Meanings and Practises Related to Fishing on the Faroes

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Abstract: The socio-ecological conditions of fish-stock depletion pose great challenges to fish-dependent economies. Such challenges are currently felt on the Faroes, where fish and fish related products account for 94 percent of total exports. Hence, ideas on how to make the fisheries sustainable are thriving. By drawing attention to the diverse ways that Faroese have organised socio-ecological relations of fishing, and the different meanings or modes of knowing and perceiving the environment (rationalities) that socio-ecological relations of fishing have drawn upon, this thesis problematises the understanding of fish-stock depletion as a problem that can be solved through techno-scientific policies and institutional reform. By engaging in a critical analysis of narratives on sustainable fisheries and the environmental history of fishing on the Faroes, this thesis argues that fish-stock depletion is a material manifestation of a structural problem in the world-system, with onto-epistemological roots in the Cartesian paradigm of modernity of which neoclassical economics is a discursive expression.

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Elisabeth Skarðhamar Olsen

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1. Introduction

In this thesis meanings and practices of fishing in four historical periods on the Faroes[1] are analysed and related to contemporary narratives on fish-stock depletion and sustainable fisheries. Drawing from field-work carried out on the Faroes I pose the following question:

How have Faroese meanings and practices of fishing changed in the course of history and what can they teach us about contemporary socio-ecological conditions of fish-stock depletion and the discursive meanings surrounding it?

To answer this question I rely on the following specific research questions:

1) How was fishing organised and understood in four periods in Faroese history?

2) How have changing Faroese meanings and practices related to fishing influenced and/or been influenced by changing material and energy flows?

3) What characterises contemporary Faroese understandings of fish-stock depletion and narratives on how to make Faroese fisheries sustainable?

4) What are some practical implications and discursive meanings surrounding contemporary conditions of fish-stock depletion and of on-going diverse economies on the Faroes?

With an export economy of which 94 percent are fish or fish related products, of which 60 percent are related to wild fisheries and 34 percent to fish-farming (Fishin.fo 2011a; Fishin.fo 2011b; Búskaparráðið 2011, 7-8), it is safe to say that the challenges to fish-stock depletion faced by the Faroes are of significant proportions. It is no wonder then that there seems to be a consensus on the Faroes on the importance of regulating the fisheries so that the national economy gets 'as much out of fishing as is biologically possible' as the discourse goes.

By drawing attention to the diverse ways that Faroese have organised socio-natural relations of fishing and the different meanings or modes of knowing and perceiving the environment (rationalities) these have drawn upon, I problematise the conception of fish-stock depletion as a

1. The Faroes (Faroe Islands) are 18 islands covering 1399 km^2 located north-west of Scotland, midway between Norway and Iceland. Populated by only 48.000 people, the Faroes are a self-governing region of the Danish State with their own parliament (For more background information on the Faroes, see Appendix 2).

problem that can be solved through techno-scientific policies and institutional reform. Instead I argue that fish-stock depletion is a material manifestation of a structural problem in the world-system with onto-epistemological roots in the Cartesian paradigm of modernity of which neoclassical economics is a discursive expression.

The purpose of relating a historical contextualisation of Faroese meanings and practises of fishing to contemporary Faroese understandings of fish-stock depletion is to inspire a more nuanced and critical way of perceiving and talking about fish-stock depletion and to empower an epistemic shift in the way we engage in and conceptualise economic practises.

I begin by characterising my methodological framework in chapter two, and continue in chapter three with presenting my theoretical framework. In chapter four I then seek to make a survey of meanings and practices related to four historical periods of fishing on the Faroes in which I identify how fundamental shifts in perceptions of the seascape occur that have consequences to what Pálsson (1991) defines as 'modes of access' to sea resources, a concept which not only emphasises the *degree* of access (the *spatial* tension between closure-open access), but also the *kind* of access (the *social* dynamic between closure and tenure).

In chapter five I shift to a more Foucault inspired analysis. First I characterise the technologies of government related to contemporary fishing regulation in *Fiskidagaskipanini* (i.e., the fishing-days system), as well as current problematisations of the system. Drawing primarily from data gathered at *Fiskivinnuting 2011* (i.e., the fisheries' assembly 2011), I then engage in a discourse analysis inspired by Hajer (1995) of *Burðardygg fiskivinna.* (i.e., sustainable fisheries), which I argue is a discourse characterised by the consensus that: 1) a sustainable fishery is a fishery that obtains as much economic profit out of fishing as is biologically possible, and 2) that in order for the Faroese fisheries to become sustainable, an institutional reform of the ways fisheries are regulated must be carried out. In this chapter, I emphasise how differently positioned actors seek to articulate a path towards 'their common understanding' of what constitutes a sustainable fishery, and how, in so doing, unconventional discourse-coalitions are formed that come to invest new meanings to the phenomenon of fish-stock depletion.

In chapter six I reflect upon the discourse analysis in chapter five in the light of the environmental history presented in chapter four, emphasising the changes in meanings and practises related to different eras of fishing throughout Faroese history. By employing concepts from my theoretical framework I try to nuance our current understanding of fish-stock depletion. In the conclusion I

then summarise some of the key issues brought up in this thesis.

2. Methodological framework

2.1 A political ecology research paradigm

> Political ecology's originality and ambition arise from its efforts to link social and physical sciences to address environmental changes, conflicts, and problems. In this initiative, analyses of social relations of production and questions of access and control over resources - the basic tool kit of political economy - are applied in order to understand forms of environmental disturbance and degradation and to develop prospects and models for environmental rehabilitation and conservation, as well as environmentally sustainable alternatives (Paulson and Gezon 2005, 17).
>
> ...the environmental crisis of modern society is a problem of power, culture, and epistemology (Hornborg 2001, 2).

By positioning myself along scholars of political ecology that study local practises and meanings as well as structural economic and ecological forces, and the interaction between these, I wish to problematise conventional understandings of sustainability as an issue requiring economic and technical solutions. Instead I wish to follow in the footstep of those that trace the causes of environmental degradation in distributional conflicts.

Political ecology is defined by Joan Martinez Alier as the study of ecological and economic distribution conflicts. In his book *Territories of Difference*, Arturo Escobar elaborates on this arguing that "economic crises are ecological crises are cultural crises" (Escobar 2008,14). By making explicit the cultural dimension of distribution conflicts, Escobar encapsulates what I sometimes have been inspired by Escobar (2008), Tim Ingold (2000), Alf Hornborg (2006), Nurit Bird-David (1999) and Mario Blaser (2009) to think about as epistemic inequalities. First is the idea that we (differently located and identified humans) have different epistemologies (different ways of knowing and relating to the world). Second that we also live in different worlds; have different ontologies, different conceptions of nature, reality, the environment, each-other, etcetera and thus come to analyse and interpret the world differently.

In emphasising a phenomenological approach as I analyse how Faroese meanings and practices of fishing have changed throughout history I seek to show how different historical periods on the Faroes represent unique and particular ways of knowing and being in the world, herein particular ways of relating to the practice of fishing. I argue that the way of knowing the sea and the practise of fishing related to for instance *Bátsbