 385.
8 Cf Bjørk 1, 1956/57: 52; see also Zachariasen 1961: 383f.
the Rhine gulden in the latter part of the 15th century, valued at two loth\(^1\) of silver. The oldest two loth silver dollar, the Joachims-thaler, which was coined in Germany around this time, received its silver value from this gulden. Through the trade with Hamburg the gyllin reckoning seems to have come into the Faeroe Islands in the period 1450-1480.\(^2\)

(f) 'The Rhine gulden was divided in 20 sub-units, and the Faeroese gyllin got these 20 sub-units in sheep skins.'\(^3\) 'Gyllin has become part of the Faeroese land appraisement because it equals \(\frac{1}{2}\) eyrir according to the old value or 2 gyllin an eyrir. According to Faeroese valuation there are 40 skinn or 2 álnir in 2 gyllin and, if Seyðabrævið reckons in Faeroese wadmal, 20 álnir here means the same which later came to be called 2 gyllin in rent on the sauðamörk.'\(^4\)

(g) The old Faeroese calculation and land mørk came to contain 16 gulden. Because the money gyllin was valued in skinn, the skinn appraisement was possibly transferred to the land gyllin. Gyllin and skinn most likely came into the Faeroese land appraisement 'shortly before the year 1600' but beyond doubt the skinn was the latter to be adopted because the bailiff accounts, 1584, mention álnir of land and fixes its money value in skinn.\(^5\)

(h) 'When the land registers begin in 1584 the rent on infield land was everywhere in Sandoy 1 gyllin a mark [land] but in the [ie, Faeroese] Northern Isles merely \(\frac{1}{2}\) gyllin. This half gyllin is also found in nearly the whole of Eysturoy and some part of Streymoy but in other parts of the Faeroe Islands the rent on the infield mark [land] lies between one half and one gyllin. We thus see that the infield rent has been highly varying in the Faeroe Islands

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1 Faeroese lodd is here best rendered with the old term loth (cf Doursther 1976: 238).
2 Cf Zachariasen 1961: 385f; see also 14.
3 Cf Zachariasen 1961: 394.
4 Cf Zachariasen 1961: 388.
5 Cf Zachariasen 1961: 394.
... and that it in the Northern Isles appears to have dropped to half, probably around the Reformation.\textsuperscript{1}

To this may be added that the corresponding passages in the SB statutes are as follows:

SB 1298: "... læigv fyrir haga sinn .xx. alnir fyrir sauða mork hueria";\textsuperscript{2}

SB 1637: "... Leje for den Marck / som Søuden gaar paa / en Gylden for hvar Marck Søuder",\textsuperscript{3} and in

SB 1698: "... Leje for det Haugestykke / som Faarene gaae paa / 2 Lod Sølv for 40 Faar".\textsuperscript{4}

The whale \textit{gyllin} is by K. Hoydal (1986 ms: 21) rendered as \textit{guilder} and by J.P. Joensen (1976: 20) as \textit{florin}. Müller's (1884b: 35) reference to the 'Dutch ell' (cf chapter 7.5) seems to reflect a similar notion.

The present author is highly sceptical regarding the interpretation that the \textit{gyllin} is no older than the 15th century or so in the Faeroe Islands, that it reflects the Continental florin/gulden currencies, introduced through foreign trade from North Germany and Bergen, and that it first became part of the Faeroese land reckoning in the 16th century. Zachariasen's argument rests on the implicit etymological premise that the Faeroese/Dano-Norwegian terms \textit{gyllin} and \textit{gylden} are the same as the (Rhine) \textit{gulden} and centers on, firstly, the Hamburg trade in the period 1450-1480; secondly, the vigesimal division of the florins/guldens and, thirdly, the 2 loth value of the Faeroes \textit{gylden/gyllin}.

The etymological (or pseudoetymological?) premise has the serious methodological consequence that a possible Norse origin of the phenomenon as such and the term(s) \textit{gyllin/gylden} is not at all considered, neither whether there

\begin{flushleft}
\textsuperscript{1} Cf Zachariasen 1961: 388.
\textsuperscript{2} Cf Poulsen and Zachariasen 1971: 47, see also 53.
\textsuperscript{3} Cf Debes 1963: 267f.
\textsuperscript{4} Cf Børentsen 1911a: 58.
\end{flushleft}
could be a late mediaeval/early modern convergence of a Faeroese/Norse denomination with the foreign one. This author wishes to pursue an alternative, ie, Norse, interpretation of, inter alia, the Faeroes gyllin.

A. Steinnes (1936) observes that through the Middle Ages land in Norway was 'nearly always reckoned in units which originated in the land rent'. 'The land rent was in each place paid in the common payment goods, most often just in goods, sometimes in goods and money together, seldom in money alone. The land rent denominations, thus, generally conform with the local units of value.' 'The same applies to the corresponding land denominations.' However, there exist regional variations regarding the units used as the common denominator.¹ For that reason, 'there existed as many different land denominations as rent denominations'.² Details relevant to the currency aspect of the following discourse are given in item A.16.6.

In Shetland and Orkney the oldest denominations of land measurements are mark, ure (cf eyrir), ertog and penny (cf penning) of land.³ Following the removal of Shetland from the earldom of Orkney (1195 AD) lands in Shetland were revalued around 1300. Urislands and pennylands thereby became obsolete and because marks of land already existed a new unit called 'last of land' was introduced for land that paid a mark of burnt silver in rent (ie, was equivalent to the Norwegian markabøl).⁴ Th. Torfaeus (1697) mentions that the lands of the Orcadian and Shetlandic udallers were valued to marks, ures, etc, and taxed by king Hákon 4 Hákonsson, in 1263 AD.⁵

Indication about the use of the silver mörk, eyrir and

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¹ Cf Steinnes 1936: 141f.
² Cf Steinnes 1936: 144.
⁴ Cf Smith 1994 (pers comm). See also Bjørkvik 1981d.
ertog denominations of land measurement in the Faeroe Islands is the sauđamörk (1298 AD). We also find the alin vaðmáls used both regarding rent (1298 AD) and land appraisement (1584). It is generally agreed that the Faeroese land and whale skinn originate in the old hüðarlag reckoning in which sheep, goat, calf and seal skins were smaller denomination of the cow hide unit. The various kinds of skins had a fixed value which remained unchanged over long periods making them legal tender and calculation units. Hüðarlag and skinn are well documented in Iceland after about 1100 AD and in western Norway after the mid 14th century\(^1\) as part of the more comprehensive verðaurar and lögaurar reckonings\(^2\) and were as such used for the payment of rents on land. Hüðarland ('hide land') is recorded in Norway as the amount of land on which a rent of 1 hüðarlag was due.\(^3\)

Therefore, with a view to the obviously prominent role of sheep rearing and wool production in the Faeroe Islands, which is fully acknowledged,\(^4\) I advance the preliminary hypothesis that alin wadmal, sheep and lamb skinn must always have been prominent units of legal tender and calculation in the Islands and may, at an early date, have given rise to (local) alin and skinn denominations of land measurements besides the eyrir, ertog and (later) mörk land units.

Moreover, based on the calculations made by landfoged (bailiff) J.A. Lunddahl (1911: 431f, incl fig), I advance the hypothesis, as contradistinct from Zachariasen's conclusions under item (g), above,

(1) that the Faeroese infield land units mörk, gyllin and skinn divisionally are tied in with the ell as follows:

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2 Cf Benediktsson 1982b; 1982g; Lárusson 1981j.

3 Cf Fritzner 2, 1954: 76.

1 mørk = 16 gyllin = 320 x 80 ells; ¼ mørk = 4 gyllin = 1 áttatiál (F; 'eighty-ell') = 80 x 80 ells; 1/8 mørk = 2 gyllin = 40 x 80 ells; 1/16 mørk = 1 gyllin = 20 x 80 ells; and 1/320 mørk = 1 skinn = 1 x 80 ells and 4 x 20 ells;

(2) that the Faeroese whale division 1 gyllin = 20 (whale) skinn = 80 mark vag (= 4 x 20 old Norse weight marks) (cf chapter 7.5) constitutes the extension of this land reckoning;

(3) that, because whales were generally divided proportionally to infield holding and because the 80 mark vag presumably dates from the 12th century AD the latest, the land reckoning in mørk, gyllin and skinn is, consequently, no younger;

(4) that the intromittent character of the gyllin between the mørk and the skinn in a carefully integrated system of land reckoning testifies to it being a traditional element of old Norse origin; and

(5) that since the early Middle Ages the mørk, gyllin and skinn land valuation system existed concurrently with other reckonings like alin vaðmáls and kýrfóðr(svöllur) ('cow fodder [land]') for infield1 and sauðamórk for outfield land.

Lunddahl found his calculations confirmed in the áttatiál denomination (cf hypothesis 1) which still existed in some settlements at the turn of the century2 and in the width of ca 4 ells of the traditional rigs (teigar) of cultivated land. He also noticed that the conversions between mørk, gyllin, skinn and ell work smoothly and produce regular figures.3

We shall now look at the aspect of foreign influence.

After the first treaty between the Norwegian crown and Lübeck, 1250 AD, Hanseatic activities and influence increased steadily in northern Europe. From the mid 14th

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1 Cf Lárusson 1981i; Poulsen and Zachariasen 1971: 49; Zachariasen 1961: 390f.
2 See also Zachariasen 1961: 384.
3 Cf Lunddahl 1911: 431.
to the early 16th century the Bergen kontor of the Hanseatic League to a great extent monopolised the Norwegian trade. When Magnús lagabætir in 1294 issued trade privileges in Norway to the Hanseatic League, direct trade with the Faeroe Islands was prohibited. The ban was renewed in 1302 but in 1361, upon the Black Death, the Hanse merchants were granted the same rights to trade in the Faeroe Islands as Norwegians. In 1490, the Dutch received this right in Shetland.\(^1\) In the period ca 1415-1530, Hamburg, Bremen and Amsterdam vessels traded directly in the Faeroes and Shetland, partly on their passage to and from Iceland, to the dissatisfaction of the Bergen kontor and Lübeck.\(^2\) Moreover, from 1380/1397, Norway and Denmark were ruled by the same monarch until they were united in 1536.

Thus, it is a fact that the Faeroe and Shetland Islands in the 14th-16th centuries were within the Lübeck-Hamburg trading and monetary orbit, with direct links and influences as well as indirect ones via Bergen, the Netherlands and Denmark. However, I think this is not sufficient to sustain Zachariasen's view (cf items c-f, above) that the Faeroese gyllin originates in the Rhine gulden (even if this is taken in the widest sense). Furthermore, the aspect of origin must be kept separate from the issue of whether the Faeroese gyllin in due course possibly interacted with, and converged on, the currency standards of Lübeck, Hamburg and the Danish-Norwegian realm.

In my opinion, the Hamburg link cannot be assigned the weight implied in the florin/gulden interpretation, to the degree that the overall Faeroese/Bergen/West Norwegian trade and currency circumstances are effectually disregarded.\(^3\) Moreover, land valuation in Shetland demonstrates homogeneity (based on the Norse mark, etc) and

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2 Cf Dollinger 1966: 318, 546f; Smith 1984: 8f.
3 Cf Zachariasen 1961: 386.
stability through history. While Shetland during the 16th and 17th centuries had extraordinary close links with Germany and its commercial vocabulary was substantially German, "Shetlanders measured fish and cloth (but not land) in gulden". Recalling that land valuation is very conservative, it is difficult to see how and why the Continental gulden should have passed easily into the Faeroese land reckoning but not into that of Shetland. Furthermore, the origin of the division in 20 skinn of the Faeroes gyllin is only sought in the Continental florin/gulden (cf items c and f, above) which ignores the fact that the 20 division (cf item d) is omnipresent in the old Norse and mediaeval Faeroese accounting systems as the 80 marks vág and Lunddahl's calculations of the Faeroese land valuation has demonstrated. Later convergence is another matter which cannot be considered here. One might therefore surmise that the florin/gulden-gylden/gyllin etymology could either be invalid or secondary which, in turn, begs an alternative explanation of the (primary) Dano-Norwegian Faeroese gylden/gyllin term(s). It will be offered at the end of this chapter.

There exist sources which I think have not been fully appreciated, viz:

Firstly, an entry in the chartulary of Munkeliv (St Michael's) monastery in Bergen about its property in the Shetland and Faeroe Islands, from the late 15th century, 5

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1 Cf Smith 1995a-b (pers comm).
2 Cf Smith 1995a (pers comm).
3 Zachariasen (1961: 394) seems fundamentally mistaken when he writes that the estates of Munkeliv monastery in Shetland in the 16th century were stated in 'Shetlandic land gulden' (hetlendski jardargyllinin) and his reasoning on that basis. A close reading of the preceding accounts of the monastery's property there in the late 15th century demonstrates that the gyllene concern money rent payments (also offered in Shetland shillings). (Cf Unger and Huitfeldt-Kaas 1886: 162-162; see also Smith 1995a). The misunderstanding may rest on Evensen's (1908: 64) interpretation.
4 Cf Zachariasen 1961: 394.
5 Cf Unger and Huitfeldt-Kaas 1886: 152, 162; see also Evensen 1908: 64f.
reads as follows:

'Likewise, so much property owns Munkeliv monastery in Faeroe. ---. First, Vágur in the North Islands, 14 marks land [mærker jardar] and each mark gives 10 ells wadmål [alna wadhmaal], and 3 marks sheep rents [give] 6 gyllene a year. Likewise, Oyri 12 marks land [mærker jardar] of each mark [comes] 10 ells wadmål [alna wadhmaal], and 1 mark sheep rents [give] 2 gyllene. Likewise, the expensive mark ["Jtem marken dyra"].'

Secondly, the details about currencies, etc, in Bergen, the Faeroe Islands and Shetland, from 1551 at the latest, which bishop Gieble Pedersen, of Bergen (d 1557), entered in a manuscript of MLL (Thotts Samling, 1272 folio), like this:

'In Faeroe. Likewise, 1 mark gold is 8 mark Faeroese. Likewise, 1 mark Faeroese is 16 gyllin Faeroese. Likewise, 1 gyllin Faeroese is 8 loet silver. Likewise, 1 gyllin Faeroese is 2 Bergen gyliden as of old ["effter gammalt"].

In Shetland. Likewise, 18 mark burned in land [march brende i iorde godz] is 1 man's work as we call (it) in Norway, although bigger in Shetland. Likewise, of each 3 mark land [march jord] is in rent [landskyld] 1 pound butter and 6 ells wadmål. Likewise, 1 mark silver is 1 Shetlandic gildin. Likewise, 1 gildin in Shetland is 2 gyliden in Bergen and home there in Shetland ["oc ther hieme j hieltland"] 2 pounds of fish or 1 pound of butter or 6 ells wadmål ["vj alne watmool"]'. Gieble continues by describing how the tenants in Shetland, apart from the annual rent, every third year also pay to their landlord 6 Shetlandic gildin in aasete köp for

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1 Cf Unger and Huitfeldt-Kaas 1886: 163; see also Barentsen 1911a: 16; Evensen 1908: 65.
3 The intended spelling of the extended abbreviation g- cannot be determined for which reason the local variants are used.
every 18 mark land and 3 Shetlandic g(ildin) for beer on the same occasion (ie, contract renewal). Shetlandic g(ildin) are also mentioned in similar rules about communally held land.¹

To this might be added that in 1569 a royal charter determines the due which the monopoly merchants in the Faeroe Islands should pay 'of each Faeroes gylden' goods, value and income, and decrees that 'They shall also use such ell(s) and weight (measures) which of yore have been used in the Faeroe Islands and Bergen.'²

C. Bærentsen (1911a: 17) enters a question mark with the Munkeliv monastery remark "Jtem marken dyre" but attempts no interpretation. It presumably indicates that in the 15th century there existed (two?) different (land/sheep) mark standards in the Faeroe Islands, or in the Islands, on the one hand, and Bergen, on the other. The 'expensive' mark applied to at least a part of the Faeroese land (eg, that of Munkeliv monastery). The 'cheaper' mark could be a depreciated West Norwegian (/Faeroese) currency. If the entry dates from very late in the 15th century we may have to do with the standards of the mörk forngild from 1280/1300 (71.44 g silver) and ca 1500 (13.395 g), respectively. Otherwise, it seems to refer to the marks of the 12th century (214.32 g) or the initial standard of the mörk forngild (71.44 g).

The information Gieble offers may be summed up as follows:

Faeroe Islands:
(a) 1 mark gold Faeroese = 8 mark Faeroese.
(b) 1 mark Faeroese = 16 gyllin Faeroese.
(c) 1 gyllin Faeroese = 8 loet [ie, loth] silver.
(d) 1 gyllin Faeroese = 2 Bergen gylden 'as of old'.

¹ Cf NGL 4, 1885: 440f.
² Cf Evensen 1908: 101f [dipl 119]; see also 99f [dipl 118].
Shetland:
(e) 1 mark silver = 1 Shetlandic gildin.
(f) 1 Shetlandic gildin = 2 Bergen gylden.
(g) 1 Shetlandic gildin = 2 [lis]pounds of fish, 'in Shetland'.
(h) 1 Shetlandic gildin = 1 [lis]pound of butter, 'in Shetland'.
(i) 1 Shetlandic gildin = 6 ells of wadmal, 'in Shetland'.

Bergen:
(d) 1 gyllin Faeroese = 2 Bergen gylden 'as of old'.
(f) 1 Shetlandic gildin = 2 Bergen gylden.

The ancient ratio of 1:8 between burnt gold and burnt silver was transferred to weighed and forgild marks\(^1\) so the equation (a) is not helpful. Neither can we make use of (g) and (h) here.

The equation (c) makes 1 Faeroese gyllin equal to 107.16 g burnt silver or \(\frac{1}{8}\) mark burnt. This only harmonises with (b) provided the mark there is \(\frac{1}{8}\) mark burnt silver, a standard we find in the mark counted money of the 13th century; equation (c) might therefore actually read '1 gyllin burnt Faeroese = 8 loet silver' and, correspondingly, equation (b) '1 mark counted money Faeroese = 16 gyllin counted (money) Faeroese'.

In equation (d) the Faeroese gyllin counted makes no sense, only the Faeroese gyllin burnt. The addition 'as of old' presumably indicates an 'old' Bergen gylden in contradistinction to a 'new' one, perhaps that in (f) which is without qualification. Equations (c) and (d) give us 53.58 g silver for 1 old Bergen gylden, equal to 1 mark weighed money.

The Shetland 'mark silver' of (e) may theoretically be 214.32 g (burnt - also mentioned in the first text passage about Shetland) but it is more likely to be either the weighed (53.58 g) or the counted (26.79 g) mark money which then, according to (f), makes 1 ('new') Bergen gylden contain either 26.79 g or 13.395 g silver.

\(^1\) Cf Bjørkvik 1981c.
In equation (i), 1 Shetlandic *gildin equals 6 ells wadmal which, in turn, is 1 (lög)eyrir = 1/8 mark = 26.79 g silver. According to (f), 1 ('new') Bergen gylden would then actually be 13.395 g. This identifies the Shetlandic 'mark silver' in equation (e) as the mark counted money.

The ratio between the Shetlandic *gildin of (i) and the Faeroese gyllin burnt of (c) is 1:4; such a ratio seems only documented with the mark weighed money from the 12th to the 13th century AD. In other words, the Faeroese gyllin and the Shetlandic *gildin seem to have been at par in the 12th century, as gyllin/*gildin burnt, a standard which the Shetlandic *gildin departed from in the 13th century when it came to be reckoned in (depreciated) money weighed.

When sources from the mid 15th century often mention a Bergen (calculation) gylden, equalling 12 Danish/Lübeck skillinger, and a land register from Båhus fief also mentions a gylden of the same value in 1540,¹ chronology and the general tendency of currency depreciation suggest that the reference is likely to be the old mark forngild (à 71.44 g). Although a West Norwegian forngild mark in the 15th century appears generally to have contained 18 skillinge² such a division makes the Bergen gylden of 12 skillinge equal to 47.626665 g silver, or 3.56 times more than Gieble’s 'new' Bergen gylden, which is not plausible. However, by the eastern and northern Norwegian division of 16 skillinge to the forngild mark,³ the 15th century Bergen gylden would be 53.58 g, equivalent to Gieble’s old Bergen gylden and to 1 mark weighed money of the 13th century, or 4 times more valuable than Gieble’s 'new' Bergen gylden.

In the analysis of the Faeroese/Bergen (West Norway), the Shetland/Bergen (West Norway), the Faeroese/Shetland and

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¹ Cf Steinnes 1936: 133, 137, 150.
² Cf Steinnes 1936: 133, 152.
³ Cf Steinnes 1936: 133, 152.
the Bergen evidence, we have found the following gyllin, *gildin and gylden standards:

- Faeroese gyllin burnt à 107.16 g silver (= ¼ mark burnt = 4 aurar = 8 loth);
- Faeroese gyllin counted money à 1.674375 g silver (= 1/128 mark burnt = 1/16 eyrir burnt = 1/8 loth);
- Shetlandic *gildin burnt à 107.16 g silver (= ¼ mark burnt = 4 aurar = 8 loth; inferred);
- Shetlandic *gildin money weighed à 26.79 g silver (= 1/8 mark burnt = 1 eyrir burnt = 2 loth);
- Gieble's old Bergen gylden à 53.58 g silver (= 1 mark weighed money = ¼ mark burnt = 2 aurar burnt = 4 loth);
- 15th century Bergen gylden à 53.58 g silver (= 1 mark weighed money = ¼ mark burnt = 2 aurar burnt = 4 loth);
- Gieble's 'new' Bergen gylden à 13.395 g silver (= 1/16 mark burnt = 1 loth).

Except for the last one, all denominations seem to relate to the currency reckonings used prior to the adoption, about 1280-1300 AD, of the forngild mark with which they apparently are incompatible. Moreover, it looks as if the Faeroese and Shetlandic denominations in the 12th century formed a common gyllin/*gildin burnt silver standard from which the Shetlandic *gildin then parted in the 13th century.

This refutes Zachariasen's items (c), (d) and (e), above, and brings with considerable certainty the origin and early history of the gyllin/*gildin/gylden beyond the scope of the Continental florin/gulden (as of 1252 AD), both chronologically and regarding its way of functioning.

Mediaeval Norse units of land measurement are termed by their value in mörk, eyrir, ertog and penningr of the various kinds (burnt silver; weighed, counted and forngild money), or by a variety of other legal tender. Documented mediaeval denominations of land measurement in Shetland are of the former kind, or modifications of them, however, based on the special Orcadian-Shetlandic 144 penny mark.¹ Evidence from the 13th to 16th centuries shows that both

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¹ Cf Smith 1995a-b (pers comms).
mørk (etc) and alín vaðmáls must have been units of land measurement in the Faeroe Islands during the Middle Ages. The analysis above also demonstrates the likelihood of the skinn value unit having been of considerable importance in the Faeroe Islands all the time from the Norse Settlement, and that the gyllin/*gildin/gylden value unit appears to have existed there from at least the 12th century. A sporadic and even a more systematic use of them as denominations of land measurements in the Middle Ages, although not recorded, is therefore possible in which case the adoption of gyllin and skinn in the Faeroese land valuation, and by extension whale appraisement, would have been a more prolonged and gradual process than Zachariasen suggests.

On the basis of the reasoning in this chapter I advance the hypotheses

(1) that in the 11th century AD at the latest a (common) Norse gyllin/*gildin/gylden denomination, called *gildingr,1 developed which originally was worth ¼ mark burnt silver, then equalling ¼ mark weighed as well as ¼ mark counted money, or 120 pennies, and which in the course of time became an integral part of the Faeroese mørk/gyllin/alin/skinn value and land reckoning;

(2) that in the subsequent centuries the Faeroese gyllin, the Shetlandic *gildin and the Bergen gylden diverged;

(3) that in the Faeroe Islands the gyllin burnt silver (à ¼ mark burnt) continued to exist into the 16th century while the Faeroese gyllin counted money followed the depreciation of that currency; and that the Shetland *gildin and Bergen gylden depreciated with the money weighed;

(4) that in the course of the late mediaeval depreciation the various gyllin, *gildin and gylden weighed and counted money attained smaller values (eg, 2, 1 and 1/8 loth silver) which easily functioned within the Danish-

1 For the term, cf below.
Norwegian/Lübeck mark reckoning.

The land register of Munkeliv monastery from the late 15th century refers to land units and rents in the Faeroe Islands in a very traditional manner (eg, by ells wadmal). For that reason the gyllene there most certainly refer to the gyllin burnt silver (½ mark burnt), rather than the Faeroese gyllin money counted (1/128 mark burnt). At the same time the Bergen glylden (¼ mark burnt) was only half of the Faeroese gyllin burnt. Therefore, the remark at the end of the entry about 'the expensive mark' seems to be a reminder about the ½ mark burnt Faeroese gyllin but whether in contradistinction to the Faeroese gyllin money counted or the contemporary Bergen glylden cannot be said, although the following points towards the latter.

In the late 15th century the Bergen glylden weighed had a ratio to the Faeroese gyllin burnt of 1:2 which in the first half of the 16th century changed to 1:8. The situation described in Zachariasen's item (h), above, might, thus, be explained by the ancient Faeroese gyllin burnt in the century prior to 1584 having widely been superseded by the old Bergen glylden, or rents been fixed somewhere between the two denominations. Such an interaction between local Faeroese and Bergen units of value, weight and measures seems probable.

The question we set out with, 'What is the origin of the Faeroese gyllin?', I wish to answer tentatively with the hypothesis,

firstly, that already in the 9th century AD in Norway, and by extension in the Faeroe Islands, a whale of 10 standard short ells in overall length/20 *hvalsdalnr/20 (whale) skinn constituted a particular legal entity, called *gildingshvalr/*gildingsfiskr, or (for short) *gildingr, being the maximum sized unshot whale which a free sub-odal person could appropriate (einfyndr), and that in the 11th century such a whale was valued at 4 aurar or ½ of a mark
burnt silver;\(^1\) and, pursuant to chapter 7.5.4,
secondly, that persons of odal rank or above were
permitted to appropriate an unshot whale up to the value of
1 mark burnt silver, or 2 "gildingar.

It is appropriate to explain the etymology and word
formation of "gildingr, "gildingshvalr and "gildingsfiskr
which have here been introduced.

The primal meaning of gildr (adj, m, ON; cf gild, E) is
'valid', 'valued at a certain size, quantity and quality'
and 'payable with a certain price'; gilding (f) means
appraisal, taxation.\(^2\) Gild, in early 17th century
Shetlandic Norn means "of full value; full-grown".\(^3\)
Gildingr (m, ON, I) is known in Iceland (cf GG 2: 125, 130;
3: 402), from the 12th-13th century AD, for a cod of a
certain size used as a unit of value and extent.\(^4\) Perhaps
gilling(e), girling (E), used about a young salmon and
stated to be of unknown origin,\(^5\) is related to it either
through Old Norse or Anglo-Saxon? In fact, gildingr is a
neutral term and the cod (etc) connotation seems secondary;
nothing precludes the word from being used about other
animals under the same definition. By suffixing whale and
fish (in the comprehensive mediaeval sense) we arrive at
*gildingshvalr, *gildingsfiskr, and, by extension, modern
Faeroese gyllingshvalur and gyllingsfiskur.\(^6\) Whether the
former were merely old Faeroese terms or were also current
in Norway along with einfyndr/einfundr (sb, m; cf
einfyndinn/einfundinn, adj, m), we cannot say. One might
conjecture that such a whale could also have been called

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\(^1\) Cf at the end of ch 4.4 where the question is raised about how the
20 and 18 ell size limits may originally have been established.
Hødnæbø 1972: 125; Jakobsen 1, 1985: 221; Magnússon 1989: 245; Storm
and Hertzberg 1895: 238.
\(^3\) Cf Barclay 1962: 95; Shaw 1980: 208; see also Fenton 1978: 595.
\(^4\) Cf Fritzner 1, 1954: 595; Jakobsen 1, 1985: 221; Magnússon 1989:
245.
\(^6\) Cf Jacobsen and Matras 1961: 134.
7.7 Conclusion

In the past, Norse cetacean size figures, the Faeroese (pilot) whale appraisement, and the Faeroese money, land and whale gyllin have been considered in isolation. They have involved either unsolved basic problems or what this author considered to be questionable assumptions and conclusions. Based on an integrated approach to these divers subjects the present study seems to have solved basic problems and clarified other issues. As a result it offers a coherent frame of reference concerning Norse cetacean size figures, whale appraisements and divisions and has demonstrated that these aspects are part of a common Norse tradition which is discernible as from the 9th century AD. The history of this cultural complex is characterised by a remarkable stability over a period of a thousand years, on the one hand, and interesting regional developments in Norway, the Faeroe Islands and Iceland, on the other hand.

Many difficulties still beset this subject but with the complexity of the whole issue acknowledged and the confusion concerning relevant Norse terms of value, weight, size, land area and currencies tentatively removed, it should be possible to refine the interpretation and to deepen and expand its scope.

The results of this study appear to have considerable repercussions. Firstly, all Norse pre-1900 whale size measures and appraisals can now be considered on a rational basis. Secondly, the results necessitate that the analysis of the Faeroese pilot whaling skinn statistics, as from 1584,\(^1\) takes into account the short old Norse ell; the old Norwegian/Faeroese and old Norse linear equisegmental appraisement scales; and anterior and posterior fixed

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\(^1\) Cf., inter alia, Bloch and Zachariasen 1989; Bloch 1994.
points at the eye and blowhole, on the one hand, and
basically the genital opening, partly shifting towards the
anus, on the other. A comprehensive analysis along these
lines would greatly advance our understanding of the Norse
whale appraisement systems and their dynamics. Thirdly,
because the hitherto accepted interpretative frame of the
Faeroese *gyllin*, which may suitably be called the
florin/gulden paradigm, has been shown to be highly
prejudicial and presumably invalid a critical reassessment
of Faeroese mediaeval to early modern economic and farming
history, in general,¹ is required. A review of the
Shetlandic *gildin, gyllin, gylden, gulden, guilder* and
*florin*² issues appears likewise appropriate.

² Cf Jakobsen 1, 1985: 221, 249f.
8 Ritual aspects in Norse whaling

8.1 Ritual aspects in traditional whaling, in general

R.F. Heizer, in his dissertation *Aboriginal whaling in the Old and New Worlds* (1941 ms), presents a table of cultural traits associated with various 'whale cults'. When what this author considers to be socio-economic items are left aside, the remaining ones (3-21) indicate the range of possible ritual aspects in traditional whaling although they refer mainly to the North Pacific and American Arctic regions, viz:²

(a) whaling equipment and esoteric knowledge is inherited; young whalers are initiated; individual ownership of whaling songs exists;

(b) the whaling season is a special taboo period; whalers secrete themselves during preparations; whalers observe sexual abstinence; clothing, boat and implements are cleaned before the hunt; whalers have special headgear, nose cut, tattooing and face painting; whalers' wives stay quietly at home during the hunt;

(c) human corpses are used for magic purposes by whalers; human remains are carried in the canoe (boat) during the hunt; amulets are used in connection with the hunt; and

(d) the dead whale is received with demonstration on shore; upon the arrival at shore the whale is given to drink; particular whale parts are treated ceremonially; the whale spirit is returned to the sea; celebration of a whale festival; and renewing of sacred fire during the whale

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1 Cf Heizer 1941 ms: table ii (at p 121). Recent scholarship has rejected the terms 'animal worship' and 'animal cult' as misleading interpretive categories. In totemism the animal categories form part of a social classificatory system that does not imply worship or cult of the animal. Similarly, "The universal practice among hunting peoples of respect for and ceremonial behaviour towards animals stems from the religious customs of the hunt and not from worship of the animal itself." (Cf Enc Br, Mic 1, 1981: 387).

2 Here rearranged according to main categories.
festival.

Heizer (1941 ms: 145f) concludes that aboriginal whaling in most parts of the world seems basically a utilitarian pursuit and that only in the North Pacific and American Arctic regions prominent psychological and esoteric aspects developed in extension of earlier animal ceremonialism. We shall look more closely at this.

The Norse mediaeval and (early) modern sources used for this thesis were scrutinised concerning religious customs and related beliefs, in a narrow sense, relating to whales, whale products and whaling. It only produced three cases, namely two associated with the same locality in West Norway and one in Iceland.

8.2 Offerings to the old Norse god Njörör for whales

In 1785/86, A. Christie explains that after minke whales had been enclosed and killed in the inlet Kvalvåg, off Skogsvåg, in Sotra, Hordaland, West Norway,¹ they were landed at a place called Kvalvoll,² in the inlet Kvalvik on the western side of Kvalvåg:³ 'it is a small green slope encircled by stones. It is told that in olden times the one who swore or quarrelled inside this (ring) lost his share in the whale. Probably an indication of how important the whaling was considered in the days of old.'⁴

In 1932, A. Barsnes rediscovered Kvalvoll which is located on a sloping grass plain to the north of the brook falling into Kvalvik. Between small knolls, stone garths

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¹ Kvalvåg is an inlet off Skogsvåg but for distinction and convenience the wider of the two place names (Skogsvåg) is often used to designate this Kvalvåg locality, a practice which shall be followed here.

² Modern spelling.

³ Cf Barsnes 1935: 71; Norges sjøkartverk, chart 23 (1:50,000), reproduced by Stoltz 1957: 133; Anon 1985b.

⁴ Cf Christie 1785/86, UBB ms 221: f17r; see also f11r.
enclose a cleared plain, ca 25 m long and 9-12 m wide. In its upper part there is a small low circle of stones in the middle of which dark mould and numerous smaller stones are found, around the stone circle the earth is trampled down.\(^1\) To judge by a photograph published by Barsnes,\(^2\) the outer diameter of the stone circle could be 1.8-2.0 m. A garth marks the upper boundary of the Kvalvoll,\(^3\) or Vigslavoll as it was also called.\(^4\) J.E. Hummelsund (1970: 312) describes the central site as a pile of stones (røys), partly overgrown with heather, being 5 m in diameter and located 8 m from the upper garth.\(^5\)

In 1932, Barsnes suspected the stone circle to be an old sacrificial site but he could learn nothing about it. In 1935, he revisited the place, together with then 72 year old Hans Skoge (b 1863):\(^6\) Hans Skoge told him that until 1887 the peasant fishermen in Skogsvåg cut the tail off minke whales and placed it, with the flukes up and bent together, supported by stones, in a hole in the stone circle; 'Then the sun and wind should wither it away.' Skoge was 24 years old when the last tail was raised at the site in 1887. When Barsnes pointed out that he had 'taken part in sacrificing to the old gods', Skoge replied: 'That I knew nothing about. It was an old custom that we should do it like this.' Caused by land rise of '1 m or more', the whales could no longer, not even during high tide, be hauled ashore below Kvalvoll and were as of 1888 landed at

\(^1\) By Barsnes (1935: 70-73 [incl ills]) called 'sacrificial site'; cf also Christie 1785/86, UBB ms 221: f17r.

\(^2\) Cf Barsnes 1935: 71, upper photograph.

\(^3\) Cf Barsnes 1935: 71*.

\(^4\) Cf Barsnes 1935: 71; Østberg 1934: 77 [map legend].

\(^5\) Considering the available information and the thoroughness with which archaeological and historical sites have been registered in Norway it seems strange that Kvalvoll/Vigslavoll is not marked as such a site on the main map of Økonomisk kartverk (cf Anon 1985b). One can only hope that this is an omission and that the site has not been destroyed.

\(^6\) Cf Barsnes 1935: 70f*. Hans Skoge's surname refers to the farm Skoge where Kvalvoll is situated.
a more convenient site a little distance away. Skoge recalls that fighting and the use of hand weapons (but not swearing and rude talking) inside the garth caused the loss of one's share. Designated shares were placed outside the upper garth of Kvalvoll while the variable shares were 'placed inside the garth along the walling. It was the latter which could be subject to dispute and therefore they [ie, the forefathers] had organised things so that the division could take place peacefully - inside the garth.'

Kvalvoll/Vigslavoll is clearly a sanctuary. The sacrosanct area, subject to helgr (f, ON), between the garth and the water edge (ca 25 m long and 12 m wide) not only secured the peace during the flensing and division of the whales, it also centered on, and presumably offered general protection to, the sacrificial 'tail raising' site. Kvalvoll seemingly derives from *Hvalvöllr (ON) ('Whale Plain') while the other name, Vigslavoll (NN), will have been *Vígsluvöllr (ON) ('Consecrated Plain').

Archaeological dating of the site is not available but its pre-Old Norse origin seems supported by geological evidence concerning the land rise in Sotra (cf chapter 9.7.6). The old landing site may therefore have been adopted by the peasant whalers sometime at the beginning of our era, if not earlier. Because flensing and division must take place at the landing site it seems permitted to consider the use of the landing site, the creation of the sanctuary and the ceremonial tail raising to coincide in time.

1 Barsnes 1935: 70f. This clearly resulted in the tail raising being discontinued and presumably indicates that the sanctuary as a whole was also abandoned.

2 Cf Barsnes 1935: 71.


It is obvious that raising a whale’s tail in open air has nothing to do with Christianity. E. Wexelsen (1987: 61f) interprets the tail raising as a sacrifice to ‘prehistoric’ gods following a successful catch. Barsnes (1935: 70) also speaks of gods in the plural but he neither elaborates on the issue. In my opinion the tail raising relates to the old Norse god Njörör.

In Gylfagynning (ch 23) of the Prose Edda by Snorri Sturluson¹ it is stated about Njörör that ‘he controls the motion of the wind ["hann ræðr firir gavngv vindz"] and stills sea and fire; he shall be invoked for seafaring and catching ["ahann skal heita til sæfara ok til veiða"]).² He is so wealthy and prosperous that he can give them [i.e., those who invoke him] abundance of land and movables; --- but Njörör wants to be near the sea … in Nøatún.³

According to Hákonar saga góða (ch 14) Njörör and Freyr were invoked ‘for prosperous year and peace’ ("til árs ok friðar").⁴

Njörör seems to have been among the best known gods in the last phase of Norse heathendom, in the 9th-10th century AD, but worship of him goes back to at least the early Iron Age as his name occurs in composite place names with -heimr and -vin from the beginning of our era.⁵ The group of old Norse gods called Vanir, to whom Njörör and Freyr belong, are generally associated with fecundity worship and farming. In prominent (inland) farming districts of Sweden and Norway, Njörör and Freyr were invoked in similar ways but Njörör was also attached to the coast, navigation, the sea, and hunting and fishing there. His name occurs

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¹ Cf item A.16.4.

² In this context veiði is often incorrectly rendered as ‘fishing’ (cf, eg, Binder 1979: 352; Dumézil 1977: 73; Haussig 1973: 73).

³ Cf Jónsson 1931: 30; see also Áðalbjarnarson/ÍF 26, 1979: 16, 23. Nøatún means ‘Enclosure of ships’.

⁴ Cf Áðalbjarnarson/ÍF 26, 1979: 168, see also 23.

frequently in place names on the west coast of Norway, from West Agder to North Trøndelag.¹ Njörør worship may have been particularly intense in South Hordaland where the island of Tysnesøy was formerly called 'Njörør's district' (Njarðarlóg) and where other place names are also associated with Njörør and the corresponding goddess Nerthus.² Njarðarlóg is approximately 40 km south of Skogsvåg.

All this indicates that the peasant fishermen in Skogsvåg invoked Njörør for good whaling by raising the whale tails at *Hvalvöllr/Víglvöllr. Moreover, it would also be logical that the tails were left withering away by wind and sun, as Hans Skoge described it, because Njörør controlled the motion of the wind.³ It may be added that into the latter half of the 18th century, Njörør was thanked by name for good (trout) fishing in the neighbouring Hardangerfjord district.⁴ Indeed, no other god or goddess of the old Norse pantheon appear to offer himself or herself for serious consideration in relation to the whale tail raising.

With the Skogsvåg tail raising apparently constituting an unbroken tradition from prehistoric times to 1887 it seems unlikely that the name *Víglvöllr/Vigslavoll originates in a Christian sanctification. However, after the Christianisation people presumably thought of both the name *Víglvöllr and the obligation to keep the peace within its bounds in Christian terms, despite continuing with the tail raising. This may be explained by requirements for a coherent world view in past times being different from what they are today and by the tail raising having become a secular social custom that had lost its meaning as a conscious religious act. Nevertheless, it is

¹ Cf Halvorsen 1981: 323.
³ Cf Gylfaginning, above. See also Bø 1982: 332; Simek 1993: 258.
⁴ Cf Opedal 1943: 49; see also Dumézil 1977: 76.
remarkable that the tail raising survived 350 years of Lutheran Orthodoxy and Pietism.¹

Mediaeval Norse sources hint at the hvalfjara ('whale beach'), ie, any (impermanent) place of the stranding, landing, flensing and division of a whale, possibly being inviolable as a matter of custom (customary law?) although it may not always have been respected.² The explanation seems to be an acknowledgement of the right of people to obtain the necessities of life and that people could not carry weapons and defend themselves during, eg, farm work, fishing and other heavy work, - although lances, knives and axes were certainly close at hand when people processed whales.

The bounteous whaling in Skogsvåg,³ together with the landing and flensing of the whales at one and the same site during perhaps 1500-2000 years, created and supported a strong organisation and related customs. The outstanding whaling may indeed have given rise to particularly splendid rituals in order to render thanks for divine benefits but they and the whole arrangement in Skogsvåg presumably reflect a common pattern. It is therefore likely that 'whale beaches', in general, with gjöf Njarðar (I;
'Njörōur's gift'), 1 were originally sacrosanct and that offering was made to Njörōr on the site. Because driftage and towing of bigger whales depended on wind, weather and topography such offerings are unlikely to have been repeated often at the same place so they have hardly left traces.

8.3 Returning the whale's eyes

Hans Skoge also told about a custom of a different kind in Skogsvåg. People took the whale eyes and threw them in the direction the whale entered the voe, 'so the whale could see (in order) to return'. When hurling the first eye they should shout 'One, two!'; the other eye had to be hurled farther into the voe while they shouted 'Six, seven!'. Finally, forcefully shouting 'A whale in the voe!' would cause the next whale to enter. If, however, the first eye went farthest into the voe the whale would turn around and move out of the voe again. It was the children who ultimately kept the custom alive; for them it was fun. 2

The eye throwing is obviously an ancient rite, of the category (d) in chapter 8.1, which turned into a children's game and as such lived into the second half of the 19th century. The ritual presumably implies that people originally considered that the whale had an (individual) spirit which reincarnate after each catching. It clearly pertains to the hunter-prey relationship and is, thus, at a different level than the offering to Njörōr. On the other hand, it is tempting to consider the eye throwing to be as ancient as the sanctuary and the tail raising in Skogsvåg. The notion of the whales having (individual)

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1 Cf the Icelandic expression "Gáll (galli) er á gjöf Njarðar" ('There is a defect in Njörōur's gift') which is known from the second half of the 17th century. Its origin is uncertain but H. Halldórsson (2, 1980: 57) thinks it could be ancient, possibly deriving from some lost myth. (See also Friðjónsson 1993: 175).

2 Cf Barsnes 1935: 74*.
spirits which reincarnated after each catching are of such an (abstract) nature that it is likely to have been widespread among the ancient Norse. Enabling the whale to find its way into Kvalvåg in Skogsvåg by throwing its eyes in the direction of the entrance of the voe is very befitting when the labyrinthine topography there is considered. Similar customs may have existed at other whaling voes but the underlying idea seems not to make much sense beyond them.

8.4 Whale penises eaten in Iceland: Aphrodisiac - Norse phallic cult?

In the Danish version (1737) of JÖfG's 'Icelandic fishlore' (Ichthyographia Islandica) whale products are only mentioned in very general terms, but in the Icelandic version which JÖfG prepared 1737-1742 he explains that in Iceland whale is eaten fresh, pickled, and dried, after being boiled, furthermore that whale 'penises eaten are thought to induce (magic) power [or strength] and growth in the person who eats (them)' ("Getnaðar limirnir etnir er haldið hleypi megni og vexti í þann sem etur"). Kristjánsson (5, 1986: 72) cites this passage in relation to the use of whale for food but neither he nor apparently other scholars have addressed the associated notion. As the statement seems to be unique it is difficult to place it in a historical context and to interpret it duly; an attempt shall nonetheless be made.

Norse literature from the high Middle Ages contains, in Flateyjarbók, a much debated story (Völsabátttr) which describes a domestic horse phallus (Völsi) cult in a

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1 Cf KBK Rostgaard ms 111: 28r.

2 Cf LBS-JS ms 247: 33.

3 "Phallus ... An image of the male generative organ, symbolizing the generative power in nature, venerated in various religious systems" (cf SOED 2, 1987: 1567).
north Norwegian setting around the time of Christianisation. Whether Völsápatr is partly or wholly a Christian apologue or not, it seems to testify to some phallism (phallic cult) in Norway during Viking and possibly early mediaeval times.

Eating whale penises for megin and vöxtur is a concrete act which seems to imply that they were used as an aphrodisiac in Iceland in the first half of the 18th century. JófG's term megin also suggests the custom being reminiscent of phallism. Norse phallism is first and foremost worship of the fecundity god Freyr who is characterised by an immense penis. In the whole of the animal kingdom one finds no bigger penises than those in large whale bulls which perhaps explains their role here.

Like with Völsí, one could imagine that Norse households in heathendom kept a dried (whale) penis in linen, together with onions and other strongly smelling or aromatic vegetables, and that it during various ceremonies was handed among the household members with verses made for, and spoken to, it. At a particular celebration it might have been boiled and eaten to induce (magic) power and growth. If people did not want to consume the fetish, another (fresh) penis could presumably be eaten instead. Such consumption would probably continue beyond the existence, and possibly the memory, of the fetish itself as an independent superstitious custom, similar to the one


2 *Ie, "... religious activity that involves sexuality or that utilizes the symbolism of the male or female sexual organs" (Enc Br, Mic 7, 1980: 925); "... the worship of the phallus, or of the organs of sex, as symbols of the generative power in nature" (SOED 2, 1987: 1567).

3 Enc Br, Mic 1, 1980: 443; SOED 1, 1987: 86.

4 *Magna (ON, I) means to fill with (magic) power (ie, megin) (cf Blöndal 2, 1980: 520, 537; Halldórsson [1785/1814] 1992: 313, 322; Kuhn 1968: 138; Lid 1980: 10). The interpretation depends partly on whether megin is interpreted in the direction of physical strength and power or that of supernatural power and strength.

5 Cf Briem 1981.
described by JÓfG. It seems implausible that the custom would be of foreign origin and, thus, introduced into Iceland in early modern times.

8.5 Conclusions

Special natural circumstances helped sustain the peasant fisherman minke whaling in Skogsvág virtually unchanged from prehistoric times to the late 19th century, just long enough for some ceremonial aspects to be recorded. The tail raising and eye throwing provide us with a glimpse some 1500-2000 years back in history. They seem to reveal offerings to Njórðr for the good catches as well as beliefs about the spirit and reincarnation of the whales. The whole arrangement in Skogsvág also indicates that in late prehistoric times any whale stranding, landing and processing site may have been a sanctuary. Thus, Heizer's conclusion (cf chapter 8.1) that traditional whaling outside the North Pacific and American Arctic regions has essentially been a utilitarian pursuit, devoid of religious, spiritual and psychological connotations, cannot be sustained concerning Norse whaling of late prehistoric and early historical times. The issue must clearly be addressed against the regional socio-economic and cultural background and its changes through history. Many beliefs and customs have passed into oblivion, in the Norse context possibly also some similar to those mentioned by Heizer.

Viewed in a wider perspective, the tail raising in Skogsvág suggests, in my opinion, that a unified notion of godsend marine produce, including whales and wreck, had already formed in prehistoric times within Norse polytheism as *gjöf Njarðar (ON; 'Njörðr's gift') which smoothly translated into the corresponding Christian guðs gjöf.

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1 The adoption of the crossbow, presumably in the high to late Middle Ages, instead of the spear and/or the ordinary bow and arrows for wounding the whales is of secondary importance.
('God’s gift') in its mediaeval providential form (cf chapter 6.2.K13). It is likely that ‘Njörör’s gift’ was perceived in a more concrete way than was later ‘God’s gift’ because the (universal, monotheistic) God of the Christian faith appears to be a more abstract notion than was Njörör in Norse polytheism. The increased abstraction in the course of transition to the mediaeval ‘God’s gift’ may have been accompanied by a kind of ‘secularisation’ of, inter alia, whaling which later unfolded in the Protestant capitalistic utilitarianism (in the Weberian sense).²

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1 In English usually called God’s send, godsend.

9 Whale coming, driving and trapping

9.1 Synopsis

The catching of migrating and straying cetaceans may, inter alia, be by means of drive hunting/beaching, drive hunting/trapping, and trapping of migrating and stray animals. These methods partly overlap. In the history of peasant fisherman whaling in the Norse area drive hunting/beaching is considered to be a comparatively common method. On the other hand, the only kinds of trapping (in a technical sense) which have hitherto been acknowledged are the enclosure of minke whales and the seining of dolphins and orcas at a few places in western Norway, using either specially made nets or ordinary herring seines. In this chapter we shall concentrate on the issue of whale traps and whale trapping which, however, requires some consideration of drive hunting, too. Hitherto, scholars have not differentiated clearly between driving and trapping sites, and there exists considerable confusion about the Old Norse and Norwegian terminology in that respect.

It is crucial for the understanding of the argument in hand that the reader distinguishes between original Old Norse and Dano-Norwegian (technical-analytical and legal) terms for sites, trapping arrangements, etc, as defined and used by this writer, on the one hand, and the often ambiguous terminology and notions by other scholars, on the other. These terms have been given tentative renderings in English,¹ the general connotations of which should not be

¹ The renderings are as follows: vágr (ON), våg (N, D) = 'voe'; vik (ON), vig (D/N, D), vik (N) = 'creek'; and 'inlet' implies any smaller (undefined) indentation of the coast. In modern Norwegian (etc) usage and literature våg and vig/vik are often used in the general sense of 'inlet' which, in my opinion, often becomes mixed up with the technical and legal meaning in mediaeval sources. In modern Faeroese hválvágur is a suitable (traditional) site for pilot whale drives; current usage is to call it 'whaling bay' in English, a practice which is followed in this treatise.
permitted to interfere with the argument.

9.2 Natural strandings of cetaceans

Cetaceans may come within reach of humans for a variety of natural reasons. They may be alive or dead when coming ashore: Live strandings are either natural or caused in hunts. Natural live strandings may be caused by cetaceans using geomagnetic contours as a travel cue\(^1\) or by orca attacks. Carcasses originate from natural death at sea (including orca attacks) or from wounding by humans, causing the animal's death (inshore or offshore), both of which may result in the carcass drifting inshore and possible ashore. Natural live strandings of cetaceans are rare events compared to the stranding of carcasses.\(^2\) The number involved in each natural live stranding depends on the social habits of the species concerned.\(^3\) Similarly, in cetacean drive hunts and trappings (as in all hunting), specific biological and behavioural aspects in the species are exploited, in particular social bonding, sensitivity to noise and reaction to (other) pain. Drive hunts possibly also exploit the weakness in the cetacean strategy of travelling along geomagnetic contours.\(^4\)

Many dead whales will disappear at sea. Some drift inshore and ashore because they float on the blubber or are blasted through putrefaction.\(^5\) The whale's body mass, the internal body heat and its blubber insulation cause very rapid putrefaction in whale carcasses. This results in

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4 Cf Klinowska 1990: 12, see also 1; and 1989: [6f].

decomposition of the intestines within a day and quickly thereafter also spoils the meat.¹

9.3 Drive hunting and trapping of cetaceans: Introduction, definitions and hypotheses

We shall briefly establish the basic analytic elements involved in the whaling methods which are here called 'induced ebb-stranding', 'drive' and 'trapping'.

The principle of manngard² involves a barrier or fence formed of people which is often an important component in pre-modern large game hunting.³ In practice it involves the cooperation of many, more or less unarmed, persons who surround, and possibly drive, the quarry. The greater manpower and more elaborate organisation offset the comparatively simple and less abundant weapons and other gear.⁴ In northern Europe the manngard was used in sealing into the 20th century whereby the hunters were only equipped with sticks or clubs; occasionally the method was combined with the use of nets.⁵ However, hunting of marine mammals in water requires more than a simple manngard if it is to be successful.⁶ In taking cetaceans, usually pods of small to middle-sized odontocetes, many boat crews of experience must cooperate;⁷ basically they apply sound, missiles and lances.

¹ Cf Eschricht 1845: 164f, 196, 199; Helland 1921: 337; Lytle 1984: 42; Sandison 1896: 45.


³ Cf Nordby 1935: 127.


⁵ Cf Nordby 1935: 127f; see also Gjessing 1955: 40; Klein 1935: 136-139.


⁷ Cf Klinowska 1989: [4, 6]; 1990: 1, 7-9, 12.
A. von Brandt’s valuable systematisation of fishing methods and principles\(^1\) counts only man-made constructions and implements;\(^2\) the *manngard* is only implied in his category of drive-in fisheries.\(^3\) So far a framework for analysing inshore whaling activities, other than those using wounding and attaching piercing weapons (arrows, spears, gaffs, harpoons), seems lacking. This student suggests the following tentative definitions which may be considered as thorough modifications of von Brandt’s sections 5 and 11 (1984).

The securing and killing of cetaceans depend on three factors, *viz*: (a) the character of the whaling site, *ie*, (aa) whether the cetaceans must be killed while they are free-swimming or afloat, although restrained either by a line or an enclosure (*eg*, a *manngard*, net, seine, poles, beams or a lattice); or (ab) whether they can be killed ashore after having been grounded; (b) the enclosing method (*cf* item aa); and (c) the securing and killing weapons employed.

*Manngard* and drive fishery: Fish and other aquatic animals can be caught by using the *manngard* and driving in various ways, basically through frightening the animals (by audible, visual and painful physical means).

Pinnipeds on land may be prevented from escaping into the water by the *manngard* (occasionally aided by dogs); similarly, (larger) cetaceans in shallow waters may be prevented from reaching deeper waters until the sea ebbs away under them and they strand (‘man-induced ebb stranding’); ‘frightening’ may also be used as the sole means of retarding whales inside an inlet or fiord,\(^4\) prior to, and during, the employment of piercing weapons.

The driving of cetaceans traditionally makes use of

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\(^1\) See also Dorsteinsson 1980: 12-14.


\(^4\) Cf Christie 1785/86, UBB ms 56: f51v; Olafsen 1, 1772: 546.
beating in the boats, shouting, throwing stones (producing noise, bubbles and touch). A long rope, with attached switches of straw or heather, pulled between boats behind a pod has a similar effect. The drive is intended to direct the animal, or animals, towards a place where it, or they, can be secured and killed: this may be a shore where they can be grounded or a place where they can be seined or trapped. Pods of small to medium-sized odontocetes may in the final phase of a drive hunt be caused to ground themselves in panic by hurting and wounding rearward animals of the school.

Traps are natural topographical features and special constructions and implements which the prey enters and which hamper its escape; they may have one or more chambers which will be closed after the prey has entered.

Barriers are (a) walls or dams (mostly of stones, especially in tidal areas); (b) fences (stockades, wattle work, straw screens and nets, also in labyrinth arrangements); (c) lattices (grates); and (d) natural or constructed watched chambers, closed by the fishermen after the prey has entered.

Nets and seines are used as a fence; they may either be ordinary fishing nets or gear exclusively made for the purpose. In our present context it suffices to distinguish between (a) tangle nets (e.g., for taking of seals and harbour porpoises); (b) beach and boat seines (for herding and enclosing shoal fish and cetaceans); and (c) gill nets (used in the mediaeval Scanian herring and modern cod fisheries).

The drives, trapping and killing of animals invoke hunting and other property laws and customs. The division of the catch will generally reward the labour of the participants and other necessary factors involved in the

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1 Gun shots and sonar are here left out.
2 Von Brandt's (1972: 225; 1984: 45) section 14, omits these species.
3 Von Brandt (1972, 1984) does not refer to the latter.
hunts (e.g., boats, nets/seines, constructions, and the land) according to the definitions and the weight assigned to each of these factors by the socio-economic and legal order.

Norse drive hunts and trapping are mostly identified with the Faeroese pilot whale drive hunt and the Skogsvåg minke whale trapping, in Sotra, Hordaland, West Norway, to a lesser degree with the seining of smaller odontocetes which at different times during the 18th-19th century took place in western Norway (Hordaland; Sunnmøre). These peasant fishermen whaling activities have often been considered to be more or less unique.

The Faeroese hunt continues to the present day. In its 18th-20th century form it has been extensively researched and a considerable body of literature exists about it (also in English). The Skogsvåg minke whaling is hardly known outside Norway, except perhaps the so-called 'poison' aspect of it (cf chapter 12). It effectively ended in the 1890s. Various, partly unpublished, sources exist about both the Skogsvåg minke whaling and the West Norwegian seining of smaller cetaceans;¹ photographic documentation is available since the 1880s; gear used in Skogsvåg is also extant. Between the 1870s to the 1910s, the Skogsvåg killing aspect was studied by veterinarians and bacteriologists. In this century ethnographers and historians have published studies (in Norwegian) about the Skogsvåg whaling and the whale seining in western Norway activities. In my opinion, these cases have not been placed in an overall systematic and theoretical framework about peasant fisherman whale driving, trapping and seining covering the Norse area as a whole in historical times. Without such an anchoring, I am afraid, their 'uniqueness' could just as well partly reflect their being unrelated to a wider historical context. Neither should one be blind to

¹ Often referred to by the imprecise expression springer ('jumper') catching.
the possibility of such an unrelatedness working in tandem with overproportional attention, thus, maintaining an overall unbalanced historical, ethnographic and cultural picture. The lack of a comprehensive study for the Norse area may also result in these cases being unduly generalised. The significance of these activities seems to be that they are well documented, illuminating, cases of peasant fisherman whaling.

Below, this student attempts to place these whaling activities in a wider Norse historical context. To begin with I wish to advance the initial hypotheses:

(a) that in North and West European tidal areas\(^1\) an early and widespread method of actually catching whales was to prevent the animals from leaving inshore waters during the falling tide of the sea by way of the manngard (perhaps aided by dogs), thus inducing their stranding, and that this method continued to be used in certain places into early modern times;

(b) that this ebb-stranding method developed into drive hunting proper, first in the littoral, later by intercepting the cetaceans farther out at sea and chasing them inshore towards a convenient trapping, seining or beaching site where they could be attacked and killed;

(c) that whale trapping, using natural topographical features, erected constructions and movable gear, eg, nets, seines, boats, together with the manngard, with or without driving, in various combinations, was also a common method in North and western Europe until modern times.

These hypotheses may be expanded as follows:

(1) that coastal inhabitants in Norway, from prehistoric to modern times, caught pods of small and middle-sized toothed as well as (solitary) larger baleen whales in inlets with a favourable topography which they improved upon and prepared for the enclosure and trapping of

cetaceans through special precautions, arrangements/constructions (of wood, wattle work and stone), called *hvalgarðr, ON; 'whale garth'); that such a site was a special legal entity, in early to high mediaeval times called hvalvagr (ON; 'whale voe'), as distinct from the *hvalvík (ON; 'whale creek') which is merely a creek suitable for beaching cetaceans, without betterments;

(2) that such special precautions and arrangements aiming at preventing the exit of the cetaceans from inlets were the placing of boats in the strategic pathway(s), crews making noise (by beating), often, but not always, followed and supported by the erection of a barrier in the water; that into the high Middle Ages these barriers were made (2a) by ramming down already prepared stakes in pathways with shallow water and (2b) by bringing floating beams and/or lattices into position in pathways with deeper waters (possibly in combination with item (2a); that since the late Middle Ages and early modern times the barriers were also established (2c) by pulling specially made (bast) nets athwart the pathway and (2d), in modern times, by shooting herring seines to the same end;

(3) that inlets which were frequented by cetaceans but had an unfavourable topography (eg, two or more pathways) were improved upon through the erection of permanent stockades, wattle work, and dams in shallow waters, and lattices in deeper waters, especially at the exit(s) usually used by the cetaceans, in order to enable the peasant fishermen time to apply a means of enclosure mentioned under item 2 at the other pathway(s);

(4) that submerged stone dams were created in order to trap smaller cetaceans at low tide and to discourage larger ones from exiting inlets through certain sounds;

(5) that weirs were constructed as leaders and wings for inlets in order to intercept migrating cetaceans off, and guide them into, an inlet of the item 2 kinds;

(6) that peasant fishermen combined the methods under items 2-4 with the driving of cetaceans, especially schools of smaller (toothed) cetaceans, from considerable distances
(up to perhaps 10-11 km);

(7) that gradual but persistent relative land rise has affected the whaling voes/garths as well as cetacean movements in their vicinity; that wooden constructions in the whaling voes/garths required constant maintenance and that modifications could partly accommodate such changed circumstances; that the land rise nevertheless slowly rendered ancient sites obsolete, most quickly where they included stone dams; that whaling voes/garths for that reason now and then had to be 'relocated', ie, new ones established, if the catching (ie, tradition) should continue in the area; that relocations and new establishments of whaling voes/garths will mostly have been necessary on the coast from Møre and Romsdal and northwards because of considerable land rise there since late prehistoric times; that West Norwegian whaling voes/garths, due to comparatively small land rise in that area, have been rather stable entities and that their traditions therefore are more likely to reach back the furthest;

(8) that the maintenance of whaling voes/garths at old sites and their relocation to new ones was hampered by new emphases in the economy, especially the relative increased emphasis on, and participation in, the commercial fisheries after the 12th century AD;¹

(9) that the demographic and economic changes following the Black Death of 1349-1350 AD and subsequent plagues in the 15th century² made it impossible to maintain and re-establish whaling voes/garths except in the most favourable geographic, demographic and socio-economic circumstances, causing many of them to fall into disuse and to disappear;

(10) that from the late Middle Ages only whaling voes/garths which required comparatively little maintenance and


timber, and/or where specially made (bast) nets or herring seines were, or became, available and could be applied, continued to exist;

(11) that the inlet, the catching and trapping arrangement as an integrated whole initially was termed hvalvágr, referring to the topographical setting as such of the more conspicuous whale garths; that, since the 15th-16th century, the hvalvágr came to be called hvalgârd (hvalgaard, D/N; 'whale garth'; *hvalgarðr, ON) from the constructions/arrangements made there, in order to clearly distinguish it as a legal entity from the general appellative and place names of the hvalvágr type;

(12a) that Icelanders into the late Middle Ages avoided using hvalvágr and hvalvík type names because of their legal connotations in the old Norse context (cf hypothesis item 1); and (12b) that the whale garth proper seems to have existed in Iceland on a limited scale, at least into the high Middle Ages, presumably in the form of stone dams (for ebb trapping?).

9.4 Norse whale drives and trappings (including seining)

9.4.1 Norse whale drives, in general

Norse cetacean drives and trapping (including seining), other than the Faeroese (cf below), are described by many authors.¹ The method of driving whales is adequately outlined by A. Christie (1785/86, UBB 56: f51v-f52r) who also considers how smaller cetaceans earlier were taken in

creeks in Norway without the use of nets or seines.

Traditionally the topography of the littoral at driving sites, and partly the features of the surrounding landscape, are considered to influence the last phase of whale drives. Svabo, in 1781/82, classes Faeroese 'whale driving places' (hvalrakstur) in three categories: 'the best, the average, the poor and incidental'. The best whaling bays have a bottom which inclines evenly towards the beach, is covered with mud or not too pale, loose, sand. If the bottom is too hard, it cannot be stirred up and if it is too light in colour, the pilot whales easily become wild over it. Where a subtidal slope (marbakki) exists close to shore it may sometimes be bypassed by driving the pod along and close to shore (eg, in Funningsfjörður; Vestmanna). This is also the view of later authorities. Christie (1785/86, UBB 56: f52r) writes about 'chasing and driving' of smaller cetaceans in Norway that 'If the creek was wide and deep near the land it was unsuitable for this catching and one had to refrain from chasing it into such a one. But where it [ie, the creek] was narrow and extended shallowly it could easily be driven ashore'. Klinowska (1990: 8f) has demonstrated that the 'unsuitability' and 'suitability' of particular inlets for such drives might actually relate to geomagnetic contour lines running athwart at their mouth or parallelly into into them, respectively.

About 1781-1782 scholars began considering the history and technique of the Faeroese hunts. Svabo (1976: 249) writes that 'driving smaller cetaceans [Marsviín] ashore' is of unknown but 'undoubtedly exceedingly old' age. Jón Eiríksson (1782: 87) observes that driving and beaching of smaller cetaceans, like the Faeroese do, 'is in all respects so simple that it might well testify to its having

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1 Ie, hvalvág(ur) in modern Faeroese.

been adopted, and becoming common somewhere, long before nets and harpoons [skutlar] became common, without all doubts for the reason that people, by some kind of happy chance, have discovered the great fear which these whales have of vehemence and noise.’

In 1761/66, Strøm described in detail the driving and seining of dolphins and orcas at Springervik/Skarbøvik, Ålesund municipality, Møre and Romsdal, Norway, and how a specially made seine was used for the purpose (cf item A.18). The catching seems then to have been of some tradition; how long it continued is unknown.¹

In the 18th-19th centuries, West Norwegian peasant fishermen, mainly of Hordaland, conducted regular drives and seinings of orcas and dolphins. The drives commenced out at sea or in the archipelagos. The cetaceans were preferably chased to a place where they could conveniently be enclosed with seines but people would also use such places which were less convenient in order to avoid a long drive. The schools were enclosed with herring seines that were kept at the inlets. Dolphins were considered more difficult to drive than the orca and in the winter the schools were usually larger and more quiet than in the summer.² Shouting and beating in the boats seem to have been the main means of driving in the Sunnmøre and Hordaland takes because stone throwing and the line-and-sinker (fastakast, F) appear to be absent.

Høst (1875: 354) writes that in the Faeroe Islands orca drives were seldom successful and suggests that a long diving time could be the cause. Icelandic sources, mainly annals*, show that Icelanders conducted irregular dolphin, orca and pilot whale drive beachings for which they used noise and stones.

¹ Cf Øvrelid 1973: 393, 395; Strøm 1, 1762: 310, 459-461; 2, 1766: 90f.

² Cf Alver 1986: 96-99; Christie 1785/86, UBB ms 221: f5r, f8r; Greve 1840; Hertzberg 1840: [1].
Evidence about driving of rorquals is very rare, so rare that one might think it impossible and that it has not occurred. However, Christie (1785/86) describes the driving back into Skogsvåg of a minke whale from a considerable distance away by beating in the boats.\(^1\) The Japanese took great numbers of right, humpback, fin and gray whales in drive and net hunts in the 17th-19th centuries. The whales were driven by noise from hammering at the hulls of the participating 8-12 boats. J.N. Tønnessen (1967: 174) observes that 'it is remarkable how many fin whales were caught. Whaling literature generally states that this species could not be caught before modern catching methods were introduced.'\(^2\) Mikkjal Dánjalsson á Ryggi (1927: 130) also describes the successful drive of a fin whale in the Faeroe Islands, about 1853: 'Mostly for play' some boat crews 'threw stones in front of it, and it responded well to them'. Thus we may conclude that larger rorquals are potential species for drive takes. This has implications for the interpretation of, eg, the old Norwegian whaling voes and the Normandy walmenni whaling.

9.4.2 Hvalrekstr ('Whale driving/coming')

The Nordic terminology behind cetacean drive hunts and trapping, in general, may be summed up as follows:

Rekstr (ON; rekstur, rakstur, I, F; rekster, NS) essentially means 'a driving', 'a pursuing'; it is variously applied to domestic animals (ON, F, I, NS), cetaceans (ON, F, NS?), driftage (I), stewardship (I, F) and lawsuits (I).\(^3\) G. Storm and E. Hertzberg (1895: 302, 514) define hvalrekstr as 'chasing' and 'pursuit' inshore/

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1 Cf Christie 1785/86, UBB ms 221: f13v.
2 Cf Tønnessen 1967: 174, 177. See also Tønnessen and Johnsen 1982: 128f.
ashore of whales; Hødnebø (1972: 169) follows them; in Iceland it means 'the driving ashore of whales (eg, in pilot whale catches'). Fritzner does not define hvalrekstr as such except he subsumes it as an aspect under hvalréttr (ie, the law concerning whale); however, his definition of hvalreið ('whale ride') as hvalreki, hvalrekstr and explanation about "... mange Hvaler drive til Lands" imply that hvalrekstr would be 'whale driftage'. In modern Norwegian literature hvalrekstr is used in the meaning of 'whale driftage' proper. This is also the usual interpretation of the Ljósvetninga saga (ch 8), written ca 1260 AD or later: It tells that in a summer of dearth, hvalrekstr occurred at Tjörnes, northeastern Iceland, and people travelled thither with horses in order to 'buy whale'. A variant manuscript speaks of it as a 'great hvalreið year' ("hvalreiðarár ... mikit") which Fritzner and B. Sigfússon explain as hvalreksár ('whale driftage year'). The interpretation of hvalrekst(u)r, hvalreið (and hvalreki) as 'whale driftage' proper, firstly, contradicts the etymology, and Faeroese and Icelandic usage; secondly, the Tjörnes whales are not associated with polar ice and the sold meat is unlikely to be from carcasses which have drifted inshore/ashore. My conclusion is that hvalrekst(u)r means whale drive and, presumably also, natural live stranding (ie, 'whale driving/coming'). The interpretation depends on the perception of the causes behind the coming

1 Cf Blóndal 1, 1980: 372.
3 Cf, eg, Gjessing (1942: 447; 1945: 245; 1955: 38) and Bratrein (1, 1989: 354f; 2, 1990: 175, 519).
5 Cf Sigfússon/ÍF 10, 1979: 45, 47; 1981c: 653f.
7 Cf hafrekstur ('sea drivings'), 1482 and 1485, in ch 4.9.3.
inshore/ashore of the whales: What/who 'drives' them ashore: their innate nature, their enemies, a god?; the sea, wind, waves? or man? An anthropocentric interpretation is not necessarily applicable. In my opinion, hvalreið ('whale ride') has the same two meanings as hvalrekstr: a 'whale ride' by men with boats, ie, a drive hunt, and a figurative sense of 'whale riding the waves' and the like.

Chapter MLL vii 64 as a whole deals with whale driftage, driving and shooting; its title "Um hvalrekstra ..." seems, thus, properly translated 'Concerning whale drivings/comings [and] if one finds a whale'.

Of the numerous reference to whale takes in the Icelandic annals (cf item A.17.2) it is only Setbergsannáll (1250, 1335, and 1560 AD) which speaks of "hval(a)rekstur mikill":¹ The whale implied in the 1250 AD suffocation accident must be a large whale but how it came ashore we cannot say; regarding 1560, hvalrekstur will partly refer to (inedible) carcasses coming ashore.

Archbishop Aslak Bolt's register of farms and pertinences belonging to the archbishopric of Niðarós (Trondheim), 1432/49 AD, mentions that from the farm Sandnes, in modern Flakstad municipality (Moskenesøya, Nordland), inter alia, 'falls half of hvalreksstr'.² Sandnes means 'sandy headland'³ but about the take as such we can say nothing.

In Faeroese, rakstur refers to the driving of pilot whales; the route and distance involved in such a drive; and a driven pod of pilot whales (= grind);⁴ furthermore, Svabo, in 1779-1782, mentions that kvalragstur (qvalragstur) denotes the creeks and bays where pilot whales are chased.

¹ Cf Jóhannesson 1940: 26f, 32, 65.
² Cf Munch 1852: 95; see also vi.
ashore, also called hval-vaag and hval-vig by him.\(^1\) Hvalrakstur in this sense seems only preserved with Svabo\(^2\) which might indicate that it was about falling out of use. GR 1832 §20 calls the drivers ragstermænd (D/F).\(^3\)

J. Jakobsen (2, 1985: 689) notes that certain phrases with rekster exist in Shetland Norn (of Fetlar and Yell) which contain the sense of "a chase after something" and he adds "catch?". It is tempting to interpret this as a reminiscence of mediaeval pilot whale drives in Shetland.

9.4.3 Norwegian laws and regulations pertaining to sealing, whaling, cetacean drive hunts, whaling creeks and whaling voes/garths

Norway is the obvious point of departure for a study of Norse mediaeval and (early) modern cetacean drives and takes in whaling creeks, bays and voes, in addition to offering the most comprehensive (early) source material. The mediaeval sources comprise of laws, a diploma, a reference in a financial account and, by extension, place name evidence. Modern primary material is a passage in a 16th century financial statement and unpublished manuscripts by A. Christie, from 1785/86. This seems to be the total resource.

The relevant Norwegian legal sources are systematically presented and compared in item A.15.1.8. Despite interesting differences, there apparently exists an unbroken continuity in form and contents of the provisions of GTL 150c-d, MLL vii 64 l-m, NLB vi 61m-n and NL 5-12-11. As a basic assumption this is taken to reflect continuity in whaling traditions which, however, does not mean that they have been (widespread) living traditions into modern times. On the other hand, the very limited character of

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1 Cf Svabo 1779: 42; 1976: 250f.
3 Cf Anon 1832: 11.
statutory law and other evidence about the phenomena hvalvägr (ON)/hvalgård (hvalgaard) (D/N) ('whaling voe'/ 'whale garth'), hvalvik (ON) ('whaling creeks'), etc, must always be kept in mind.¹

Before we continue in the analysis our premises must be stated; they are: (a) that hunters have certain (graded) property rights in the animals they take, or facilitate the take of, be it by means of piercing weapons and nets² or in hot pursuit without such gear; (b) that property rights of whaling voe/garth owners pertain to the garth/voe (technical speaking 'trap') itself (whether on private land or in the commons),³ on the one hand, and the whales of individual takes, on the other.

On the evidence of GTL 150 and MLL vii 64 alone (cf item A.15.1.8, Summaries 1-2), this student advances the hypothesis that there exists a basic 'technical' difference between so-called 'whaling voes' and 'whaling creeks', viz: whaling voes combine certain topographical features (eg, passage, depth) with (in principle) special technical arrangements and are primarily intended for the trapping of larger, mainly baleen, whales (whereby smaller cetaceans may also be taken as a matter of course), while whaling creeks are inlets that, without technical arrangements and preparations, are suitable for driving and beaching of (primarily) smaller to middle-sized odontocetes.

¹ It must be repeated that throughout this discourse the Old Norse and Dano-Norwegian legal and technical terms hvalvägr, hvalvik and hvalgård (hvalgaard) are tentatively rendered 'whaling voe' ('whale voe'); 'whaling creek' ('whale creek'); and 'whale garth', respectively, while (modern) Faeroese hva1väg(ur) is rendered 'whaling bay'.

² In Norway whaling shots (cf MLL vii 64; NLB vi 61; NL 5-12-7), sealing harpoons (cf MLL vii 65; NLB vi 62; NL 5-12-14) and, presumably (occasionally) sealing nets (cf GTL 91; MLL vii 65) carried witnessed, if not formally thing registered, marks in order to secure the property rights of the owner-hunter. This reflects an ancient feature of big game hunting, in general.

³ Private traps could be erected and kept in the commons and remained private property for ten years (spjótgardr) and twenty years (dýr(aga)garðr) after they had last been used (cf FLT xiv 9; see also MLL vii 63).
We shall now survey and analyse the sources from the point of view of this hypothesis.

Hålogaland, to the north of Trøndelag, was in the 10th century annexed to the Frostathing law district and FTL generally applied there. The absence of whaling voe and whaling creek provisions in FTL does not mean that a legal vacuum existed there until MLL was enacted in 1274 AD: At least the fishing, hunting and trapping provisions of FTL (xiii 7, 9; xiv 9) will have protected the title to whaling voes and their catch both within the bounds of farms and in the commons although these provisions are not explicitly about cetaceans. Neither should one forget local regulations (customary law, statutes); they may indeed have been considered sufficient, thereby making the enactment of regional statutory law about these issues unnecessary.

The mediaeval Norwegian laws impose the trespass fine (landnám) for unauthorised use of another man’s property. GTL (91) and FTL (x 34 and 35, cf xiii 15) fix it at one eighth of the usual fine to the owner; it is, thus, graded according to the legal rank of the owner; MLL (vii 20) adopts the amounts stipulated in FTL.

Through a special act (lögfesta, FTL, MLL; fyrirbjöða, GTL 91) at the local church or thing it was possible to extend inviolability for twelve months to ‘one’s land, inside the garth or outside, forest or pasture or fishing/hunting sites’ (FTL xiii 14; MLL vii 19). Offending against the lögfesta invokes a double fine of trespass (landnám) and under the regional codes also the robbery fine to the king. The declaration of inviolability of a certain property is also called 'að

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2 Cf Robberstad 1981a: 211.


4 Cf Fritzner 2, 1954: 599; Hamre 1982a: 174; Robberstad 1981a: 211. See also GTL 91.
Sealing grounds (with and without traps) are specifically mentioned by the laws as private property (ÆB 146, FTL xiv 11; GTL 91, MLL vii 65; NLB vi 62; NL 5-12-15). GTL 91, 93 and 150 stipulate identical sanctions (forfeiture of catch and trespass fine, both for the benefit of the owner) for taking seals from sealing grounds with traps set, for erecting a trap on another man's land and for driving whales into a whaling voe, respectively. The other early mediaeval codes (which do not mention whaling voes or creeks) classify violations of sealing grounds (ÆB 146; FLT xiv 11) like this: (a) outside the close season, ie, between ca 13 November and 2 June, as trespass; (b) during the close season, ca 3 June-12 November, and with no public declaration of inviolability (lögfesta), as theft; and (c) outside the close season under lögfesta as robbery, with the robbery fine (ránbaugr) due to the king and the (double) trespass fine and all seals due to the owner.

GTL is more lenient regarding encroachments upon sealing grounds than ÆB and FTL; however, one might assume that the legal mechanism (apart from the close season) would be similar regarding whaling voes because they are also (postulated) distinctive private establishments, involve no less property rights, special preparations, arrangements and benefits than sealing grounds do.

Robberstad writes that the use of another man's property, inter alia 'to use his whale voe [kvalvåg], take seals in his sealing ground [selver], cut up whales on his land', makes him liable for the trespass fine (landnám). This seems only partly correct and must be differentiated. To me the legal situation appears to be as follows:

(a) unauthorised whale flensing invokes a simple trespass fine (cf GTL 149c; MLL vii 64c);

1 Cf Storm and Hertzberg 1895: 271.
2 Cf Robberstad 1981a: 211.
(b) sealing in another man's sealing ground (cf AB 146; FTL xiv 11; GTL 91; MLL vii 65a-c) does similarly but sealing grounds are likely to be subject to löggesta (cf AB 146; FTL xiv 11) so one might here actually be dealing with the double trespass fine;

(c) the various laws establish special provisions for whaling creeks and whaling voes (hvalvágr), respectively, viz:

   (ca) GTL 150 and MLL vii 64 (NLB vi 61 and NL 5-12-11) give the whale driver(s) half of the catch in another man's whaling creek (ie, in practice on any private shore outside designated whaling voes); I can only take this to mean that löggesta and (double) landnám are not applicable to whale drives onto another man's land outside whaling voes;

   (cb) because the trespass fine is mentioned in the GTL 150 whaling vœ provision I infer that löggesta, including the double landnám, also applies to whaling voes in the Gulathing law district prior to 1274 AD;

   (cc) MLL vii 64, (NLB vi 61 and NL 5-12-11), on the other hand, awards compensation to the driver for his work although the vœ owner keeps the whale(s); like in item (ca) this basically new approach presumably excludes the use of löggesta (with double landnám) in relation to whaling voes in Norway after 1274 AD;

   (cd) the laws read: 'if a man drives a whale into another man's whale vœ and stakes (it) off' (GTL 150c; MLL vii 64 l); '... and bars it' (NLB vi 61m; NL 5-12-11), etc. '... and stakes it off'/'and bars it' seems not merely to be a defining element of the whaling vœ/garth in contradistinction to the whaling creek mentioned in the continuation. Viewed together with the proviso '... without the consent' of the owner (MLL vii 64 l; NLB vi

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1 MLL vii 64 improves the lot of whale drivers as compared to GTL 150. Similarly, the MLL vii 64 sealing regulations (cf also MLL vii 19), with the (double) trespass fine as the maximum penalty is a considerable modification compared to the AB and FTL penalties. This seems to reflect a general tendency but the improvement in the whale drivers' lot could reflect a royal appreciation of chance takes of cetaceans by anyone, rather than a compromise accommodating customary regulations in the Frostathing law district.
we actually have three different situations of foreign involvement with whaling voes/garths, viz: foreign use of a whaling voe, with staking/barring of whales, under an agreement with the owner (presumably stipulating the division, etc); unauthorised use involving staking/barring; and unauthorised use without staking/barring. The last instance may also be put another way: What if a man drives a whale into another man’s whaling voe without staking it off? One possibility might be that the case would be treated as a creek drive unless special legal precautions (lögfesta) had been taken, which seems to have been possible under GTL, presumably also ÅB and FTL (cf their comparative strictness), but not under MLL.

The basic whale divisions (cf item A.15.1.8, Summary 3) show that whaling voes originally had a status similar to that of private ground inside the farm garth. In 1274 AD, the crown in the Gulathing district surrendered one half of the whales in the commons to the peasants while they, on the other hand, gave up one half of the whales inside the farm garth, a move which, from the point of view of allodial ownership, is extraordinary. This development leaves the voe owner as the indisputably sole owner of the whale taken in the voe. It shows, in my opinion, that the whaling voe is something different from the surrounding land, inside and outside of the farm garth, with high legal protection as private property. The stressing by GTL 150c of the trespass fine is presumably meant to enhance the voe’s legal status and somehow bring the voe into line with the ground inside the farm garth. As such, GTL 150c also shows the importance attached to the voe and its use by the owner. MLL vii 64 1 is more equitable to outside peasant fishermen by offering them compensation for driving and securing whales in voes but one can hardly speak of ‘encouragement’ in this respect. Let it be said that I interpret the continuity of GTL 150c and MLL vii 64 1, on the one hand, and the changes between them, on the other,
to show that they are not merely intended to cover larcency.

This raises fundamental questions: What would make people drive a whale, or school of whales, into another man’s whaling voe, and stake it off, with or without the owner’s consent, when they under GTL have to pay the trespass fine for doing so and, similarly, under MLL only receive compensation for their work, but, on the other hand, could secure half the catch for themselves by driving it into a whaling creek? What may we infer from this about the two whaling localities? Even if the drivers have an agreement with the voe owner they are unlikely to receive a full half of the catch like in a creek because of the facilities he has provided (whatever character they may otherwise be). Whaling creeks are, eo ipso, ‘suitable inlets’ and, albeit of varying quality, they will have existed on most coasts and in most archipelagos.

9.5 Faeroes pilot whale hunt

The Faeroe drive hunts traditionally involve long-finned pilot whales but occasionally also dolphins. Apart from Seyðabrávið (SB; 1298 AD) and the Pilot Whaling Statutes (GR 1832, and later), this hunt is treated in great detail in the literature. The reader will find the hunt

1 Whether the trespass fine is due without staking is an open question.

2 Cf Müller 1883: 5f; 1884b: 24.

described in the tentatively translated extracts compiled in item A.16.7; similarly, the relevant legislation and regulations of SB and GR are presented in item A.15.3.

Faeroese pilot whaling seems embedded in the ancient Norse whaling traditions which were brought to the Islands and the other outlying Norse countries by the Norse settlers as part of their culture.\(^1\) Pilot whale pods occur irregularly so their absence from the sources may only imply a periodical interruption of the whaling, rather than its non-existence.\(^2\) The K1 passage in KGS\(^*\) offers no particular geographical reference; I think that it cannot be interpreted to refer to the Faeroe Islands in particular.

SB 8c\(^*\) stipulates that whale drivers receive 1/4 and the proprietor 3/4 of a catch; however, after the 16th century, when other sources commence, the division has been \(\frac{1}{2}:\frac{1}{2}\). It appears to me that SB 8c represents a merger of MLL vii 64 1-m. Whether it was ever observed must be left open but it seems to show that whaling voes proper hardly existed in the Faeroe Islands. Moreover, the \(\frac{1}{2}:\frac{1}{2}\) division corresponds to the Norwegian non-whaling voe division. Thus, despite the modern designations of hvalvág(ur)/hvalvág we are actually dealing with a separate category, suitably called 'whaling bay'.\(^3\)

'Enclosure' or seining of (pilot) whales is only known at the (inferior) whaling bay of Vestmanna (Streymoy): In 1841, a rope with attached bundles of straw and stones,

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3 Cf Svabo ([1781/82] 1976: 250f) also uses kvalragstur, vig(e), hvalvig and hvalvaag(e) interchangeably.
pulled a little below the surface,\(^1\) was used to force a pod closer to shore (ca 30 animals killed); the following year a net made of old fishing lines was employed and as from 1843 a large net (ca 378 m long and ca 15.1 m deep, with meshes ca 16 cm in square, floats and sinkers) was used; it proved to be effective. From 1879, a new, smaller, net was used inside the bigger one to isolate some animals at a time for the killing.\(^2\) The great costs involved in this undertaking, together with the likely shortage of bast or hemp, makes the use of similar nets unlikely in the Faeroe Islands before the 19th century. Neither seem suitable fishing nets or seines to have existed in the Islands.\(^3\) Bjørk (3, 1963: 166) is also of the opinion that the whaling voe provision of NL 5-12-11, like its predecessors, has been inapplicable in the Faeroe Islands, except in the case of Vestmanna after 1841.

Around 1709/10, the Faeroese, according to landfoged (bailiff) Klein, considered the division of pilot whale pods to follow NL 5-12-6\(^4\) (ie, concerning 'shot' whales that run ashore); this is repeated by Svabo (1779: 52) who refers it back to MLL (vii 64g). At the surface of it the whale creek provision of NL 5-12-11 (about whaling voes and whaling creeks) would be the primary provision which, in turn, conforms with NL 5-12-6. But as this is hardly a slip by the two gentlemen we must look for a proper explanation.\(^5\) My tentative explanation is twofold, although each aspect would provide sufficient reason, viz:

- (a) the systematic application of the whaling lance

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1 Cf Müller (1883: 9; 1884b: 29f). Sandison (1896: 46) mentions that long ropes with switches of straw or heather have 'recently' been used in the Faeroe Islands for intercepting whales 'out at sea'; he might reflect the Vestmanna take, 1841, because such 'sweeping' seems otherwise not to be recorded but the method appears feasible.

2 Cf Anon 1856: 68f; Bang and Barentsen 1901: 199; Bjørk 3, 1963: 166, 225; Bonnevie and Mitens 1, 1932: 384; Hoydal 1986 ms: 14; Müller 1883: 9-11; 1884b: 29-32; see also Helland 1905: 658f.


4 Cf Anon 1934a: 80.

5 Regrettably Bjørk does not allude to it.
(hvalvákn) in the final phase of the drive (not necessarily the practice of hurting or wounding rear animals to cause the pod to ground itself); (b) the Faeroese institution of 'finder's whale' (findingshval, etc). The finder's whale is first documented in 1673 AD (by Debes) but is undoubtedly of ancient origin, similar to the awarding of the 'finder's blubber' in other Norse whale takes. A finder's share, or finder's whale as it is in the Faeroese modification of the rule, is incompatible with NL 5-12-11 and earlier analogous provisions.

9.6 Norwegian whaling voes

9.6.1 Skogsvåg whaling voe, Sotra, 16th-19th centuries

Curate Andreas Christie's writings, from ca 1785/86, concerning peasant fisherman whaling in Hordaland, West Norway, including the voe whaling in Sotra, are such important sources that an intensive occupation with them is inevitable. In item A.20 the manuscripts and their author are briefly introduced, followed by the full tentative transcription of the Dano-Norwegian manuscripts (B), and a draft translation and English summary of many sections of them (C). The most comprehensive and continuous sections are presented first with relevant additional parts integrated; then follow minor parts arranged under subheadings which are for guidance only.

G.P. Blom 1825: 157f*; Greve 1840: [2]*; and F. Negri [1664] 1887: 154f*, also offer accounts which may be considered of primary source value about the Skogsvåg voe whaling. To my knowledge no further such account exists.

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1 Cf Anon 1832: 10; Anon 1934: 79; Debes [1673] 1963: 159; Lyngbye 1826: 215; see also Jacobsen and Matras 1961: 77; Svabo 1976: 256.


3 Høst (1875: 331), clearly mistaken, refers to NL 5-12-11 as being the appropriate provision but adds that it has been considered 'in no way to rescind the old customary right to the finder's whale'.
until the killing method in the late 19th century attracted the attention of bacteriologists and veterinarians. 1 O. Lübbert (1865) is a primary source with partly reference to the Skogsvåg whaling method and gear as employed in another locality.

The secondary literature about the Skogsvåg whaling (including accounts of orca and dolphin takes and references to Telavåg) is considerable. 2

The reader is referred to Christie's*, Blom's*, Greve's* and Negri's* accounts concerning West Norwegian peasant fisherman whaling, in general, and voe whaling, ca 1660-1840, in particular. We shall here concentrate on studying the technical aspects as they relate to the whaling voe/whaling creek hypothesis advanced above (cf chapter 9.4.3).

The first historical reference to the whaling voe in Skogsvåg is in a letter from 1338 in which bishop Hákon of Bergen mentions that he has granted the living 'at Sund under the mountain where our whale voe is' ("... sem hvalvager vaar er") to the vicar Benedikt in Rugsund. 3

The church (as opposed to the minister) at Sund is registered in the Bjørgynjar kálfskinn, from ca 1360 AD, as receiving whale tithe (huaaliund) 4 which presumably

1 Cf Eschricht (1845), Lilljeborg (1862; 1866) and Melchior (1834) are truly secondary sources.


3 Cf DN 8/1, 1871: 125 [dipl 107]; see also Gunnes 1979: 56 [item 104]).

4 Cf Munch 1843: 53; see also Barsnes 1932: 84; Hådnebø 1980: 474.
derives from neighbouring Kvalvåg.

Despite the bishop's words I doubt that the Skogsvåg whaling voe has ever been a separate entity and as such held by the bishopric or Munkeliv monastery in Bergen. In modern times we learn of a complicated whale division which must reflect an ancient property structure around the whaling voe. My interpretation is therefore that the voe whaling was pertinent to the adjacent farms (regardless of ownership). However, one could imagine that the bishopric in 1338 AD owned the most important farms in Skogsvåg, that it had reserved for itself the ensuing shares of voe whales, rather than letting its tenants enjoy them, and that the bishopric for that reason considered the whaling voe to be its own.

Because whales were regularly caught in the whaling voes they were special pertinences which in modern times, presumably since the 16th century, were separately taxed. Concerning the farm Skoge (Skogsvåg) the land register (matrikkel) for North Hordaland, in 1667 AD, writes: 'Of the whale voe (qualwogen) to pay yearly in tax 1 rigsdaier'. Later we learn that both Kvalväg/Skogsvåg and Telavåg were particularly taxed pertinences.

In Hordaland, around 1785/86, cetaceans were taken irregularly at many places while whales were 'regularly caught' at 'several places', particularly in Store and Lille Sotra islands. Cetaceans were not only taken in voes, creeks and inlets but both ends of a sound could also be closed (cf the dolphin and orca catching in Bartholm

1 Cf Hummelsund 1970: 231.
3 Cf Barsnes 1932: 85.
4 Cf Christie 1785/86, UBB 221: f1v, f4r, f19r; UBB 56:f40v. Shares in Kvalvåg in the 19th century resulted in a somewhat higher level of farm taxation in Sund municipality than in the neighbouring districts (cf Barsnes 1932: 85).
Sound, Skogsvåg, Sotra).\textsuperscript{1} To at least 1785/86, voe (minke) whaling was more or less regularly conducted at five localities in Sotra: Eidspoll, Førrespoll, Fjellspoll, Skogsvåg and Spildepoll. Between the 1780s and 1890s, there existed skilled shooters and harpooners in Skogsvåg who used crossbows, arrows and toggle harpoons. In the other four voes the peasant fishermen relied on the Skogsvåg people for shooting, harpooning and lancing. Christie notes (1785/86) that outside Sotra he has only discovered one instance of the taking of a minke whale, namely in Florvåg, on Askøy, opposite Bergen, and in that operation the Skogsvåg shooters were also involved.\textsuperscript{2}

At least from the late 18th century to the beginning of this century, hardly a year passed without a minke whale being caught in Skogsvåg; 3-5 whales appear to be quite usual, sometimes more (11 in 1888). The few years (1830, 1885, 1923) without any catch are well remembered. The main season was April through October.\textsuperscript{3} In 1896, the newly developed Krag-Jørgensen rifle was introduced in the Telavåg hunt and shortly afterwards also in Skogsvåg which fundamentally changed the character of the hunts.\textsuperscript{4} Catches in Skogsvåg increased to 20-30 whales annually by 1920 while around 1910 occasionally 10-12 whales were taken in Telavåg\textsuperscript{5} but statistics are not available for the takes. The rifle take figures give the impression that whales occurred more often in Kvalvåg/Skogsvåg than the pre-1896 level of traditional takes indicate and what constituted the old pertinence as such.

\textsuperscript{1} Cf Christie 1785/86, UBB 221: f1v-f2r.
\textsuperscript{2} Cf Christie 1785/86, UBB 221: f9v-f10v; f29v. Lilljeborg (1862: 38; 1866: 277), Collett (1911-1912: 565) and Helland (1921: 332) directly mention Florvåg as a whaling voe.
\textsuperscript{3} Cf Barsnes 1932: 77; Blom 1825: 158 Christie 1785/86, UBB 221: f4r, f20v, f29v; Grieg 1889b: 16; 1897: 10.
\textsuperscript{4} Cf Barsnes 1932: 80f; Sjurseth 1961: 417f; see also Helland 1921: 333.
\textsuperscript{5} Cf Collett 1911-1912: 565f; Helland 1921: 333.
Apart from the story about cutting flesh from the living whales, Negri's account, from 1664, corresponds remarkably well with Christie's description some 120 years later: ¹

We notice the small size of the (minke) whales, the 'thick' net, the shooting with arrows from boats, the time (5-6 days) to faintness; the breaking through the net and the final killing of a weakened whale; the taking turns of the men (guarding the net?); the joy and celebration of the local people and the participation in the hunt of people from Bergen.

Christie (1785/86, UBB 56: f37r-f37v; UBB 221: f11v, f22v-f23v) and Rev Greve (1840: [1]*) describe the Skogsøvåg net and its use in great detail. Attention should already here be drawn to the islets which are found at the entrances of both Kvalvåg/Skogsøvåg and Telavåg and two passages (one wider and deeper than the other) which they in each case create. Both islets are used in relation to the enclosing of the voes. ²

From a visit to Hordaland in 1800, J. Rathke (1907: 66) mentions that sturgeons and dolphins had been enclosed in Skogsøvåg, 'with a net of bast ropes ['Nodt af Bastetoug'] and later gradually killed ... with harpoon'. The bast rope net probably refers to Skogsøvåg but some confusing with dolphin and orca seinings in the vicinity seems likely.

P. Ascanius (1775: 4f) gives a brief, obviously second hand and flawed, account of voe whaling in the vicinity of Bergen, presumably in Sotra. However, he (p 5) writes that in whaling voes 'the entrance has been closed with large nets, wooden lattices, etc, ...' ('... fermé l'entrée par de grands filets, des grilles de bois, &c. ...") which is of most interest to us here. His description of the people from Bergen voyaging to attend the festivity surrounding the voe whaling points to Skogsøvåg but whether

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¹ Negri is considered to be 'a truth-loving Herodotusian nature' (cf Daae 1889: 99).

² This is an accompanying, not a necessary, aspect of whaling voes although it, coincidentally, shall be helpful in our later analysis.
his wooden lattices relate to Telavåg and/or Skogsvåg cannot be ascertained.

Asphaug (1987: 74) writes that 'We may assume that the net was the exclusive means of enclosure in Skogsvåg. But in Telavåg another method was used ...'. The existence in the late 18th century of a lattice share in Skogsvågl seems to disprove this view.

9.6.2 Telavåg whaling voe, Sotra, 16th-19th centuries

On the west side of Sotra island, but neighbouring to Skogsvåg, lies Telavåg. In Vincent Lunge's land register (jordebog) from 1535 AD, the following entry is found:

'In Sotra [Sotther] in Sund parish.

Nota that these following farms, both inhabited and deserted, own more than the half part together with me in a whale voe [hwalewogh] which is called Telavåg [Tellewog] and I shall every year order 40 coils of bast for a net [nodh] and 60 sticks [stygh] and hawsers in addition, when necessary. [...] Furthermore one barrel of beer for every whale they take and cut up; all other appurtenances the peasants shall provide themselves.

Nota[.] Similarly, that the peasants who have abandoned farms under them for these have taken a share [loedt] in the meat [twesterett] and not in the blubber [speckett][.],

The land register then mentions 16 farms which pay rent to Lunge, ie, belong to his estate: 12 were inhabited of which four each had an abandoned farm annexed. All farms

1 Cf Christie 1785/86, UBB 221: f4r.
2 Cf Huitfeldt-Kaas 4, 1906: 469-496.
3 Cf Huitfeldt-Kaas 4, 1906: 474, see also 469-496. See also Barsnes 1932: 94f; Hanssen 1927: 4; Sellevold 1924.
4 Cf Huitfeldt-Kaas 4, 1906: 474f.
were presumably among the traditional co-owners of the Telavåg whaling voe, making up half of the share holders in it. The entry apparently reflects the arrangement which Lunge, as estate owner (and thus ultimate owner of the 16 farm stakes in the whaling voe), had with his twelve tenants about material and labour contributions, and the division of the catch in the voe.

Towards the maintenance of the Telavåg whaling voe, Lunge should every year provide '40 coils of bast for a net and 60 stygh ['sticks'] and hawsers in addition, when necessary'. The twelve tenants contribute 'all other appurtenances', undoubtedly in addition to the labour.\footnote{Presumably these materials amount to approximately half of what was yearly needed for the whaling voe.}

In the early 16th century the Telavåg whaling voe obviously made use of both a stockade or lattice and a bast net to enclose the whales. The entry shows that around 1535 the necessary timber for whaling voes on the outer coast of West Norway was available, provided the means existed for obtaining it.\footnote{This has a bearing on Christie's view that the whale garths declined because of the shortage of local timber (cf UBB 56: f48r-f48v), cf ch 9.7.6.}

In the late 18th century, Telavåg was second to Skogsvåg in importance as a whaling voe. If the permanent taxation is something to go by it will then have yielded about two-thirds of the catch in Skogsvåg.\footnote{Cf Christie 1785/86, UBB 56: f40v.}

Christie (1785/86, UBB 56: f40v-f41r) describes the Telavåg whaling voe and minke whaling in detail, but partly with reference to the contemporary gear and method used in Skogsvåg. Viewed in connection with the entry in Vincent Lunge's land register, from 1535, I would sketch the development of the Telavåg whaling voe in modern times as follows: All circumstances and arrangements in Skogsvåg and Telavåg were very similar. The crossbow and arrows were used in both voes around 1785/86; as this method in Skogsvåg seemingly has mediaeval
roots it was probably also the case in Telavåg.¹ A whaling net of bast for closing the (widest and deepest) passage in Skogsvåg continued to be used through the 19th century. The bast to be delivered annually to Telavåg by Vincent Lunge, about 1535, indicates that a similar net was then used for closing the larger sound there; the width (30 fathoms) and depth (9 fathoms) of the eastern (main) sound in Telavåg show that its bast net may have been of approximately the same length (ca 28 fathoms) as that in Skogsvåg, though not as deep (9, rather than 12 fathoms).² Christie (1785/86) only mentions the use of ordinary herring seines for this purpose in Telavåg, with no hints as to when they were introduced. The changeover therefore seems to have occurred sometime between the mid 16th and mid 18th century.

W. Lilljeborg (1862/66) writes that "In the vicinity of Bergen" the minke whale "is caught in certain small bays or creeks, with narrow inlet, which is shut up by a kind of coarse net, made of [b]last-ropes, or sometimes by a wooden gate"; the whale "is then killed either with harpoons or with arrows shot from bows. It finally dies from the wounds, but often lives 8-14 days after being shut up."³ As late as the 1890s the farmers around Telavåg closed the sounds on both sides of Stegholm using a self-made whaling net of strong line with large meshes and an ordinary herring seine, respectively. In this way they were able to catch two to three minke whales a year at two to three years intervals.⁴

By the late 18th century a lattice in the Kvalvåg/Skogsvåg eastern sound apparently had become obsolete but

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¹ Cf Christie 1785/86, UBB 56: f40v.
² Cf Christie 1785/86, UBB 56: f40v.
³ Cf Lilljeborg 1866: 277; cf 1862: 38. The English text has 'cast-ropes' which must be an error. Lilljeborg mentions, inter alia, 'Stegesund', presumably meaning Telavåg, amongst the traditional whaling voes (cf Lilljeborg 1862: 38; 1866: 277).
⁴ Cf Brunchorst 1899: 139.
the lattice share testifies to its earlier existence.\footnote{Cf Christie 1785/86, UBB 221: f4r.} Around 1785/86, the western sound in Telavåg, being ca 20 fathoms (28.4-37.7 m) wide and 7 fathoms (10-13.2 m) deep was permanently closed by means of a lattice made from long pine spires; it was kept in an upright position like a net by stones tied to the lower end of, presumably, the vertical laths. Because the movements of the sea broke and spoiled the lattice, it hardly lasted for a full year.\footnote{Cf Christie 1785/86, UBB 56: f40v-f41r.}

Lunge’s yearly delivery of 60 stygh\footnote{Stygh = stigh as one variant in normalised late mediaeval/early modern Danish (cf ODS 21, 1943: 1107); it is the same as stík (ON), ‘stick’.) to the Telavåg whaling voe seems to relate to the regularly renewal of it. Literally, these stygh (‘sticks’) should have been used in a stockade proper; however, in view of the depth of the sound concerned (ie, 10.5 m, possibly even ca 13 m), this presumably refers to the lattice which Christie 250 years later states to have been ‘20 fathoms [long] and 7 fathoms deep’,\footnote{Cf Christie 1785/86, UBB 56: f41r.} ie, at least 30 x 10.5 m, possibly even 37.6 m x 13.2 m, - in any case an impressive construction.

Christie explicitly states that it is the lattice in the western Stikholm sound which makes Telavåg a whaling voe; without it whales would hardly be caught there. Apparently sometime around the middle of the 18th century the peasants in Telavåg attempted to create a garth across that sound by filling it up with stones but this was abandoned as being too big an enterprise.\footnote{Cf Christie 1785/86, UBB 56: f4r; see also UBB 56: f40v.} The available information only allows for speculations about the construction of the Telavåg lattice. In order to be feasible as described the beams used for it must have been of considerable dimensions. Assumed horizontal and vertical laths can only have provided huge ‘meshes’ but this seems to have been sufficient to impress the minke whales and cause them to

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1 Cf Christie 1785/86, UBB 221: f4r.
2 Cf Christie 1785/86, UBB 56: f40v-f41r.
3 Stygh = stigh as one variant in normalised late mediaeval/early modern Danish (cf ODS 21, 1943: 1107); it is the same as stík (ON), ‘stick’.
4 Cf Christie 1785/86, UBB 56: f4r; see also UBB 56: f40v.
5 Cf Christie 1785/86, UBB 56: f41r.
turn around and swim towards the head of the inlet again.

Christie's account of the Telavåg whaling lattice demonstrates the great efforts which such lattices and, thus, whaling voes using them and similar constructions, required in terms of work and social (including financial) organisation. Neither this nor the absolute return from whales caught will have been significantly different in the Middle Ages. However, by the late 18th century the peasant fishermen who had a share in the Telavåg whaling voe were obviously less inclined than earlier to contribute to the maintenance of the lattice in terms of work and financial advances (beyond the lattice tylt, ie, 'twelfth' share of whales) needed for materials. The explanation seems to lie in changed socio-economic circumstances resulting in the peasant fishermen shifting their emphasis away from the whaling voe to other activities giving a comparatively higher return. In this situation it made sense once and for all to make the western Stikholm sound so shallow that whales would not exit through it. Filling stones into a 18-28 m wide and 10-13 m deep sound, even if only the lowest figures are relevant, is a considerable task; that it failed is not at all surprising, especially as the enterprise presumably was subject to similar adverse factors as those frustrating the maintenance of the lattice.

The efforts required, and the trouble involved, in making and maintaining lattices, dams, etc, in whaling voes/garths, in my opinion, explain why their owners according to the old laws could fully keep whales that had been taken there without their approval, in contradiction to the half and half division in plain whaling creeks: What at the surface of it might look like a legalistic property claim becomes in this perspective a just compensation.
9.6.3 Straumøy whaling voe, Frøya, 1435 AD

Aslak Bolt's land register, compiled between 1432 and 1449 AD, lists the farm Straumøy, in modern Frøya municipality, South Trøndelag, among the estates of the archbishopric in Trondheim. In a grant, dated 1435, to the community of canons at the cathedral in Niðarós (Trondheim) archbishop Aslak Bolt writes that he has

'now, full of hope, made and brought in a good condition the whale voe in Straumøy which for long has detrimentally been neglected in past times by our forefathers, and we have ... granted and given for the sustenance of our ... canons in Niðarós all our bishopric share of the tithe of that whale which may fall in ... Straumøy whale voe'.

My interpretation of this document is that sometime in the period 1428-1435 AD, Aslak Bolt (archbishop 1428-d 1449), had the whaling voe at the farm Straumøy, of which the archbishopric was the proprietor, repaired and put in good working order. His words seem to involve criticism of his predecessors for prolonged neglect of the whaling voe to the detriment of the archbishopric incomes. However, in 1435, the archbishop is 'full of hope', apparently about the prospects of catching whales in the Straumøy whaling voe of which the see presumably is the sole owner. Straumøy is situated on the northern part of the outlying island of Frøya, with many inlets and sounds in the vicinity (including the modern island Kvaløya, ie, 'Whale Island'). The whole setting of Straumøy indeed looks favourable for the driving, enclosure and trapping of

1 Cf Munch 1852: 60f, see also iii. See also GN 19, 1970: 280.
2 "... tha hafwa wi nw vppa eina godha waan ferdighat oc till ein godh stadgha komith hvawlwhagen i Straumøy som lenge hafwer skadeligha till forunnc forsymbadn warith af wara forfæder. ... allan wan buscopsluth tiundar af then hvall som falla kan i ... Straumøy hvawlwhagh." (Cf DN 5/2, 1861: 463 [dipl 649]).
3 Cf Munch 1852: iii.
cetaceans.

We know nothing about the legal, practical and financial arrangements surrounding the Straumøy whaling voe but MLL vii 64 will have formed the basis, although probably modified by local customs and regulations in the feu of the farm.¹

In Norway the tithe was then divided equally between the bishop, the local church, the vicar and the poor of the municipality.² After the tithe had been taken off, the bishopric in principle owned the rest, less the appraised work of drivers, killers and flensers, as it would be. Although it will certainly have been appreciated by the canons, the bishop's grant nevertheless only amounts to 2½ % of the gross catch. Aslak Bolt's wish that the grant 'may be kept everlastingly in the coming time' must originate in the confidence that the re-established whaling voe, properly maintained by his successors, for ages to come, would provide considerable profit for the see.

From the above we seem to be able to conclude that the whaling voe at Straumøy existed in the high Middle Ages and had fallen into disrepair and disuse some generations before Aslak Bolt took office. Could it have been caused by the effects of the Black Death in 1349/50 and subsequent plagues? or are there other explanations?

9.6.4 Vikna whaling voes, 1432/49 AD

Aslak Bolt's land register (1432/49) also has an entry about the farm Kvalfjord, in the archipelago Mellom Vikna,

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¹ This presumably concerns one farm, but possibly some farmsteads, so Lunge's arrangement with the peasants at Telavåg a hundred years later may give the flair of the practical arrangements.

² Cf Fladby, Imsen and Winge 1981: 342; Hamre 1982b: 285. The poors' tithe (called 'farmer's share' because it was administered by the farmers) caused much strife during the late Middle Ages and was formally abolished with the Reformation, 1539. This met with strong resistance and it was not before 1687 (NL) that the tri-division was definitely established. (Cf Fladby, Imsen and Winge 1981: 342).
present-day Vikna municipality, North Trøndelag, as follows in my tentative reading: 'from Hvalafjörður 4 spönn [ie, 24.7 kg butter] unreduced and all whale voes for which Uxabúðir had been given in exchange' ("... af hualafyrde iiij spann oll oc aller hualuager oc var ther mot lagder vxa buder"). The standard work Norske gaardsnavne (NG 19: indices) neither registers Uxabúðir as a farm nor otherwise as a place name but has, however, several similar names, such as Uxadalr, Uxaholmr, Uxahöfuð, Uxaruð, Uksagili and Oks-, Okse- names. As it is unreasonable to consider some 'oxen sheds' having been exchanged for whaling voes (pl!), and because place names are generally uncapsulated in the manuscript, I interpret the last two words as a place names, and in effect a farm name (Uxabúðir).

This seems to show that the archbishopric of Niðarós 1432/49 AD owned the farm Kvalfjord (from which it obtained an annual butter rent of 24.7 kg) and that the see had recently secured for itself whaling voes (pl!), presumably in the vicinity of Kvalfjord, for which it in a real property exchange had given the farm Uxabúðir. The whaling voes were probably put under the administration of the Kvalfjord tenant as they are mentioned under that item. Because the land register states that the see receives the proceeds 'from ... all whale voes' we may assume that a special agreement existed about maintenance, killing, flensing, etc, perhaps similar to that which Lunge had with the Telavåg peasant fishermen.

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1 Cf NG 15, 1915: 363; see also Sandnes and Stemshaug 1980: 11, 193.
3 Cf NG 19, 1970: 212, 311, 315).
4 Where Uxabúðir was and with whom the exchange was made cannot be said; neither need it be associated with Vikna and vicinity.
9.6.5 Other whaling voes

G.P. Blom (1825) and J. Kraft (1830) refer to Kvalvåg [Qvalvaag], Lindås parish, North Hordaland (ie, VM8/VF7, cf items A.17.4 and A.17.6). As late as 1910, M. Olsen writes that 'whales are caught every year' there.

Blom (1825: 157f) refers to both Kvalväg/Skogsvåg and Kvalväg/Lindås in terms of their favourable topography and states that the fishery at the latter locality differs from that of the former 'only in that the whale here is caught by harpoon and line' which, nevertheless, is a significant difference. Kraft (1830: 612) writes that 'a special kind of whale fishery' takes place at two localities in Nordhordlen (North Hordaland) and Voss bailiwick; he then describes the Skogsvåg whaling and continues: 'A similar whale fishery takes also place in Kvalvåg in Lindås parish, however, with the difference that the whale is here caught by harpoon and line.' These accounts in various ways link the whaling in Skogsvåg and Lindås ('differ ... only'; 'similar', etc) but their references to the similarity seem not to concern the Skogsvåg net but rather the species (minke whale) and the topography. They firmly state that the Lindås whaling differs from that in Skogsvåg by using 'harpoon and line', ie, that the main method there in the 1820s was harpoon tow whaling (qv) in the inner part of the inlet and that no net (seine) was used. The name seems to identify the locality as a former whaling voe. This student could imagine that whales, eg, in the 18th century, may have been enclosed there with herring seines but that the peasant fishermen, from using the grommet toggle harpoon in the same way as in Skogsvåg, discovered that they could manage without shooting a seine at the mouth of the voe. The use of the harpoon in some whaling voes and the crossbow and arrows in others is confirmed by

1 The farm VM8/VF7 was in earlier times also called Toftegaard (cf Nedrebå 1993, pers comm). I have not been able to verify the second Kvalvåg locality in Lindås which Helland (1921: 332) mentions.

2 Cf NG 11, 1969: 413; see also Nedrebå 1993, pers comm.
Lilljeborg around 1862.\textsuperscript{1}

J. Brunchorst (1899) also describes Østfjordspollen (modern Spildapollen, at the northern end of Rustefjorden), in southern Sotra island, Hordaland, as a whaling voe. The peasants there used the crossbow and arrows, it seems, as late as the 1890s but for enclosing they employed ordinary herring seines.\textsuperscript{2}

F. Wallem (1918: 119f) states, rather vaguely, that in the early 16th century there were many whaling 'localities' along the southwestern coast of Sotra (between Telavåg in the north and Tofte and Humlesund in the south). He (p 120) writes that the accounts of the royal estate (\textit{kongsgård}) in Bergen, 1517 AD, show that people were sent from it to southwest Sotra to conduct whaling in the middle of March, which seems to be a short time after the arrival of the spring herring, and that they returned with whale blubber. So far I have been unable to verify this statement in, eg, the accounts of Bergens \textit{kongsgaard}, 1516-1518.\textsuperscript{3} In the same area Glesvær is mentioned as a whaling voe.\textsuperscript{4} Kvalios, Øygarden municipality;\textsuperscript{5} Kvaleim, Manger, Radøy municipality; and Kvalesund, Os municipality, all in Hordaland, are possibly also old whaling voes.\textsuperscript{6}

O. Lübbert (1865) describes how the Skogsvåg shooters, sometime before 1864, killed a minke whale enclosed with triple herring nets at Hatlevik, Fitjar herred, Hordaland, about 5-6 km south of Bergen.\textsuperscript{7}

At summer time, between 1891 and 1897, a minke whale was

\textsuperscript{1} Cf Lilljeborg 1862: 38; 1866: 277.

\textsuperscript{2} Cf Brunchorst 1899: 138f; cf also Collett 1911-1912: 565.

\textsuperscript{3} Cf Huitfeldt-Kaas 2, 1896: 673-688.

\textsuperscript{4} Cf Collett 1911-1912: 565; Helland 1921: 332.

\textsuperscript{5} Cf Garatun-Tjeldstø 1976: 50.

\textsuperscript{6} Cf Helland 1921: 332.

\textsuperscript{7} Cf NG 11, 1910: 153.
caught at Dalsland, in Hjeltefjord, Hordaland.\(^1\) The circumstances are not mentioned but it indicates the possibility of such takes in the Norwegian archipelagos outside of whaling voes.

Without putting a name to them, Brunchorst (1889: 160\(^*\)) describes two whaling garths, in northern and southern Bildøy, Hordaland, respectively, which use stone dams for ebb-trapping of smaller cetaceans up to and including minke whales. It seems most likely to me that the peasants in the 1880s have been improving on earlier constructions rather than creating entirely new ones, \emph{i.e.}, that the whaling garths there are of earlier date. It is even possible that the unidentified stone whaling garth referred to by Christie (1785/86, UBB 56: f47v) may be one of these.

9.7 Whale creek (hvalvík), whaling voe (hvalvágr) and whale garth (hvalgarðr)

9.7.1 Hvalvík, hvalvágr: present state of research

We shall now pursue the whaling voe/garth (hvalvágr/hvalgárd) and whaling creek (any other vágr/vig) hypothesis on the basis of place name evidence.

\emph{Vig} (D/N), \emph{vík} (ON, I, F; from Proto-Norse \(^*\)wík or \(^*\)wíć), \emph{vik} (NN), \emph{wick} (NS) means an inlet or small bay,\(^2\) so does \emph{vágr} (ON; from Proto-Norse \(^*\)wäga-, \(^*\)wēga-); \emph{vág}, vágur (F); vogur (I); \emph{vág} (N); vo (NS); wa, waa (NO).\(^3\) Vík and vágr

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\(^1\) Cf Grieg 1897: 10. The locality is not mentioned in NG and I have as yet been unable to identify it.


offer themselves as parts of a compound word.

When contrasting the special hvalvágr with the eigi [hval]vägr/vig (ie, 'not whale voe') (cf item A.15.1.8, Summary 1) my working hypothesis is that the latter may also have been termed víf,¹ and even more specifically *hvalvík (ON). The appellative is not recorded² but it exists as place, including farm, names in Norway, the Faeroe Islands,³ Iceland and Shetland (cf below). The Norwegian, Shetlandic and Orcadian usage involve that a vágr is narrower, more indented and sheltered than a vík.⁴

Professor O. Nes has kindly informed me that nothing definite can be said about the age of the Hvalvágr and Hvalvík proper names; linguistically, they may well go back to the 10th century AD but as they probably were living appellations for a very long time the adoption at individual localities may also have happened much later, spanning a period of several hundred years. As composite place names they must in terms of relative chronology be considered to be somewhat younger than Vágr and Vík, respectively.⁵

According to K. Kruken (1993, pers comm) 'There has been written nothing of importance about' the Hvalvágr and Hvalvík names as such and N. Hallan (1985) only offers a general discussion of vágr. However, Hallan (1985: 137) puts the present issue in perspective when he writes: 'The Norwegian and Norse place names terminating in -vág have ... not been treated by other name researchers than Rygh [cf NG]. The topic seems not to have caused linguistic and historical problems and has presumably appeared to be trivial'. Similarly, the literature on Norse peasant

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³ Cf Nielsen et al 1968: 356.
⁵ Cf Halveg 1993, pers comm.
fisherman whaling hardly deals with the question 'What is a whale voe/garth (hvalvágr/hvalgård)?'.

The research situation from where we begin is rather complex. The definitions and meanings of hvalvágr and (hval)vík, including their modern derivants, which scholars have hitherto offered, often involve vague ideas. Because of the need for discrimination, their views are presented at some length in item A.16.8. They may be summarised thus:

A. Kjær, M. Olsen and K. Rygh apparently see no real difference between the Hvalvágr and Hvalvík farm names in Norway. J. Sandnes and O. Stemshaug not only associate the large majority of Kval- place names with cetacean presence but also with catching. Actually, this is the opposite position compared to that of O. and K. Rygh who are inclined to metaphorical interpretations. For Wexelsen all Kval- names are potential catching places although the names are otherwise silent. This seems only partly to account for Ø. Frøiland's correct observation that a metaphorical interpretation is reasonable in certain cases. In my opinion there is no basis for interpreting the Old Norse Hval(a)- prefix in place names beyond the indication of cetacean presence, be it inshore migration, stranding or catching.

To G. Sørensen et al, hvalgaard are simply smaller inlets into which cetaceans are driven and killed. Martinsen uses the term hvalvág indiscriminately about any fiord, bay or creek with some whale presence and which might be suitable for whale drives and/or enclosures. Risting relates both (hval)vág and vík to takes of smaller odontocetes whereby he basically associates hvalvágr with natural live strandings. To A.O. Johnsen (1981: 163) the difference between (hval)vág and vík appears to be that the former essentially involves minke whales. Bjørk (3, 1963: 166) also thinks that the special whale voe/garth

1 In addition, it is not clear what these scholars mean by 'whaling', etc.
provisions in Norwegian laws concern 'perhaps mainly catching of the minke whale'. E. Wexelsen attempts a differentiated analysis but operates only with the terms (hval)våg and hvalsteng ('whale enclosure', ie, whale seining) which he applies to whaling voes as well as whaling creeks. Wexelsen reduces the whaling voe proper (also termed hvalvåg) to an issue of enclosing cetaceans in narrow inlets, basically with seines, where they were later arrowed or speared.

The present student disagrees with these views because they generally lack in clarity, (internal) consistency and do not conform with the historical evidence. Simply considering some unquantified cetacean presence sufficient so as to speak of a whaling voe makes, to overdraw it, virtually every creek on the Norwegian coast a whale voe proper; 'frequent live strandings' of whale schools and topographical criteria, eg, 'narrow inlet', are obscure criteria; furthermore, S. Risting and O. Martinsen do not suggest any criteria to have been applied in their legal 'recognition' of a whaling voe. This all entails (a) that the definition of a whaling voe becomes a matter of simple opinion (eg: how often must a whale or whales be present to make a creek a whale voe? How many cetaceans are needed? What species? For how long can a 'whaleless' whale voe maintain its status as such?); and (b) as a matter of opinion, the division becomes an issue of permanent controversy with up to half of the catch at stake. Merely inscribing matters of opinion in the law would be against the rationale of making such provisions, ie, offering clear guidelines, defining rights and duties, and securing the peace.

Martinsen’s assertion that 'the hvalvåge often lay far from permanent settlements, far from the farms - at the edge of the [open] sea and the fishing stations' is not based on a systematic study and below we shall find quite a number of whaling voes being associated with farm and settlements. His speaking of a 'nice reward' for outsiders using another man’s whaling voe is in direct contradiction
to GTL 150 and hardly in conformity with MLL vii 64 (compensation for work). These scholars only consider the 'staking off' aspect casually and non-definitionally so it is better dealt with separately (cf chapter 9.7.5).

This survey of the state of research shows that Robberstad, in 1952, does not interpret the old hvalvägr and non-vägr provisions and phenomena; however, in 1978 he compares the hvalvägr to fishing with stationary gear off a coastal estate which is basically repeated by the Civil Code Committee (1988). Neither of them offer more direct views on the issue but it nonetheless involves support for the whaling voe/whaling creek hypothesis under consideration here.

However, my conclusion is that the approach, methodology and state of research concerning all Hval- place and farm names, including Hvalvägr and Hval(a)vik, is generally unsound, if not outright speculation. In my opinion it is necessary to widen the approach, conduct systematic (statistical, geographical, topographical) studies and bring hitherto unused sources to bear.

9.7.2 Norwegian Kvalvik and Kvalväg farm names

Norske gaardsnavne (NG) enumerates Norwegian farm names since the high Middle Ages and offers explanations and interpretations of them, and by extension similar ones. It appears to be the most appropriate work to begin consulting. In Norway there exist numerous place and farm names which seem generally associated with 'whale', both literally and metaphorically. In recent centuries such (one-word) place names are Hval, Kval, Hvala, Kvale, Hvalen, Kvalen and Hvaler but possibly the majority are compound names with the prefixes Hval-, Kval-, Kvala-, Kvale- and Kvals-.

1 Cf NG 0, 1962: 31; NG 19, 1970: 130, 165; Sandnes and Stemshaug 1980: 192f; Stemshaug 1985: 9, 71, 76. Meanwhile the Hval- spelling has been changed to Kval-.
the Hvalvágr (Hvalvág/Kvalvág; -vaag) and the Hvalvík (Hvalvik/Kvalvik) type of (farm) names. They are listed in item A.17.4. The old Norwegian terminology and laws indicate a literal, rather than figurative, meaning of the former category; similarly, behind the latter I postulate the phenomenon, word and legal term "hvalvík to exist. It is important to note that we here primarily deal with the two (farm) names as categories and only secondarily with them at the individual level.

The commentaries in NG indicate that the interpretation of Hvalvágr and Hvalvík farm names and, by extension, similar place names, concern questions such as:

(a) do these farm names have a direct reference to whales frequenting the localities or are they adopted from topographical features in the vicinity which carry a name that figuratively compares it with the back or body of a whale (hvalr); 1

(b) is a hvals- farm name a variant of the more usual hval- type or is it derived from a personal name (Hvalr) which, of course, is a metaphor; 2 and

(c) is it justified to treat the hvalvágr and hvalvík names as reflecting essentially the same phenomenon or should one differentiate between them because they, at least originally, may have been given deliberately to characterise different things?

In summary, NG treats the issues like this:

Regarding item (a): M. Olsen points out that one must assume similar (farm) names to have the same character in local and regional contexts, 3 and by extension, the overall Norwegian and wider Norse context. The prefix of both categories of farm names is generally considered to

1 The discussion of these issues by K. and O. Rygh, and M. Olsen is very instructive but cannot be considered here (cf NG 13, 1969: 37; NG 17, 1970: 156; NG 11, 1969: 413).

2 Cf NG 13, 1969: 37, 350.

3 Cf NG 11, 1969: 413.
refer to whales proper\(^1\) but O. and K. Rygh accept secondary metaphorical applications of hvalr in the names of farms which I consider implausible as long as there is a possibility of establishing a more direct relationship between whales and an inlet.\(^2\)

Regarding item (b): Hvalvík is indeed the usual Old Norse form of the place name but this student considers that Hvalsvík, presumably treated as two words (hvals [m sg, gen] vík, ie, 'whale's creek'), is also a feasible compound\(^3\) although I assume it to have another meaning than is here under consideration, ie, somehow pertaining to the animal (or a whale carcass) rather than a whaling site and a legal category.

The aspect (c) we shall consider further in the following subchapters. At this point it should be recalled that the Hvalvágr and Hvalvík farm names per se constitute a limited selection which can only reveal information about non-farming aspects as far as these are also found in relation to farm sites (and farming areas). Similarly, non-farm Hvalvágr and Hvalvík place names are only a selection of the localities where the postulated activity may have taken place.

The majority of the Hval(a)vágr farms are in modern Norwegian called Kvalvåg (Hvalvåg), (VF1, VF3-4, VF6-12),\(^4\) one is called Kvalevåg (Hvalevåg) (VF2); and one extended name occurs, namely Kvalvågsnes (Hvalvågsnes) (VF5). In consequence of the usage adopted here these names are 'Whale Voe', 'Whales' Voe' and 'Whale Voe Headland', respectively. Ten Hvalvík farm names are found again in

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2 Qvigstad (1922: 4) takes the same position in a similar issue.


4 For the various codes and enumerations of farm and place names, cf items A.17.4; A.17.5; and A.17.6.
their modern Norwegian *Kvalvik* (*Hvalvig*) (CF2-5, CF7-12) (ie, 'whale creek') form. One name is originally recorded as *Hvalsvik* (CF6) and another name is recorded as *Hvalvik(a)r* (CF1), ie, 'Whale's Creek' and 'Whale Creeks', respectively. Their geographical distribution is as follows:

<table>
<thead>
<tr>
<th>Farm names, etc</th>
<th><em>Hvalvågr</em> (References)</th>
<th><em>Hvalvik</em> (References)</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telemark</td>
<td>-</td>
<td>1 (CF1)</td>
</tr>
<tr>
<td>Rogaland</td>
<td>2 (VF1-2)</td>
<td>1 (CF2)</td>
</tr>
<tr>
<td>Hordaland</td>
<td>4 (VF3-4, VF5/6, VF7)</td>
<td>1 (CF3)</td>
</tr>
<tr>
<td>Sogn and Fjordane</td>
<td>1 (VF8)</td>
<td>2 (CF4-5)</td>
</tr>
<tr>
<td>Møre and Romsdal</td>
<td>2 (VF9-10)</td>
<td>1 (CF6)</td>
</tr>
<tr>
<td>South Trøndelag</td>
<td>-</td>
<td>1 (CF7)</td>
</tr>
<tr>
<td>Nordland</td>
<td>1 (VF11)</td>
<td>4 (CF8-11)</td>
</tr>
<tr>
<td>Troms</td>
<td>1 (VF12)</td>
<td>1 (CF12)</td>
</tr>
</tbody>
</table>

We notice that *Hvalvågr* farm names are found on the West, Mid and North Norwegian coast, from inner southeastern Ryfylke (Sand), in Rogaland, to Helgøy, in North Troms, and that they appear to be more frequent on the coast from Ryfylke to North Møre (ie, West Norway).¹

Our *hvalvågr* evidence so far consists of the legal provisions as from ca 1100 AD, information about the Skogsvåg, Vikna, and Straumøy localities, and the farm names, of which the earliest references are:

- once, in 1322 AD (Rogaland);
- once, in 1338 AD (Hordaland; no farm name);
- twice to thrice, ca 1360 or earlier in the 14th century AD (Hordaland);
- once, ca 1360 or earlier in the 14th century AD (Sogn and Fjordane);
- once, ca 1430-1440 AD (Møre and Romsdal),
- once, 1435 AD (South Trøndelag; no farm name),
- once, 1432/49 AD (North Trøndelag; no farm name) and
- once, ca 1430-1440 AD (Nordland).

Similarly, **Hvalvík** occurs once in 1333 AD (Telemark); once, ca 1360 or earlier in the 14th century AD (Sogn and Fjordane), and once, ca 1430-1440 AD (Møre and Romsdal).\(^1\)

This implies that **Hvalvágr** and **Hvalvík** (farm) names in Norway date at least from the high Middle Ages and that they occur side by side, whatever their meaning is; this I also take as applying to the phenomena **hvalvágr** and **hvalvík**.

Farm and place names will be much more stable entities than the activity they may initially have reflected. The **Hvalvágr** names do not indicate when the phenomenon as such ceased to exist, only that we somehow have potential localities. On the other hand, evidence shows that an actual whaling voe, even carrying the **Hvalvágr** (**Hvalvág** or **Kvalvág**) name, need not necessarily (so far we know) give a name to any farm in the vicinity;\(^2\) furthermore, a whaling voe needs not at all carry a **Hvalvágr** type name.

My **hypothesis** is that when the farms were named, and no later than around the first mention of the respective **Hvalvágr** farm names, there will have been a whaling voe (garth) proper (in the meaning of GTL 150c and MLL vii 64 1) close to the farm, probably within its bounds, which was considered of more importance than other features or connotations of the place. It is even possible that the whaling voe/garth occasionally predated the farm as such.

9.7.3 **Kvalvág** and **Kvalvík** place name evidence in Norway, Iceland and Shetland, in general

J. Qvigstad (1922) compiled from land registers, maps and charts all Norwegian and Samish place names in Nordland,  

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1 **Hvalvík** (etc) is stated to be a frequent name (cf NG 14, 1965: 12; 16, 1970: 165, 207).

2 Cf Kvalvág/Skogsvág 1338 AD, above.
Troms and Finnmark counties relative to animals and plants. He lists six Norwegian place name types and localities associated with porpoise (Nise- and variations) and around 51 place name types and ca 195 localities associated with whale (Kval- [Hval-]). Other names relating to cetaceans do not occur which seems to coincide with the expression in MLL vii 65e ('If a man finds a seal or porpoise or other fishes except whales above the subtidal slope and brings the owner ...') and subsequent provisions (NLB vi 62d; NL 5-12-17). It presumably reflects vernacular usage and an aspect of popular taxonomy of cetaceans and I conclude that the hval- prefix in hvalvågr/hvalgard includes all cetaceans other, and larger, than the harbour porpoise. The small size of the porpoise may have placed it as a 'near-fish' proper in the popular mind. F. Nansen (1911b: 2) limits the 'whale' designation to baleen whales which is at variance with the present hypothesis that associates Hvalvåk sites with takes of mainly dolphins, orcas and pilot whales. The place names with more specific references to species, eg, Springervik,2 seem to be comparatively few and shall be left aside here; I consider the hvalvågr issue best, and sufficiently, dealt with by juxtaposing the hvalvågr and the hvalvåk aspects.

Among Qvigstad's (1922: 47f) place names in Nordland, Troms and Finnmark associated with animals and plants we find 4 Kvalvåg (PQ1-4) and 19 Kvalvik names which are further identified in item A.17.5. However, for our study we need a country-wide survey.

Item A.17.6 offers lists of current Kvalvåg names (including their variants) and Kvalvik place names proper (including different inflexions of the suffix) which are compiled from maps in, and index information from, the topographical main map series M711 (1:50,000) which the geographical service of the Norwegian defence forces (FMGT

1 Cf Qvigstad 1922: 45-49, 52.
2 Cf Strøm 2, 1766: 90.
1993, pers comm) was kind enough to place at my disposal. Noting the comparatively large scale of the M711 maps, the enumerations must be considered representative, although, of course, not complete.

Tentatively, 10 of the 12 VF Hvalvágr type farm names have been collated with the 17 VM names and 2-3 of the PQ localities; they are all cross-referenced in the tables. A similar collation of the Hvalvík names is more difficult and unimportant in the present context so only the most obvious CF/CM localities have been cross-referenced.

The national scope of this survey should permit a cautious evaluation of the frequency and geographical distribution of these names.

Hvalvágr type names occur at 17 localities (with a total of 21 place names) while Hvalvík is found at some 72 localities (with 75 place names in total). Thus, in Norway as a whole only one Hvalvágr exists for approximately every four Hvalvík, however, with great regional differences (cf below). This indicates that the two names are hardly synonyms as one might then expect a more equal ratio between them. Furthermore, the assumption that Hvalvágr has some special arrangements, while Hvalvík has none, implies a ratio with this tendency. This 'proves' nothing, but a reversed tendency would have rendered the hypothesis unfeasible, if not invalid.

Thirteen Hvalvágr names, from a total of 21, or 62 %, are associated with current villages (ancient farms), present and former farms; one should presume that some under the simplified designation 'inlet' are within close range of ancient farmsteads, too. It can therefore hardly be maintained that whaling voes proper generally lie 'far from permanent settlements, far from the farms' (Martinsen). Looking at the Hvalvík names in the same manner 18 (24 %) are directly associated with farms and settlements while the remaining 57 are designations for inlets. The tendency seems to be that Hvalvágr place names are associated with farms to a higher degree than the
Hvalvik names are. These frequency comparisons emphasise the need for a differentiated approach to the two name categories.

The geographical distribution of M711 Hvalvågr and Hvalvik localities (rather than place names as such) between counties in Norway is listed below and shown in the maps of figures 11-12. Because of the low absolute numbers involved the percentages there are only offered with great reservation; they should be interpreted accordingly. The same concerns the shoreline\(^1\) which is 'unadjusted' with regard to potential cetacean presence.

<table>
<thead>
<tr>
<th>Fylke/county</th>
<th>Shoreline %</th>
<th>Hvalvågr (Refs)</th>
<th>Hvalvik (Refs)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>nos %</td>
<td>nos %</td>
</tr>
<tr>
<td>Rogaland</td>
<td>4.5</td>
<td>2 12 (VM1-2)</td>
<td>2 3 (CM1-2)</td>
</tr>
<tr>
<td>Hordaland</td>
<td>10.6</td>
<td>6 35 (VM3-8)</td>
<td>6 8 (CM3-8)</td>
</tr>
<tr>
<td>Sogn/Fjordane</td>
<td>7.5</td>
<td>1 6 (VM9)</td>
<td>3 4 (CM9-11)</td>
</tr>
<tr>
<td>Møre/Romsdal</td>
<td>12.5</td>
<td>3 18 (VM10-12)</td>
<td>7 10 (CM12-18)</td>
</tr>
<tr>
<td>S Trøndelag</td>
<td>9.9</td>
<td>- - ---</td>
<td>2 3 (CM19-20)</td>
</tr>
<tr>
<td>N Trøndelag</td>
<td>7.5</td>
<td>- - ---</td>
<td>4 6 (CM21-24)</td>
</tr>
<tr>
<td>S Nordland</td>
<td>(13.7)</td>
<td>3 18 (VM13-15)</td>
<td>6 8 (CM25-30)</td>
</tr>
<tr>
<td>N Nordland</td>
<td>(13.7)</td>
<td>1 6 (VM16)</td>
<td>19 26 (CM31-49)</td>
</tr>
<tr>
<td>Troms</td>
<td>9.5</td>
<td>1 6 (VM17)</td>
<td>13 18 (CM50-62)</td>
</tr>
<tr>
<td>W Finnmark</td>
<td>(5.3)</td>
<td>- - ---</td>
<td>5 7 (CM63-67)</td>
</tr>
<tr>
<td>E Finnmark</td>
<td>(5.3)</td>
<td>- - ---</td>
<td>5 7 (CM68-72)</td>
</tr>
<tr>
<td>Total</td>
<td>(100.0)</td>
<td>17 (101)</td>
<td>72 (101).</td>
</tr>
</tbody>
</table>

The Hvalvågr and Hvalvik names exist side by side in Rogaland, Hordaland, Sogn and Fjordane, Møre and Romsdal, Nordland and Troms. The names are most equally distributed in Nordland with 24 % (4 localities) and 35 % (25), respectively, if one may trust such low absolute figures. There is otherwise a strong imbalance in the distribution: two-thirds of the Hvalvik names are found north of Trøndelag while more than two-thirds of the Hvalvågr names are found south of that county, in (wider) West Norway. M711 Hvalvågr place names are conspicuously absent in Trøndelag and Finnmark where Hvalvik is the only recorded name.

According to the hypothesis above, whaling voes will

\(^1\) Cf Anon 1988c: 30 [table 1]; see ch 9.7.6 for absolute shore length.
*Hvalvágr* type place names in Norway

According to item A.17.6 (map series M711)
Figure 12

Hvalvik type place names in Norway

According to item A.17.6
(map series M711)
require constant supervision and maintenance which, in my opinion, inevitably relates them to farming settlements of some strength in terms of manpower and economy. The northernmost Hvalvågr locality, in Vanna (Vannøy), Karlsøy municipality, Troms (VF12/VM17), falls just within the continuous early to high mediaeval Norwegian settlement in North Norway\(^1\) and lies at the extreme northern margin of cereal growing.\(^2\) The farmstead VF12/VM17a seems to have been established 1770-1800;\(^3\) the farm name may therefore to be derived from a name of the adjacent inlet (VM17b) which Bratrein lists among 'likely' late Iron Age names.\(^4\) There are registered farms (from 1615) and Iron Age finds (post 400 AD) within a distance of some kilometres, to the north and south of VM17b.\(^5\) VM17b seems either to be an exception to the tendency of proximity with farms/settlements or it may be of a secondary (modern) character. Its position far beyond the otherwise northernmost Hvalvågr locality (VF11/VM16), at Bodø, is hardly conclusive with a view to the other wide geographical gaps between Hvalvågr names in Mid and North Norway (cf figure 11). The settlement history of northern Troms and all Finnmark indicates that Hvalvik names there are from the high Middle Ages to early modern times but this should not affect their character as compared to those farther south. It would indeed be understandable if the crofter fishermen in Finnmark never were able to establish, nor maintain, whaling voes/garths as postulated and that therefore only Hvalvik names occur in Finnmark. Along the same lines the unproportional two-thirds share in Nordland, Troms and


\(^{2}\) Cf Vorren 1985: 83-85.


\(^{4}\) Cf Bratrein 1, 1989: 159-161 [incl map], 167.

\(^{5}\) Cf Wold 1980: 10f, 16f, 22f [incl maps].
Finnmark of all Hvalvik names might indicate that cetacean drives have been more widespread and had a stronger tradition in northern Norway then in the rest of Mid and West Norway. This is further accentuated if the reservation regarding VM17b is accepted: then we would have a situation in which only Hvalvik names were found to the north of Bodø.

The comparable place name situation in Iceland is noteworthy: GG, JS and JB never mention hvalvägr (ON; *hvalvogur, I), hvalvik (ON, I), nor any variants with hvala- (pl); indeed, no such words are recorded in Old Icelandic.1 Following a rather comprehensive search this student has only discovered one farm called Hvalvik (recorded 1367-1733) in East Iceland (Borgarfjarðarhreppur, Múlasýsla)2 and a fishing station in Tálknafjarðarhreppur, Barðastrandarsýsla, West Iceland, by that name in 1710.3 *Hvalvogur seems entirely absent among the otherwise great variety of Hval- place and farm names.4 In the Icelandic translation of NL (NLI 5-12-11) hvalagarður (normalised) occurs but the word is otherwise not recorded in Icelandic.5 The 'reluctance' by Icelanders to use hvalvägr/*hvalvogur and partly hvalvik needs to be explained; it might facilitate the interpretation of their character.

1 Cf Ingólfsson 1993, pers comm. See also Magnússon 1989: 1150.

2 Cf DI 3, 1896: 238 [dipl 184], see also 858; DI 4, 1897: 205 [dipl 17-300, section 246], 271 [dipl 332]; DI 5, 1899-1902: 630 [dipl 570]; see also 923; DI 15, 1947-1950: 684 [dipl 331-688, section 284]; ALDB 12, 1971: 130; see also 638.

3 Cf JÅMPV 6, 1983: 353; see also 403.

4 Cf ALDB 1-17; Bearnson, Bearnson and Vane n y ms; DI 1-16; Hauksson 1972; ÍF 1-2, 4 (incl Víðauki), 5-10, 12, 26-29, 34; JÅMPV 1-13; Jóseppsson and Steindórsson 1985: 140; Kristjánsson 5, 1986: 29, 436f; Sæmundsson, Helgason and Pálsson 1976; Thorsson 1988. Anderson (1747: 105) refers to an old dictionary concerning 'the Icelanders' using the specific term Hual-vag; the reference is probably to 'old Norse', ie, Norwegians.

5 Cf Anon 1779: 627; Ingólfsson 1993, pers comm.
In Shetland, Hwalik, West Burra, is actually "Hwalwik (NS)" but so far I have been unable to study the Hvalvik/Hvalvagr evidence there and in Orkney.

9.7.4 Hvalgarðr (whale garth)

We notice that in the first half of the 15th century the old term hvalvagr was still used in Norway (cf Straumøy, 1435; Vikna, 1432/49) in a semi-legal sense but by 1604 (NBL) the legislator clearly found a need for amending the law by introducing the hvalgard term. One could imagine that the confusing of hvalvág (kvalvág) and hvalvig (kvalvik) as legal terms, on the one hand, and ordinary appellatives, on the other hand, goes back to at least the 16th century. The appellative hval(a)garðr (ON) is not recorded in Old Norse, neither are farm or place names of this type recorded in Norway.2

Qualsgarth (Hvalsgarðr) is recorded as a farm name in Unst, Shetland, around the 16th century.3 This indicates whale garths proper having been used in Shetland but I know nothing about the topography of this locality.

Around 1285 AD, the inventory of Dingeyri monastery in Iceland mentions that it owns a share in the farm Hualgarðr (Vindhælishreppur, Austur-Húnavatnssýsla), including whale comings. There is no indication of a special position of Hvalgarðr in that respect nor of any 'whale garth'.4 In 1525, Hualgardur is characterised as being 'uninhabited' and in 1708 as 'abandoned'.5 This farm name apparently has no parallel in Iceland. In fact, I have not come

1 Cf Jakobsen 2, 1985: 1047.
2 Cf NG (19, 1970: 165) and J. Halveg (1993, pers comm) who has kindly consulted the register of the map series M711.
3 Cf Anon 1839a: 522.
4 Cf DI 2, 1893: 249f [dipl 120]; see also 963 [index].
5 Cf DI 9, 1909-1913: 314; see also 853 [index]; JÄMPV 8, 1984: 479.
across other references in other Icelandic sources that could possibly be associated with whaling voes/garths. From a superficial look at the map and descriptions\(^1\) the topography of the site, with skerries and the (present) lagoon, is not unfeasible to have fostered a Viking Age or early mediaeval attempt to erect a whale garth proper, presumably of the Bildøy kind. Shore displacement seems of little or no relevance in this case.\(^2\)

9.7.5 'To stake off' whaling voes; 'whale garths'; weirs, stockades; lattices; Stikholm

\textit{Stik} (pl, ON) are 'poles rammed down in the water'.\(^3\) Storm and Hertzberg (1895: 609) explain \textit{stíka} (vb) as to 'pole, ram down poles' and, concerning GTL 150 and MLL vii 64, that "\textit{stíka firi (hvale)}" means 'to enclose [whales] by ramming down poles'. The meaning is to 'close, furnish with stangs or poles, particular in order to prevent passage' as was also done in waterways and rivers.\(^4\) The translation by NLB (vi 61) and NL (5-12-11) of MLL's "\textit{stíka fyrir}" to (normalised) \textit{stænge} (D/N) has the same meaning (ie, to 'close', 'to bar', from 'stang', 'poles and posts placed across or in a water course');\(^5\) this is also reflected in the Icelandic translation of NLI 5-12-11.\(^6\) Considering the Stekholm and Stekasund names in Skogsvåg, Barsnes (1932: 94) suggests that 'probably they have at some time enclosed whales by ramming stakes into the bottom of the sea' but he does not associate it with GTL 150 and

\(^1\) Cf JAMPV 8, 1984: 477, 499; Jóseppson and Steindórsson 2, 1981: 9, 218.


\(^3\) Cf Fritzner 3, 1954: 545f.


\(^6\) Cf Anon 1779: 627.
MLL vii 64. Martinsen (1964: 23) thinks that 'When they first had got the whale into the creek or the bay they enclosed it there by ramming poles into the bottom behind the whale.' Asphaug (1987: 47) considers that prior to the introduction of nets in whaling voes the positioning of the stangs involves diving. The question is whether this is actually generally feasible, and if not, what was then the meaning and arrangement.

Christie (1785/86, UBB 56: f43r-f53r) offers a very valuable discourse on Norwegian cetacean drives, arrow whaling, whaling creeks and whaling garths (voes). It appears not to have been presented before nor considered in its consequences. Christie's complex argument is relevant for this study as a whole and is presented in extenso in items A.20 (D) and (E). Christie only uses NL (possibly with a view to NBL); for that reason he speaks of hvalgaard ('whale garth') rather than hvalvaag ('whale voe') but the phenomenon under consideration is the same. He seems not to have known the MLL or GTL provisions. Christie's points of immediate relevance for the present study are as follows:¹

(a) NL 5-12 cannot be explained by 'shooting' referring to larger cetaceans and 'driving' to smaller ones. Shooting of whales in fiords and open waters will have been a common method when the law was formulated but (allegedly) it is unknown 'in the whole country' (i.e., ca 1785/86). However, they are driven and shot at a few localities which is insufficient to warrant a paragraph in a general law.²

２This is an important conclusion when it is taken into account that Christie was unaware of spearing taking place in northern Norway around this time.

(b) The law also states that whales are driven into whale garths: 'But what is and where is a whale garth?'

¹ All manuscript reference in this respect are to UBB ms 56 which will not be repeated below.

² Cf Christie 1785/86, UBB 56: f43r-f43v, f45v, see also f46v.
Christie (cf f43v) asks. The legal provisions can only mean that the whale garths will have existed at several places; they may have been modest in number but, on the other hand, comparatively important (cf f43v-f44r).

(c) Christie magisterially presents the intertwined etymological and construction aspects (cf f46v). He seems to apply 'whale garth' for the constructions as such while the resulting overall catching arrangement is called 'whale voe' (cf f41r, f47v-f48r). This is significant because he was apparently unaware of the change by which hvalvágr/hvalvág came to be called hvalgård (cf *hvalgarðr). He thinks (cf f46v, f47r-f48r, f51r-f51v) that fences (gjárde) in the widest sense (ie, stockade, weir, lattice) may in many ways have helped people catching whales, for example:

(A) erected from shore to shore they could:
(Aa) block a sound leading into the open sea;
(Ab) block the entrance of an inlet less suitable for the catching and thereby directing the whales to a more suitable inlet;
(Ac) close a sound (in the middle or at one end) allowing for the cetaceans to be caught like in an inlet;

(B) erected perpendicular from the coast on the remotest side of a bay they could intercept advancing cetaceans and direct them into a particular inlet;

(C) erected as (angled) wings and leaders from both shores, or from one of them where extended shallows exists, only leaving a narrow and deep entrance, cetaceans could be contained by placing in the opening

(Ca) a boat, the crew of which using beating (bails or clubs against the boat frames, oars on the water);
(Cb) a boat from which beams are suspended if the opening is very deep; and/or

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1 See also figure 16.

2 The excursus in item A.16.9 concerning old Norse fences, barriers, enclosures, traps, etc, fully confirms Christie's views.
(Cc) a lattice (grind), with sinking stones keeping it upright.

Christie (cf f47r-f47v) believes that variant (C) forms 'the nature of the most common whale garths', with seines being a later modification in certain cases. He has 'only found traces of one whale garth [hvalgaard] which still exists and one of stone of which it in the old days probably is built instead of wood' (cf f47v); thereafter he refers to the Telavåg construction as a lattice (grind) which 'is still used' (cf f48r). This seems to exclude that the wooden (stockade/weir) whale garth (hvalgaard) he found traces of is the Telavåg lattice. Regrettably, Christie does not name the places concerned. Similarly, the constructed stone garth from 'the old days' must be something else than the attempt 'some years' prior to 1785/86 to 'fill up' Grindasund in Telavåg (cf f41r). Christie (cf f47v) concludes that the constructions will generally have been made of wood 'because one nowhere finds remains of them'. Moreover, as the coast became barren of forest the erection and maintenance of any wooden barrier, which by its mere character is localised, became too expensive in terms of material and labour, absolutely and/or relatively (cf f48r-f48v). Christie (f51r) thinks that dolphins and orcas were 'in the old times' caught in specially designed garths (cf f51r) but these takes only continue until his own days where peasant fishermen have large herring and mackerel seines at their disposal which, at virtually no extra costs, may also be employed in seining the smaller cetaceans (cf f48r).

Christie's outstanding analysis of the catch division stipulated in NL 5-12-11 shows, firstly, that fishing nets (seines) were not used at the whaling garths (/voes) but 'that the garth must have been a construction [bygning] which nearly alone could do the catching', and that at least no outside gear was involved.¹ Christie's

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¹ Cf Christie 1785/86, UBB 56: f51r-f52v.
conclusion becomes inescapable when this provision of MLL vii 64, NBL vi 61 and NL 5-12-11 is compared with GTL 150 (the owner keeps the whale and receives the fine for trespass), a provision which Christie apparently did not know about. Secondly, the division of catches in creeks 'also shows that no net (seine) was used' and he considers it evident that small to middle-sized cetaceans were chased ashore there. ¹

Traditional Scandinavian fishgarths are weirs. Finds in Denmark show 'that the tradition and technique of fishing with weirs were developed more than 7,000 years ago' and lasted through the 19th century. ² In the ancient porpoise drive hunt in Little Belt, Denmark, people in the 18th-19th century used a large semi-permanent net (radgarn) for trapping the porpoises and a seine (vådgarn) for securing them. ³ The whole arrangement gives me reason to consider the nets to be successors of a porpoise (wattle work) garth in Gamborg Fjord.

The earliest known example in Scandinavia of a stockade dates from the Roman Iron Age, ca 1-400 AD. During the Viking through the Middle Ages they were widely used in Denmark and Sweden for defence purposes but seem not to be archaeologically and historically documented in Norway. ⁴ Christie (f47v-f48v) hints at the importance of the axe which implies an earliest date of ca 4000 BC (ie, the beginning of the Neolithic). ⁵ It is also clear from item A.16.9 that solid garths/dams and weirs/stockades have a history that predates the Viking Age. In my opinion it is most logical to assume the existence of a technical

¹ Cf Christie 1785/86, UBB 56: f51v; see also f51v-f53r.
³ Cf J.E. 1782: 80f; Petersen 1969: 71.
continuum ranging from (light) fishgarths, over (somewhat stronger) propoise/dolphin garths to other (more massive) whale garths, with weirs/stockades, lattices and/or special nets. The postulated, more elaborate, Norwegian whaling garths are comparatively large-scale enterprises. Apart from the iron axe, one must therefore assume that they will have required a socio-economic organisation which could enlist a considerable work force for their construction, maintenance and use, and defray the costs. In effect this must have been by communal efforts or organised by wealthy and powerful peasants, both in stable farming settlements (of single-farms, as it will be in Norway). The Iron Age commences about 500 BC but these conditions were probably not all met with before the Roman Iron Age (ca 1-400 AD) after which I could imagine chieftains and other wealthy peasants at the coast establishing larger whaling garth/voes, maintaining and using them. In the following centuries this presumably resulted in farms acquiring their Hvalvägr names and legal provisions similar to GTL 150c becoming firmly established.

There exist quite a number of early mediaeval Danish (Steg-, Stag-) place names which are associated with stockades; Swedish -stäk place names are similarly associated with stockades and weirs. In the Ynglinga saga Snorri Sturluson mentions Stokk(s)sund (in Stockholm) as associated with a massive stockade. Behind two Swedish Pålsund names and those of the Stavsund type lie probably also stockades. Since the 14th century weirs on the central east Sweden coast are called sták. Rammed-

3 Cf Aðalbjarnarson 1/FÍ 26, 1979: 37f, see also p 399. See also Aðalbjarnarson 2/FÍ 27, 1979: 8, see also p 475; Granlund 1981b: 617.
5 Cf Granlund 1981a: 349.
down poles carrying set nets are also called steg in Danish.1

It is striking that in Skogsvåg2 as well as in Telavåg3 the enclosing of the whales took place at islets called Stikholm (ie, ‘Stick Holm’). Christie (1785/86, UBB 221: f4r) calls the western sound at Kvalvåg/Skogsvåg for Stikholms Sund, later mentioned as Stekasund (ie, ‘Stick Sound’),4 with the eastern sound being called Grindasund (ie, ‘Lattice Sound’).5 The Stekasund name apparently reaches beyond the introduction there of the bast net.6 Christie (1785/86, UBB 221: f11r) and Greve (1840: [1]) state that the eastern sound in Skogsvåg is too shallow for whales to exit through for which reason it required no enclosure. The existence of a lattice share for it7 shows that the sound had earlier been blocked. We have already seen (cf chapter 8.2) that, in fact, a moderate land rise played a role in Skogsvåg: Perhaps it also rendered the lattice obsolete? If so, the lattice must have had quite a long history.

Christie (1785/86, UBB 221: f41r) speaks of Stikholms Sundene (pl) in Telavåg.8 In later times more specific names are also recorded, ie, Grindasund (‘Lattice Sound’) for the western sound and Notasund (‘Net Sound’) for the

1 Cf Stoklund 1982: 249.
2 Cf Christie 1785/86, UBB 56: f37v; UBB 221: f11r, f11v, f12r, f19r, f24r; Barsnes 1932: 94.
3 Cf Christie 1785/86, UBB 221: f40v; Barsness 1932: 94.
5 Cf Hummelsund 1970: 232. One might think from what Hummelsund writes that it could be a recent name but the ancient lattice share speaks for its antiquity.
6 Melchior’s (1834: 267") mention of a lattice in each of the two Skogsvåg sounds presumably involves some confounding with Telavåg.
7 Cf Christie 1785/86, UBB 221: f4r.
8 Cf Christie 1785/86, UBB 221: f41r.
eastern one,¹ which fit the arrangement we have inferred from Lunge’s agreement with his tenants, 1535.

There existed a bast net in Telavåg in 1535; this could also have been the case in Skogsvåg. They were clearly introduced to block the deepest and widest passages while lattices continued to be used in the more shallow passages. With a view to the expressions of the old Norwegian laws it seems most likely that the bast nets were adopted after the 13th century AD.

In Telavåg we find a sequence of tangible enclosures, viz: (1) stockades/lattices; (2) a bast net; (3) herring seines. It seems rather complete although we know nothing about the possible use of (vertically?) floating beams there.

Christie (1785/86, UBB 56: f52v) remarks that whaling garth/voe owners possibly ‘fenced behind’ (gieret etter) the whales in order ‘to avoid ambiguity’ regarding their claim to the animals and because they (presumably initially) found no clear provision about it in the law. Christie raises here an issue which scholars seem not otherwise to have considered. It leads this student to advance the hypothesis that the legal expressions ‘to stake off’ ("aô stika fyrir"; GTL, MLL), and by extension ‘to bar’ ("at stænge"; NBL, NL), in the whaling voe/garth provisions signify variously (a) a concrete exercise of enclosure, (b) a legal-symbolic act of manifesting an arrived whale, or whales, to be formally trapped, with all resulting vested rights in it, or them, on part of the garth/voe owner, or (c) both.

Old Norse legal language and practice seem indeed to allow for adding the symbolic dimension to the expression: stafr means ‘staff’ (‘stick’) but is also used in the meaning of ‘boundary post between the outfield of a farm

¹ Cf Sjurseth 1961: 416. Barsnes (1932: 94) presumably calls the former for Stekasund which I think could be wrong.
and the commons' (cf *stafstööi*, *stafstaurr*);¹ *hegna* (vb), *hegning* (sb), *hegnaðr* (sb) (etc) mean 'fence' and 'fencing (in)' in concrete and legal senses,² *eg*, the particular declaration of inviolability ('að hegna eign sín'; cf chapter 9.4.3). Storm and Hertzberg (1895: 609) interpret the passages in GTL 150c and MLL vii 64 l as 'to stake off whales' ('að stika fyrir hvali'); one might probably just as well read the passages as 'to stake off [in front of] the voe' ('að stika fyrir vág'),³ with the same applying to NLB vi 61m and NL 5-12-11 ('stænge for') as L.M. Larson (1935: 127), whose translation I am otherwise often at variance with, does. However, most importantly, *fyrir* means not only 'in front of', etc, but also 'in protection of'.⁴ Indeed, this meaning of 'að stika fyrir' seems not unreasonable in circumstances where 'staking' proper is improbable, *eg*, in deep passages, and other means of enclosure had to be applied. This also adds an aspect to the interpretation of place names such as *Stikholm* and *Stikholm Sund(e)*: Apart from referring to a storage place for material, etc, such names may signify whaling voe status of the inlet inside the islet. This student has so far not studied the place name evidence in this respect but one might advance the hypothesis that place names of the *Stik-* type at the coast, if they exist, might indicate old whaling voe/garth sites.⁵


³ Cf *fyrir*, "1) foran, paa forsideen af ..." (cf Storm and Hertzberg 1895: 217).

⁴ "4) til beskyttelse for ..." (cf Storm and Hertzberg 1895: 218).

⁵ M. Olsen's (1910) interpretation of the Stikholm name in Telavåg as probably relating to a berth marked on maps and a mooring post (cf NG 11, 1969: 263) I consider to be disproved.
9.7.6 Decline of whaling voes/garths in Norway

At least through the high Middle Ages a substantial number of whaling garths/voes seem to have existed in Norway, by the name of Hvalvågr and otherwise. During the subsequent centuries they apparently disappeared so that only two of the more elaborate ones (Telavåg; Skogsvåg) were intact in the second half of the 18th century and one (Skogsvåg) functioned to the mid 1890s. Whaling was conducted in certain other inlets in Hordaland in the 18th-19th century displaying various elements of ancient voe whaling. Presumably the whaling voes/garths gradually lost functional elements, some of which could at first be mitigated while others could not. In the short and medium term, as well as locally and regionally, this would be part of the socio-economic and technical changes in society. Christie (1785/86, UBB ms 56: f48r-f48v) fully appreciated this but found that the disappearance of forests at the Norwegian coast, resulting difficulties in obtaining suitable timber, and absolute and relative labour and capital costs had sometime, presumably in the late Middle Ages and early modern times, caused people to abandon the whaling voes/garths and only continue drive/beaching and drive/beach-seining hunts.¹

We seem now able to settle Christie’s ‘timber issue’: Firstly, the coastal deforestation in Norway was gradual and took mainly place between 500 BC and the early Viking Age but remnant coastal forests existed until modern times in West Norway; otherwise timber was obtained in more distant common forests.² Secondly, we have seen that in the 15th-16th century whaling voe/garth owners overcame problems in this respect, perhaps partly by adopting bast nets.

There exists, however, a natural factor which may have

1 Cf Christie 1785/86, UBB 56: f48r-f48v; f51r.

played much of the same role as Christie attributed to deforestation, namely shore displacement. It is acknowledged as a significant factor to be taken account of when dealing with Norwegian historical coastal issues, including place names.¹

The post-glacial relative land rise reflects a complicated process of uneven, but gradually decreasing, isostatic movements, marine transgressions and regressions, with strong regional and local variations.² Through interpolation and approximation from current land rise figures (isobars)³ I have attempted to quantify the land rise in the coastal areas (Boknafjord; outer archipelagos) from southwest to North Norway for periods of 1000 and 2000 years and to apply them retrospectively as minimum figures to the situations of ca 1000 AD, and 1 AD, respectively. The geographical extent may result in a range of mean values.⁴ The Norwegian Geological Survey (NGU 1993, pers comm) has kindly informed me that in these areas 'The maximum average shore displacement for the last 2500 year is ca 4 m for every 1000 years, the last 1000 years the shore displacement has been less than this'; moreover, one may assume that depth conditions 'have not changed more than 2-3 m at the most during the last 1000 years because of shore displacement.' This shows the following calculations to be realistic.

3 Cf Hafsten 1983: 72 [fig 6].
4 For coastline data, cf Anon 1988c: 30 [table 1].
Localities | Min land rise since 1000 AD | Hvalvágr | Total coastline km |
---|---|---|---|
| | 1 AD | nos % | | 
Rogaland (Boknfj) | 0 m | 0 m | 2 | 13 | 12 | 2297 | 4.5 |
Hordaland | 1/4 m | 1/4 m | 6 | 38 | 35 | 5421 | 10.6 |
Sogn and Fjordane | 1/4 m | 1/4 m | 1 | 6 | 6 | 3849 | 7.5 |
Møre and Romsdal | ¼-2 m | 1-4 m | 3 | 19 | 18 | 6401 | 12.5 |
Trøndelag | 2-3 m | 4-6 m | - | - | - | 8912 | 17.4 |
South Trøndelag | 2½ m | 5 m | - | - | - | 5054 | 9.9 |
North Trøndelag | 2-3 m | 4-6 m | - | - | - | 3858 | 7.5 |
Southern Nordland | 2-2½ m | 4-5 m | 3 | 19 | 18 | --- | (13.7) |
Northern Nordland | --- | --- | - | - | - | 13999 | (13.7) |
mainland | 2 m | 4 m | 1 | 6 | 6 | --- | --- |
Lofoten, etc | ¼-2 m | 1-2 m | - | - | - | --- | --- |
Troms | 1-1½ m | 2-3 m | (1) | higher | 6 | 4861 | 9.5 |
Finnmark | ¼-1½ m | 1-3 m | - | - | - | 5468 | 10.7 |
Total | --- | --- | 16/17[16][17] | 51208 | (100.1) |

The three West Norwegian counties have the lowest uplift rate and the highest number (9) of M711 Hvalvágr names, or at least 53 % of the localities, by 23 % of the coastline in question. Trøndelag is at the other extreme with extraordinary strong land rise and no M711 Hvalvágr name recorded, by 17.4 % of the coastline. With all reservations concerning the representativeness of the M711 Hvalvágr names versus actual whaling voes/garths and the very coarse data used, I consider that this tendency is hardly fortuitous and supports the hypothesis (7) in chapter 9.3 in this respect.

Field investigations in Sotra indicate a land rise there of ca 1.4 m since 1 AD and ca 2.4 m since 500 BC. Barsnes (1935: 70f) and Skoge observed that the haul-out place in Kvalvik/Skogsvåg, Sotra, would have been well suitable when the sea level was perhaps 1-1½ m higher than today. The 'tail raising' at Kvalvoll, or Vigsla voll, also indicates this to be a pre-Old Norse tradition (cf chapter 8). One might tentatively assume that Kvalvåg/Skogsvåg dates at least from the beginning of the Christian era. The far stronger land rise in other areas is likely to have affected whaling voes/garths even within some centuries. This, together with the need for regular maintenance of

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1 Cf Krzywinski and Stabell 1978: 30f [incl diagram, fig 2]; see also Hafsten 1983: 69 and NGU 1993b, pers comm.
whaling garths/voes and the generally increased emphasis on commercial fisheries after the 12th century AD, could have caused the gradual abandonment of whaling garths/voes after the high Middle Ages, especially following the Black Death, 1349-1350 AD, and the subsequent plagues.

When the character of the whaling garths/voes is acknowledged, and local shore displacement and changes in bathography are taken into account, it should be possible to advance the knowledge about this ancient Norse peasant fisherman whaling further.\(^1\)

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\(^1\) A follow-up of the present work might beneficially involve an analysis of the postulated Hvalvágr sites on the basis of topographic, bathographic and geomagnetic maps and field studies, and in the case of Norway, taking particular account of local shore displacement. Geomagnetic maps are currently available for Norway and Iceland but not the Faeroe Islands (cf Klinowska 1989: [4]; 1990: 5; Landmælingar Íslands 1993, pers comm; NGU 1993b, pers comm). Clues relating to the Hvalvágr and Hvalfjökr might also be found in old Norwegian court books and land registers.
10 Whaling with piercing weapons

10.1 Synopsis

Whaling history has hitherto considered that traditional Norse whaling with piercing weapons basically involves hand harpooning. In this chapter the technical features and categories relevant to whaling and sealing with traditional piercing weapons will be defined and described. An analysis of the mediaeval Norse terminology in this respect reveals a clear distinction between the seal/porpoise/dolphin harpoon (and harpooning), on the one hand, and the whaling spear (whale 'shooting' and 'ironing'), on the other. Descriptions and other sources show that in Iceland and Norway whale spearing, in fact, continued until the late 19th century. It is also argued that (hand) harpooning of middle-size and large cetaceans was not conducted by Norse peasant fishermen before 1610 but from that time onwards only sporadic attempts were made upon the influence from the Basques and other foreign whalers. In the course of the analysis it becomes clear that there existed two kinds of Norse spear whaling, using darting and thrusting, respectively, and that so-called gaffing of middle-sized whales is likely to constitute a distinct technical category of traditional whaling. The change in the interpretation of traditional Norse whaling, from harpooning to spearing, has profound effects on the overall picture of Norse mediaeval to modern whaling. The significance of owner marks on whaling shots becomes apparent in the light of this interpretation; they will be

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1 This issue was initially presented in the paper Whaling by peasant fishermen in Norway, Orkney, Shetland, the Faeroe Islands, Iceland and Norse Greenland: Mediaeval and early modern whaling methods and inshore legal régimes (cf Lindquist 1993). For reasons generally beyond control of this student (cf Ringstad 1994, pers comm) the paper as printed contains a number of, partly very unfortunate, errors. The publishers have produced a List of errata for the volume; the Errata for Lindquist 1993 is reproduced in item A.16.1. Particular attention should be paid to the first erratum (p 19, first column, 18th line) as it concerns a definition.
considered in chapter 11. The killing aspect will be discussed in chapter 12.

10.2 Piercing weapons and whaling techniques

10.2.1 Definitions: Lance, spear, harpoon and gaff

In the analysis and discussion of whaling techniques it is essential to define unmistakably what is meant by spear, lance, harpoon and gaff. The spear is essentially a pointed staff intended for darting. More elaborate ones consist of a head joined to a shaft. The point may be fixed to remain in position or it may be designed to detach ('detachable') or break off after piercing ('semi-detachable'). The spear is basically a wounding instrument but may, of course, be employed in the direct dispatching of larger animals. However, the killing instrument for such animals is the lance which has a longer cutting edge and stronger shaft than the spear. On the other hand, a lance may also be darted and then serves as a spear.

The harpoon consists of three main components which are the shaft, the head and the line. The shaft may be either that of an arrow, the staff of a hand-darted harpoon or the part of a harpoon slipped into the barrel of a harpoon gun. The head may be single-barbed, multi-barbed or a toggle, fixed to, or detachable from, the shaft, and is intended for penetrating into, and fastening a line to, the body of the animal. The line is an integral part of the harpoon for the purpose of keeping contact with, impeding and retrieving the quarry. The hunter's contact with the prey by way of the line may either be, for some time, indirectly through a free drogue (qv) attached to the line, or

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1 The approaches and discussions of technological principles by, eg, Arutiunov and Sergeev 1975; von Brandt 1972, 1981, 1984; Fitzhugh 1975a: 375-378; and McCartney 1975: 298-300, are valuable in this respect.
directly and permanently, whereby the boat, if one is used, may also serve as an impediment (tow whaling). Ultimately, the line in the hands of the hunter allows him to approach and to retrieve the quarry for subsequent killing and securing.  

"The detachable harpoon appears to have developed relatively early in the Upper Paleolithic as a device to hold game fast while dispatching it with a lance or other weapon. In the Mesolithic cultures of northern Europe its primary function was for harpooning fish and seals." Together with fishhooks and leisters they made up "a core complex for northern maritime adaptations in subarctic waters." With a few exceptions Arctic hunting cultures use the toggle harpoon and foreshaft. Nearly identical forms of toggling harpoons and occasionally foreshafts are found in low frequency with other northern coastal cultures, including Mesolithic and Neolithic ones in Norway (cf chapter 10.4). The distribution of toggling and non-toggling harpoon types corresponds to ice-bound and ice-free waters, respectively, which suggests that the toggle harpoon/foreshaft combination is less likely to be dislodged by obstructions.  

A spear, lance and arrow may occasionally carry a light line for the recovery of the device itself; such a line is then an auxiliary to the implement concerned and does not make it a harpoon.  

In the catching of marine mammals a gaff may also be employed: in its modern form it is a large, usually barbed, iron hook which is hewn into the animal and to which a line is fastened for keeping contact with the prey  

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1 Eschricht (1845: 165) stresses that 'From a darting weapon a whale will never die before some time later ...'. Speaking of 'killing' a whale 'with a harpoon', as, eg, Bogen (1933: 8) does, is incorrect, at least in the context of hand harpooning (cf Heizer 1941 ms: 144; Wexelsen 1987: 57).  

2 Cf Fitzhugh 1975a: 375.  

3 Cf Fitzhugh 1975a: 375f.  

4 Cf Arutiunov and Sergeev 1975: 161; Fitzhugh 1975a: 376.
and securing it. The gaff, of which the line is also an integral part, basically distinguishes itself from the harpoon by being hand-held (rather than darted) when being fastened to the prey. The line which is crucial for distinguishing between the spear and the harpoon does not in itself allow for a discrimination between the harpoon and the gaff.

10.2.2 Basque (Biscayan) whaling technique and whaling

The Basques apparently developed their technique for the taking of North Atlantic black right whale (*Balaena glacialis*). Probably in the 15th century, at the northern end of the range of this (temperate) species, ie, off eastern Canada, northwest Iceland and northern Norway, they transferred the technique to the taking of the other large right whale (*Balaenidae*) species, the (subpolar) bowhead, or Greenland, whale (*Balaena mysticetus*). The black right and bowhead whales are both relatively slow swimmers and have thicker blubber than the much swifter and stronger larger rorquals; they were therefore easier to catch and recover because they would usually float when dead.

The unique Biscayan, or Basque, hand harpooning technique for right whales was slowly brought into England

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1 The discussion in ch 10.8 about gaffing/'anchoring' shows, in my opinion, that the (hook) shape is a subordinate attribute.

2 Cf Aguilar 1981: 457.

3 Thomas Edge (1906: 30"), having an intimate knowledge of 15th-early 16th century Basque whaling, writes that the bowhead has "beene first killed' in the Grand Bay, ie, the Gulf of St Lawrence. See also Guldberg 1884: 148; Harmer 1928: 55.

4 Ie, the blue, fin, sei, humpback and minke whales (cf item A.16.2).

5 Jón Guðmundsson Ízrði (1924a: 9), around 1640/44, notes that 'the foreign whales ... catch nothing but the right whale species, ... not ... rorquals', at Iceland (cf Guðmundsson 1924a: 9).

after about 1575 AD. Documents from 1575, 1577, 1583 and not least the commission for Thomas Edge, dated 31 March 1611, may be cited to this effect. The same applies to the Netherlands and Denmark-Norway after ca 1615. The (nine) royal privileges and licences concerning whaling at Spitsbergen and northern Norway granted to citizens of Bergen and Copenhagen, 1614-1617, all include permission to employ foreign arponer, ie, harpooners. In the early 1630s Basques were still employed in the Danish-Norwegian whaling trade with, for instance, nine Basques working for the Icelandic Company in 1633. Even in 1664, Preben von Ahnen, vassal (lensmand) in Nordlandene (ie, the present-day Nordland and Troms counties), received royal permission to seek assistance 'outside the kingdoms' for his whaling enterprise in Nordlandene and Finnmark because he had been unable to

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1 Cf Hakluyt 2, 1907-1909: 161-163; Jenkins 1921: 71, 74, 303-305; Purchas 1906a: 30f.


4 Cf Juel 1889: 165f. In 1619-1620, when the royal navy smithy at Bremerholm, Copenhagen, produced for the first time Basque type harpoons for the royal Danish-Norwegian Spitsbergen whaling expeditions they were called "kroge, at fanne hualer medt" (cf Dalgård 1962: 275), clearly for want of a suitable Danish term at the time. Jón Ólafsson indfafari, in 1661, uses the term harponer (sg) regarding a Basque harpooner employed in the Danish whaling fleet 1619 (cf Ólafsson 1908-1909: 132; see also Dalgård 1962: 106 [incl note 46]). The 'Basque'-Icelandic vocabulary (AM 987 4to; cf Deen 1937: 42-85 ['Vocabulary I']) from the late 17th century (cf Guðmundsson 1979: 83) translates harporie ('Bsq') with harponere (I) for 'harpooner' (cf Deen 1937: 43). Both Jón Ólafsson indfafari and the (unknown) author of Vocabulary I were apparently not content with the contemporary Icelandic vocabulary for 'harpooning' and 'harpooner' and used instead the foreign terms.

5 Cf Dalgård 1962: 292f.

6 Cf Fossen 1979: 176f.
acquire ‘suitable people, ships or materials in this kingdom’.1

These documents are augmented by detailed early accounts by T. Edge (1611, 1622), J. Poole (1611, 1612), H. Gerritszoon (1612) and R. Fotherbye (1613) of the gear and method employed at Spitsbergen,2 later descriptions by Lancelott Anderson (ca 1660), Gray (1663), F. Martens (1675), C.G. Zorgdrager (1723), J. Biriksson (1781) and W. Scoresby Jun (1820) concerning the Spitsbergen and Greenland whaling,3 and by F. Negri (1665) regarding foreign (presumably Dutch) whaling at North Cape.4

These primary accounts offer the best possible instruction in the techno-zoological aspects involved in the interpretation of the catching of medium-sized and large cetaceans by hand harpoon. They also show beyond doubt that knowledge of the taking of right whales by hand harpoon did not exist in northwestern Europe around 1600 AD, that the emerging Old whaling trade of England, the Netherlands and Denmark-Norway depended entirely on hired Biscayan harpooners and line managers and, at least in the Danish-Norwegian case, also harpoons and foregangers5 imported from the Basque provinces. N. Juel concludes that von Ahnen’s royal permission of 1664 ‘shows that this kind

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2 Cf Edge 1906: 12, 27f; Fotherbye 1906: 85f; Gerritszoon 1904: 20; Poole 1906a: 34, 37; 1906b: 45f.
3 Cf Conway 1900: 629, 632f; I.E. 1781; Martens 1923 (partly translated and abridged in Martens 1855); Scoresby 1969; Zorgdrager 1975. Scoresby’s comments quoted in Steenstrup 1889-1890: 100-102, should not be overlooked.
4 Cf Negri 1887: 148-151. See also ch 10.7.2.
5 The foreganger, forerunner or harpoon strap is the length of line attached to a whaling harpoon at one end and the harpoon line proper (main warp) at the other. In hand harpoons of the Old whaling trade the foreganger is approximately 3 fathoms (5.5 m) long, spliced around the harpoon shank and terminating in an eye splice to which the main length of harpoon line is bent. The foreganger is of particular fine, light, strong and untarred cord in order to facilitate the darting. A Spanish ordinance from 1555 decreed that the main warp used by Basque whalers should be 70 fathoms (177 m) long and be composed of 30 strands, or ca 16 mm in diameter; each whaling boat carried two such lines (cf Proulx 1993: 37).
of whaling must have been unknown to (the) natives'. The royal permission allowing von Ahnen to buy 'suitable materials' outside the realm also implies a continued Danish-Norwegian dependence on foreign whaling foregangers and harpoons. The catching of larger rorquals by hand harpoon was generally considered impracticable and rarely attempted.

10.3 Norwegian and Norse whaling and sealing from prehistoric to modern times: State of research, open questions and hypotheses

In earlier, and even contemporary, Nordic archaeological literature much ambiguity exists concerning the terms spear, lance, harpoon and the underlying techno-zoological principles, as has been pointed out by several authorities. The ambivalence in terminology is also commonplace in other Nordic literature where often only the context makes it possible to determine the kind of weapon

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2 Cfr Juel 1888: 138; Solberg 3, 1945: 297. The Icelander Jón Eiríksson (cfr I. E. 1781) offers an excellent and detailed description of the 'Danish' whaling method and whaling gear, the first of its kind to be published in Icelandic and specifically intended 'to give seamen out in Iceland some kind of instruction regarding the ways, together with the catching gear and other treatment, that foreign nations of the northern hemisphere now use in big whale catching' (cfr J. E. 1782: 73).


employed.\(^1\) One finds a similar ambivalence in British and American literature.\(^2\) However, because descriptions of old Norse whaling with piercing weapons are lacking the interpretation and use of terms become a very serious problem in Old Norse and older Icelandic, with bearing on contemporary Icelandic, Faeroese and New Norwegian usage.

In continuation of the definitions given in chapter 10.2.1 and the clear evidence about the Basque and Old whaling technique in the preceding subchapter, we shall now look at the basic assumptions (including the terminology) involved in the traditional view of Nordic whaling.

Many authorities, including lexicographers, editors and translators of the old Norwegian and Iceland legal sources, assume explicitly or implicitly that harpooning of larger free-swimming cetaceans in semi-open and open waters existed in Norway to a lesser or greater extent in prehistoric times and throughout the Norse region during the Middle Ages.\(^3\) We shall briefly outline the opinions.

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\(^2\) Cf Hibbert 1822: 422f. Radcliffe (1921: 30-40, 309-311, 459) is very ambivalent about what he often calls 'spear-harpoons' although he (p 40) gives a proper definition of the (detachable) harpoon. Heizer terms crossbow arrows 'harpoons' (cf Heizer 1941 ms: 39) and 'harpoon-arrows' (cf Heizer 1943: 1486).

In 1911, F. Nansen vividly argues that (early) mediaeval Norwegians caught "great whales" by hand harpoon tow whaling in open waters.\(^1\)

Risting (1922) writes: 'It is well known that the Norwegians in the Middle Ages knew to kill a whale with a shot or harpoon'; on the other hand, he acknowledges the existence in modern times of spear whaling in northern Norway but presumably considers 'this ruthless catching' to be an exception and entirely separate from the mediaeval ('harpooning') tradition.\(^2\)

H. Bogen (1933: 8) considers that people, presumably during Mesolithic times, learned to 'hunt the whale in its own element and kill it first with the bone or wooden harpoon, later with the harpoon (made) of metal and finally, in the 19th century, with the grenade harpoon.'

G. Gjessing (1955: 46, 54f) expresses the opinion that harpooning of medium-sized and large cetaceans commenced in the Neolithic period and continued into historical times in Norway while the older hunting methods remained in use throughout prehistoric times.

B. Alver (1986: 95) considers it improbable that Norwegians in 'prehistoric' times were able to hunt whales 'in the open sea' but, according to his interpretation of GTL, they had become able to do so around the 10th century AD.\(^3\) J. Granlund, Johnsen and Martinsen earlier express the same opinion.\(^4\) The passage which these scholars refer to is apparently GTL 149f ('If a man hunts a whale and it

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\(^1\) Cf Nansen 2, 1911a: 159*; 1911b: 2*.
\(^2\) Cf Risting 1922: 100, 103, see also 97.
\(^3\) Cf Alver 1986: 99.
is wounded on the deep [a diupi']); MLL vii 64g contains a similar provision. Recently, Schnall (1993: 13f) also interprets this and related references in MLL as implying "open sea" and "deep-sea whaling" (as opposed to "bay whaling", i.e., inshore whaling),\(^1\) using harpooning as Schnall (1993: 13) sees it,\(^2\) although he (p 13) concedes (like Nansen 1911b: 2* also does) that "this deep-sea whaling was somehow bound to the land, as the harpooned animals normally were not cut up at sea, but were towed to the shore."

Wexelsen points out that only few Norwegian prehistoric artifacts actually fall into the category of harpoons and may as such have been used in the taking of porpoises and dolphins. Their low number is out of proportion with the presumed scale of whaling along the Norwegian coast.\(^3\) As long as the hunting took place in the inner archipelagos and narrow inlets 'it was hardly common to use the harpoon'; enclosure by means of a net (seine) placed across an inlet, combined with 'poisoned arrows, spears and lances, 'was probably a method just as effective in catching the prey.'\(^4\) According to Martinsen and Wexelsen the explanation could be that the harpoon was not commonly used for catching larger whales before iron was introduced. They assume that the transition to iron-headed seal/porpoise harpoons resulted in the manufacturing of larger and stronger harpoons which, together with larger and more seaworthy boats, revolutionised the active pursuit of

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1 See also Schnall 1992: 214 ("... Hochseewalfang ... von der Wikingerzeit an sogar unzweifelhaft zu belegen"). In continuation of ch 4.5 and item A.16.15 it is my opinion that the djúp ('deep') is a legal category which designates the common waters adjacent to the alodial zone of the shore proprietor, i.e., above the subtidal slope (marreinsbakki, marbakki) (cf MLL vii 65e) and, thus, cannot be given the usual meaning of 'open sea', 'deep sea' or 'high sea'.

2 The interpretation by Schnall and others of skot and skjóta in, eg, MLL vii 64g as 'harpoon' and 'harpooning' are at the core of the analysis in ch 10.5.3.

3 Cf Wexelsen 1987: 57.

4 Cf Wexelsen 1987: 63, 66f.
larger cetaceans in the period ca 600-1000 AD.¹ Nansen appears to think along the same lines.

S. Vilhjálmsson (1990 ms) writes that "... the Icelanders began early on to drive whales ashore and harpoon them with primitive tools. ---. Hand harpooning and other primitive hunting methods were practised in Iceland until the close of the last century ...";² in the summary it says, inter alia: "Whales were harpooned (or speared) ...".³

Guldberg (1889a: 27) regards it as an open question whether the Norse, presumably during the Viking Age or early Middle Ages,⁴ taught the Basques harpoon whaling or vice versa, or whether it developed independently with each of them. Nansen (1911) supposes either a transfer of Norse whale harpooning knowledge to the Basques or the development of two independent, but quite similar, harpooning techniques, first with the Norse and somewhat later with the Basques, and that the Norse tradition had ceased to exist around 1600 AD.⁵

Many authorities⁶ in addition indicate or assume a direct Norse origin of the Biscayan (Basque) hand harpoon whaling technique.⁷

On the other hand, a few scholars hold different views:

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2 Cf Vilhjálmsson 1990 ms: 8.

3 Cf Vilhjálmsson 1990 ms: 1. These passages are not referenced and the bibliography seems not to contain any publication that considers the harpooning/spearing issue; for these reasons it is not possible to verify the reference to 'spearing'. It presumably has no more scholarly significance than various other expressions in this document such as "the discovery of the explosive harpoon" (pp 1, 8) and "One of the group of laws in Jónsbók" (p 8).

4 Cf Guldberg 1884: 148.

5 Cf Nansen 2, 1911a: 159-162, 178.


7 Heizer (1941 ms: 40) thinks that the West Europan "use of harpoons ... is probably ascribable to the Normans" and English whaling is "perhaps also attributable to the influence of the Northmen ...".
Juel (1888: 133) thinks that the driving, trapping and spear whaling methods 'have probably always been the only ones used by the common people, all the way since the days of Thor ..., because harpooning required a more expensive outfit ... than they were able to acquire.'

Nordgaard (1903: 18) suggests that the name geirhvalr of KGS and Torfæus could 'originate in the old catching method. According to old accounts the minke whale was killed by a (great) number of darting spears ["en Mængde Kastespyd"] being hurled into its body.' Nordgaard (1903: 81) associates this with hvalvåg whaling so an (initial) misunderstanding of the crossbow arrowing in the Sotra voe whaling seems somehow involved in this description.

Sørensen et al (1912: 14f*) consider the ancient Norwegian methods for taking both smaller and larger cetaceans to be drive hunts (inter alia, into whale voes/garths) and arrowing/darting. Among the latter these scholars (not quite logically) count the method which makes use of thrusting a detachable (possibly 'poisoned') spear into the side of surfacing large rorquals which would die within a short span of time and, if luck permitted, be recovered ashore. They consider that this 'manner of catching whales has remained nearly unchanged all the time to' the mid 19th century.

Mikkjal Dánjalsson á Ryggi (1927: 126*) writes that the old Norwegians hunted large whales by thrusting (stungu) a rusty and dirty 'loose shot' (leysan skutil) into the animal 'and let it then go' so it would die from the festered wound and perhaps be recovered.

Mikkjal á Ryggi's notion1 was given no attention until A. Thorsteinsson, in 1976*, expresses the view that 'Large whales were in the Middle Ages caught by harpoon both out at sea and in the fiords' and2 that Mikkjal á Ryggi confuses this with the deliberate infection used in the West Norwegian voe whaling. 'Normally a poisoned harpoon

1 It seems likely that Sørensen et al (1912) is Ryggi's source.
2 Cf Thorsteinsson 1976: 5, see also 7.
was not used. Out at sea they harpooned the whale and tried in the best way they could to kill it. It was not always successful and many a whale escaped but died later.\textsuperscript{1}

For Wexelsen's view, cf above.

J.E. Hummelsund (1970: 231) is of the opinion that spears were used in the Skogsvåg whaling prior to the adoption of the cross bow and 'poisoned' arrows there in the Middle Ages.

The prevalent scientific opinion of the past hundred years is clearly that late prehistoric to early modern Norse whaling employed (tow) harpooning for the catching of free-swimming middle-sized and large cetaceans. Serious alternative views have only been put forward by a few scholars, viz: parallel spearing and harpooning traditions, with spearing having been most commonly used for economic (rather than technological) reasons (Juel); a combination of net enclosure, spearing, arrowing and harpooning (Wexelsen), and spear thrusting solely (Sørensen et al and Mikkjal á Ryggi).

Because the interpretations and presentations of mediaeval Norse whaling with piercing weapons (ie, arrow, spear, harpoon and gaff), in the opinion of this student, abound with uncertainties, inconsistencies and contradictions I wish to reconsider the issue and venture the following hypotheses: (a) that from prehistoric to modern times essentially the same light harpoon equipment was used for catching seals, porpoises and small dolphins; (b) that the mediaeval peasant fishermen of Norway and Iceland, together with the Norse in Greenland, conducted whale spearing in continuation of a prehistoric tradition; (c) that hand harpooning proper of medium-sized and large cetaceans did not occur in Norway, Iceland and the Faeroe Islands before

\textsuperscript{1} Cf Thorsteinsson 1976: 5. The translation here of skutil as 'shot' (Ryggi) and 'harpoon' (Thorsteinsson) is explained in detail below in this chapter. Thorsteinsson is mistaken when he describes the infected Sotra weapon as a harpoon.
the early 17th century; (d) that the ancient Norwegian and Icelandic laws concerning whales, whaling, the littoral and inshore régime were specifically designed to accommodate spear whaling, while (e) the natural circumstances of the archipelagos Orkney, Shetland and the Faeroe Islands were unfavourable to the spearing technique. The hypotheses (b-c) clearly involve a change of paradigm in northwest European whaling history.

In my view, one can only study the Norse mediaeval whaling technique by stratifying the evidence according to techno-zoological principles and by establishing the long historical lines, from prehistorical to modern times.

The above hypotheses are based on the assumption of four different technological main traditions, which are:

(1) A seal, porpoise and dolphin\textsuperscript{1} harpooning tradition, reaching from Mesolithic to modern times;

(2) a spearing tradition of medium-sized to large cetaceans, reaching from prehistoric, possibly Neolithic, into modern times;

(3) a Biscayan (Basque) hand harpooning tradition for the taking of right whales, established no later than the early 11th century AD: At an early stage it may have dispersed to neighbouring shores (Normandy, Ireland), and with the Basque whaling activities off Iceland and northern Norway after about 1600 AD the method will also have become known to peasant fishermen in these countries; to what degree they were actually able to adopt the method must have depended on a range of factors, eg: conservatism, availability of equipment, training, organisation and cooperation, presence of right whales or the possibility of adapting the method to traditionally pursued species;

(4) the diffusion, as from around the middle of the 18th century, of new bluefin tuna, sturgeon, basking shark, seal, dolphin and whale hand harpoon types, essentially of British and New England origin, to the Nordic countries to

\textsuperscript{1} For convenience occasionally shortened to 'seal/porpoise'.

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be employed by peasant fishermen there in different fisheries, including the taking (securing) of smaller cetaceans.

Methodologically, the situation is, in my opinion, as follows:

All four assumed technical traditions require a detailed study of the possible hunting gear and methods with a direct view to the species involved in each case.

The prehistoric and historic evidence must be examined to see if it accommodates the seal/porpoise harpooning aspect (1) whereby it should at least not contradict the aspect (2) concerning a tradition of spearing larger cetaceans; preferably, the analysis should offer indirect support for the latter. The whale spearing aspect (2) requires the examination of the historical sources, including legal texts and other descriptions, particularly with regard to the terminology pertaining to the marine mammal hunting gear and operational aspects of the hunting techniques. Even if pre-1600 AD sources should not offer positive evidence for whale spearing, the evidence should at least not contradict the method. A post-1600 existence of a particular whaling technique in itself offers no support for its existence during the Middle Ages. However, a post-1600 AD change in the basic techniques used by Norse peasant fishermen may be indicative; similarly, a contemporary comparison of whaling techniques should reveal valuable details about the traditional Norse method(s). Moreover, a likely non-availability, or absence, of certain means necessary in harpooning proper as opposed to spearing would be an indication in support of the whale spearing tradition.¹

Finally, the third and fourth aspects involve the establishment of broad chronologies which should not

¹ Methodically, absence of a thing or phenomenon in an archaeological or historical context does not prove anything; however, the circumstances may be such that the absence offers an indication in support of more firmly based results.
contradict aspects one and two.

10.4 Seal, porpoise and dolphin harpooning tradition, from Mesolithic to modern times

Scandinavian prehistoric (bone and antler) harpoons and harpooning have been discussed in detail by numerous scholars.¹ This is also the case with similar Eskimo harpoons for the taking of seals, walruses, narwhals and white whales by kayak in Greenland.²

The finding that Norwegian and similar prehistoric harpoon gear is suitable for catching seals and the smallest cetaceans³ by implication excludes that larger cetaceans could be taken by means of it.⁴ "The old Norwegians lacked sophisticated technologies to hunt large whales. The oldest harpoons uncovered at archaeological sites were made of bones and were too fragile to have been of much use in whaling."⁵

Attention has also been drawn to the great difference in size between Greenlandic seal and small cetacean harpoons, on the one hand, and such used for the taking of large cetaceans, on the other hand.⁶ It seems therefore essential to differentiate between harpoons for catching the smallest marine mammal species, on the one hand, and

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⁴ A simple comparison of the known Scandinavian, relatively small, harpoon heads with the size of the various cetaceans will lead to the same result, similarly, a comparison between the gear of the Old whaling trade with, eg, Greenlandic and Estonian sealing harpoons (including lines). For example, Martinsen (1964: 39) overlooks this aspect.

⁵ Andersen et al 1992 ms: 23.

⁶ Cf Andersen 1972: 111.
those for catching medium-sized and large cetaceans, on the other. Icelandic evidence from the mid 18th century shows that the same kind of harpoon was used for taking seals, porpoises and (smaller) dolphins. Norse harpoons for the catching in ice-free waters of these smallest marine mammals seem therefore not to have been particular specialised and a differentiation according to species is probably neither possible nor justified. Harpoons used for sealing from or on ice (eg, in the Baltic area) may, on the other hand, have specialised shafts and lines.

We shall now look at the chronology in the development of the seal/porpoise harpoon and the introduction of iron.

The cave Skjonghelleren, at Giske, Valderøya, Møre and Romsdal, which housed a group of hunter fishers in the 4th-5th centuries AD, produced arrow and harpoon heads made of bone. However, among the (detachable) harpoon heads found at Mestersand, Kjelmøy, East Finnmark, two antler harpoon heads have been iron-tipped and one could indeed be an imitation of an iron harpoon head. The site derives from the first two, possibly four, centuries AD and is definitely Samish.

For a long time lesser peasant-fishermen-hunters were clearly unable to acquire iron to any extent and to forge it. The superiority of iron lies particularly in the long, restorable, cutting edges which it can be worked into. Even after iron became generally available and cheaper, stone arrow and spear heads will have been more easily produced, they surely served their purpose just as well as iron heads and were, still, less expensive to lose. This

1 Cf Olafsen 1772: 529, 696f; O.S. 1787: 35.
3 Cf Helskog 1977: 13 (ills), 16; Nansen 1, 1911a: 214 (fig 2), 216; Solberg 1909: 38f (incl figs 35, 43).
4 Cf Solberg 1909: 40f (incl fig 44); see also Klein 1935: 133 (fig 2c).
probably explains why iron arrow heads were among the latest iron implements adopted in Norway.\(^1\) The period ca 650-950 AD is the 'true Iron Age' in Norwegian history, with great quantities of iron weapons and tools given as grave gifts.\(^2\) During the Merovingian Period (ca 570-800 AD) and the Viking Age (ca 800-1050 AD), hunting arrow heads are larger than those found in contemporary usual weapon graves; the iron spear seems also much used in the hunting of large terrestrial prey.\(^3\)

It is therefore reasonable to assume that by the end of the prehistoric time the seal/porpoise harpoon had followed the general transition to iron-pointed implements. However, to my knowledge no such late Iron Age or mediaeval harpoon has been identified but, in the absence of other evidence, it may be assumed that they will have been similar to the sealing harpoons known from early modern times, viz:

Olaus Magnus, in 1555, positively describes the sealing harpoon, probably mostly in relation to the Baltic Sea, although his illustrations (in the Historia de gentibus septentrionalibus, vignette of book 20, ch 4, and the Carta marina, 1539) lack the harpoon line.\(^4\) Apart from this inconsistency, the weapons resemble the detachable single-barbed and double-barbed iron-headed seal harpoons which were used in eastern Sweden, Finland and Estonia between 1700 and the early 20th century.\(^5\) L. Kristjánsson illustrates a northwest Icelandic sealing harpoon head, probably from 18th-19th century, which this student thinks could be of ancient design. It has a comparatively long tang but that does not preclude it being loosely fixed to

\(^1\) Cf Johansen 1979: 146.
\(^3\) Cf Gjessing 1955: 34.
\(^5\) Cf J.G.D. Clark 1946: 33 (fig 9); Klein 1935: 132-134 (incl ills 2b-c; ill 3). Klein terms the harpoon sáljárn (S; 'seal iron') and járne (S, 'iron') (cf Klein 1924: 246; 1935: 132, 133 [ill 2b], 144).
the shaft.1

The Proto-Germanic words *skutila and *skutula, and the Old Norse/Icelandic skutill and skutull, basically mean 'a shot'.2 The Swedish, Finnish, Russian and Samish derivants seem generally to have associations with pinnipeds, mainly seals, and a connotation to the harpoon proper.3 This linguistic evidence indicates that, through the Middle Ages, skutill and skutull were the main specific terms for the sealing weapon, presumably the harpoon.

The mediaeval Norse references to the darting weapons used in sealing and whaling are very brief and offer no direct evidence as to the kind of weapon,4 and thus method, actually applied.5 A comprehensive analysis of the Old Norse texts with regard to the terminology about the hunting weapons may offer clues.

GG seems to have only one (general) mention of 'to kill' (drepa) a seal (GG 3, 384: "ef maör drepr sel") while GTL 91*, MLL vii 65b-e* and JB vii 68* all use more specific

1 Cf Kristjánsson 1, 1980: 339 (incl fig 184).
2 -il and -ul are instrumental suffixes (cfMagnússon 1989: 876). Arrow and spear were in Old Norse termed skot ('shot') or skotvápn which fell into bogaskot ('bow shot') and handskot ('hand shot'), respectively. The same applies to the derived skeyti. The specific term for arrow is õr. (Cf Falk 1914: 95).
3 In Gotlandic 'a sort of seal harpoon' was called skyttling. In the Ladoga district 'a long-shafted seal spear, [seal] harpoon' was in Finnish called kuttelo, which was adopted in Russian as kutilo, meaning 'a darting spear for the catching of marine animals', and kudilo, denoting 'harpoon, darting spear with which one catches walrus'. (Cf Vilkuna 1982: 690). A. Nesheim (1947: 82f) considers that the Coast Sami words sköttal, sköttal and sköttul derive from Norwegian skottel, skot(t)aal and skotul and denote pronged weapons and/or harpoons which the Coast Samis, in recent times, have used for catching halibuts and flounders.
4 The theoretical options are: spear with a permanently fixed head or with a head intended for being broken off; spear with a detachable head; harpoon with a fixed head; and harpoon with a detachable head.
5 In the case of cetaceans this is acknowledged by, eg, Lárusson 1981h: 168; Whitaker 1984: 255.
terms\(^1\) like skjóta ('to shoot'), ljósta ('to pierce') and skutill (literally 'shuttle'); in addition, JB speaks of witnesses to a skot ('shot') and about pingborit skot (formally announced and registered shot) while the two other codices imply that the skutill will have carried the owner's mark. The subsequent enumeration in MLL vii 65e specifically excludes 'whales' while JB vii 68 indirectly does so; the clauses seem therefore to pertain to smaller marine mammals only. The enumerations even indicate that the same weapon may have been applied to such identifiable species as polar bears, walruses, seals and porpoises, whereby JB adds hafhrvalr, i.e., probably dolphins, to the list.

At this point I presume these weapons (skutill, skot), at least in part, to be seal/porpoise harpoons proper because GTL 91, MLL vii 65b and JB vii 68 speak of shooting seals from onboard a ship: The recovery of a shot seal from a boat or ship would be unlikely unless it could happen by the harpoon line. This would also link these sealing/porpoise skot and skutlar (pl) with the prehistoric and early modern evidence of (detachable) sealing harpoons. Fóstbræðra saga (ch 23), from 1200-1215 AD,\(^2\) remarks that the Norse Greenlanders carried hunting and fishing gear (veidarfæri) on board their ships, among which a selskutill is mentioned.\(^3\) The laws indicate that Norwegians and Icelanders did the same. In the Sturlunga saga (Þóðrar saga kakala) it is told that in the sea battle Flóabardagi, 24 June 1244 AD, off Húnaflói, western North Iceland, selskutlar (pl) and hvaljárnl (pl), among other things, were hurled between the ships ('skotir skotlum ok hvaljærnum').\(^4\) It is noticeable that this account from about

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\(^1\) Here in normalised Old Norse, with verbs in the infinitive mood and substantives in the nominative case.

\(^2\) Cf Sigfússon 1981: 542.

\(^3\) Cf Dórólfs and Jónsson/ÍF 6, 1972: 230.

\(^4\) Cf Anon 1906-1911, 2, 1911: 72; see also Thorsson 2, 1988: 521. Kristjánsson (5, 1986: 63) considers the hvaljárnl here to be whale lances which I disagree with.
1300 AD\(^1\) clearly differentiates between the sealing and whaling weapons.

*Landnámabók*, in the surviving manuscripts from the 13th to early 14th century AD,\(^2\) mentions that the Norwegian settler Helgi Hrólfsson had found a *skutíll* at the water edge in a fiord in Iceland which he then called Skutilsfjörður.\(^3\) If this actually refers to a weapon, and not a place name rationalisation on the part of the author of *Landnámabók* or a figurative name, it will most likely pertain to a sealing harpoon as suggested by J. D. Dór (1984: 31).

The earliest historical references to toggle and grommet harpoons in Norway are from the period ca 1759-1800, and in Iceland from 1780, where they were used in a variety of fisheries and for securing smaller cetaceans that had been seineed.\(^4\) So-called swivel-barbed, grommet, temple and humpback harpoons appear to be 18th and 19th centuries American (New England) developments\(^5\) from where the design and individual weapons may well have come to the Nordic countries. One should therefore not infer retrogressively from these weapons to Norse mediaeval and early modern harpoons as several authors do.\(^6\)

In summary, the specific Old Norse word for the piercing sealing weapon apparently is *skutíll* (*skutull*), being synonymous with *selskutíll*, which the historical evidence

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1 Cf Benediktsson 1982e: 355.
3 Cf Benediktsson 1968: 187.
4 The issue is too complex to be considered here but it is surveyed in the excursus, item A.16.14.
5 Cf Lytle 1984: 28-43 (incl ills).
also establishes as the sealing/porpoise harpoon proper. Because both prehistoric and modern sealing/porpoise harpoons have detachable heads, the mediaeval (sel)skutill presumably had likewise. The words skutill and skutull carry the additional sense of 'a bolt' for a door.\(^1\) The primal meaning could therefore be something stout and short that is shot into something else which I interpret as indicating that the old Norse sealing/porpoise harpoon has a (relatively small) detachable head, while skot ('a shot'), skjóta ('to shoot') and ljósta ('to pierce'), in this context of sealing, will be general expressions.\(^2\)

10.5 Spearing tradition of medium-sized and large cetaceans, from prehistoric, possibly Neolithic, times through the nineteenth century

10.5.1 Harpooning or spearing of whales in prehistoric and mediaeval times in Norway?

The apparent uniqueness, until about 1600 AD, of the Basque (Biscayan) harpooning technique (cf chapter 10.1.2), and the zoological and physical aspects involved in the taking of right whales, not to speak of large rorquals, leads this student, at the outset, to oppose those scholars (cf chapter 10.3) who explicitly or implicitly consider that harpooning was used by the Norse for catching middle-sized and large cetaceans in late prehistoric, mediaeval and early modern times of whatever species.

We shall now consider the evidence in support of the spear whaling hypothesis (b).

At least five ca 17-50 cm long, presumably all slate, points (cf item A.17.7) have been recovered off the

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2 This conforms to the explanation by A. Liestøl (1981b: 275) regarding arrows: 'As collectives are used skot and the closely related skeyti but these words could also be used about darting spears, ie, they denote that which one might skjóta.'
T. Petersen concludes that the great depth from which 'his' double-barbed points were recovered imply that they, inter alia, were used as 'harpoon' points in the hunting of larger sea animals. 'One then first thinks of minke whales or seals.' In Bratrein's opinion, the Grø point was a 'harpoon' for catching 'smaller whales'. Gjessing considers the slate spears suitable for, and possibly to some extent applied in, the taking of dolphins and porpoises from boats during the Stone Age while some may have been 'whale lances' for the dispatching of (larger) cetaceans after stranding and harpooning and, perhaps mostly, 'seal spears'.

In discussing the large Norwegian slate points a differentiation between lances and spears seems important, and indeed possible. When applied in the immediate killing function the lance is thrust into the animal, moved in and out, up and down, whereby barbs would be adverse; on the other hand, barbs are essential in keeping the spear, or at least the spear head, embedded in the body of the quarry. Indeed, the four large slate heads found in deep waters and reported by Petersen (1938: 180f) are double-barbed and the two points found in the littoral (cf Gjessing 1942: 135f) also have barbs. All in all, I see nothing precluding the notion that the large slate heads found in Norwegian inshore waters belong to spears which were deliberately darted at medium-sized and large cetaceans in the fiords.

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1 Cf Gjessing 1942: 135f; Petersen 1925: 15; 1938.
2 Cf Petersen 1925: 15.
3 Cf Petersen 1938: 181.
4 "... etter beskrivelsen trulig en skottal eller harpun til småkvalfangst" (cf Bratrein 1, 1989: 119).
5 Cf Gjessing 1942: 136, 447; 1945: 244. I am unsure how Gjessing imagined the recovery of these smallest cetaceans taking place.
6 Cf Gjessing 1942: 447; 1945: 244; 1955: 44, 46f. The 'seal spears' seem only to make sense if applied on land.
7 Gjessing (1942: 136) hints at this differentiation but, as we have seen above, does not draw the full conclusions from this.
and inner archipelagos (skærgården) after which the hunters awaited the death of the whales by blood poisoning and the like (cf chapter 12) and their possible drifting ashore, much in the same way as is known from the northern and eastern North Pacific Ocean (using slate and obsidian points). ¹

GG thrice call a whaling 'shot' járn² (cf chapter 10.5.3) which indicates that by the 11th-12th century AD at least some of these weapons were made of iron. In my view, there is nothing compelling about the development of a whaling harpoon (of iron) taking place in the Iron Age, as suggested by Martinsen (1964: 24, 39) and Wexelsen (1987: 50, 57): This would presumably involve the (gradual) enlargement of the seal/porpoise harpoon, and possibly its synthesis with the spear, or vice versa, to result in a third, and highly specialised, category of weapon: the whaling hand harpoon. Such a construction needs some substantiation if it shall be entertained.

It is in my opinion of fundamental importance that the notion of Norse whale harpooning as put forward (cf chapter 10.3) does not appreciate the method in its entirety, ie, by considering all necessary technical components, such as the harpoon head, shaft and line (of which the first and the last are equally important³), and the wider aspects of the method(s), be it free drogue (qv) or tow whaling (qv), cooperation between crews, etc; neither has it been demonstrated that all necessary means are likely to have been available at the time in question.

This writer regards the introduction of iron with the Norse peasant-fisherman-whalers to have been a smooth transition, with step by step modifications in material and form and the existence side by side for a long time of

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² Cf GG lb 128; 2: 527; 3: 401.

³ This is sufficiently demonstrated by the early accounts, etc, of the early Spitsbergen whaling trade.
barbed stone (slate) and iron-tipped spears, - all depending on the availability of the metal and the economy of the individual household. Such a course is well-known in cultural developments. After all, why should a whale spearing tradition not continue although some, even all, spear heads came to be made of iron?

During the late Iron Age, I presume that the hunting, and landing, of larger whales must have been considered an achievement at least similar to other big game hunting. This is bound to have social and religious ramifications which should, theoretically, be detectable in the great quantities of iron weapons and tools offered as grave gifts in Norway during the period ca 650-950 AD,¹ provided the right questions are put to the material. Hitherto it has been searched for harpoons, with a negative result: an Iron Age or mediaeval whaling harpoon (proper) seems not extant.² Let me suggest another approach to be somehow along the line that coastal grave sites producing (unworked) bones from larger cetaceans in conjunction with spear heads be considered potential whalers' graves. Although barbed spears will probably have been preferred in whaling in this world, unbarbed ones may possibly have served the dead well enough in the other world. Actually, K.E. Schreiner goes halfway along this suggested path in relation to the slab grave at Hundholm, Tysfjord, Nordland, from the first half of the 9th century AD: With the unburned skeleton an unworked hyoid bone from a large cetacean, possibly a black right whale, was found which Schreiner interprets as 'most likely being laid into the grave as a trophy'.³ However, because Schreiner and T. Sjøvold stay entirely within the concept of harpoon

² Cf Lárusson 1980c: 545. O. Rygh (1885) records none. For krök(a)spjöt, cf Falk 1914: 69 (incl figs 12-13).
whaling\textsuperscript{1} they see no significance in the fact that amongst the grave gifts is also a spear head (38.5 cm long, 4.5 cm wide across the point), albeit unbarbed.\textsuperscript{2} With reference to the hyoid bone in the Hundfjord grave, Sjøvold (1974: 350f) considers it likely that the buried person (being of mixed Samish-Norwegian race) was engaged in whaling. This may indeed be so but then possibly with the modification of what is meant by 'whaling' and 'whaling equipment'. It would be interesting to see the result of a reanalysis of similar grave finds in Norway from the point of view of the spear whaling hypothesis.\textsuperscript{3}

This takes us to the historical sources.

10.5.2 Ohthere from Hålogaland

Many scholars have referred to Ohthere's late 9th century AD account to king Alfred of England\textsuperscript{4} (cf item A.18; see also chapter 5.7.1) in support of the taking, even harpooning, of large cetaceans in northern Norway at that time.\textsuperscript{5} For the interpretation, and translation of the account it is crucial to realise that 'but in ... ells

\begin{itemize}
\item \textsuperscript{1} Cf Schreiner 1927: 230f, 304f; Sjøvold 1974: 262, 350.
\item \textsuperscript{2} The spear head, found lying across the head of the dead, is 'of a somewhat peculiar form' in as much as the shank below the socket is square-sectioned and between socket and shank there is a squared projection while the point is flat and broad. (Cf Nicolaissen 1919: 14, 15 [fig 7]; see also Sjøvold 1974: plate 10a). According to Sjøvold (1974: 81) "The spear-head does not belong to any of the standard types", it cannot be assigned to Rygh's (1885) catalogue but later he (p 350) describes it and an axe also found in the grave as being "a set of ordinary, Norwegian Viking Period weapons".
\item \textsuperscript{3} Rygh (1, 1885) illustrates six different barbed spear heads (R 202, R 210-212, R 525, R 528); four of these are associated with finds of shield bosses (cf Rygh 2, 1885: 6, 9f, 23, 29) which, as such, may exclude them from consideration as whaling spear heads.
\item \textsuperscript{4} Cf Bately 1980: 14f*.
\end{itemize}
long'\textsuperscript{1} is an inserted separate statement, unrelated to the preceding and subsequent sentences. Such insertions are a general stylistic feature of the Old English Orosius as J. Steenstrup has convincingly demonstrated.\textsuperscript{2} In other words, Ohthere explains that he and his companions somewhere at the shores of the Kola Peninsula or by the White Sea killed 60 walruses in two days and that large cetaceans were hunted (sic) in Hålogaland\textsuperscript{3} with great advantage. With a view to the discussion above I tend to associate this beneficial hwælhuntað with spearing; furthermore, the size of up to 48-50 ells (or 22.7-23.7 m)\textsuperscript{4} reveals that the blue and fin whales were among the target species (cf item A.16.2).

10.5.3 Icelandic and Norwegian mediaeval whaling by piercing weapons

The hitherto generally accepted interpretation of the Icelandic mediaeval sources about whaling is found in M.M. Lárusson's articles Hvalfangst, Island (1962) and Ejermærke (1958) in Kulturhistorisk leksikon for nordisk middelalder (KLNM), and in L. Kristjánsson's work Íslenzkir sjávarhættir (vol 5, 1986).\textsuperscript{5} Among the more numerous works on Norwegian mediaeval whaling, A.O. Johnsen's (1962/1981) synoptic article Hvalfangst, Norge in KLNM and O. Martinsen's (1964) Aktiv hvalfangst i Norden i gammel tid may be considered representative of the currently accepted interpretation of Norwegian (and old Norse) mediaeval sources about whaling.

\textsuperscript{1} Cf Bately 1980: 15.

\textsuperscript{2} Cf Steenstrup 1889-1890: 102-104; see also Jones 1968: 159; Lund 1954: 2; Nansen 1, 1911a: 171f; Simonsen 1957: 9.

\textsuperscript{3} ie, approximately present-day Nordland and Troms counties.

\textsuperscript{4} Cf ch 7.3.

\textsuperscript{5} Cf Lárusson 1980c; 1981h; Kristjánsson 5, 1986; see also Gjessing 1955: 55f, and Guðmundsson 1946.
In the context of the taking of large cetaceans Lárusson explicitly defines the Old Norse skot, skutill and skutull as the harpoon¹ and Nansen states that in 'the ancient Norwegian laws ... whale-harpoons (skutill) are often mentioned.'² Johnsen is of the opinion that harpoon whaling for large cetaceans in open waters ceased in the late Middle Ages in Norway³ but that harpoon (skutill, ON; skutel, N) tow whaling 'was maintained through the Middle Ages, and onwards' by the taking of minke whales in whaling voes (hvalvåg).⁴ However, Martinsen (1964: 30) mentions that 'not a single complete account of the old catching, only hints' remain. Similarly, G. Guðmundsson, Lárusson and Kristjánsson acknowledge that the Icelandic mediaeval literature contains no description of Icelandic peasant fisherman whaling in which skot and skutill/skutull were applied before the year 1638 AD⁵ and that no 'mediaeval harpoon' seems extant.⁶

Lárusson,⁷ Guðmundsson (1946: 294f) and Kristjánsson (5, 1986: 51-61) treat all Icelandic mediaeval and early modern evidence in an unstratified manner and interpret the sources exclusively within the concept of harpooning; they in no way indicate the possibility of a spear whaling tradition. The elaborate Icelandic legal provisions concerning salvage of whale carcasses, finding of a 'harpoon' (Lárusson) in a whale and the shooter's share,

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¹ Cf Lárusson 1980c: 545f.
² Cf Nansen 2, 1911a: 157.
³ Many authors postulate variously 'decline', 'decay' and 'disuse' of Norwegian whaling for large cetaceans during the late Middle Ages (cf Guldberg 1886: 162; Johnsen 1981: 162, 164; Martinsen 1964: 23; Nansen 2, 1911a: 178; Proulx 1993: 11; Schnall 1992: 214) which seem to be based on an undue generalisation of Claussen Friis's statement (ca 1599; cf Friis 1881a: 70f⁷, and item A.16.10 (A)).
⁶ Cf Lárusson 1980c: 545.
Lárusson interprets as resulting from people's inability always to complete the operation successfully.¹

In 1890, a Norwegian government committee report on the whaling issue in northern Norway, with reference to mediaeval and early modern times, explicitly states that 'people in earlier times only knew to kill whales by arrow shots or by thrusting marked irons into it, while people did not know the use of the harpoon line ...'² and that this 'old manner of catching continued until far into the' 19th century:

'It involved sticking a marked iron into the whale that caused blood poisoning and from which it died after some days. Where it then drifted ashore depended on winds and currents. At the beginning of the [ie, 19th] century this most wasteful of all hunting methods seems to have been used to a not insignificant degree.'³

This opinion by naval captain N. Juel and his co-authors and, by extension, the evidence on which it apparently is founded, seems not to have been paid heed to by Guldberg (1884; 1889), Nansen (1911) and subsequent scholars who instead adopted the 'harpooning paradigm', as I choose to call it.

It should be mentioned that Wexelsen (1987: 63) observes that 'traces' of a spear whaling method can be found in the old Norwegian legislation⁴ while he otherwise considers harpooning to have been a prominent method.⁵

The line of evidence and reasoning in support of the seal/porpoise harpoon (a) and spear whaling (b-c) hypotheses in chapter 10.3, is strongest with the Icelandic

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¹ Cf Lárusson 1981h: 168.
² Cf Anon 1890: 91.
³ Cf Anon 1890: 5.
⁴ He refers to GTL, in translation.
⁵ Cf Wexelsen 1987: 50, 57, 65f.
historical sources, seconded by the Norwegian and Faeroese evidence. To begin with we shall determine what terminology is actually used regarding piercing whaling weapons in these sources, what is the context of their use and what interpretations they permit. Let us first look at the legal sources.

The (normalised) terminology of the two Norwegian codes GTL (149f*) and MLL (vii 64f-g*) relevant to piercing whaling weapons is comparatively simple, viz: veiða ('to hunt', 'to catch'), særa ('to wound'), skjóta ('to shoot') and hêfa ('to hit') whales; in addition, MLL speaks of skot ('shot'), markað skot ('marked shot') and, as a variant for the latter, markað spjót ('marked spear').

The Icelandic GG refers to whaling in polynias as 'to use weapons against whales', possibly also meaning 'to lance whales' ("bera vápn á hvala(na)") which is once varied as 'to wound whales' (særa hvala). Otherwise the terms are: 'shot' (skot), once specifying that an 'arrow' (ór) should be counted as a skot ("ef fleire scot ero ihualnom oc eignaz ör þvi eino scote"), and 'to shoot' (skjóta). Shots which were formally announced and registered at the Althing should be shown 'on wood or iron' there. Such pingborit skot (sg), pingborin skot (pl), entailed an immediate claim by the whaler without further witnessing of the shooting, etc. The 'shot' is in GG thrice termed járn. A whale (carcass) carrying a shot is

1 For methodological reasons we shall for the time being disregard entirely this spear variant and return to it at a later point.
3 Cf GG 2: 533.
4 Cf GG 1b: 127-130; 2: 519-529, 531, 538; 3: 391-401, 403, 441.
5 Cf GG 1b: 130.
6 Cf GG 3: 391, 395.
7 Cf GG 2: 522, 526; 3: 394.
9 Cf GG 1b 128; 2: 527; 3: 401.
termed *skothvalr*.¹

GG widely applies the terms 'shooter' (*skotmaór*), 'shooter's share' (*skotmannshlutr*) and 'shot money' (*skotfé*) for half of the shooter's share due if the shooter does not attend to the processing of the whale. Exceptions are few: instead of *skotmaór* GG on two occasions calls him 'whale shooter' (*hvalskyti*);² this term is also found once in JB (vii 64). *Skotmannshlutr* is on two occasions termed 'shooting share' (*skothlutr*)³ because it applies to several persons.

JS 109, from 1271 AD, states about whales in Icelandic (terrestrial) commons that 'if a shot [skot] is found in such a whale, the nearest neighbour shall take care of the *járnhvalr*'.⁴ JB 59, from 1281/83 AD, repeats the passage word by word.⁵ Járnhvalr, which seems otherwise only used (twice) in an Icelandic document from 1374 AD,⁶ is clearly a whale carrying an 'iron'. This is in line with GG's term *járn* for shot.⁷ It may thus be inferred that shooting whales with an 'iron' may have been called *járna* (literally 'to iron').

JB vii 63*, 64* and 67*, which forms the most comprehensive mediaeval Norse legislation concerning whales and whaling, once speaks of *veiða* ('to hunt', 'to catch') whales and once of *saфа* ('to kill') them in polynias. Otherwise this code uses the following basic expressions associated with the weapon employed (in simplified form): Skot ('shot');

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¹ Cf GG 1b: 131; 2: 519, 521f, 526; 3: 390, 393f, 399, 441.
² Cf GG 2: 526; 3: 400.
³ Cf GG 1b: 133; 2: 533.
⁴ Cf NGL 1, 1846: 292.
⁵ Cf Halldórsson 1904: 194.
⁶ Cf DI 3, 1896: 280, 284 [dipls 232A-B].
⁷ Storm and Hertzberg (/NGL 5, 1895: 325) state that *járnhvalr* is 'a whale that is found with a harpoon embedded in the body' ('*hval, der findes med harpun i kroppen*'); this student's reservation concerning the 'harpoon' interpretation needs not be repeated here.
mark á skoti ('mark on a shot'); þingborit skot ('registered/announced shot'); "skot er þingborit mark er á" ('shot carrying a registered mark'); banaskot ('killing shot'); "koma banaskoti á ok þingborit mark hefr" ('place a killing shot which carries a registered mark'); and skjóta ('to shoot'). A whale killed by a shot is termed skothvalr and the whaler concerned skotmaðr, hvalskyti and simply skyti. His share is termed skotmannshlutr ('shooter's share') or skothlutr ('shooting share') when applied to two or more persons; the money share due is skotfé.

Despite the uniformity in terminology for the piercing whaling weapon between the three Icelandic legal sources, it is interesting that JB consistently uses skot (skot-), in fact, conforming with GTL and MLL, while GG and JS also apply the term järn (järn-), alone and in compounds. The skot and the järn are clearly the same weapon. GG once mentions that an õr ('arrow') shall be counted as a skot so we may conclude that the bow and arrows were occasionally used in mediaeval Icelandic whaling.1 Equally, according to GG, various (undefined) vápn ('weapon') were apparently also used in attacking and wounding whales in polynias in Iceland.

The specific terms (other than compounds)2 used by the Norwegian and Icelandic early to high mediaeval legal sources for the darting whaling and sealing weapons, together with the related action words, may be summarised as follows:3

1 K. Østberg (1934: 78) writes: 'From the earliest times the whale has been shot with bow and arrow (kvaljarn)'; this is obviously a wrong interpretation of hvaljárn.

2 By compounds I mean terms that today would generally be written as one word, eg, skotmaðr, skothvalr, skotmannshlutr, skotfé, banaskot and järnhvalr.

3 The reader is still requested to disregard the spjót manuscript variant.
Even without considering the *spjöt* variant and without drawing on other old Norse sources the interpretation appears to be straightforward: The *skutill* (*skutull*) is completely distinct from the whaling weapon. Because it is apparently also called *selskutill* (cf *Fóstbræðra saga; Dóðar saga kakala*),¹ and with reference to the early linguistic evidence, the prehistoric archaeological artifacts and modern ethnographical objects, it can hardly be anything but the detachable seal/porpoise harpoon. In order to clarify and improve on the present confused state of affairs, I therefore suggest that *skutill* (*skutull*) in any pre-1600 AD Nordic context be rendered as ‘seal (porpoise, dolphin) harpoon’ and, similarly, the verb *skutla* (cf Germanic *skutil5n*)² be rendered ‘to harpoon a seal (porpoise, dolphin)’.

The *skot* of JB 68 in the context of sealing seems to be a comprehensive term to include all piercing weapons which might be employed in the taking of polar bears, walruses, seals and dolphins, in addition to the *skutill*. It appears therefore justified to consider *skot* in this sense to be different from the specific term *skot* in the context of whaling.

The terms *skot* and *járn* related to whaling in the legal texts apparently refer to one specific kind of weapon, also called *hvaljárn* (cf *Dóðar saga kakala*),³ which in its

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¹ Cf Anon 1906-1911, 2, 1911: 72; Dórólfs and Jónsson/ÍF 6, 1972: 230; see also Thorsson 2, 1988: 521.

² Cf Magnusson 1989: 876.

³ Cf Anon 1906-1911, 2, 1911: 72; see also Thorsson 2, 1988: 521.
design and whole application must be different from the skutill. The character of this whaling weapon seems revealed by the variant term used in eight, out of forty, extant manuscripts of MLL vii 64g, all dating from the first half or the middle of the 14th century AD, where the passage reads: 'If a man shoots [skytr] a whale with a marked spear [markaðu spioti] and other men find (it) on the deep ...'.¹ This internal evidence corroborates the conclusion reached independently of it.²

The etymology shows the skot and skutill to be (in principle) darting weapons which, by internal evidence, also applies to spjót and járn, however, with the reservation that both the spjót and járn may indeed also be thrust into the whale.³ The whaling spears may have a head which breaks off, or is broken off, after penetration⁴ or is fully detachable (cf the Arnarfjörður whaling spear, Iceland; cf figure 8).⁵

As a matter of course it must be mentioned that the sealing and whaling provisions of the two younger Norwegian codes, NLB (1604) and NL (1687), written in Dano-Norwegian, follow the main texts of the mediaeval laws and, if anything, are less conclusive than the older ones.⁶

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¹ Cf NGL 2, 1848: 3-6, 147 (note 26).
² In fact, it is not included in my paper from 1992 (cf Lindquist 1993: 27) because I was then not aware of it.
³ Cf Kolsrud 1955: 143*.
⁴ Cf Brooke 1823: 300*; Helland 1899: 413*; Larsen 1950: 24 (cf item A.16.10 (C)).
⁵ Cf Kristjánsson 5, 1986: 52 [fig 13], 54; Lindquist 1993: 31 [incl 111].
⁶ NLB vi 62 knows only 'to shoot' (skiude) seals and 'to kill' (sla) a seal with a 'spear' (spiud) (cf Hallager and Brandt 1981: 159; see also MLL vii 65). NL speaks of 'to shoot seals' (skýde sál; NL 5-12-15) and 'to shoot' (skýde) a 'spear' (spýd) into a seal (NL 5-12-16) (cf Anon 1982: 225). NLB only mentions 'to shoot' (skiude) a whale and to shoot a whale 'with a marked dart' (pijl som merckt er) (NLB vi 61; cf MLL vii 64g) (cf Hallager and Brandt 1981: 157f); one should be aware that (normalised) pil earlier had a much wider meaning than today's 'arrow' (cf Falk and Torp 1992: 594; SOED 2, 1987: 1583). NL uses the expressions 'to hunt whale' (vejde hval; NL 5-12-5), 'to shoot' (skyde) whales (NL 5-12-5 to 7) and 'if somebody shoots a whale with marked shots' ('skyder mand hval med merked skud'; NL 5-12-7).
Kristjánsson (5, 1986: 51) acknowledges that 'in the many provisions of the old lawbooks concerning whales the word skutull [skutill] is never used, but in its stead always the word skot'. With reference to the passage in Egils saga Skálalagissa-Grimssonar (ch 29) about Iceland during the Settlement Period which says that 'whales came then also in great numbers and everybody was allowed to shoot as he pleased', \(^1\) Kristjánsson writes: 'But here is of course referred to harpooning'. \(^2\) Similarly, Á. Jakobsson (1975) earlier states that 'This sentence ... tells us the two things: During the settlement period whales occur in great numbers and that they have been harpooned.' \(^3\) Ö. Thorlacius (1991) repeats this view. \(^4\)

In their Grágás edition, S. Karlsson, K. Sveinsson and M. Árnason (1992: 556) also explain "skot í hval" as skutull. Likewise, Einarsson (1987: 37) considers that 'The accounts of the whaling by Ólafur bóndi in Óey is one of the most reliable indications that the Icelanders have harpooned [skutlaf] whales in the Middle Ages.' \(^5\) Others \(^6\) also hold this view but it seems not sustainable on grounds of the above and the following evidence. Seen both in the context of Old Norse and modern Icelandic, and by extension also Faeroese and (New) Norwegian, the replacement in relation to pre-1600 AD Nordic whaling of skot (and spjót)

(cf Anon 1982: 223f).

1 "Hvalkvánum væru þa ok miklar, ok skjóta mätti sem vildi; ..." (cf Nordal/IF 2, 1979: 75).

2 "En her er auðvitað átt við skutlun" (cf Kristjánsson 5, 1986: 30; see also 351f).

3 "Dessi setning ... segir okkur hvorttveggja: Mikla hvalagengd á landnámsfmanum og að þeir hafi verið skutlaðir." (Cf Jakobsson 18, 1975: 313).


5 Einarsson refers to the passage by JG1, in Tíðófírðríf about the whaling by Ólafur in Óey, 1385 AD (cf Hermannsson 1924: 38; see next subchapter): Actually, JG1 speaks of skot, not skutill or skutlun.

6 Cf Bjarnason 1, 1976: 100f; DI 5, 1899-1902: 558, 570, 1044; Guðmundsson 1946: 294f; Lárusson 1980c; 1981h.
by skutill (skutull), and thereby indirectly skjóta by skutla, must be considered an undue re-interpretation of the old Norse and Icelandic sources; moreover, in my opinion, it ‘effaces’ the ancient Norwegian, Norse and Icelandic spear whaling tradition.

10.5.4 Mediaeval Norse hunting of blue, bowhead and other large whales

We shall now examine which whale species the Norse peasant fishermen pursued in their skot/járn/spjót whaling.

In chapter 6.2.K21, we have already considered the Old Norse reyðr which is the blue whale. According KGS*, from 1240-1263 AD, ‘it is often caught by hunters because of its gentleness and quietness’. ¹

The circumstances of such hunting seem revealed in the accounts about the recovery, in 1385 AD, in southwest Greenland, of the marked skot belonging to Ólafur ísfirðingur, of Æøey, in Northwest Iceland (cf item A.16.11 and figure 1).² The instance highlights the importance of the whaler’s shot mark although this case seems extreme and unique.³

According to the information concerning the recovery of Ólafur ísfirðingur’s shot (1385 AD), KGS/K21 (mid 13th century AD) and Ohthere’s whaling (late 9th century AD) the blue whale seems to have been the preferred target in Norse spear whaling, possibly seconded by the fin whale in cases where it was not a ‘fish driver’ or ‘herring driver’ (if one allows for fiskreki and sildreki being circumstantial names). This makes Petersen’s (1938: 181) association of

1 Cf Holm-Olsen 1983: 17.

2 A. Sigurjónsson’s (1975: 117-119) different association of the account, and subsequent redating to ca 1450, which this student doubts is correct, has no bearing on the argument pursued here.

3 The mark recovery as such has its modern equivalent in the so-called ‘Discovery mark’, made of stainless steel, which was developed in the 1920s to determine whale migrations (cf Mackintosh 1965: 17f).
the large slate spear tips with, inter alia, minke whaling and Bratrein's connection of the Grøn stone spear tip and Sami (spear) whaling with 'smaller cetaceans' implausible. Indeed, spearing seems predisposed towards larger cetaceans, firstly, as targets; secondly, for economic reasons (potential loss of weapon versus uncertain gain). Moreover, spearing is not subject to the same technical restraints as hand harpoon (tow) whaling is. From KGS we learn that the bowhead whale (K20*) was also 'caught'; this presumably involves spearing, too. The historical distribution of the bowhead indicates that a regular hunt probably only took place in Norse Greenland and, possibly, (Northwest/North) Iceland (cf chapter 6.2.K20). Other large whales were probably also speared.

10.5.5 Continuity in Icelandic whaling with piercing weapons and changes in terminology, ca 1250-1800 AD

In their present state of publication the Diplomatarium Islandicum (DI) and the Alþingisbækur Íslands (Althing records; ALDB) slightly overlap in the late 16th century; however, their specific references to whales and whaling seem to fall into the periods ca 1220-1525 and 1582-1792, respectively. The roughly fifty years gap between the two series appears to be accidental and may be considered bridged by the fact that they are congruous. These sources concerning whaling and sealing weapons, etc, (cf item

1 Cf Bratrein 1, 1989: 119; 2, 1990: 520. In contemporary Norwegian usage smákvalfangst is to a high degree associated with minke whaling.

2 Cf Holm-Olsen 1983: 16.

3 Calves were apparently regularly targeted, eg, blue whale calves in Ísafjarðardjúp, before ca 1450* (see item A.17.2) and (later) humpback calves in Arnarfjörður (cf item A.16.3 (B)). The questions of adult and calf/juvenile takes, free and restricted movement ('enclosing'), and struck and lost rates cannot be considered here.

4 Cf Anon 1857-1972.

5 Cf Anon 1912-1990.
A. 17.8) may be summed up as follows:

Skothval(u)r (with the rare variants of skothlutr, skothvalr, hlutur) is recorded throughout the period 1250-1775 AD. Apart from the mention by BJás and JGl (1385/1623 and 1385/1644), the Icelandic whaling weapon skot occurs only a few times, i.e., ca 1290, 1582/83, possibly 1688, and 1693. Identifiable Icelandic whaling weapons seem otherwise termed (hval)skeyti, 1663-1792; járn, 1663 and 1668; (hval)skutill/(hval)skutull, 1634-1735; (hval)skutulsjárn, 1658-1735; and hvalskeytisjárn, in 1728 and 1741. Foreign whaling weapons are either acknowledged as such in the appraisals of the drift whales or may be deduced to be so from circumstances such as the weapon being found with a 'half-flensed' carcass or parts of a whale and weapons (járn, 1666; skutull, 1691) being described as having part of the whaling line still attached to them. Once a lance seems also distinguishable (1737, called skeyti and járn). Foreign whaling weapons, which must be considered to be harpoons (apart from a few lances), appear to be termed (hval)skeyti, 1670-1775; (hval)járn, 1666-1777; (hval)skutill/(hval)skutull, 1659-1776; (hval)skutulsjárn, 1659-1700; and hvalskeytisjárn, in 1689.

As is directly evidenced (cf item A.16.10 (B)) by N. Horrebow (1752), O. Olavius (1780) and S. Magnússon (1786), and may be deduced from J. Biríksson's (1781) writing and the decree of the Danish-Norwegian government (13 June 1787, concerning the Icelandic commerce and shipping),

1 8th century Icelandic whaling with piercing weapons was mainly, if not wholly, spear whaling. The non-legal Icelandic whaling lexicon is interesting for various reasons: Firstly, skot as designating a whaling weapon is rarely used except in the compound skotmannshlutur; the same concerns járn. Secondly, skeyti, skutill/skutull and skutulsjárn (with or without the 'whale' prefix), being new terms in the whaling context, appear rather suddenly in

1 Cf ALDB 16, 1986: 434f; LFI 5, 1855: 450f.
1634; the hvalskeytisjárni is a later and less frequently used term. Thirdly, all these terms seem indiscriminately applied to the Icelandic whaling spear as well as the foreign whaling harpoons.

A tentative interpretation of this rather blurred picture might be like this: After perhaps the mid 17th century, the term skot seems to have been avoided in Iceland in relation to whaling and may therefore, initially, have been directly substituted by skeyti. The reason could be that, in the 16th and first half of the 17th century, skot was increasingly being associated with firearms.\textsuperscript{1} The fact that (hval)skeyti, (hval)skutill/ (hval)skutull, (hval)skutulssjárni and hvalskeytisjárni are used indiscriminately about the whaling spear and the whaling harpoon I can so far only explain by several interacting factors, viz: the influence from Basque, English, Dutch and Danish whaling where skutill/skutull is a proper technical term for the harpoon; the occasional attempts by Icelandic peasant fishermen as from 1610 to employ harpoons in whaling (and these harpoons probably also being duly announced and registered) (cf chapter 10.7.2); and probably the feeling of the contemporaries that a distinction between the whaling spear and the whaling harpoon was not important which is certainly true if the issue is mainly viewed from the point of driftage rights.\textsuperscript{2}

This Icelandic 17th-18th century terminological confusion would of course be reflected in the works written

\textsuperscript{1} This would be similar to what occurred in the English language when 'shot' after the 1660s ceased to mean 'that which is discharged from a bow, an arrow or arrows' and the sense of a discharge from a firearm took fully over (cf OED 9, 1961: 750; SOED 2, 1987: 1982). Gjessing (1953-1955: 27) notes that firearms in the course of the 17th century became usual in hunting in Norway.

\textsuperscript{2} When the Icelanders felt the need to emphasise the technical principle of whale harpooning they seem to have resorted to terms such as strengjárna (literally 'to rope-iron').
by Icelanders in, eg, Danish during that period.¹

In order to overcome the confusion which in modern times has troubled the Icelandic usage, etc, and the interpretation of the mediaeval Norse sources this author suggests, firstly, that skutill/skutull be strictly limited to designate harpoons proper, and whaling skot, based on the authority of MLL vii 64g variants, be rendered spjöt whenever possible and reasonable, except in particular cases involving, eg, the arrow (ør).² The spear whaling may suitably be called spjótveiði (f) in Icelandic, analogous to skutulveiði (skutilveiði).³

10.5.6 Seventeenth to nineteenth century Norwegian and Icelandic spear whaling and ‘whale sticking’

Our methodological point of departure was the strict definitions, inter alia, of spearing versus harpooning. While the sources in many cases are unlikely to permit any further differentiation, a preliminary analysis of the narratives in excursus A.16.10 (C) suggests that there exists a particular category of ‘whale sticking’ which combines characteristics of the (detachable) spear with such of lancing,⁴ in contradistinction to spear darting. There is every reason to be specific as to whale sticking,_________________________________

¹ The alternating use by Petter Dass in Nordlands trompet (1690s) of whaling ‘spear’ and ‘harpoon’, etc, where he presumably refers to the whaling spear (cf Dass 1989: 134f*, see also 44) can hardly be attributed to the poetic setting: Dansk ordbog defines hvalspyd as "det samme som harpune" (cf Anon 1802, 2: 676); similarly, hvalsypd is explained as harpun in ODS (8, 1926: 807f); in other words, ‘whale spear’ and ‘whale harpoon’ were considered to be synonyms.

² Cf GG lb: 130. The expression ‘loose harpoon’, løs harpun (D; used by Magnússon [1786] 1944b: 48); laus skutill (I), used by B. Samundsson (1903: 134) and T. Einarsson (1987: 40); leysur skutil (F) used by Mikkjal d Ryggi (1927: 126); and ‘harpoon with a loose wooden shaft ("harpun med løst træskafte") used by A. Helland (1899: 412) I consider contradictory, not clarifying and, thus, unbefitting.

³ Cf Blöndal 2, 1980: 746.

⁴ It seems appropriate to revive the Dano-Norwegian term hvalstikker, ‘whale sticker’, etc, in this respect.
whenever possible.

The information contained in the sources presented in item A.16.10 ranges from indications about whale spearing to very detailed descriptions of the spearing and harpooning methods and gear involved. In my opinion

(a) **indications** about mediaeval Norse spearing are found with Clausson Friis (ca 1599);¹ similarly, about spearing in Iceland, with P. Vidalín (1699, according to Eiríksson 1768), JÄMPV (1710), M. Stephensen (1808), and the Rentekammer/Treasury (1829); indications about spearing (unspecified as to darting or sticking) in Norway, with Debes (1673), P. Dass (1690s), E. Pontoppidan (1753); Leem (1767), J. Landt (1800) and J. Fellman (1820s); and indications about whale sticking in northern Norway, in the Troms fief accounts (1682); furthermore,

(ba) **descriptions** of a primary to secondary character of Norwegian whale spearing and whale spears are found (unspecified as to darting or sticking) with E.A. Colban (1814) and F. Boie (1822); descriptions concerning Norwegian spear darting, with G.P. Blom (1830) and J. Holmboe (1873); regarding Norwegian whale sticking, by A. Larsen (1950), F. Rode (1826-1833), De Capell Brooke (1823/1827) and O. Thomassen (19th century); furthermore, secondary to tertiary sources in this respect are Juel (1888; 1892) and NWA 1896; and

(bb) **descriptions** of a primary to secondary character of Icelandic spear darting, in general, occur in relation to Ólafur ísfirðingur (1385 AD), Ólafur Jónsson (ca 1450), Horrebow (1752), Eiríksson (1768), E. Ólafsson (1772), Olavius (1780) and Magnússon (1786); furthermore, the spear darting (and whole method) used in Arnarfjörður is described by Stephensen (1808), in relation to the whale ‘Pincushion’ (1833), by Steenstrup (1846), J. Árnason (1862), H.E. Oddsson (1960) and G. Ásgeirsson (1929, 1946).

¹ The names/key words and years refer to the headings in item A.16.10.
These sources seem to show, firstly, that peasant fishermen in Iceland and (northern) Norway in modern times\(^1\) practised whale spearing proper, by darting a spear with a detachable head\(^2\) into the whale; secondly, that in Norway (not in Iceland) there existed in modern times a method of thrusting ('sticking') a lance head into the whale by means of a long shaft; such whale sticking used either detachable lance heads\(^3\) or the lance heads were more permanently fixed and intended to be 'broken off'.\(^4\)

County governor (amtmand) Holmboe (1873: 24, 51f) narrates how, in 1870, the ancient Norse peasant fisherman spear whaling tradition apparently came to an end in Norway. By some kind of historical coincidence it happened at the same time as Svend Foyn had just perfected his whaling cannon and grenade harpoon and in the same area (East Finnmark) in which the Modern whaling industry began its expansion.

In Iceland spearing ended in 1894 or 1896.

We seem, thus, to have found further support for the spear whaling hypothesis (b) (cf chapter 10.3) but we still have to consider the possibility of Norse harpoon whaling proper of larger cetaceans in the Middle Ages (cf chapter 10.7.3).

In technological terms it appears to me that the detachable darting spear (Arnarfjörður type) is closer to the traditional big game hunting spear than the whale sticking spear/lance (Rognsund type) and, thus, represents a more ancient design than the Rognsund type. However, whale sticking is not unlikely to be of prehistoric origin and to have existed in parallel with whale spearing proper but so

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1 In Iceland actually since ca 1450.
2 It may be termed 'Arnarfjörður type' (cf figure 8).
3 It might be termed 'Rognsund type'.
4 This is likely to have been the case if stone heads were used; otherwise one should not be blind for the expression 'breaking off' simply meaning to 'make free'.

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far we can only say that it seems to have existed in northern Norway in the 17th-19th centuries.\(^1\)

Information by Debes and Landt (cf item A.16.10 (D)) indicates that large rorquals speared in northern Norway, ca 1673-1800, have succumbed to their wounds in Faeroese waters while on their southbound autumn migration and that some were regularly recovered in the Faeroe Islands. They presumably still carried spear/lance heads although these were not recognised as such, contrary to what was the case with Ólafur Isfirdingur's whale in Greenland (1385 AD).

10.6 Harpoon whaling lines in mediaeval Norway and Iceland?

The crucial means in whale harpooning as compared to spearing is the line. In my opinion, if the whaling line is not addressed as a special issue one is easily lead to questionable assumptions, for instance, about the existence in northwestern Europe, as from late prehistoric times, of suitable lines for whale harpoon darting and for tow whaling.\(^2\)

The whaling line issue is twofold, depending on the harpooning method involved, drogue whaling (qv) or tow whaling.

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1 In my opinion there is no basis for trying to establish separate Samish and Norwegian traditions in whale sticking and spearing, respectively.

2 Examples of this have already been mentioned in in ch 10.3; two more shall be cited here:

G. Stoltz (1957: 136) writes concerning the mediaeval references to whaling, including hvaljárnr: 'It must be remarked that it here seems to pertain to whaling with harpoon; this method indeed also presents itself as the most natural. By means of the harpoon line a hold on the whale was established and prevented it from sinking or escaping.'

Martinsen (1964: 42) speculates about the scenarios - which he actually calls 'a likely theory for the hunting process as such' ("en sansynlig teori for selve fangstforløpet") - of late prehistoric Norwegian and mediaeval Norse whaling; he writes: 'Through the harpoon line, contact was kept from the boat with the whale, so that it perhaps had to drag the boat along the surface. After hours, indeed perhaps even days, of hardship it was exhausted and gave it up.' Any supposition involving hand harpoon whaling actually builds on assumptions like these although not always being so explicit.
whaling (qv). Requiring approximately the same high strength, drogue whaling may employ considerably shorter lines than tow whaling: it obviously makes no great difference whether a free drogue is sometimes pulled under water because of a short line, contrary to what is the case with a manned boat in tow. Theoretically, harpoons (in both sorts of whaling) may be thrust into the whale, rather than darted, thus reducing the necessity for lightness and suppleness of the line. Either way, the whaling line must be a conspicuous element which one would expect to be directly or indirectly detectable in the historical sources, provided it existed in the Middle Ages.

Methodologically, the situation seems to be as follows: If evidence can be produced of the existence of the whaling line in the high Middle Ages in Norway or Iceland, it might indicate the existence of a harpoon whaling tradition alongside the whale spearing and 'sticking'; if the existence of the whaling line is found to be unlikely it implies that Norse mediaeval harpooning of medium-sized to large cetaceans was hardly possibly and most likely did not occur.

The issue of ropes and lines in the Norse area during the Middle Ages is considered in detail in item A.16.12. From this it appears that through the Middle Ages ropes in Norway and Iceland were made of (in the order of their approximate strength) walrus hide, ox hide, lime bast, and other bast; and lines, similarly, of skin, horse hair, coarse woollen thread and flax. If leather and skin ropes were not plaited the strap had to be comparatively broader in order to offer the same strength. Hemp ropes were apparently first introduced in the late Middle Ages and then for ship tackle "for which the great strength of hempen cordage combined with its good flexibility must have been specially important."\(^1\) Exactly the same will apply to the whaling line.

\(^1\) Cf Schjølberg 1988: 133.
Mediaeval Icelandic, indeed also 16th century, sources, such as church and private inventories, testaments, accounts, legal tariffs, etc, appear never, in any context, to mention or indicate the presence of a whaling line although bird cliff ropes and shark fishing lines seem often accounted for. Less valuable and less bulkier fishing lines of various kinds are also registered on various occasions and even pieces of bird cliff ropes (8 and 20 fathoms long), put to secondary use ('pulling'), are mentioned.¹

Mediaeval Norwegian and Icelandic laws in no way indicate the existence of a whaling line proper, rather the reverse: JB vii 63 provides that 'one shall probe for a shot as if one expected a shot (to be) in a whale on another man's foreshore, and he who finds a shot owns a vætt [ie, ca 34.3 kg] of blubber from the shooter's share'; GG (1b: 127; 2: 520; 3: 391) has similar provisions. This can only mean that probes for shots in whale carcasses should be conducted so painstakingly as if the investigator had a personal interest in recovering a shot of his own on someone else's ground (rather than his own) and thereby securing for himself the shooter's share. Taken together with the award offered to the finder of a shot, it points to the shot often not being visible on the surface of the dead whale. With harpooning the identification of the weapon in the carcass would at least occasionally have been aided by the broken line affixed to the harpoon head, except in cases where the harpoon shank had broken off. Moreover, whaling and sealing weapons and related terms in Icelandic diplomas and Althing records, 1250-1800 AD, (cf item A.17.5) seem only on two occasions to contain references to pieces of line in association with whaling weapons, viz: '25 fathoms of old whaling line' (1666) and 'a little more than three fathoms of thin rope' (1691), both recovered from large whales in the previous years.²

¹ Cf DI 3, 1896: 155.
The accounts and circumstances indicate that the weapons are of foreign origin and the 'thin rope' is apparently a foreganger (qv). Most essential is, however, that these instances date from the second half of the 17th century. The comparatively rich, pre-1610, Icelandic evidence otherwise never even indicates anything resembling Jón Ólafsson indafari's description of the Basque technique (1619, at Spitsbergen): '... rope with harpoon [lagjárni] lay coiled up in the boat, new, 300 fathoms [ie, ca 430 m] long ...'; '... no more than 5 fathoms ran out before it was cut on the iron [ie, harpoon] which extended forward'; and '... ironed with a harpoon iron on a rope ...'.

Furthermore, this student maintains, as a scientific principle, that information and narratives about Icelandic peasant fisherman tow whaling, and thus whaling lines, dating from the 17th-18th centuries (eg, Jón Ólafsson, 1610-1621; Gísli Oddsson, 1638; Ólafur Jónsson, mid 17th century; E. Ólafsson [Olafsen] 1772) cannot be invoked retrogressively to Icelandic and, for that reason, Norse whaling before 1610.

The strain, ie, pull and twisting, on a whaling line is presumably at least as much as on the cordage in the standing and running rigging of a Norse knörr for which bast ropes were considered too weak. Sufficient strength could apparently only be obtained by using walrus and ox hide leather ropes, variously as broad straps or plaited. Although available in Norway, but hardly in Iceland, bast ropes appear not to have had the strength necessary for a whaling line. Great weight and bulk, and presumed want of suppleness, of both bast and (plain and plaited) hide ropes, seem also to have been prohibitive factors regarding the surmised mediaeval Norse whaling line. It is difficult to imagine such lines being hurled the distance required (despite all possible skills of the harpooner) and managed

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1 "... strengur með lagjárni lá niðurhringaður í bátnum nýr 300 faðma [ie, ca 430 m] langur ..."; "... ei fórst af strengnum utan 5 faðmar, því fyr skarst en meira útrynni á því járni er út stóð fram á"; "... með harpoonajárni á streng járnudu ...". (Cf Ólafsson 1908-1909: 133-135).
when running out particularly in the case of tow whaling. In such leather warps (qv) the apparently highly crucial (light and strong) foreganger (qv) would be missing, the invention of which I consider to form the basis of the Basque success in whaling.\textsuperscript{1}

The tentative conclusion must be that production, trading, carrying, managing, hurling, recovering and storing of whaling lines cannot be found in mediaeval Icelandic sources which, in turn, I consider, makes it unlikely that any whaling line was employed at all. On grounds of the congruity of the Icelandic and Norwegian mediaeval whaling operations this then also applies to whaling in Norway through the Middle Ages.

It seems also possible to approach the whaling line issue from the angle of legal principle.

The Old whaling trade universally applied the principles of 'fast' and 'loose fish' (qv) to fundamental practical and legal problems arising out of conflicting claims to whales.\textsuperscript{2} These principles seem taken over from the Basques who, in turn, may have modified ancient customary fishing and hunting law to suit the particular nature of whaling.

All mediaeval Icelandic laws (GG 1b: 132; GG 2: 531; GG 3: 405; JS 109; JB vii 66) apply the principle of fast and loose fish in the driftage zone (cf chapter 4.11) for carcasses being towed in from the common sea to the shore of a coastal estate. GG 2: 531 reads as follows:

'When people transport [flytia] a whale from the commons to [private] land then they only own the

\textsuperscript{1} Its invention was possibly facilitated through the availability of good quality hemp from, eg, France (cf VTKL 5, 1938: 111).

\textsuperscript{2} Cf Scoresby 2, 1969: 312, 318-322, 520. "First, That a fast-fish, or a fish in any way in possession, whether alive or dead, is the sole and unquestionable property of the persons so maintaining the connection or possession; and secondly, That a loose fish, alive or dead, is fair game." "... if either the line or the harpoon were only to lie across its back, the fish would still be considered as fast"; "... whenever the continuity of the line is broken, no matter by what means, the fish is esteemed loose." (Cf Scoresby 2, 1969: 319).
whale provided they first carry [beri] the fasts [festar] ashore but if they let the whale loose [lavsan] ... it is a drift whale [rek hual]. But if they do not follow [fylgia] the fasts [festum] ashore which are attached [fastar] to the whale ... then this is a drift whale [reka hvalr].'

Apart from a modification found in the short-lived JS (1271-1281 AD), the mediaeval Icelandic provisions are clear, precise and without arbitrariness: the slightest disconnection with the whale in the driftage zone before a fast has been brought ashore turns the 'transported whale' into a 'drift whale', resulting in the salvors losing their one-third share in it.

According to GG (GG 2: 531; GG 3: 404f; and less clear: GG 1b: 132) the 'finder's blubber' (finnandaspik) from a drifting whale carcass belongs to those who first discover it and make fast to it (bera fester i); in case the discoverers are away fetching assistance they still have the right to one half of the finder's blubber. JB vii 66, however, states plainly: 'those men who first fasten to a whale shall have the finder's blubber though others take part in the transport' ("peir menn sem fyrst bera festar i hval eigu at hafa finnanda spik, pótt fleiri sé at flutningu ... ").

The Norwegian laws have no specific references to fastening to floating whales.

The consideration of the legal aspect therefore leads me to conclude as follows:

Firstly, the otherwise so detailed mediaeval and early modern whaling legislation in both Iceland and Norway would hardly have been able to disregard the issue of ownership and non-ownership of whales in situations involving the harpoon line if harpooning had actually been conducted,

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1 JS 109 states that salvors retain their rights in a 'transported' whale although they become 'separated' (skiliaz) from it because of surf or storm, provided it drifts ashore where they intended to land it, otherwise it becomes a drift whale. (Cf NGL 1, 1846: 292).

2 JS has nothing about finnandaspik.
especially as tow whaling requires a comparatively long line and the setting is, inter alia, the Norwegian fiords and archipelagos (skærgård).¹

Secondly, the whole lay-out of the postulated primal Norse and Icelandic inshore and littoral régime, in particular the driftage zone, and the (modified) Norwegian proprietorial zone, (cf chapter 4.13) also indicates an emphasis on whale driftage as opposed to direct takes of free-swimming whales.² - This also being said in support of the hypothesis (d), in chapter 10.3.

10.7 Early mediaeval Norse and early modern Icelandic, Norwegian and Faeroese hand harpoon whaling

10.7.1 Early mediaeval whaling by the Norse in Ireland and Normandy

An argument against my spear whaling hypothesis might be that mediaeval whaling at the coasts of the southern North Sea, the English Channel, in Normandy and in particular by the Norse in Ireland, seems to have involved 'harpooning' of whales. Apart from the possible ambivalence regarding the terms 'harpoon' and 'harpooning' as used by the scholars who consider whaling in this region it is not least important to notice that their interpretations generally rely on references to Norse, allegedly 'harpoon', whaling.³ These interpretations therefore most likely

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¹ Negri (1887: 150), from 1665, mentions that 'Occasionally it happens that it swims around a rock ... with the long rope behind it'. Even in the Modern whaling industry the line plays a legal role, cf NWA 1896, § 7: 'Provided that a whale which is legally shot still drags a fast line, the hunt ... may be concluded ... inside a protected area' (cf Paulsen 2, 1908: 275).

² Drift wood can hardly have played the same significant role in the Gulathing and Frostathing law districts as it did in Iceland so the postulated primal Norse driftage zone seems in Norway to have been with emphasis on whales and wreck.

³ This is very obvious in W.M.A. de Smet's (1981) concise presentation; Nansen (2, 1911a) may be cited as a Norse counterpart.
involve both imprecise definitions and terminology (at least on the part of their Nordic references) together with circular reasoning so they hardly offer valid arguments at the more general level.

Firstly, the account by the Spanish geographer al-‘Udhri*, from about 1058 AD, as quoted by al-Qazwīnī (d 1283 AD) about Norse whaling in Ireland\(^1\) is indeed at issue. If one interprets this account as describing harpooning, it needs not at all testify to whale harpooning having existed in the Norse core lands. It would be more straightforward to consider it belonging to the Biscayan, or Basque, tradition. This view I have earlier argued for\(^2\) and still consider fully valid, provided we are actually dealing with whale harpooning. However, after having studied the Hiberno-Norse whaling method more closely it is my opinion that it is a kind of gaffing and, consequently, only has the whale species in common with the Basque whaling (cf chapter 10.8).

Secondly, 9th-12th century AD sources refer to associations (societies) of whalers and to whaling stations along the northern Normandy coast which are usually associated with the term walmanni of Old Norse origin (‘hvalmaðr, sg; *hvalmenn, pl; ‘whaler(s)’; cf "in sociatate walmannorum", "erga communionem walmannorum", etc); the whaling stations are similarly called valseta, also of Old Norse origin (‘hvalseta [sg, f], ‘whale station’; ‘hval (manna) seta, ‘whalers’ station’). Various monastic estates seem to have been directly and indirectly involved with these associations and stations, ie, the whaling as such,\(^3\) but also in the trade (export) of products.\(^4\)

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1 Cf Dunlop 1957: 19f\(^*\); see also Nansen 2, 1911a: 156f.
2 Cf Lindquist 1993: 34.
3 Cf Musset 1964: 148, 150-152, 154, 157 [map] (see also Nansen 1911b: 2; Steenstrup 1, 1972: 188). The variant -seta (f; cf nordrseta) seems to be a more direct reference regarding the Norman usage than -setr (m) (cf Fritzner 2, 1954: 834; 3, 1954: 212, 220, de Vries 1977: 471) suggested by L. Musset (1964: 152). Proulx (1986: 10) is clearly mistaken when he writes: "The hunters used nets and whaling boats (called by the Scandinavian name walmanni) to surround the whales.'
The Norse apparently used the term hvalr for all cetaceans others than the harbour porpoise although there is a tendency to associate it with the larger ones.\textsuperscript{1} Nansen (2, 1911a: 161f) thinks that if the Norse had learned whaling, implying harpoon whaling, 'in the foreign land, it goes without saying that they would also have taken the name from there, and it is extremely improbable that they should have acquired a Scandinavian designation for an occupation the knowledge of which they had not brought with them from their native land.' To this conclusion I have the following observations: The term walmanni in Normandy cannot be interpreted to mean anything else than simply 'whalers' (cf above) and it has no connotation whatsoever with any method: Although the name seems to refer to larger cetaceans it does not exclude that these men also caught, eg, porpoises. A preliminary study suggests to me that the Normandy walmanni drove and seined smaller cetaceans and possibly induced ebb-strandings of larger cetaceans in an area well-known for its high tidal difference and wide shallows.\textsuperscript{2}

10.7.2 Icelandic, Norwegian and Faeroese harpoon whaling as from the early seventeenth century\textsuperscript{3}

About 1588/89, bishop Oddur Einarsson states that the Icelanders do not capture whales alive but only take dead ones which drift inshore and ashore.\textsuperscript{4} Whale shot registrations, mark recoveries and shooter's money at the Althing (cf item A.17.10) will have been familiar issues to

\textsuperscript{4} Cf Musset 1964: 160.

\textsuperscript{1} This is also Nansen's (1911b: 2) view.

\textsuperscript{2} This student suggests that man-induced ebb-strandings in areas of medium to high tidal differences be considered a distinct whaling method and given more attention as such.

\textsuperscript{3} Cf item A.16.10.

\textsuperscript{4} Cf Einarsson 1928: 60.
the bishop and the passage does not contradict this fact.

Longer Icelandic descriptions of whaling other than drives commence with bishop Gísli Oddsson and JG1 in the first half of the 17th century.¹

The Basques are known to have been inshore in Northwest Iceland in 1608 (Ballarárannáll)² and to have whaled inshore there in 1613, 1614 and 1615 (cf Fitjaannáll, Sjávarborgarannáll and Skarðsárannáll, 1613-1616); Skarðsárannáll, 1613, call them "spanskir hvalskutlarar".³

JG1, in 1615/16, is the first in Iceland to describe the actual whaling activities of the Basques at northern Strandir and in Ísafjarðardjúp, Northwest Iceland, and their misfortune in 1615. He speaks of them 'ironing' (járna) whales.⁴ The anonymous Northwest Icelandic poet of Víkinga rímr offers an interesting passage which reads, in verbal translation: They (ie, the Spanish) pretended to have great skills / to kill whales, / spanning for that the slender spear / with the Spanish socket, / ---.⁵ The 'spears' of the Spanish are mentioned on four later

¹ Cf Kristjánsson 5, 1986: 55; Lárusson 1981h: 168. D. Blefken's (1906: 509) description, from 1607 AD, about the hacfal 'monster' fishery in Iceland must in my opinion be disregarded: It presumably pertains to the Greenland shark (haafa(r)1) fishery of the Icelanders, the gear (lagváður) and method (cf Olavius 1780: 340f [incl ill]) of which Blefken apparently has misunderstood and which he confuses with the Basque harpooning technique and (possibly early) Basque takes of 'monsters' in Icelandic waters. The participation of Icelandic vessels in the Basque whaling off Iceland, around 1600 (cf Scoresby 2, 1969: 17, repeated by Conway 1906: 41, Guldberg 1889a: 31; 1890: 259; Helland 1905: 660; Hjort 1902: 159) cannot be supported on the present evidence (cf, eg, Einarsson 1987: 27-41). Blefken's hacfal story could be Scoresby's source.

² Cf Dorsteinsson 1930b: 191.

³ Cf Dorsteinsson 1922a: 200. This is presumably the earliest positively identifiable use of skutla (and by extension skutull/skuttill) relating to harpooning but the annal author may have used it in the (old) meaning of 'darting' (cf below about strengjárna). English whaling activities as from 1588 off Iceland and the North Cape (cf Lindeman 1869: 7 [referring to Elking's View of the Greenland trade and whale-fishery, p 41]; repeated by Scammon 1968: 189, and Ashley 1938: 23) seem not reflected in Icelandic sources.

⁴ Cf Guðmundsson 1950: 6, 19; see also 7, 12; and JG1's autobiographical [1649] poem Fjölmóður (1916: 27-53).

⁵ "Deir letust hafa lista gnútt / að leggja hval, / spenna þar til spjóltið mjótt / með spenskan [sic] fal, / ---". (Anon 1950: 33).
occasions.\textsuperscript{1} The 'slender spear with the Spanish socket' clearly refers to the whaling harpoon proper and the 'socket' (falur) will be a circumlocutional expression for the harpoon head.\textsuperscript{2}

Jón Ólafsson \textit{indiafari}, in 1661, narrates his experiences in the Danish Spitsbergen whaling operations, 1619.\textsuperscript{3} His Icelandic whaling lexicon reads like this: harpóner = harpooner;\textsuperscript{4} lagjárn = 'thrusting iron', being a harpoon because it carries a (300 fathom long) strengur, ie, line;\textsuperscript{5} harpónajárn = 'harpooning iron', being attached to a strengur (line);\textsuperscript{6} járn = harpoon;\textsuperscript{7} járna (vb) = harpooning.\textsuperscript{8}

Sæmundsson informs us that Jón Ólafsson hvalfangari/hvalamaður ('whaler') was said to have strengjárnað ('string-ironed'), ie, harpooned whales, in Ísafjarðardjúp, Northwest Iceland, during the period, 1610-1621 AD.\textsuperscript{9} He offers no references but in Skarðsáránnáll, 1610, we read "Tökst upp hvalaskutlan á Vestfjörðum".\textsuperscript{10} Taka upp means in this context 'to begin doing something', 'especially as a custom, etc' (Blöndal) and 'to begin doing something, creating a new habit for oneself' (Böövarsson).\textsuperscript{11} The translation of the passage seems therefore to be: 'Whale harpooning was begun in the Westfjords'. We shall return

\textsuperscript{1} Cf Anon 1950: 55, 72-74.
\textsuperscript{2} The expression "spenna til spjötis" has a striking resemblance to (later) whalers' usage of 'spanning harpoons' and 'spanned in harpoons' (cf Scoresby 2, 1969: 230f).
\textsuperscript{3} Cf Dalgård 1962: 106 [incl note 46].
\textsuperscript{4} Cf Ólafsson 1908-1909: 132.
\textsuperscript{5} Cf Blöndal 1, 1980: 468; Ólafsson 1908-1909: 133.
\textsuperscript{6} Cf Ólafsson 1908-1909: 135.
\textsuperscript{7} Cf Ólafsson 1908-1909: 134.
\textsuperscript{8} Cf Ólafsson 1908-1909: 134f.
\textsuperscript{9} Cf Sæmundsson 1903: 134; 1929: 87.
\textsuperscript{10} Cf Dorsteinsson 1922a: 198.
\textsuperscript{11} Cf Blöndal 2, 1980: 842; Böövarsson 1985: 1029.
to this entry in chapter 10.7.3.

Bishop Gísli Oddsson, in 1638, describes Icelandic tow harpoon whaling which makes use of a line one hundred ells (50-60 m) long, fixed to the stem of the boat.

This student has difficulties in accepting the narrative of the whaling by Ólafur Jónsson (Hvala-Ólafur), in the mid 17th century, at face value. Firstly, if he used a harpoon gun as described he might be the first ever to do so; secondly, the government grant he allegedly received would fit far better into the Danish promotion of peasant fisherman harpoon whaling a century later, ie, after ca 1750; in this context the harpoon gun also seems more plausible, whoever may then have been involved with it. Ólafur apparently harpooned larger rorquals which were sometimes too strong to be taken in tow whaling with an 8-10 oared boat (ie, 28-30 foot/8.9-9.3 m long), even when using additional drags. My preliminary interpretation of the story is therefore that Ólafur Jónsson, of Hvesta, around the mid 17th century, employed strong hand harpoon gear in tow whaling but that we should look for another person by the same name who sometime after ca 1750 perhaps attempted to use a gun as described for which he may have received a government grant.

Oddur Öósafsson, at Svalbarð, Svalbarðsstrandarhreppur, Suður-Þingeyjarsýsla, apparently harpooned dolphins and porpoises around 1677 but whether the whales he skutlaði in Eyjafjörður were also harpooned (cf Sjávarborgarannáll, 1677) cannot positively be said. Whatever this method

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3 W. Scoresby Jun ([1820] 2, 1969: 133) tells about a (first?) trial, 1762-1763, in Ireland, with a harpoon gun that fired both harpoons and lances and which resulted in the successful capture of five large rorquals, 50-70 feet long. See also Mitchell, Reeves and Evely 1986: 47.
5 Cf Jóhannesson 1942: 305f. Seal and 'dolphin' (porpoise?) harpooning in Eyjafjörður was dying out in the late 18th century (cf O.S. 1787: 35).
was, it suffices here to notice the year, ie, 1677.\(^1\)

According to E. Ólafsson (1, 1772: 546f*) some Icelandic peasant fishermen in Northwest Iceland ‘In earlier times’\(^2\) specialised in bay whaling: They operated in companies of 2-3 large and strong (specially build) boats and used harpoon tow whaling with additional impediments (brushwood). In order to keep the whales embayed the whalers were supported by smaller boats from which stones were thrown into the water. The whales were finally lanced. The hunt was apparently successful but there is no evidence for considering it more than a local phenomenon of limited duration.

Ólafsson also writes that the peasant fishermen of Eyjafjörður ‘60 to 100 years ago’ ‘regularly [?] harpooned and chased’ bottlenose whales ashore but by the 1750s they were seldom caught, ‘mostly because the boats have become so small and weak; otherwise people have here used the same method as in the Westfjords by making the boat fast to the whale. Harbour porpoises are shot with harpoons like seals.’\(^3\) Ólafsson’s information about the bottlenose whaling conforms with Hrafnagilsannáll and Vallaannáll, 1728.\(^4\)

Sources about harpooning of larger cetaceans by peasant fishermen in Norway before ca 1900 seem very rare; indeed, the only reference I am so far aware of is found with

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1 The entry in Vallholtsannáll, 1661, (cf Ærsteinsson 1924b: 357) about Trel(l)und’s station in Hrísey, Eyjafjarðarsýsla belongs in this context. The station was presumably not used for whaling in North Iceland but the peasant fishermen in Eyjafjörður are likely to have become acquainted with the gear and technique of the Old whaling while this, seemingly, short-lived enterprise existed.

2 This needs not refer further back than to the 17th century, or 4-5 generations.

3 Ólafsen 1, 1772: 543f; 2, 1772: 696f; see also 705.

4 Cf Jóhannesson 1948c: 663f; Ærsteinsson 1922b: 533. Ólafsson (1, 1772: 443f) states that the bottlenose whale in North Iceland had ‘its most prominent place’ in Eyjafjörður.
Fellman, from the 1820s:¹ He is well aware of the difference between spearing and harpooning² so it seems clear that peasant fishermen in Altafjord, West Finnmark, conducted hand harpoon whaling, 1816-1818. In 1818, eight larger whales were taken and Fellman is in no doubt about the prospects of whaling 'for the local people if one began conducting it in an appropriate manner.'³ There is no information about a continuation of this whaling. It presumably involved some form of tow whaling.

'Shooting' of larger cetaceans in the sense of skot proper (spearing) is not documented from the Faeroe Islands.⁴ This corresponds with T. Tarnovius's (1950: 60) observation, in 1669: 'Big whale fishes are often seen in the Islands but of them the inhabitants become none' but they catch smaller ones.

There exists a Faeroese legend about Óli jarnheysur (being the historical Ólavur Larvasson) who hewed his marked axe into a large rorqual that is later found drifted

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¹ Earlier this student followed Gjessing's (1953-1955: 26f) view that Negri's (1887: 148-151) account describes tow whaling by the coastal inhabitants in Finnmark and even considered it to be "The earliest historical reference ... that beyond doubts deals with harpooning of larger cetaceans by peasant fishermen in Norway" (cf Lindquist 1993: 35f). Upon reconsidering Negri's (1887: 137, 148-151) account concerning the whaling in North Norway and the Samis I have changed my view: It deals with the Old whaling trade, presumably Dutch black right whaling near North Cape in 1665. This I conclude from the following details: The whale floats when it is dead (implying the black right whale); 3-4 shallops cooperate in the harpooning and lancing; the extraordinary long harpoon line, the whale being towed (floating, with the tail cut off) to an expedition vessel ('ship') in harbour; the flensing and the blubber being winched on board in preparation of the trying out; Negri himself visiting the vessel. - On the other hand, I still agree with Gjessing (1953-1955: 26) concerning Negri's (1887: 137) remark that Samis 'every year voyage on the sea far to the north all the way to Spitsbergen' involves a confusion with the Old whaling activity at Spitsbergen. However, when Negri continues that 'whaling ... is one of their most important means of subsistance' he could be touching on something essential, perhaps Samish whale spearing?

² Cf Fellman 3, 1906: 70f*.

³ Cf Fellman 1, 1906: 63*; see also Helland 1905: 670.

⁴ Cf Ryggi 1927: 129.
ashore and of which he received the shooter's share.\textsuperscript{1} Mikkjal á Ryggi (1927: 129f) thinks that the legend indicates that the Faeroese have known spear whaling similar to that used in Norway. This conclusion involves two steps: firstly, that the Faeroese traditionally respected the hunter's right based on the marked weapon as such; secondly, that the 'axe' reflects the spear as such. In my opinion the last step is doubtful. Hunting weapons and other implements (cf the axe of the stories) seem generally to have carried owner's marks; all such marked implements, eg, gaffs, lances, large knives (grindaknívur) and axes which were used in the securing, killing and flensing (at sea) of whales, were probably considered to be a proof of the right to the 'shooter's share' (ie, the killer's share) and the finder's share (or 'finder's blubber'), as it would be, when recovered.

We have positive evidence about harpooning of three pilot whales in the Faeroe Islands, in 1619, by Ólavur Larvasson (Olof Lauridsen)\textsuperscript{2} (cf item A.16.10 (D)). The legend about Óli jarnheysur\textsuperscript{3} (cf item A.16.10 (D)) must be considered secondary to this evidence and perhaps reflecting it. The legend shows that harpoon tow whaling of even pilot whales was dangerous and on the brink of being possible. This fact and the novelty of the method could explain the preservation of the story.

The next certain evidence about the use of harpoons in the Faeroe Islands seems to be from 1734: Following a complaint it was then decreed at the Faeroese lawthing (lagting) 'that nobody was allowed to use harpoons

\textsuperscript{1} Cf Jakobsen 1, 1984: 108f*. The legend states that Óli jarnheysur was the son of Larvasson but this seems mistaken because he was quite a different person (Ole Joensson) who is, however, recorded in 1616/1617 (cf Thorsteinsson 1976: 7). In the rendering by Mikkjal á Ryggi (1927: 129) this legend is associated with a certain Sjúðar-Hanus.

\textsuperscript{2} Cf Bjørk 3, 1963: 166; see also Svabo 1976: 253f; Thorsteinsson 1976: 7.

\textsuperscript{3} Cf Jakobsen 1, 1984: 110f.
(skutler) when [ie, pilot] whales are driven before they go to sea and everybody agrees in abandoning it'.

When Svabo, in 1781/82, writes that in addition to whaling lances, 'harpoons have long been used in the pilot whale hunt in the Faeroe Islands' after driving has been abandoned, I think that it does not contradict the conclusion that Ólavur Larvasson might have been the first to engage in harpoon tow whaling in the Faeroe Islands, whether it was intended or not. However, I am not at all certain that the technique employed by him belongs to the Basque tradition, regardless of possible incentives (including gear) from that side: Larvasson's three pilot whales are stated to be 6 and 4 ells long, and a smaller one. The whales were clearly not appraised because the size would then have been offered in skinn and gyllin so the size measures seem to refer to the overall length of the animals. The biggest whale can therefore by no means have been longer than 3.8 m, most likely it was only 2.8 m long; which indeed gives reason to characterise an even smaller pilot whale as liden. Larvasson's gear and attempt might therefore just as well lie in continuation of the mediaeval Norse seal/porpoise/dolphin harpooning tradition (cf chapter 10.3).

E.H. Grieg (1856: 74f) writes that "The Faeroese never venture to assail these formidable monsters", meaning the large cétaceans. In 1879, J.P. Trap states: 'The Faeroese does not tackle the big whale fish for which he lacks gear, and for this catching people consider ships


2 ... have Harpuner (Skutil) længe været brugt til Grind i Færøe ...

3 Perhaps the name skutil (cf Svabo [1781/82] 1976: 253) and the light character of the modern Faeroese skutil (cf Joensen 1976: 14 [ills], 16 [ill]) may be taken as indications in this direction.

4 Grieg seems to have sought information on this point during his visit to the Islands because he adopts the Faeroe usage of calling all larger whales 'Greenland whales' (cf Høst 1875: 355).
If we sum up, evidence about peasant fisherman harpoon (tow) whaling in Iceland goes back to 1610; in the Faeroe Islands to 1619 which might possibly be extended back to 1616/17 or 1613;\(^2\) and in Norway so far only to 1816-1818.

10.7.3 Norse harpoon whaling as from 1610; cooperating crews versus single-boat operation; origin of the harpoon whaling paradigm in Nordic whaling history

In continuation of chapter 10.5.6 we shall now return to the interpretation of the sources presented in item A.16.10 and consider possible changes in the traditional whaling techniques.

Suggestions for improvements and changes in Icelandic whaling are found with Olavius (1780) who recommends the adoption of the Dano-Greenlandic drogue whaling method, and with Vídalín (1699, according to Eiríksson 1768), Horrebow (1752), Eiríksson (1768, 1781) and the Rentekammer/Treasury (1829) about the adoption of the Old (Basque) whaling technique.

Attempts at adopting the Old Basque style tow whaling technique, including gifts of whaling harpoons, lances, foregangers, lines and shallops, payment of bounties and the training of Icelandic harpooners are found with the Icelandic Partnership/Innrettingar (1752-1757) and in (other) Danish government efforts (1778-1787; 1829).

These proposed and partly initiated basic reforms show that neither hand harpoon drogue whaling (Dano-Greenlandic style) nor hand harpoon tow whaling (Basque style) were traditionally used techniques in Iceland.

Furthermore, several authors mention the lack of suitable

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1 Cf Trap 6, 1879: 537.

whaling equipment in Iceland but the issue is more complex, or as Biríksson (1768: 253f*) puts it:

'The inhabitants have nothing of what is needed to repair the whale fish catching; neither vessels, lines nor other gear; they cannot afford to buy it, neither is it on sale with the merchants; everywhere they lack knowledge and experience in this occupation.'

Exactly for this reason the Danish government, as of ca 1750, worked for the development of peasant fisherman bay whaling Basque style in (northwestern) Iceland and a small local Old whaling industry as part of the Innréttinngar in Reykjavik.

When this is considered in the light of the information in chapter 10.7.2, it seems clear, firstly, that hand harpoon tow whaling was attempted in Iceland on various occasions from the early 17th through the 18th century. Some of these enterprises clearly made the whalers legendary, much in the same way as happened with Ólavur Larvasson/Óli jarnheysur in the Faeroe Islands, but renown also followed whale spearers.

We cannot say whether Jón Ólafsson hvalfangari/hvalamaður, who Sæmundsson says 'string-ironed' whales in

1 For example, Becker (1736, cf N.N. 1798: 22); Anderson (1747: 105); von Troil ([1772] 1808: 662f); Olavius (1780) on several occasions also mentions Icelanders' lack of sealing equipment (pp cxxviii, 349, 513) or existing gear being weak (p 400).

2 Rathke mentions from 1801 that peasant fishermen in Fugløya, Nordland, 'regretted that boat and equipment, namely a basking shark line of 150 fathoms or more in length, was too expensive for them: they also seemed to fear the danger of this fishery in their frail boats: a basking shark had recently smashed the whole side of one of their eight-oared boats because they incautiously approached it.' (Cf Rathke 1907: 112). This makes tow whaling unlikely with them, too.

3 Skúli Magnússon and Jón Biríksson were clearly the driving forces.

4 This student suspects the sources to overlap so the attempts may be few and more isolated than it seems at first. The Basques whaled inshore in northwestern Iceland (from Breiðafjörður to Strandir), in 1608 and from 1613 until ca 1720, and hired Icelandic labourers (cf Olafsen 1, 1772: 372, 464, 618; Ólason 1916: 37-39 [Fjölmsóur, verses 48 and 54]) so the model will have been quite well known with the local Icelanders.
Ísafjarðardjúp, 1610-1621 AD, was the sole entrepreneur in that period. However, there is every reason to take the Skarðsárrannáll literally in the sense that 'Whale harpooning was begun in the Westfjords', 1610. This seems to be conclusive in the context of what we otherwise know.

It is tempting to link this Northwest Icelandic hand harpoon whaling with the whaling by the three Spanish ships at Strandir, in the same region, in 1608 (Ballárárannáll). Although the annals do not mention the Basques again before 1613, the 1610 entry could be an indication that the Basque possibly also whaled at Strandir 1609 and/or 1610. Anyway, some Northwest Icelandic peasant fishermen seem to have been encouraged to attempt hand harpoon tow whaling and may to that end also have obtained some gear (harpoons, foregangers and/or lines?) from the Basques. Hand harpoon whaling proper appears, consequently, not to have existed in Iceland and, by extension, in the Faeroe Islands and Norway prior to 1610.

Whale harpooning and whale spearing/’sticking’ have accompanying features which we have so far not considered; the issue might be described as 'cooperating crews' (companies) versus 'single-boat operation':

W. Scoresby Jun writes: "I know of no instance of even one [ie, bowhead] whale having ever been killed, of the largest size, by a single boat’s crew of 6 or 7 men. Ordinarily 3 or 4 boats, with 18 to 25 men, are deemed necessary for the capture of a single whale." Eiríksson also states that 'surely there are instances where two boats, each with 6 or 7 men, can take a whale, if everything goes as desired; but usually no less than four

1 Cf Sæmundsson 1903: 134; 1929: 87.

2 The Basque-Icelandic contacts need not have been as negative as Ballárárannáll claims: Language problems, Protestant resentments towards Catholics and the Danish trade monopoly imposed in 1602 (to 1787) may all have played a role in the issue and the annals' presentation of it.

3 Quoted by Steenstrup 1889-1890: 101.
boats are used at a time, and quite often 6 or 7'. Negri (1887: 149-151) mentions 3-4 boats, each with a crew of 6, being considered necessary in the (Dutch?) black right whaling at North Cape, 1664. In fact, this is a general feature of the Basque and Old whaling.

The Northwest Icelandic harpoon tow whaling which E. Ólafsson (1, 1772: 546f*) describes (cf preceding subchapter) involved three boats cooperating in the immediate capture and a manngard, formed by smaller boats, at the entrance of the bay.

Christie (1785/86) mentions that in Skogsvåg 'a great number of boats, usually 20-30' hang onto their harpoon lines 'and form a wide field so as to be more heavy to pull'2 in order to exhaust the minke whale, the smallest of rorquals, when it was already weakened by blood poisoning. He also considers the possibility of mediaeval harpoon whaling, with 'many boats', 'for example 10 boats with harpoons and lines', cooperating:3 'But when I think about how alert it [ie, the minke whale] is and how difficult it is for many boats, even on a small bay, to hit it I am more inclined to believe, it [ie, the shooting] has happened with arrows, although I earlier have considered this to be implausible'.4 Furthermore, Scammon (1874/1968: 30) reports that the North West Coast Indians in their inshore harpoon and drogue catching of gray whales used 'expeditions' made up of 2-5 canoes (each 35 feet long, with a crew of 8 men).

In contrast, the mediaeval Norwegian and Icelandic skot/járn whaling and whale 'sticking' only consider the shooter as an individual and behind him we detect no more than a single boat crew being directly involved; there is no trace

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1 Cf I.E. 1781: 150*.
2 Cf Christie 1785/86, UBB 221: f16v.
3 Cf Christie 1785/86, UBB 56: f44r, f44v.
4 Cf Christie 1785/86, UBB 56: f45r-f45v. He (1785/87, UBB 221: f12v-13v) also gives an example of a large minke whale escaping after having been weakened and harpooned.
of a formal or informal organisation, nor of cooperation of boat crews in the capturing process (which would be harpooning and lancing), which seems otherwise necessary both in hand harpoon tow and drogue whaling for larger cetaceans. This supports the hypotheses (b) and (c) in chapter 10.3 and the conclusion reached earlier in this chapter.

One is bound to reflect on the origin of the Norse/Norse-to-Basque harpoon (tow) whaling paradigm in Nordic whaling history. We recall that Juel (1892: 14) explicitly stated that spearing was a traditional Norwegian whaling method which had been used into the 19th century, that NWA 1896 (§ 6) alludes to it, and that Sorensen et al (1912: 14f*) did not count harpooning among the ancient Norwegian methods. On the other hand, Guldberg (1884: 148) implied that hand harpooning of black right whales existed in Norway in the 9th century AD although he (1889a: 27) left the question open whether the Norse had taught the Basques harpoon whaling or vice versa, or whether it had been independently developed by each of them. Nansen (1911) supposed either a transfer of Norse whale harpooning knowledge to the Basques or the development of two independent, but quite similar, harpooning techniques, first with the Norse and somewhat later with the Basques, but that the Norse tradition had ceased to exist around 1600 AD. The Norse/Norse-to-Basque harpoon (tow) whaling paradigm seems therefore ultimately to rest on Guldberg’s, and not least, Nansen’s authority. Later the paradigm also assumed traits which resemble the development and expansion of the (Norwegian) Modern whaling industry, even to the degree that scholars introduced ‘pelagic’ whaling and expeditions into the old Norse whaling (cf chapter 2.1.2).

1 Cf Nansen 2, 1911a: 159-162, 178.
10.8 Faeroese bottlenose whaling; Hiberno-Irish gaffing of black right whales, mid 11th century; gaffing as a primary whaling method

Through the 19th century there existed a minor Faeroese fishery of the northern bottlenose whale, in particular in Suðuroy, which is duly described by several scholars. Item A.16.16 (A) offers translated extracts from the main sources.

The oldest information about this take is found in the country accounts of crown incomes, 1584, the description of which conforms fully with the method as it is later described regarding the Suðuroy takes. When the animals have come inshore a gaff (sóknarongul, etc, F; 'attack hook'; ie, a strong iron hook attached to a suitable line) is hewn into their melon (forehead) after which they are carefully guided into the littoral to be pulled ashore by the line.

H.C. Müller (1884a: 48) regards it as 'uncertain' whether this take is older than the late 16th century. In my opinion, circumstantial evidence indicates that it must be at least of mediaeval origin: Firstly, the migration pattern and presence of the bottlenose will hardly have changed significantly in medium terms prior to commercial exploitation in the late 19th century and it was well known to Norse people in the Middle Ages (cf KGS K5-K6*). Secondly, the bottlenose is renowned for great strength and tenaciousness of life, eg, when harpooned, so the method is highly intricate. The practice carries the hallmark of long experience and the method was clearly fully developed in 1584 which indicates its being at least of mediaeval origin.

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2 Cf Müller 1884a: 48f; see also Matras 1960: 178.

3 Cf Müller 1884a: 51, 66.
Actually, there seem to exist further accounts about this bottlenose whaling. Encountering them individually is bound to cause bewilderment because of various absurdities in them: At first, this student interpreted these stories basically as misunderstood hand harpoon whaling which had given rise to fictitious descriptions,¹ a kind of folktales. However, after noticing the recurrence and variation of certain features in these narratives I have come to the conclusion that they are distorted descriptions of the Suðuroy bottlenose gaffing. In order to grasp these descriptions it is advisable to study the narratives, from the most recent ones back to the oldest, beginning with H.E. Høst’s (1875) and Müller’s (1884) accounts which are generally beyond questioning (cf item A.16.16 (B)): Although the narratives display interesting changes over time they apparently pertain to the same subject, ie, the capturing and securing of northern bottlenose whales off Hvålibiarfjörður and Sandvík exclusively by gaffing. The misconceptions centre around the approaching of the whale and the gaffing method. For example, Landt (1800) writes that the whale is scratched on the back during which it lies calmly; the whalers then ‘prick a hole in the blubber by which a line is made fast and at this line the bottlenose whale is towed ashore’.² According to Debes (1673) the whalers ‘make a hole in the thick blubber, usually in the eyelid’³ Pontoppidan’s (1753) version only mentions the ‘eyelids’.⁴ According to Tarnovius (1669) ‘the inhabitants wade out and cut holes over the eyes ... slip lines through these and so pull them to the

¹ Cf Lindquist 1993: 36.
² Cf Landt 1800: 400; see also 1965: 228; generally repeated by H.E. Grieg (1856: 75).
³ Cf Debes 1963: 163.
shore'.\(^1\) Debes's story is essentially repeated by Resen (ca 1688), although the younger Danish translator thinks the weapon used is a 'harpoon'.\(^2\) H.B. Melchior (1834: 297) has it that a whole is cut in the blowhole lid to which a line is made fast and 'by which the bottlenose whale is with care towed to shore'.

Melchior (1834: 297) remarks that it is 'but a fable' that the Suðuroy bottlenose whalers thrust their woollen mittens into the blowhole of the whales to prevent them from diving. According to Høst (1875: 350), Landt's account of the thrusting of woollen mittens into the blowhole of the bottlenoses 'by means of an oar' is 'unreliable'; however, Müller (1884a: 53) remarks that the method 'is no longer used', thus giving it credibility. Similarly, Høst (1875: 350) dismisses Debes's and other authors' opinion that the bottlenose takes pleasure in being gaffed while Müller (1884a: 52f) writes that 'it seems to tickle it pleasantly when the boat rubs against its side, just as the salmon trout likes to be tickled'. Høst and Müller are authorities of equal high standing so the evidence seems inconclusive.

The cognizance that gaffing can be applied as a principal method in catching middle-sized whales induces the question whether the method has been more widely used than in the Faeroe Islands, perhaps either being wrongly interpreted as 'harpooning' or assigned to folklore, bypassed or overlooked. In fact, I see sufficient indications in this direction in order to advance the following hypothesis:

Firstly, that it is necessary to distinguish between the use of the gaff as a primary (main) and secondary (auxiliary) means of catching cetaceans;

secondly, that 'primary gaffing' of adult middle-sized cetaceans and calves of larger cetaceans (in practice being

\(^1\) Cf Tarnovius 1950: 61. I wonder whether the 'obsession' of the 17th century authors with the eyelids somehow relates to the dögling name and stories.

'middle-sized'), which are not already partly or wholly under control, is a whaling method in its own right besides the other main categories of ('natural') trapping, driving/beaching, driving/trapping (/seining), spearing, 'sticking' and harpooning.¹

Gjessing (1955: 56) remarks that the Faeroese weapon set is the ancient one, except for the gaff, while S. Dahl (1981: 166) considers the pilot whaling method, including gaffing, to be unchanged since the Middle Ages.² According to my approach, 'secondary gaffing' takes place in the Faeroese pilot whale drive hunt and in the 18th century dolphins/orcas at Springervik/Skarbøvik (Heissa, Ålesund municipality, Møre and Romsdal).³ The use in Hordaland, West Norway, of (toggle) harpoons inside seines for landing orcas/dolphins⁴ presumably lies in the 'secondary gaffing' tradition in which the (toggle) harpoon, with its detachable shaft, seems to have replaced the gaff because it appears more convenient and safer to use.⁵

On his Carta Marina, from 1539, Olaus Magnus (1986) shows an anchor (two-armed, with stock!) being used for securing a whale in the Faeroe Islands. K. Barthelmeß and J. Münzig (1, 1991: 44) convincingly demonstrate that ship anchors and ladders in 16th-17th illustrations of stranded whales

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¹ As any other main method it may also be combined with auxiliary methods.

² Dahl (1981: 167) writes that Debes mentions the use of the harpoon (skutil; F) in relation to the pilot whale hunt but I am unable to find the harpoon nor the gaff mentioned by Debes ([1673] 1963: 155-159) or J.C. Klein (1709/10) (cf Anon 1934a: 79-81) in the same respect.

³ Cf Strom 2, 1766: 91*.

⁴ Cf Christie 1785/86, UBB 221: f8r.

⁵ A. Edmondston's (2, 1809: 299) considers that Shetland fishermen (Walls) use a 'similar' method to the one described by Debes when they "make a hole through some part of the animal, introduce a rope into it, and then drag it on shore". There is nothing to support that this refers to anything but the ordinary landing of dead whales (not using the gaff or a loop around the whale's tail stock.
'belong ... to a popular tradition of book illustration which ultimately reaches back to the whale processing scene which Olaus Magnus 1539 in his Nordic map placed on the Faeroe Islands as decoration ["als Staffage"]'). Although the anchor feature later becomes decorative I tend to interpret Olaus Magnus's placing it at the Faeroe Islands, of all places, to be more than a coincidence and, in fact, reflecting the use there of the gaff, mainly in pilot whaling.

The account by the Spanish geographer al-‘Udhri from around 1058 AD,* as quoted by al-Qazwīnī who died 1283 AD*,1 of the Norse taking of black right whale calves inshore in Ireland2 has traditionally been interpreted as describing hand harpooning (in a distorted way). In turn it has also been taken as a proof of the existence of hand harpoon (tow) whaling with the Norse during the Viking and Middle Ages and been placed in a north-to-south (Norse-to-Basque) diffusion context.3 In 1992/93, this student indeed accepted the account as "unequivocal, albeit slightly distorted, evidence about harpoon whaling by Norwegians" but interpreted the diffusion direction to be Basque-to-Hyberno-Norse, with no bearing on the whaling technique (postulated to be spearing) in the Norse core areas.4 After having the full benefit of the study of the Faeroese bottlenose gaffing I have revised my opinion and postulate that al-‘Udhri and al-Qazwīnī describe Hyberno-Norse gaffing of black right whale calves around the mid 11th century AD, or a related method which one might call

1 Cf Dunlop 1957: 19f*; see also Nansen 2, 1911a: 156f.
2 The information on the whales themselves, their biology, habitat, cow/calf relationship and behaviour, as provided by al-‘Udhri and al-Qazwīnī, strongly suggest that the species in question is the black right whale. (Cf Collett 1911-1912: 551, 553-555; Evans 1987b: 208, 216f; Kraus and Prescott 1982 ms: 5, 8, 10, 12, 15, 19f; Rice, Carter and Saayman 1983 ms; Stonehouse 1985: 133; Watson 1985: 70).
4 Cf Lindquist 1993: 34.
'anchoring' in case the shank of the weapon is considered to be straight (cf below). ¹ The central part of the al-ʿUdhrī/al-Qazwīnī's account ("... the hunters assemble in ships --- brought to the shore") has, in my opinion, a striking similarity with (a) Høst's (1875: 350) description of the Faeroese bottlenose catching ('... after one has gone alongside ... for that purpose'); (b) Høst's (1875: 356f) remark that 'When the circumstances are favourable' large rorquals are 'caught approximately in the same manner as the northern bottlenose whale'; and (c) his description of the gaffing of an (albeit beached) blue whales near Klaksvík, 1874 ('the gaffs with lines --- the animals beat terribly'). Black right whale calves are ca 5.5 m long at birth; 6 month old they are ca 9 m long and juveniles (18 months old) are about 12 m long. ² A half year old black right whale calf thus corresponds in size to an adult bottlenose whale. It appears to me that al-ʿUdhrī's and al-Qazwīnī's description of the behaviour of the calves and cows and, correspondingly, by the boat crews, is reasonable. ³ To mention but one aspect: From their field studies at the Bay of Fundy, S.D. Kraus and J.H. Prescott (1982 ms: 18) report what they call "anecdotal details", inter alia, that black right whale calves were generally the most inquisitive and 'playful' which investigated the research vessel and lifted once its stern slightly out of the water. Both in the Hiberno-Norse black right whale calf and the Faeroese bottlenose whaling we find the 'scratching and pleasure aspect'. Noticing the very different sources, I have difficulties in accepting this to be merely a coincidence, or a reflection of a popular or learned tradition; rather I tend to consider such cetacean-

¹ This modification leaves my hypothesis about the Norse spear whaling unaffected. Gaffing eliminates the 'humorous' and 'fanciful' which D.M. Dunlop (1957: 20) and J. Fairley (1981: 117) attribute to the description while viewed from the angle of hand harpooning.

² Cf Kraus and Prescott 1982 ms: 8, 14-18, 21; Rice, Carter and Saayman 1983 ms: 24, 28. See also Collett 1911-1912: 551, 555.

³ Cf, eg, Kraus and Prescott 1982 ms; Rice, Carter and Saayman 1983 ms: 19, 34; Payne 1976.
human interaction as a prerequisite for primary gaffing of middle-sized cetaceans.

The 19th-20th century Faeroese gaff has a shank and an overall length of 40-45 cm, with a hook proper of about half the shank's length which stands at a right or sharp angle to the shank and terminates in a point, at least sometimes having a small cutting edge; at the upper end of the shank there is an eye to which ca 13-20 m of sturdy (sisal or manila hemp) line is attached. The Hiberno-Norse weapon is described as "a great iron blade with sharp spikes" and "In the blade is a great strong ring, and in the ring a strong cable". In case it has a straight shank/blade from the eye to the point, which we cannot tell from the description, it comes strikingly close to the weapon illustrated by K. Gesner, 1560. We notice that the crookedness of the Faeroese gaff does not prevent it from being driven deeper into the bottlenose's head by means of a stone (cf Høst 1875: 350); the Hiberno-Norse use of an iron mallet makes no difference, neither would the straightness of the weapon ('anchor') do. The importance of staying clear of the whales' tail during these operations is obviously also a common experience of the Hiberno-Norse and the Faeroese whalers.

This study cannot consider the postulated Norse spear whaling and the Faeroese/Hiberno-Norse gaffing in a wider late mediaeval and early modern West European context. However, a first glance at the issue reveals that 17th-18th century English usage of harping-iron (iron for short) and harping-spear has connotations with the javelin and the

1 Cf Andreasen and Magnussen 1989: [28], [31] [incl ills]; Høst 1875: 318f [incl ill]; Joensen 1976: 14f [incl ill]; Østberg 1934: 93; Williamson 1945: 121f [incl ills]; 1948: 105f [incl ills]. Martinsen (1964: 38f) considers the rope in al-'Udhri and al-Qazwīnī to be proof of the weapon being a harpoon; however, this is not a conclusive feature because primary lines are integral parts of both whaling harpoons and gaffs (including 'anchors').

2 Cf Barthelmeß 1992: 12 [ill]. There is perhaps even more 'grappling hook' to the whaling harping iron, as a kind of harpagon (16th century English) and harpago (Gr, L) (cf Georges 1909: 1263; OED 5, 1961: 101) then previously thought.
grappling hook as well as the whaling harpoon proper. The SOED (1, 1987: 928) explains harping-iron as, inter alia, "a barbed spear used for spearing whales and large fish" which has "been superseded by harpoon". The question is indeed whether the harping-iron (harping-spear) was a barbed spear or javelin which in West Europe was traditionally used for spearing whales and large fish and which, upon the adoption by the northwest Europeans of the Basque detachable whaling harpoon, after 1611 AD, received the parallel meaning of 'harpoon'. Actually, there is no reason for assuming that spear whaling has been an isolated Norse phenomenon: There are many other places in western Europe which in prehistoric and mediaeval times are likely to have offered favourable circumstances in terms of whale presence and topography although, in mediaeval times, spear whaling may have been restrained by socio-economic and legal factors.

A preliminary analysis of the weapons in European 16th century illustrations related to cetaceans (cf item A.16.17) indicates that they basically reflect late mediaeval to early modern spear and crossbow whaling, rather than hand harpoon (tow) whaling, as hitherto assumed.

The first step to verify this would be a critical reappraisal of the descriptions by Vincent of Beauvais (ca 1190-1264 AD) and Albertus Magnus (ca 1200-1280 AD), who both lived in Paris, to see whether a darting weapon with a line can be positively identified there. Further steps would involve directed studies of other mediaeval sources in Latin relating to, for example, coastal estates, harbours and fisheries.


2 In Speculum majus, or "Speculum universalis, i. 1272", according to Nansen 2, 1911a: 158.

3 In "De animalibus, xxiv. 651", according to Nansen 2, 1911a: 158.
In this chapter we shall sum up the evidence about Icelandic whaling marks, outline Icelandic spear whaling in the 17th-18th century, and formulate hypotheses regarding mediaeval to modern Icelandic spear whaling, in general.

Owner marks proper 'were the old property signs of the hunter, fisher and peasant from the time before alphabets came to the Nordic countries.' They continued into modern times to be applied to all kinds of private possessions, movables and real estate alike; similarly, the mark was used by illiterate persons in lieu of a signature.

In hunting, owner marks on weapons manifest the private ownership in the weapon as such as well as a claim to the whole, or part of, the quarry that might have been wounded or killed with it, depending on the circumstance of the hunt (individual or collective) and of the recovery (eg, ground ownership and securing). Prehistoric and pre-literate owner marks consist of lines which could easily be cut in certain patterns. In the 3rd-5th century AD, rune-like and runic owner marks were used, inter alia, on arrow shafts found at Nydam, Schleswig-Holstein, Germany. Mediaeval Norse owner marks were often (combined) runes.

1 Cf Trätteberg 1980: 75.
3 This student considers O. Solberg's (1909: 81f) view that Samish and proto-Samish owner marks pertain to 'collective hunting' (bow and arrow; sealing harpoons) doubtful: seal harpooning is essentially an individual pursuit.
6 Cf Scheffer 1980: 73.
at a late stage also incorporating majuscules.¹

The old Norse laws have general references to owner marks on seal/porpoise harpoons and whaling shots (spears). Icelandic late mediaeval and early modern sources also inform about the marks themselves (names, initials, signs) upon their registration (qv), personal and geographical details of the shot mark owners, and the marks and recovery sites of shots in those cases they resulted in Althing announcements (qv) because the mark was not known locally or shooter’s money (skotfæ)² had to be paid to somebody living in another quarter of the country.

Older Althing records are extant from 1570-1800 and have been published (cf ALDB). The earliest whaling shot mark entry is from 1634 which is also the oldest known mark proper;³ the latest one is from 1792. After the Althing was abolished in 1800, and through 1919, registration took place with the High Country Court (Landsyfirréttur)⁴ the records of which presumably are deposited in the National Archives of Iceland, Reykjavik.⁵

Because the East Iceland manuscripts of the land register (JÁMPV), from 1702-1714, have been lost, its whaling information is limited in geographical scope (cf item A.17.9 (A)); on the other hand, the Althing shot mark

¹ Cf Trætteberg 1980: 75.

² Ie, the part of the shooter’s share, skotmannshlut(u)r, which was due when the shooter did not attend to the whale before his share was moved from the beach.


⁴ Cf Hammer 1866; see also DJSf-SSSE 10 January and 5 February 1868 (I am grateful to J. Hjaltason 1993, pers comm, for his information in this respect); Laxness 2, 1977: 35.

⁵ Boie (1822: 260) mentions that in Norway the registration of whale spear marks was by entry into the records of the local Norwegian courts (bygdeting). In 1633, thing books (tingbøger, justis-protokoller, tingprotokoller [pl]) became mandatory for the local courts in Norway; they are kept by the Norwegian State Archives (statsarkivene) (cf Fladby, Imsen and Winge 1981: 343f). Norwegian whale shot marks may presumably be found registered there by the sorenskriver, also called tingskriver.
registrations (cf item A.17.10) should give a random picture for at least 158 years of where whaling with piercing weapons was conducted or attempted. It must be recalled that basically only new entries appear in this way. Shot marks were also inherited, given away and traded, generally without being recorded in the Althing documents. New shot marks were possibly also, to a limited degree, registered at the district thing or witnessed by neighbours.

In item A.17.10 the information on whaling shot mark registrations and announcements is compiled, systematised and tentatively complemented with geographical and personal details. The design of the Icelandic whaling shot marks as such becomes obvious from the enumerations in items A.17.10 (B) and (C). They generally refer to the first and second name of the owner, however, making use of various ways of presentation (eg, lower and upper case letters, letter changes and position on the shot head), sometimes with additional texts or abbreviations. The Latin-Icelandic alphabet is used in all marks (although, eg, 'Z' may stand for 'R'), except one (1726) which admixes, inter alia, a rune-like sign (runic 'l') in the meaning of 's'.

The whaling shot marks certainly lie in the tradition of the ancient (Norse) property marks but they reflect the fact that Icelandic peasants were generally literate. We may assume that since late prehistoric times and into the late Middle Ages runes made up many shot marks. The transition to the kind of marks we see here, more or less with full names, presumably took place during late mediaeval times. Occasionally, abbreviations were applied (cf the marks in 1782) being close to initials. Only one Icelandic whaling mark (1693) makes use of initials proper.

1 Kristjánsson's (5, 1986: 52) simple summary figures may in a few instances reflect such an identification but in some cases they differ from my figures for what must be other reasons. Kristjánsson did not have the benefit of the publication of the last two volumes of the Althing records (ALDB 16-17, 1986-1990) but includes nevertheless the year 1782 in his presentation. He (5, 1986: 52) writes that the mark registrations in the period 1634-1782 total 70, including the lance; by the same token I reach the number of 72.
but this weapon is probably of foreign origin.\footnote{The marks on foreign weapons may possibly be matched with whaler’s and smith’s marks abroad.}

We find registration of specific owner marks on a total of 73 whaling shots and 1 lance, as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Mark</th>
<th>Year</th>
<th>Mark</th>
<th>Year</th>
<th>Mark</th>
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</thead>
<tbody>
<tr>
<td>1634</td>
<td>1</td>
<td>1673</td>
<td>2</td>
<td>1693</td>
<td>1</td>
</tr>
<tr>
<td>1653</td>
<td>1</td>
<td>1674</td>
<td>1</td>
<td>1699</td>
<td>3</td>
</tr>
<tr>
<td>1657</td>
<td>1</td>
<td>1675</td>
<td>2</td>
<td>1700</td>
<td>1</td>
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<tr>
<td>1658</td>
<td>2</td>
<td>1676</td>
<td>2</td>
<td>1702</td>
<td>2</td>
</tr>
<tr>
<td>1659</td>
<td>1</td>
<td>1677</td>
<td>5</td>
<td>1704</td>
<td>1</td>
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<tr>
<td>1660</td>
<td>1</td>
<td>1679</td>
<td>1</td>
<td>1712</td>
<td>1</td>
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<tr>
<td>1667</td>
<td>1</td>
<td>1680</td>
<td>3</td>
<td>1719</td>
<td>1</td>
</tr>
<tr>
<td>1668</td>
<td>1</td>
<td>1682</td>
<td>1</td>
<td>1720</td>
<td>1</td>
</tr>
<tr>
<td>1669</td>
<td>8</td>
<td>1685</td>
<td>3</td>
<td>1726</td>
<td>2</td>
</tr>
<tr>
<td>1670</td>
<td>1</td>
<td>1692</td>
<td>2</td>
<td>1728</td>
<td>1</td>
</tr>
</tbody>
</table>

These figures only reflect new entries; the total number of registered and witnessed shot marks, not to mention the actual whaling activity, will remain unknown. The entries are comparatively evenly distributed except that there are peaks during the years 1667-1677 (with a total of 23 registrations) and 1740-1741 (6) of which the latter could be incidental. Only 13 of these registrations are without geographical reference while the majority (60 plus the lance) are attributed at least to a county or district, many also to a municipality. Around 90\% of these 61 shot marks are found concentrated in the northwestern part of Iceland, \textit{viz:}

- **Barðastrandarsýsla**: 7 registrations (11\%; 1670-1737);
- **V-Barðs/V-Ísafjörs/ Véstfirðir**: 4 registrations (7\%; 1653-1680);
- **Ísafjarðarsýsla**: 33 registrations (54\%; 1634-1792);
- **Strandasýsla**: 8 registrations (13\%; 1669-1782);
- **Húnavatnssýsla**: 3 registrations (5\%; 1674-1782).

The remaining 6 marks are widely dispersed around the coast of Iceland, from Mýrasýsla (1761), Dalasýsla (1741), Eyjafjarðarsýsla (1693; plus the lance, 1700), to Gullbringusýsla (1726), and (widely apart) in Norður- and Suður-Múlasýsla (2, 1685)\footnote{Kristjánsson seems to have overlooked the Gullbringusýsla and Múlasýsla registrations when he writes that no marks come from East or South Iceland (cf Kristjánsson 5, 1986: 52); they fall within the data which he otherwise covers.}. Their temporal and...
geographical occurrence looks casual in character but we are unable to say anything about the actual number of legal shot marks or whaling spears in any district.

The home municipalities of identified whale shooters are as follows:

- **Mýrasýsla:** Hraunhreppur 1761.
- **Dalasýsla:** Laxárdalshreppur 1741.
- **A-Barðastrandars:** Geyradal 1685.
- **V-Barðastrandars:** Barðastrandarhr 1670.
- **Patreksfjörður:** 1679.
- **Tálknafjörður:** 1680.
- **V-Barðs/V-Ísafjs:** Arnarfjörður 1653; 1680.
- **V-Ísafjarðars:** Arnarfjörður strönd 1733; 1792.
- **N-Ísafjarðars:** Skutilsfjörður 1669.
- **Eyrarsókn:** 1634.
- **Orugsveit:** 1667; 1735; 1737.
- **Laugadalsströnd [in inner Nauteyrarhr]:** 1735.
- **Strandasýsla:** Trékkylsvíkurhr 1675.
- **V-Húnavatnsýsla:** Hrútafjarðarhreppur 1782.
- **A-Húnavatnsýsla:** Skagaströnd 1751.
- **N-Múlasýsla:** Seyðisfjörður 1685.
- **S-Múlasýsla:** Álftafjörður 1685.

Spear whaling in Arnarfjörður is well documented from the 19th century. The shot mark registrations in Arnarfjörður\(^2\) (1653, 1680, 1733 and 1792) pre-date this evidence but conform well with it, so does the information about whale 'ironing' and driftage in this fiord complex in the generations prior to 1710 (JÁMPV) (cf item A.17.9). Spear whaling is similarly well documented in Ísafjarðardjúp in the late 14th and the 18th centuries\(^3\) and also supported by the driftage evidence in this fiord complex from the generations prior to 1710 (JÁMPV). The registrations from Eyrarsókn (1634), Skutilsfjörður (1669), Ögursveit (1667; 1735; 1737) and Laugadalsströnd (inner Nauteyrarhreppur; 1735) concur with, and add to, this picture. Two marks are registered (1679-1680) in the fiord

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1. Cf items A.16.10 (B) and A.18 (Ásgeirsson 1946/1929; Oddsson 1960).
2. Arnarfjörður is divided between Vestur-Ísafjarðarssýsla and Vestur-Barðastrandarsýsla.
3. Cf items A.16.10 (B) and A.16.11.
complex of Patreksfjardarflói, Patreksfjórur and Tálknafjörður just southwest of Arnarfjörður but here is no mention of driftage (JÅMPV). Closely connected with the Arnarfjörður fiord complex is Barðastrandarhreppur, at Breiðafjörður, which shows one mark registration (1670). In the inner Breiðafjörður fiord complex there are registrations referring to Geyradalur (1685) and Laxárdalshreppur (1741) but these shots may possibly have been used during seasonal fishing from stations in central and outer Breiðafjörður¹ rather than in these comparatively enclosed fiords. Prior to the ravages of Modern whaling (after 1883), large cetaceans strayed widely around the Breiðafjörður complex. As Olavius (1780) writes: 'every year' they enter Breiðafjörður 'in swarms [flokketal], particular in the autumn, where they also now and then are said to stay for most of the whole winter.'² Three registrations from Barðastrandarsýsla (1677; 1726; 1737) have not been located by municipality; whether they were used in Arnarfjörður, Patreksfjörður/Tálknafjörður or in Breiðafjörður cannot be deduced. The registrations from Trékyllisvíkurhreppur (1675), Bæjarhreppur (1782), Hrútafjarðarhreppur (1782) and Skagaströnd (1751) group around the greater Húnaflói area.

On the basis of the shot mark registrations I wish to advance the hypothesis that into the 17th-18th centuries there existed four districts in (northwestern) Iceland where spear whaling was conducted, viz: the fiord complexes of Arnarfjörður and Ísafjarðardjúp stand out, presumably because of a favourable combination of whale presence (shooting) and geography (enclosing and/or recovering), while the (wider) bays of Breiðafjörður and Húnaflói come second, possibly because of a less favourable geography. It is only through the mark registrations that

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¹ Cf Kristjánsson 2: 1982: 30-31 [map]; 4, 1985: 257 [map].

² Cf Olavius 1780: 640; see also 652.
the latter two spear whaling areas become clearly visible.¹ This line of reasoning seems indirectly supported by the other registrations, with the exception of Eyjafjörður:² they belong to smaller fiords (Patreksfjörður; Tálknafjörður; Seyðisfjörður; Álftafjörður) or open coasts (Myrasysla; Gullbringusýsla); the experience seems to have taught the peasant fishermen that spear whaling under such circumstances was hardly worth the trouble.

Let us now turn to the recovery of marked whaling weapons. In cases where the shooter attended to the whale by keeping it 'enclosed' he clearly obtained the shooter's share directly in kind. If his mark was known locally or regionally he is likely to have been notified and would then certainly try to appear at the site of the whale in order to take charge of his full shooter's share (ie, half of the whale less finder's blubber); otherwise, he would receive the shooter's money (ie, half of the shooter's share), eg, at the quarter assembly. The recovery only resulted in an announcement at the Althing in cases where the mark was unknown or the shooter's money had to be paid to somebody in another quarter. We have ten such announcements which undoubtedly involve Icelandic shots. They are listed in item A.17.10 (F), together with the year and place of recovery and matching information from the registrations. All but one (1663) can be matched with Althing mark registrations³ which touch the very essence of spear whaling, whaling mark registrations and announcements.

Speared whales will often move around before they become sick or die, also out of deeper fiords; furthermore, it may

¹ The northern shore of the Snæfellsnes peninsula is conspicuously absent from the whaling mark registrations.
² Kristjánsson (5, 1986: 52) is also surprised that Eyjafjörður only yields two registrations.
³ Kristjánsson (5, 1986: 52) only mentions one such match ('ARME 10').
take some time before the carcass of a whale which has died offshore come inshore or ashore, if at all. The overall geographical distribution of the mark recoveries conforms with the four postulated spear whaling districts and seems to indicate that whale movements, winds and currents favoured these districts.

For the nine shot mark matches the time between mark registration and recovery is everything from 1 to 35 years. We should be permitted to infer that whaling under these marks has taken place more or less regularly in the intermediate periods.

If we assume that the municipality of the registered shot owner generally reflects the area of spearing (also in cases of a considerable time gap) and that the sýslumenn (ie, sheriff-stewards) announced recovered whaling marks from their own districts, the whales will have moved, and the carcasses drifted, approximately as shown on the map in figure 13:

From Arnarfjörður: one (e), in a semi-circle north around Cape Horn and southeast to central Strandir; another (i), south to northwestern Snæfellssnes; a third one (j), presumably past Snæfellssnes, to Mýrasýsla; and a fourth one (f), somewhat farther across Faxaflói to Kjósasýsla; one (a), from central Ísafjarðardjúp south to northwestern Snæfellssnes; moreover, it seems, from Ísafjarðardjúp or Arnarfjörður, one (g) to central northern Snæfellssnes and another one (h) to central southern Snæfellssnes, respectively. The longest distance (f), and possible (h), amounts to ca 300 km if measured in curves just off the headlands.

A preliminary analysis of the whaling marks based on the Icelandic patronymics, residence information, etc, reveals likely family links between various peasant whalers, and even the lifetime of individual whaling weapons, but it cannot be presented here.

Generally, the shot mark owners appear to have been proprietors and tenants but two registrations, in fact under the same year, 1735, explicitly mention the shot mark
Conjectural routes of whales in Iceland from place of spearing to place of recovery, 1657-1725, according to item A.17.10 (F).
owners as being servants. The entry from 1761 may constitute a third such case and others could come to light in the course of detailed studies of other sources, eg, the national census of 1703. These two manifest cases of servants whaling with their own weapons and marks raise the question whether these men were able to keep the shooter’s share/money, with little or no deductions, if it ensued, in a situation where the master usually owned all work results of his servants.

The Icelandic expression that something ‘is like a whale coming/driftage for someone’ ("... eins og hvalreki fyrir einhverrn"), implying an unexpected strike of luck, is first recorded in the mid 19th century¹ but may be older. Following the analysis of the spear whaling tradition in Norway and Iceland it seems clear that this expression, or similar ones, reflect both natural whale comings/driftage and such resulting from spearing, but we can generally say little about the relative importance of either.

In chapter 10.5.1 (see also chapter 10.4) the material of whaling spear heads and the transition from stone to iron spear heads is discussed.² There are reasons to return to the issue here. We should recall the big slate points which have been found in comparatively deep waters off the Norwegian coast (cf item A.17.7) and which this student, for technical, economical and historical reasons, considers to have been used in the spearing of large rorquals. On the other hand, frequent references to járn and járña in relation to Icelandic whaling weapons (cf items A.17.8 and A.17.9) could lead to the generalisation that iron has been the only material used for tipping Norse whaling spears in mediaeval and modern times but the Althing registrations actually imply other materials, too.

According to GG (lb: 130) shot marks announced at the

¹ Cf H. Halldórsson 1, 1978: 280.
² Cf also Lindquist 1993: 23, 50.
Althing should be shown 'on wood or on iron' ("... sönt ... at lögbergi með ... morkom atre eða a iárne"). In modern times the way and means of presenting the marks are often not specified but once the actual marked shot was shown to the assembly (1673) while in other cases the mark had been cut in wood (1659; "... hvalsutuls marki, á tré markað") or drawn up on paper (1679; 1685). By the 17th century one must assume marks written on paper to have been quite common.

In 1657, 'a whale shot of iron with the mark of Árni Jónsson ...' ("hvalsutli af járni með marki Árna Jónssonar ...") was announced at the Althing. In isolation, one hardly pays attention to the words 'a whale shot of iron'; however, in 1660, an 'oak-shot mark [eikarsutuls mark] which ... Andrés Magnússon, peasant in Ísafjarðarsýsla, will have on his shots for whaling' is announced. This puts the expression from 1657 in perspective. Moreover, it cannot reasonably be asserted that the 'oak-shot mark' refers to a mark cut in a piece of oak wood (the technical terms of which would be á tré, cf á járni). My hypothesis is therefore that other materials than iron were also used for whaling spear heads, at least in Iceland into the second half of the 17th century, of which I consider oak to be documented. Similar potential materials are ash (ie, the other North European main sort of hardwood), antler and bone. Furthermore, there is hardly any reason for not also considering stone-tipped whaling spears to have been used in certain circumstances into modern times. Hardwood, antler and bone permit the incision of owner marks; in the case of stone tips, eg, shape and stone sort/colouring may add strength to an owner's mark cut on the lower part of

1 Cf ALDB 7, 1944-1948: 270.
2 Cf ALDB 6, 1933-1940: 447.
4 Cf ALDB 6, 1933-1940: 397.
5 Cf ALDB 6, 1933-1940: 468.
the wooden shaft of the spear. The Icelandic eikarskutull ('oak shot') from 1660 indicates that the Stone Age hunting spear kit partly survived through the Middle Ages in Norway, Iceland and Norse Greenland, and occasionally even longer.
12 Norse whaling involving septicaemia bacillus (arrowing and spearing)

12.1 Poison and 'poison whaling': Introduction and definitions

Some Norwegian peasant fisherman whaling is associated with 'poison', the discussion of which has hitherto been rather inconclusive. Icelandic spear whaling involved a similar pathogenesis but has not previously been studied. This gives impetus to a reexamination of the whole issue.

Whaling with plant poison (phytotoxins), and disease-producing bacilli and bacteria (pathogenic eubacteria) lies at the intersection of biotoxology, bacteriology, veterinary medicine, ethno-botany and ethno-zoology. As an amateur in these fields this writer must rely on the opinions of professionals, relate their information and views to one another and to historical evidence about whaling and draw tentative conclusions on that basis.

'Poison' refers to any substance that, when introduced into, or applied to, the body of an animal in relatively small quantities, by chemical action, may cause damage to a structure, a disturbance of function, or death.  

Only biotoxins are relevant to our study; they may conveniently be grouped into three categories: zootoxins (ie, poisons produced by animals); phytotoxins (ie, poisons produced by higher plants); and microbial toxins (ie, poisons produced by bacteria, blue-green algae, dinoflagellates, golden-brown algae, etc). Poison may

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1 Cf Hodge 1981: 606.

2 Curare, prussic acid and synthetic substances have only been known in Europe for up to 250 years (cf Anon 1971b, 1: 220; Enc Br, Mic 3, 1981: 300; Enc Br, Mic 5, 1981: 242; Leicester 1981; MNL 8, 1974: 270).

block motor nerves in cetaceans and paralyse an otherwise mobile animal, which is then easier to approach for killing, but only when the heart itself is paralysed does the animal die.\(^1\)

The so-called Frost Report (1979) considers that the primary traditional methods of killing larger cetaceans are drogue (qv) and tow (qv) whaling, with a lance to kill the whale, and the use of 'poison'. 'Poison whaling' is stated to have occurred in two forms, viz: "trapping with nets in embayments and killing the trapped whale with poison arrows", and "hurling hand-held poison-tipped harpoons into surfacing whales on the open sea".\(^2\) The former refers to the West Norwegian voe whaling with crossbow and arrow, the latter to whaling conducted at the coast of northeastern Asia, in the Aleutian Islands, Kodiak Island and Archipelago, in particular the so-called Kodiak type whaling, which we shall first briefly consider for comparison.

### 12.2 Kodiak type 'poison whaling'

The Kodiak type whaling seems to have been conducted into the 1870s. Large cetaceans were approached at sea in kayaks and a spear, carrying an obsidian or slate point smeared with a concentrate rendered from the roots of the Aconitum plant,\(^3\) was thrown at them. Aconite paralyses nerve ends and causes respiratory and heart paralysis. The best sites of entry are places where rapid circulation of the poison occurs. The whalers seem to have aimed at one of the flippers which have a high concentration of blood vessels and are therefore particularly suitable, the area

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1 Cf Slijper 1979: 34f; see also Mitchell, Reeves and Evely 1986: 8.

2 Cf Anon 1979b: 173. Strictly speaking, one should read 'taking' for 'killing' and 'spear' for 'harpoon'.

3 Also called monkshood, friar's cap and wolfsbane.
close by (under) one of the flippers, the dorsal fin and the tail. Whales struck under the pectoral fin were expected to be dead and floating within three days; those struck near but behind the flipper, within five or six days; and those struck under the dorsal fin or in the tail, no sooner than after eight or nine days. If the dead whales sunk they would generally rise to the surface within three days and then float and possibly be recovered at sea or when coming ashore. 1

Some authorities think that poison spear whaling was conducted in Kodiak in prehistoric times and that slate 'bayonets' in the archaeological material at Ocean Bay on Sitkalidak Island, dating from 2500-1800 BC, may have been used for it. 2 It has also been argued that aconitine whaling is a cultural transfer from Asia to America in historical times. 3

'Poison whaling' in various forms may have existed in other areas bordering on the North Pacific Ocean, too: 4 Alaska Inuit are said to have struck bowhead whales with bone or ivory harpoons which 'were sometimes poisoned' in order to weaken the animal in drogue whaling. 5 The Kerek at the Anadyr Gulf, eastern Siberia, may earlier have whaled with 'a special large arrow or lance possibly tipped

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4 For a thorough investigation of the hunting poison issue in the North Pacific region, cf N.G. Bisset 1976.

with poison';\textsuperscript{1} the Kamchadal (Itel'men), on the southeastern shore of Kamchatka, may have done similarly.\textsuperscript{2} Bacterial agents from dried worms and fat rendered from human corpses are also mentioned as having been used in 'poison whaling' in this region.\textsuperscript{3}

Captain P.N. Golovin reports from Russian America in 1861:

"... often when Aleuts go out to hunt a whale they only wound it, not kill it. Salt water penetrates into the wound, and in two or three days the whale is dead. Often the wind and waves carry the corpse about for several days until it washes up on shore; then the Aleuts eat this dead animal."\textsuperscript{4}

Here is no mention of 'poison' whatsoever.

E.D. Mitchell and R.R. Reeves (1990 ms: 48) sum up their views regarding the Kodiak type 'poison' whaling like this:

"The darting procedure was meant to penetrate deep into the whale's body, beneath the blubber ... Notwithstanding the efficacy of 'poison', and whether bacterial agents ..., contemporary accounts indicate that the method worked; the 'poison' on the blade killed the animal one way or another. Kodiak-type whalers may have been good enough or lucky enough to dart or lance the whale in the heart or lung, thus delivering a lethal wound by dint of stealth and skill. The 'poison' may have helped to concentrate the mind of the hunter and target his action appropriately."

According to N.G. Bisset (1976) the 4-5 g of pure alkaloids needed to kill a large whale might correspond to as much as

\begin{itemize}
  \item \textsuperscript{1} Cf Mitchell and Reeves 1990 ms: 77.
  \item \textsuperscript{2} Cf Mitchell and Reeves 1990 ms: 80.
  \item \textsuperscript{3} Cf Mitchell and Reeves 1990 ms: 48.
  \item \textsuperscript{4} Cf Dmytryshy and Crownhart-Vaughan 1979: 65; cf ill p 128.
\end{itemize}
100 g of less concentrated poison so he concludes:

"No quantity of poison of this order is likely to have been put on the weapon used, although it will certainly have been much more than was smeared on an arrow head. Again, therefore, the main effect of the poison would seem to have been as a means of intoxicating the animal, thus hastening death, rather than as a direct cause of death. Aconite as a poison can hardly be considered to have been a dependable factor in hunting sea animals like whales."\(^1\)

Instead, Bisset (1976: 117) suggests that the hunting strategy of aiming at the flipper may have involved inflicting even just a slight wound on the whale that could make the whale unable to maintain its balance, cause it to roll over when it intended to breathe, thus, causing its drowning sooner or later. "Although, if circumstances were favourable, the whale was usually found dead or was washed ashore dead after about three days, there is no indication in the literature of how long it took the whale to die. There was, nevertheless, the firm belief that the poison, be it magic or real, was essential in hunting them".\(^2\)

**12.3 Poison in the Norse area; West Norwegian 'poison whaling'**

In Europe the ancient Greeks used aconitine as an arrow poison.\(^3\) Several related Ranunculales species are common in Europe and also poisonous to man and livestock,\(^4\) however, this student has found no explicit reference to their use in western and northwestern European hunting and warfare.

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\(^1\) Cf Bisset 1976: 116f.

\(^2\) Bisset 1976: 117.

\(^3\) Cf Anon 1971b, 1: 26; Enc Br. Mic 1, 1981: 63.

The Norse seem to have thought of poison (eitr) basically as snake venom (of the European viper, or common adder);\(^1\) at any rate, poisonous plants are seldom mentioned.\(^2\)

Eitr occurs in Norse mythology and early literature, basically in fictional contexts, including the World Serpent.\(^3\) Translated mediaeval Christian literature also teems with venom-spewing adders (dragons/flying serpents) of classical origin while KGS reports the correct observation that in Ireland no 'poisonous beings' (serpents) exist\(^4\) but explains it in religious terms as resulting from the country being more holy than others.\(^5\)

This corresponds to the common use in the Christian religious literature of words such as eitraðr ('poisoned') and eiturfullr (eterfulder; 'full of poison') to describe the devil and all his doings.\(^6\) In Shetland, eder (SN), an abbreviation of eitr-fiskr (ON, NS), denotes certain, partly mythical fish, traditionally the venomous weever fish (Trachinus draco); from Eshaness, Northmavine, 'de eder' is recorded as a name for the sea serpent.\(^7\)

Poison for food seems to have been prepared from snake venom while poisonous herbs would have been used for a magic potion.\(^8\) The Icelandic family and kings' sagas seldom mention eitr although they refer to attempts to poison Hálfdan svartí, Egill Skallagrímsson, Magnús inn

\(^1\) The effects on humans are local pain and edema, haemorrhages along lymphatics, vomiting, abdominal pain, shock, occasionally death (cf Halstead 1981: 616).

\(^2\) Cf Halvorsen 1980: 540f.


\(^4\) Cf Halvorsen 1980: 541.


\(^6\) Cf Halvorsen 1980: 541.

\(^7\) Cf Jakobsen 1, 1985: 140.

\(^8\) Cf Møller-Christensen 1981b: 479.
göði and Óláf Tryggvason. ¹ A sword the edge of which had been dipped in poison was considered by the Norse to cause more fatal wounds than otherwise. 'Incurable wounds' probably implies that they were 'poisoned'. ²

For weapons applicable to inshore whaling, ie, arrows and spears/lances, (plant and snake) poison seems only to occur in relation to the former. Poisoned arrows for warfare are occasionally mentioned in the Old English literature and in other Germanic countries. The Old Norse literature has only one reference to poisoned arrows which is found in verse 94 of Íslendinga saga of the Sturlunga saga (ch 286). ³ Early mediaeval literature alludes to the discontinuation of the use of poisoned arrows in warfare with Christians. ⁴ Into the 17th century, poisoned crossbow arrows were used in deer hunting in Spain and chamois hunting throughout the Alps. ⁵ The use of poison (in addition to barbed arrows and barbed spears) was clearly acceptable in hunting.

H. Falk (1914: 101f) refers to 'arrows dipped into poison' ("in Gift getauchte Pfeile") which the old Norse and old English used and continues: 'That poisoned arrows ["vergiftete Pfeile"] have been used in the Nordic countries in hunting is made most likely because of the fact that such ones have still in our time been used near Bergen in whaling.' Falk, in other words, associates Scandinavian hunting, including the Sotra minke whaling, with an, essentially snake, venom tradition.

Johnsen (1959: 96) writes that the Norwegian whaling pioneer J.N. Walsøe presumably

³ Cf Anon 1906-1911, 1: 519; Falk 1914: 101f; Thorsson 1, 1988: 412.
⁴ Cf Falk 1914: 101f.
⁵ Cf Alm 1980a: 237.
'invented a harpoon with incorporated poison ["innlagt gift"] which should poison the whale so it soon died and drifted ashore. It therefore looks as if Walsøe in the first instance attempted to continue to build on a catching method which since old times had been used for the catching of minke whales along the Norwegian coast.'

This may give the impression that the Sotra voe and similar whaling 'along the Norwegian coast' 'since old times' has employed some highly poisonous substance because Walsøe apparently experimented with prussic acid.

J. Hjort (1902: 148) merely refers to the killing 'by poisoned arrows' which cause blood poisoning.

Wexelsen (1987: 61, 64) does not distinguish between venom,aconite poison, and bacterial infection when discussing arrow and spear 'poison whaling' in Norway, in general, although he particularly refers to the Sotra whaling as involving bacteria.

All other authorities (cf below) consider 'poison whaling' in the Norse area, first and foremost Norway, in terms of bacterial infection whereby some consider the bacterial 'poisoned arrows' to be more or less unique for the peasant fishermen in West Norway - in particular the island of Sotra in Hordaland - and that in the community of Skogsvåg their use had been 'monopolised' by a small group of persons (the so-called 'shooters').

We shall now survey the evidence about the disease-producing whaling in the whole of the Norse area.

1 Apart from the last half sentence (which could originate in Helland's 1921: 333, speculations), Johnsen's source is A. Jacobsen 1943 ms.

2 Cf Johnsen (1959: 649 [note 8]) refers to Brunchorst 1899; Hansen 1888; Østberg 1934; and Pontoppidan 2, 1753.

3 Cf Anon 1863 (see also Johnsen 1959: 95, 174); Ashley 1938: 89; Christison 1860; Lytle 1984: 44-50. See also Woxholt 1930.
12.4 Whaling at Skogsvåg, West Norway, involving septicaemia bacillus

Heizer (1941 ms; 1943; 1967; 1968) is basically the only scholar to discuss Norse ‘poison’ whaling in English but his sources are very limited and mainly secondary ones. Similarly, the consideration of the issue in Norwegian in recent decades seems not to make use of the best sources available and appears even to retrogress. However, only a systematic analysis of the primary and most authoritative sources (cf item A.16.18), with professional assistance, offers the chance of shedding light on the issue.

Bacteriology developed rapidly during the second half of the 19th century: the anthrax bacillus was partly elucidated in 1863, followed by the discovery of the leprosy (1873), typhoid (1880), tuberculosis (1882), cholera (1884), tetanus (1885), glanders (1886), Malta fever (1887) and braxy (1888) bacilli. The discoverer of the leprosy bacillus was chief physician G.H. Armaker Hansen and the discoverer of the braxy bacillus was municipal veterinarian P.I. Nielsen, both of Bergen, Norway.

In the 19th century, the acute and mostly fatal splenic apoplexy in sheep was widespread in Scotland, the Faeroe Islands, in Iceland and Norway. The braxy bacillus (Bacillus gastromycosis ovis, Kitt 1893) occurs in wet spots of pastures. Coming from the soil the bacillus is invoked in the sheep through a combination of infected pastures and frozen feed. It may cause deformations in the digestive tract or spread to all organs of the animal. The Bacillus gastromycosis ovis and Vibrion septique

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1 Cf Heizer 1968: 346.
2 Cf Brinkmann 1964: 275, 277.
3 Cf Brinkmann 1964: 277, 279.
4 Cf Brinkmann 1964: 278f, 281.
(Pasteur and Joubert 1877) are now considered to be identical with, or very closely related to, Clostridium septicum (Macé 1888; Ford 1927), and thus synonyms for that name.\(^1\) Many of the bacilli which today are subsumed under the genus Clostridium (Prazmowski 1880) seem primarily to be saprophytic anaerobes and spore-producing bacilli from manured soil. Several of them may cause serious diseases in humans and other animals when they are introduced into the system where oxygen is limited or absent. The diseases are caused by the excretion of toxins and lytic substances.\(^2\)

When the Bergen physicians F.G. Gade and Armauer Hansen, around 1885, investigated the assumed poisonous effect of the darts shot into the minke whales in Skogsvåg, they discovered short rod-shaped bacilli in the gangrenous tissue around the 'death arrow' and in the blood of a whale killed there.\(^3\) In the following years Gade and Hansen experimented with inoculation of mice and rabbits, with no reaction.\(^4\) Similarly, Hansen had no reaction in aerobe cultivation experiments; the bacillus was therefore suspected of being anaerobe but anaerobe experiments were not carried out.\(^5\) On the other hand, it had at this point become clear that the 'whale bacillus' was perhaps somewhat larger than the anthrax bacillus while otherwise being similar to it in shape and with regard to spore formation.\(^6\) Experiments continued: Gade tried, in vain, inoculations on animals with arrows from the Skogsvåg whale hunt and Nielsen inoculated mice, rabbits and sheep with

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1 Cf Brinkmann 1964: 281, 287.
2 Cf Brinkmann 1964: 276; Enc Br, Mic 2, 1981: 1006.
3 Cf Brinkmann 1964: 283; Christiansen 1919: 997; Hansen 1887: 3f; Wallem 1918: 121.
4 Cf Brinkmann 1964: 283; Hansen 1887: 4.
5 Cf Brinkmann 1964: 283f.
6 Cf Christiansen 1919: 997.
bacilli from an infected whale, also without results.\textsuperscript{1} Nielsen maintained an interest in the 'whale bacillus' and sometime during the 1890s he sent microscopic slides and dried as well as spirits-preserved infected muscle tissue to Professor C.O. Jensen, leader at the Veterinary Serum Laboratory in Copenhagen.\textsuperscript{2} About 1898, Nielsen inoculated guinea pigs with the 'whale bacillus'; the resulting pathological picture was similar to that caused by the 'death arrows' in the minke whales and corresponded to that of some usual Norwegian diseases in domestic animals, such as anthrax, malignant oedema and braxy.\textsuperscript{3} During the following years bacteriological knowledge and techniques advanced greatly but nothing more was added to the knowledge about the 'whale bacillus' before veterinarian M. Christiansen (Copenhagen), in 1919 published his paper (in Norwegian, with an English summary) on the 'Whale septicaemia bacillus and its relationship to the group of oedematous bacilli'. In 1920, shortened editions of the work appeared in German and French.\textsuperscript{4} A summary was also published in 1919 by J. Holmboe.\textsuperscript{5}

Christiansen's (1919: 1034-1036) findings and conclusions are presented in extenso in item A.16.18. He succeeded in isolating and cultivating the Skogsvåg whale bacillus from the old muscular tissue of infected whales previously send to Professor Jensen. Christiansen established its close relationship with the Ghon-Sachs bacillus and the bacteria which group round it (the braxy bacillus), however, with some characteristic divergences, inter alia, that it seems more apt to form spores in infected organisms than other strains of the Ghon-Sachs group. It proved to be highly virulent and pantogenic in

\textsuperscript{1} Cf Christiansen 1919: 997.
\textsuperscript{2} Cf Brinkmann 1964: 283f.
\textsuperscript{3} Cf Brinkmann 1964: 284f; Brunchorst 1899: 151.
\textsuperscript{4} Cf Brinkmann 1964: 285.
\textsuperscript{5} Cf J.H. 1919.
various animals on which it was tested. When inoculated into a harbour porpoise the animal died in less than 20 hours. In the muscles at the place of inoculation a huge wound with haemorrhagic inflamed oedema and emphysema had developed, swarming with bacteria. Christiansen concludes: "There can thus be no doubt of the pathogenicity of the isolated bacterium for whales."

Later the whale septicaemia bacillus has been given the name Clostridium balaenae (Prévot 1938).¹ A. Brinkmann (1964: 287) asks the rhetorical question whether the whale septicaemia bacillus may still be found in nature and then possibly with whales. He has no answer to it but draws attention to the finds of Clostridium oedematens and Clostridium feseri among cultures obtained from whale meat from the Antarctic by a scientist named Case (1948).²

The more recent discussion of this issue follows a different course. Martinsen (1964: 34) and Frøiland (1977) were of the opinion that the whale bacteria culture was transferred and renewed by regular use of the same arrows. Frøiland (1982: 12) writes: 'It was first towards our century that Armauer Hansen ... could clarify what actually happened, and today we have begun to question his explanation, too. Perhaps the bacteria exist in the skin of the whales and first cause poisoning when they come into the blood.' Wexelsen (1990: 8) writes:

'Around the turn of the century some natural scientists ... were of the opinion that they had

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¹ Cf Brinkmann 1964: 286. A. Brinkmann remarks that the name is unfortunate because it indicates that the basillus occurs mainly in right whales while it was found with rorquals but also has showed itself to be infectious in the harbour porpoise; a more proper name would therefore be Clostridium cetaceae.

² Clostridium balaenae spores survive for several decades at lower temperatures while they are sensitive to higher temperatures (cf Christiansen 1919: 1013f; see also Holmboe 1919: 365). According to Hummelsund (1970: 234) a certain Dr Kloster, who also analysed Skogsvåg bacteria, stated that they would survive for many years 'if the arrows were kept in a dark room'. Nobody else mentions darkness as a preserving factor of the spores so Kloster perhaps mistakes darkness for low temperature, eg, in a store.
found tetanus bacilli in the blubber and meat around the wound in the prey. It was therefore believed that the "paralysis" was caused by these very bacilli which were transferred by arrows. The [Commander Christian Christensen's] Whaling Museum [Sandefjord, Norway] has discussed this theory with some of today's cetologists and veterinarians. They do not reject it but are somewhat sceptical and have therefore wished to investigate whether traces of tetanus bacilli could be found on some of the arrow points which still exist. The "death arrow" of the Whaling Museum was, however, prepared before it became clear that this was a relevant question and is, thus, of no interest in this context. Perhaps unprepared arrows may be found in collections in West Norway which might help to confirm or disprove the theory.'

Wexelsen (1990: 9) has doubts that 'the founders of the modern natural sciences', 'the natural scientists of the early 20th century' and, in particular, 'Brunchorst and his contemporaries', appreciated all relevant aspects in their 'recently acquired scientific enthusiasm' and have actually taken sufficient care to prove their case: 'Their conclusions that the whale became paralysed because of the tetanus bacilli is not scientifically proven.'

At first this student attributed authority to Frøiland's (1982) remark that 'today we have begun to question ...' and accepted the logic of his notion about transport of bacteria into the system, even thinking that poisonous algae, etc, which exist abundantly in coastal water, could also be brought into the system. Seeking advice, I turned to Dr Toralf B. Metveit with descriptions of the pathogenesis and my thoughts in that respect. Dr Metveit is of the firm opinion that, although bacteria may be transported from the water and skin into the system, these serious cases involve bacteria of the genus Clostridium of
which *Clostridium septicum* is particularly likely.\(^1\)

Wexelsen (1990) only refers directly to Brunchorst's article of 1889; he and other scholars, *eg*, Andersen et al (1992 ms: 24); Alver (1986); Frøiland (1982: 12); Heizer (1941 ms; 1943); Å. Jonsgård (1992: 11); and E.D. Mitchell, R.R. Reeves and A. Evely (1986: 8, 38) seem to have overlooked what must be considered to be the most crucial scientific contribution in this respect, namely Christiansen's (1919) article *Hvalseptikæmbacillen og dens forhold til ødembacilgruppen* together with Holmboe's summary (cf J.H. 1919).

As can be seen from Christiansen's (1919: 994f) introduction (cf item A.16.18) he was fully aware of the unique opportunity of examining original material from whales killed with the ancient method in Skogsvåg. Therefore, Christiansen seems already, with admirable foresight, to have dealt with Wexelsen's bacteriological concerns in the best way possible.\(^2\)

Discussion about the pathogenesis in the Norwegian arrow and Norwegian and Icelandic spear whaling is, of course, most welcome but it should not be allowed to stray from already secured scientific ground. This student is afraid that the doubts and questions raised by Frøiland (1982) and Wexelsen (1990) involve exactly that.

Pontoppidan (1753) appears to be the first who refers to a particular role of the smiths regarding the Skogsvåg arrows: the smiths know to make their points 'so poisonous' that they cause the large wound.\(^3\)

Christie (1785/86), in the draft treatise on the Skogsvåg whaling, once mentions that the arrows are

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\(^1\) Cf Metveit 1991, pers comm.

\(^2\) The problem with the arrows, even in an unprepared state (cf Wexelsen), is that they may not necessarily be genuine 'death arrows', *ie*, infected ones, as Christiansen (1919: 997) and Wallem (1918: 121) have explained.

\(^3\) Cf Pontoppidan 2, 1977: 193f.
'poisoned'; ¹ otherwise he only speaks of them 'burning'. ² He remarks that the arrow points were 'made from rusty iron and were hardened like other cutting iron' ³ and that some people 'pretend' that it depends on the smiths, through their hardening or other treatment of the arrow points, whether they 'burn' correctly and quickly. ⁴ On two (early) occasions Christie does not dismiss this explanation although he considers it just as likely that it is merely 'a thought'. ⁵ In a commentary on Pontoppidan's reference regarding the arrows being 'poisonous' he states: 'This is only a pretence'. ⁶ G.P. Blom (1825: 157f) writes that the 'iron arrows ... are shot into the fish, one or several, and through the work of the fish, or perhaps muscular twitches caused by the pain, they work their way all the way to the bone and cause gangrene which within 4 to 6 days kill the fish.'

According to I. Nielsen (1889-1890) the tradition stated that 'death arrows' 'had to be forged from old iron, preferably deriving from old church hinges or church windows, and a skilled smith could see at once when he had put the iron into the fire whether he would get death arrows from it or not because in the former case a blue flame rose from it.' ⁷

In 1932, a Skogsvåg shooter said that the 'smith had to forge the arrow from soft (English) steel - and then he

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1 Cf Christie 1785/86, UBB 56: f31r.
2 Cf Christie 1785/86, UBB 56: f31v, f39v; UBB 221: f15r-f15v, f28r, f30r-f30v.
3 Cf Christie 1785/86, UBB 221: f28r.
4 Cf Christie 1785/86, UBB 56: f31v; UBB 221: f15v.
5 Cf Christie 1785/86, UBB 56: f31v; UBB 221: f15v-f16r.
6 Cf Christie 1785/86, UBB 221: f30r.
7 Cf Nielsen 1889-1890: 282; see also 1889-1890: 285; 1890: 269. Joensen (1981: 113) mentions that in the Faeroe Islands some fishermen were of the opinion 'that the best iron for fishhooks smelled in a special way'. 
should harden it at the point.'

In 1889/90, Nielsen speculates about the origin and history of the septicaemia bacillus whaling in Sotra. Apart from the possibility of an accidental origin he thinks that a clever person may well have got the idea to 'give evil' (satte ilt) to a whale by dipping the arrows in the infected tissue of a domestic animal dead of anthrax, shooting the arrows thus prepared into the whale and thereby killing it. 'Death arrows' had great value because they entailed good portions of the whale. In order to maintain the secret the notion about the old church iron was circulated.2

Brinkmann (1964: 287) thinks that Nielsen's scenario 'was indeed only a well-founded notion - but a better explanation can hardly be found.' He continues that in recent times

'Nielsen's braxy bacillus and the whale septicaemia bacillus are considered to be identical (or very closely related) with Clostridium septicum ... (Bergey's Manual). Furthermore, Moussa (1959) has showed that all strains of Clostridium and C1 feseri have one common spore (S) antigen and is therefore of the opinion that these two should be grouped together into one species as type A and type B. ---. Perhaps the braxy bacillus and the whale septicaemia bacillus originally were [one and] the same. And if we then return to Nielsen's supposition, it was perhaps in a dead sheep in Sotra five hundred years ago that the inventor infected his arrows.'

This student can indeed accept the notion of deliberate, although not decisive, attempts in 'poison whaling' in Skogsvåg by smearing the arrows with infected substance either from whales or carcasses of infected domestic

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1 Cf Barsnes 1932: 88f.
2 Cf Nielsen 1889-1890: 285; see also 1890: 270f.
animals for magic or rational reasons. However, I have difficulties in seeing a kind of 'monopoly' sustained through five centuries as Nielsen (1889-1890: 282, 284) suggests: Everyone with a suitable bow and arrows could shoot at the whales in Skogsvåg; there seems to have been free access to the infected matter of killed whales; arrows within the infected zone of the whale's wound became automatically infected and the owners surely retrieved such (marked) arrows. From this I find that the limitation might rather be of a socio-economic kind and have to do with the possession of suitable bows and arrows. The making and possession of a crossbow, even of the ancient Skogsvåg type, can hardly have been everyman's business. Christie only mentions the points being made of old, 'rusty iron' but the belief regarding the arrow heads may also have 'restricted' the 'supply' of 'church iron' to the more wealthy peasant fishermen around Skogsvåg, discouraging others from trying their luck. Until the 1890s, traditionalism was clearly very strong in the hunt because there is no indication that anyone tried to achieve the same result by using a spear.

Armauer Hansen writes 'that there always around one of the arrows which have hit the whale will be a part of the flesh that is like rotten, [ie,] where the wound had burned' (the so-called 'death arrow'). Other arrows were dipped into the burned flesh for half a day or so in order give them similar killing properties and make them 'death arrows'; they were kept 'from one year to the next in a special skin sheath'. The arrows were neither thoroughly cleaned, at the most rinsed with a little water, nor honed, except at the very tip, and were rusty. Hansen (1887: 3) concludes

1 Cf Christie 1785/86, UBB 56: f34r; UBB 221: f18r-f18v.
2 Cf Hansen 1887: 2.
3 Cf Brunchorst 1899: 150; Hansen 1887: 2.
4 Cf Brunchorst 1899: 153; see also Barsnes 1932: 88f.
that 'It thus looks as if the peasants here in this area preserve a kind of bacterium on their arrows from one whale catch to the next in order to kill the caught animals by it.' Brunchorst (1899: 153) elaborates on this: 'Whether there in this way of treatment - the lack of cleaning and, despite this, careful keeping in a sleath - is some conscious element is difficult to tell but the treatment is anyway able to maintain the infectious capacity of the arrows from one year to the next.'

Barsnes (1932: 89) reflects on the view of a Skogsvåg shooter, in 1932, that a new (unprepared) shot would not burn and kill: 'A harpoon [skutel] can also burn. This summer a new harpoon was embedded in a whale and it had burned so new weapons can burn.'

Hansen (1887) is the first and Brunchorst (1899) the second primary source regarding the practice of holding on to the infected flesh for some time, the keeping of non-'death arrows' in infected flesh for around half a day, and about the preservation of the (dirty, rusty and infected) arrow heads in a special skin (leather?) sheath (in turn surely also infected).

Brunchorst (1899: 152) is careful about interpreting these facts and only concludes 'that the arrows for the time being are infected with the help of the burned flesh'. This is indeed a crucial point: The first evidence of this practice is from 1887 (Hansen), at a time when the bacteriological aspect will have been known for some years. None of the earlier narrators, including Christie (1785/86) and Greve (1840), touch upon it and when mentioned at all the poisonous effect of the arrows is attributed to the rusty iron and the forging. This student can therefore not resist the thought that the keeping of the arrows in the infected flesh might possibly have been adopted in the mid 1880s, partly to enhance the effectiveness of the arrows and partly as a rationalisation, perhaps resulting from the feeling of shame which Nielsen detected about 1889 after people 'now have heard that a sort of "insects" should play
a role.‘¹

F. Wallem (1918: 117, 121) notes that the shooters parted with genuine ‘death arrows’ only most unwillingly and strangers were ‘hardly allowed to see the arrow’, borrow it, let alone use it. Frøiland (1982: 12) considers that a good deal of superstition accompanied the use of the arrows and Wexelsen (1987: 61) suggests that the ‘death arrows’ may also involve reminiscences of hunting magic, ie, carrying over of some ‘spiritual’ killing power from one successfully killed animal to the new prey. This appears very likely and would not be affected by a possible rationalisation of the whole method in the 1880s.

Nansen (1911) does not consider the bacteria and blood poisoning method to be unique to "the neighbourhood of Bergen" because he thinks that Clausøn Frio’s (ca 1599 AD) account about spear whaling gives reason to "suppose that this iron was poisoned with bacteria from former whales, in a similar way to the arrows mentioned above, whereby the animal’s wound was infected."² Furthermore, "The method of whaling with poisoned arrows or throwing-spears must ... be very ancient. Whether it was invented by the Norwegians themselves, or whether they did not rather learn it from the older hunter-people of Norway the ‘Finns’ [ie, Samis], is difficult to determine."³

A virtually converse position is assumed by Heizer who writes about the
"techniques of killing large whales ... known to have

¹ Cf Nielsen 1889-1890: 283; see also 1890: 269.
² Cf Nansen 2, 1911a: 158. Helland (1921: 333) thinks that the bacilli whaling ‘was possibly already known in the 10th century and (was) presumably used at several places along the coast’ but continued only in Sotra, West Norway, into the 1890s. Sørensen et al (1912: 147) thinks that the (North) Norwegian in their hunting of large rorquals possibly made their spears ‘poisonous, so they very soon caused gangrene in the flesh, which then killed the whale’.
³ Cf Nansen 2, 1911a: 159.
been practised among primitive peoples. The most unusual is the Norwegian method of impounding whales in small bays with nets, and shooting into their bodies a crossbow dart whose tip has been smeared with pathogenic bacilli. ---. How ancient this practice is cannot be determined with certainty, but it is apparently old enough to rank as a Scandinavian coastal development which is independent of other whaling methods.\(^1\) "A hunting pursuit which seems unique in the history of human culture is that employed by the Norwegian coast dwellers ... by means of harpoon-arrows [sic] smeared with pathogenic bacilli."\(^2\) Moreover, "The method, pathogenic bacilli, and linguistic terminology have all diffused to the Lapps from the more southerly Norwegians."\(^3\)

Wexelsen (1987: 64) is of the opinion that using poisoned arrows and spears, often in combination with (net) enclosures, 'has been common along large parts of the Norwegian coast in old times.'

Nansen mentions that according to Albertus Magnus (ca 1200-1280 AD) "it is on account of salt water getting into the wound" and according to Vincent of Beauvais (ca 1190-1264) "the salt water penetrates and kills the wounded whale".\(^4\) From these points alone, and without being familiar with the full original accounts, this student can certainly not accept that, in Nansen's words, "the descriptions of Albertus and Vincentius evidently refer to ordinary harpoon-whaling".\(^5\) In harpooning (and subsequent

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1 Heizer 1968: 344.
3 Heizer 1941 ms: 23.
4 In Speculum majus, or "Speculum universalis, i. 1272", and "De animalibus, xxiv. 651", respectively (cf Nansen 2, 1911a: 158).
5 Cf Nansen 2, 1911a: 158.
lancing), whales do not die from blood poisoning (or any other infection) which takes several days to develop: Albertus Magnus and Vincent of Beauvais presumably hint at the effects of spearing and arrowing.

12.5 Pathogenesis in Icelandic spear whaling

Information about the pathogenesis in Icelandic spear whaling is comparatively limited and seems not previously to have been considered from a veterinary or historical point of view.¹

The circumstances surrounding the speared blue whale recovered in the Norse Eastern Settlement in Greenland, 1385 AD, are described in item A.16.11 (cf figure 1).² Horrebow (1752: 225) writes about spearing in (Northwest) Iceland that 'the whale fish will have to die from it, at least if it is well hit, it later drifts ashore somewhere, if the luck allows'. Ólafsson (1772) observes that 'on most occasions' wounded whales ran out to sea. He seems to offer a popular explanation when speaking of the blood running out of the whale but there might be some truth in the healing in certain whales,³ ie, those that have only been wounded in the blubber (cf below).

First-hand accounts about the late 19th century spear whaling in Arnarfjörður, Northwest Iceland, are available from G. Ásgeirsson (1929*, 1946*) and H.E. Oddsson (1960*): The speared rorquals, being mainly 1-2 years old

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1 Martinsen (1964: 34) mentions that 'poison' whaling took place in both Norway and Iceland whereby people 'probably not' contaminated the 'arrows with any special poison' but used them rusty and uncleaned to induce inflammation. The source for the Icelandic aspect is not mentioned and the statement is only correct with regard to the effects.

2 Cf also Lindquist (1993: 20 [map], 28).

3 Cf Ólafsen 1, 1772: 542, 564.
calves/juveniles,\textsuperscript{1} were held 'enclosed' in Arnarfjörður and its inner fiord complex by shoving and were left to die from their wounds; lancing seems not to have been applied.\textsuperscript{2} Ásgeirsson states that the speared rorquals, mainly being calves, usually 'died after 1½-3 days' (ie, 36-72 hours) or '2½-3 days' (ie, 60-72 hours) while it occasionally ('seldom') lasted longer.\textsuperscript{3} Oddsson (1960: 140*) says that it 'often lasted for many days'.

Oddsson (1960: 140*) offers, so far I know, the only original account of the pathogenesis and the spear wound as such: It 'often lasted for many days ... for it was the burning of the iron which killed the whale and they [ie, the spots] were often so pulpy from the burning that one could stir in the flesh like in a wet dunghill.'

The Arnarfjörður whaling spear head, being ca 50-55 cm long (cf figure 8), or about three times larger than the Skogsvåg arrow heads, was 'immediately cut out of the whale, rubbed in harbour porpoise oil or [low quality] olive oil and kept in this way until it was used the next time'.\textsuperscript{4} This implies that the spears were consistently cleaned after use and well maintained.

F. Rode (ca 1830) explains that a large rorqual which got a well-placed spear head thrust, presumably, into its side as it rolled over was assumed to die 'after 24 hours' duration.\textsuperscript{5} Sæmundsson (1903: 134) explains that the spear caused the death of the Arnarfjörður whale calves 'by blood poisoning after some days'. Later, he (1929: 90) explains that 'This method was the same as is still used in catching minke whales near Bergen in Norway. It is based on blood poisoning and is not at all humane (if one can

\textsuperscript{1} D. Scheving (1787: 210f*) reports, with the Arnarfjörður whalers as the immediate source, that the humpback calves they took were 1½-6 months old.

\textsuperscript{2} Cf Ásgeirsson 1929: 88*; Oddsson 1960: 140*.

\textsuperscript{3} Cf Ásgeirsson 1929: 88f*; 1946: 298*.

\textsuperscript{4} Cf Ásgeirsson 1929: 88*; see also 1946: 298.

\textsuperscript{5} Cf Sørensen et al 1912: 14.
otherwise speak about humane whaling) and had the great defect that the whales tended to be lost.'

A whale take in Northwest Iceland has found its place among Icelandic folk stories about 'sorcerers'. In 1833, some peasants 'ironed' (járnuðu) a whale in Arnarfjörður but they were unable to land it. When it finally died (towards the end of September) and drifted ashore 'there were thirteen irons in it, and Benedikt Bagríél Jónsson, who lived in Reykjafjörður in Suðurfaröir, owned most of them. 'The irons were all embedded in the blubber because the flesh was destroyed,\(^1\) and the whale was thus called Pincushion. This whale was of little use when it was secured'. The tradition attributes the difficulties in taking the whale to sorcery by a particular peasant.\(^2\)

For comparison we may mention Martens’s (1675) account that his shipmates once captured a middle-sized bowhead which had earlier been 'wounded by a harpoon which still stuck in its flesh; the whale fish had also spent itself by hard swimming; it also blew quite hollowly and had become very inflamed (so) that it stank alive and the birds fed upon it. This whale fish virtually fermented when it was dead and our eyes became inflamed from the smoke (of it).'\(^3\)

12.6 Pathogenesis in Norse arrow and spear whaling:

Summary and conclusions

The evidence above may be summed up as follows: Oddsson's description of the wound caused in the Arnarfjörður spear whaling is virtually identical to Pontoppidan's account

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1 I.e., presumably by the burning of the weapons.

2 Cf Davfósson 2, 1978: 262; see also 4, 1980: 326.

3 Cf Martens 1923: 6, 106; see also Martens 1855: 6, 113.
from Norway, 1753,¹ and corresponds with those given in the late 19th century from the Skogsvåg whaling. Saemundsson does not distinguish between spearing and arrowing in Arnarfjörður and Skogsvåg, respectively, but considers the methods to be identical, ie, bloodpoisoning. The main sources never associate the Arnarfjörður whaling with 'poison'² and the spear heads used there were cleaned, oiled and well maintained between takes, contrary to what was the case with the Skogsvåg arrow heads; neither is there any evidence of the deliberate or unconscious use of bacteria in the Icelandic spear whaling.

Concerning the Skogsvåg whaling, Brunchorst (1899: 148) was of the opinion that 'If the arrows were burnished and clean they would surely not harm' the whale. This seems disproved by Barsnes's (1932: 89) information from 1932 that 'a new harpoon was embedded in a whale and it had burned so new weapons can burn'.

D.F. Eschricht (1845: 164) thinks that on the coasts of Europe whales were earlier often taken by arrows, harpoons or lances, much like in Norway:³ 'That one usually did not need to inflict many stabs on it follows from the very commonly known experience that whales easily die from the results of even a comparatively minor wound.' In Greenland, O. Fabricius once thrust a 'fowling arrow' into a humpback which he passed; the whale took off with it but some days later a Greenlander returned the arrow which he had found in the stranded carcass.⁴ Captain Holbøll experienced similar instances in Greenland: In 1808 a

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¹ Cf Pontoppidan 2, 1977: 193f.

² Kristjánsson (5, 1986: 58) writes that the calves died 'because of the poison from the harpoon' ("... vegna eitursins út frá skutlinum"); however, his source is Oddsson's (1960: 140) expression 'it was the burning of the iron that killed the whale' ("páð var bruninn frá járnninu, sem drap hvalinn"). Kristjánsson's rendering is therefore unfortunate and is apt to cause misunderstandings.

³ Eschricht presumably had no knowledge of the Icelandic spear whaling.

⁴ Cf Eschricht 1845: 164; referring to Det kongelige videnskabers selskab, Skrifter, vol 6/1, p 79 [orig not seen] (Copenhagen); see also Mitchell, Reeves and Evely 1986: 45.
fowling arrow, being about $\frac{1}{2}$ cm in diameter, was thrust between the baleen of a free-swimming minke whale; the following day it drifted dead ashore, with the arrow. In 1830, a minke whale carcass was found near Nuuk (Godthåb) 'with a gun bullet in the back around which the wound was strongly swollen'.\(^1\) Around 1870, a large whale entered Nordvikevåg in Utsira, Rogaland, Norway; it carried a harpoon and was sick.\(^2\)

Conversely, Martens (1675) explains the experiences of the Spitsbergen whalers like this:

'The wounds which the whale fish ... receives in the blubber from the harpoon heal up of their own accord because the salt water cannot stick on them; many such fishes are caught which in this way have been struck with harpoons by others and are healed up again (and) have white scars.'\(^3\)

Eschricht also observes that death did not necessarily follow from wounds in cetaceans as many examples show whales having been caught with old harpoons or deep scars.\(^4\)

From the evidence above, I infer that clostridium bacteria (and spores), presumably *Clostridium septicum* (*Clostridium balaenae*), were involved in both the West Norwegian arrow and the Icelandic spear whaling. The grim pathogenic effects seem therefore to have occurred as a general feature in arrow and spear whaling. Apart from occurring in the large gas-gangrenous wounds of the shot whales, clostridium bacteria exist in the digestive tracts of animals (including cetaceans), gut contents, dunged soil and some are typical carcass bacteria,\(^5\) so neither a

\(^{1}\) Cf Eschricht 1845: 164.

\(^{2}\) Cf Steinsnes 1956: 77f, 80 [ill 1].

\(^{3}\) Cf Martens 1923: 109; see also 1855: 116.


'special' bacterial source nor a particular introduction appear to be necessary. Andersen et al (1992 ms: 80) write, in the context of Modern Norwegian minke whaling, that "If the whale has been shot in the abdomen, they [ie, the crew members] have to be especially careful to clean the meat in order to avoid the spread of the bacteria Clostridium perfringens, which causes poison and gas to develop in the meat."\(^1\) Because the bacteria and their spores are widely present in environments associated with animal husbandry and hunting and easily contaminate the arrows and spears there is no basis for advocating a 'single source infection tradition'. The cleaning (washing)\(^2\) and oiling, as in the case of the Arnarfjörður spear heads, is unlikely to prevent such contamination.

We must briefly return to the single 'death arrow' in the Skogsvåg whaling.\(^3\) Brunchorst (1899: 152) writes:

'At a first glance it seems somewhat strange that only one of the arrows is a 'death arrow' and causes burn [ie, gangrene] and blood poisoning. However, this hardly results from a difference in the arrows but merely the circumstance that one pathogenesis of the kind which is here the case prevents the occurrence of others. As soon as the infection from one arrow "strikes", the other ones do not operate despite their being infected with bacteria which are fully capable of inducing blood poisoning in an earlier non-infected animal. It is therefore a circumstance of the disease, not of the arrows, that results in only one of these becoming a death arrow.'

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1 Whether whales actually are particularly susceptible to infections and blood poisoning, as Eschricht (1845: 164) and Brunchorst (1899: 152) suggest, remains to be ascertained from the literature and by expert opinion.

2 Not to be mistaken for 'disinfection'. Clostridium balaenae spores survive for several decades at lower temperatures while they are sensitive to higher temperatures and cannot endure boiling beyond 2-3 minutes (cf Christiansen 1919: 1013f; see also Holmboe 1919: 365).

3 Cf Christie 1785/86, UBB 221: f15v.
This clearly 'demystifies' the single 'death arrow'. In spear whaling, at least in semi-open and open waters, one strike seems to have been the rule, presumably for practical reasons, which, of course, is covered by Brunchorst's explanation. The spear head is more likely to penetrate through the blubber and comparatively deep into the flesh of the whale while the arrow may sometimes not even penetrate the blubber, so experience will have taught people not to rely on only one well-placed arrow. This appears confirmed by Claussøn Friis's (ca 1599 AD) remark: 'And if the shot went through the blubber and into the flesh, then they believed that the whale could not live'.

The technicality was also noticed in the bowhead whaling by Martens (cf above) and in the Skogsvåg whaling: Melchior (1834: 266*) writes that as soon as the whale has been hit by an arrow so 'that it has penetrated through the blubber into the flesh, it is a certain prey; after one or two day's time the whale dies and remain floating in its dead state.' Nielsen (1889/90) also remarks: 'When a sufficient number of such [ie, 'poisoned'] arrows, which only passes through the blubber and a little into the flesh, have hit the whale, the shooting is halted and the course of events is watched.'

In my opinion, this also underscores that Claussen Friis genuinely describes mediaeval Norse spear whaling, if that hypothesis (cf chapter 10.5.6) needs further support.

This knowledge may cast light on the following passages in JB vii 64 (1281/83 AD):

'If there are more shots in a whale than one, then owns the one who first placed a killing shot [banaskot] and (which) carries a registered mark. It does not impair if it comes in the blubber ["Ekki sakar, ef i spik kemr."] If a man catches that whale which is earlier deadly wounded [helvænn] by a registered shot, (then) he who first shot [skaut] the

1 Cf Friis 1881a: 70*; see also Lindquist 1993: 30, 52.
2 Cf Nielsen 1889-1890: 281f; 1890: 270.
whale nevertheless owns the shooter’s share …’

The sentence about the blubber is unique in the Icelandic and Norwegian whaling laws and puzzled me for a long time; however, I feel now able to offer the following interpretation: Peasant fishermen seem to have known that a lethal spear and arrow shot generally involves penetration of the blubber layer which may have given rise to legal disputes as to what actually constituted the ‘killing shot’ where two or more shooters were involved. With the sentence "Ekki sakar, ef i spik kemr", JB eliminates the possibility of a formal objection by a co-shooter whose shot penetrated the blubber against sharing the shooter’s share with someone, whose shot did not; both shooters are put on an equal footing.

This student is bound to conclude, firstly, that zoo- or phytotoxins, ie, ‘poison’ proper, seem not to have been used in Norse whaling; secondly, that clostridium infection accompanies spear/lance and arrow whaling, in general, and forms an integral part of the methods as such. Consequently, questions relating to a deliberate introduction of clostridium bacteria (Nielsen; Brinkmann) into the Skogsvøg type whaling, its ‘invention’ (Nansen), ‘development’ (Heizer) and (500-1000 years’) history (Brinkmann; Helland; Nielsen)², diffusion from the Samis to the Norwegians (Nansen), or vice versa (Heizer), and its uniqueness (Heizer and others) are no longer relevant.

This conclusion has presumably also repercussions regarding the interpretation of other similar whaling traditions,

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1 The terms ‘poison’ and ‘poison whaling’ should therefore not be used in the Norse context except perhaps where one wishes to stress an assumption or pretence of ‘poison’ being involved.

notably in the North Pacific area.¹

¹ Cf, eg, captain Golovin’s report from Alaska, 1861, in ch 12.2, above.
13 Conclusions

This thesis on cetaceans in the economy and culture of Norse peasant fishermen, ca 900-1900 AD, involves rather diverse topics but they are complementary. The main results of the investigations are as follows.

All Norse littoral and inshore legal régimes (cf chapter 4) were (and still are) allodial. For that reason, the rights of coastal estates extended into the sea and encompassed in various ways the resources in the littoral and the inshore waters, notably driftwood, fish, pinnipeds and cetaceans. In a comparative study of the Anglo-Saxon/English, Orcadian-Shetlandic, Norwegian and Icelandic littoral and inshore legal régimes it is argued:

firstly, that the Icelandic régime preserves most features of a (theoretical) primordial Norse régime in which the 'infield' and 'outfield' terrestrial zones of property rights, centering on the allodial farm, extend into the littoral and the inshore waters as 'net zone' (netlög) and 'driftage zone' (rekamark), respectively, outside which are the commons;

secondly, that the mediaeval Norwegian régime, as stated in the legal codes of the 12th-13th century AD, constitutes a modification of this primordial system which restricted the rights of the shore estate to a 'shallow zone' ('above the marbakki') and established a partial royal prerogative in cetaceans even on allodial ground;

thirdly, in a reversal of the hitherto accepted paradigm of legal historians, that the Orcadian-Shetlandic so-called Udal ebb limit is not Norse but rather indigenous/Anglo Saxon/English in origin and that it possibly influenced the establishment of the Norwegian marbakki limit;

furthermore, that the Icelandic (and by extension the primordial Norse) régime, with its wide 'driftage zone', inter alia, reflects the circumstance that a main method of catching large cetaceans was spearing which depended on
recovering the carcasses (cf below).

The analysis of mediaeval Norse views, knowledge and perception of cetaceans, in general (cf chapter 5), and of individual cetacean species and other marine beings, in particular (cf chapter 6), demonstrates the existence of an ancient, comprehensive and rather stable body of knowledge and traditions. The Norwegian work Konungsskuggsjá (Royal Mirror), from the mid 13th century AD, 'codified' Norse knowledge and views about seals, the walrus, real and imagined whales. In the Nordic countries it remained authoritative on the subject well into modern times.

Names and descriptions of real cetaceans and fictitious marine beings of the whale and walrus kinds are identified or explained and their history outlined. Among other things, the (now extinct) North Atlantic gray whale seems positively identified through two descriptions from the 17th century of its unique bottom-feeding habits. It appears to have been well-known to, and hunted by, the Icelanders from early mediaeval to early modern times. There are indications that it was also hunted by the Anglo-Saxons under the name of hran.

Scholars have hitherto dismissed the measures (in 'ells') of cetaceans in mediaeval Norse sources as being often 'exaggerated' and generally unreliable. On the basis of a systematic examination of these data and details from the history of the Faeroese pilot whale appraisement it is argued (cf chapter 7):

- firstly, that the 'ell' measures in these sources in many cases do not denote measures of overall length using the (old) Norse standard ell, being ca 47.4-49 cm long,¹ rather they are appraisement sums using a unit called *hvalsalín ('whale ell'; alín for short), with 5 *hvalsalínir to each standard ell in a whale's eye to genital slit distance (being approximately half of the

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¹ It may without problems be approximated to 50 cm.
animals’ overall length);
secondly, that the figures as appraisement sums are not only realistic but quite reliable.

An analysis of known currency parities and ratios appear to show that the Faeroese currency (value), land and whale appraisement unit gyllin does not originate in the late mediaeval introduction into the Faeroe Islands of the Continental ‘gulden’ unit of value, as is generally considered to be the case. Its history is instead sketched as follows (cf chapter 7.6): (a) the gyllin represents a Norse denomination which in the 11th century AD was worth ½ mark burnt silver and presumably was called *gildingr; and (b) as such it became a denomination of land measurement; furthermore, (c) the gyllin also represents an old Norse legal entity called *gildingshvalr/*gildingsfiskr (*gildingr for short), being the biggest whale which a free person of sub-odal rank could freely appropriate under Norwegian odal right. The division of whales, which usually followed proportionally to the size of the infield of shore estates, would be facilitated by the use of the same, or conforming, units of reckoning for both land and whales.

Only few ritual aspects are recorded in relation to Norse peasant fisherman whaling (cf chapter 8). Two instances are known from Skogsvåg, Sotra, West Norway. Into the late 19th century, people there raised the tail of caught minke whales on a hill as a matter of course and the whale’s eyes were thrown into the sea to enable the whale to find its way back into the inlet. It is argued, firstly, that the ‘tail raising’ reflects an ancient tradition of sacrifice to the old Norse god Njörör, possibly going back to the first centuries of our era; and, secondly, that the ‘eye throwing’ may be just as old and apparently involves the belief that whales had individual spirits which reincarnated after each catching if it was returned properly to the sea.
Whale trapping has previously only been considered in relation to a few places in Hordaland, West Norway. In this thesis it is argued (cf chapter 9) that whale trapping was widespread along the coast of West and Mid Norway into the late Middle Ages and that it involved enterprises on a considerable scale. Such traps were distinct legal entities which gave the owner(s) the right to the full catch there. The traps seem reflected in the old Norwegian term *hvalvågr* ('whale voe') and Kvalvåg farm and place names. A later term for the whale voe is *hvalgaard* ('whale garth') in Dano-Norwegian which apparently hints at the wide range of aids and constructions which are recorded as having been used for trapping whales there, viz: noise from boat crews (ie, the *manngard*); lattices of huge dimensions; stone dams; presumably from the late Middle Ages, large (specially made) bast nets; and, in the 18th-19th century, herring seines. It is likely that whale traps earlier also included weirs, stockades and floating beams. In contradistinction, *hvalvík* ('whale creek') was any other suitable place where whales could be taken, notably by driving and beaching. In such places the catch was divided equally between the shore estate and the hunters.

Land rise in West Norway is minimal which, it is submitted, made it possible for whaling voes to be maintained at the same locality for perhaps up to 2000 years, *inter alia*, into the 18th-19th century, without being seriously affected. On the other hand, land rise has been considerable on the coast from northern West Norway and northwards which must have required the regular relocation of whaling voes on that part of the coast. When whaling voes outside Hordaland disappeared in the late Middle Ages the reasons were probably a combination of relative high costs of their (general) maintenance and relocation, scarcity of labour, caused, *inter alia*, by the Black Death (1349-1350 AD), higher returns from other activities and the increased emphasis on commercial fishing (as from the 12th-13th century).
Norse Viking time and mediaeval whaling with piercing weapons (cf chapter 10) has basically been associated with hand harpooning and the whale pulling the boat until it could be lanced. Based on technical principles and clear definitions it is argued that this in fact is a notion adopted from the Basque and Spitsbergen/Greenland Old whaling trades and that it is not supported by the historical evidence:

firstly, the mediaeval Norwegian and Icelandic laws use a differentiated lexicon for the sealing weapon ('harpoon' proper), on the one hand, and the whaling weapon ('shot', 'iron' and even 'spear'), on the other; the etymology shows that the sealing weapon and the whaling 'shot' are darting weapons but the former has an additional connotation which indicates it having a (small) detachable head;

secondly, suitable whaling lines seem not to have been available in Norway and Iceland before the 15th century, at the earliest, making harpoon whaling proper impossible;

thirdly, there exist numerous accounts of Norwegian/Samish and Icelandic spear whaling which relied on the recovery of the carcasses through driftage; - in Finnmark whale spearing continued to 1870 and in Northwest Iceland to 1894 or 1896;

fourthly, the Danish-Norwegian and Danish governments, respectively, attempted in the period 1752-1830 to introduce hand harpoon tow whaling (Basque style) in Iceland in order to replace the traditional local way of whaling, ie, spearing; and

fifthly, the earliest recorded instances of Norse peasant fishermen engaging in harpoon whaling proper date from 1610 (Iceland) and 1619 (Faeroe Islands); the Icelandic case probably relates to the Basque whaling in the area as from 1608 while the Spitsbergen Old whaling may have been the model in the Faeroese case.

Finds in deep waters off the Norwegian coast of large stone points suggest that whale spearng has been conducted there from at least neolithic times. The method of darting the spear with a detachable iron head at some distance from
the whale is documented in both Norway and Iceland in modern times and probably constitutes the general Norse method after perhaps the 7th century AD. On the other hand, north Norwegian/ Samish peasant fishermen also thrust the spear head into the whale using a particular long shaft. The method was presumably called 'whale sticking' and the whaler hvalstikker. This seems to have been a regional variant of the spearing method. The whales which the Norse speared and sticked were usually large rorquals or their calves.

It is also submitted, with reference to the Faeroese catch of northern bottlenose whales and the account by al-'UdhrI and al-QazwInI, from the mid 11th century AD, about Norse black right whaling in Ireland, that gaffing should be considered as a distinct whaling method, even for the taking of larger cetaceans.

It was an old Norwegian and Icelandic tradition and legal requirement to publicly register whaling 'shot' (ie, spear) owner marks, and, similarly, to announce their recovery, the real character of which has hitherto not been appreciated (cf chapter 11). A case from 1385 AD is known in which a blue whale was recovered in Norse (southwest) Greenland and the shot mark recognised as belonging to a certain person in Northwest Iceland. Icelandic sources from ca 1650-1800 contain numerous shot mark registrations and a number of shot mark recoveries within the country itself which can partly be matched. The analysis shows that spear whaling was mostly conducted in Northwest Iceland, centering on the fiord complexes of Arnarfjörður and Ísafjarðardjúp, with some activity in the adjacent fiord complexes of Húnaflói and Breiðafjörður which apparently were less suitable for this kind of whaling. Whales speared in these fiords were sometimes recovered in faraway districts. The system of shot mark registration and announcement secured that the shooter received his share of a recovered speared whale.
West Norwegian whaling with arrows is generally associated with the premeditated use of some kind of 'poison' or pathogenic bacilli, an explanation which has partly been extended to Norse spear whaling in the few cases where it has previously been acknowledged (cf chapter 12). However, the pathogenesis described in Icelandic spear whaling, and also indicated in other Norse sources involving spear whaling, is similar to the veterinary evidence obtained from the West Norwegian (Skogsvåg) arrow whaling in the 1880s. From this it is concluded, firstly, that no poison proper has been used in Norse whaling; secondly, that clostridium infection accompanies arrow and spear whaling, in general, provided the whale's blubber is penetrated; and, thirdly, that this effect constitutes an integral part of the spear and arrow whaling methods.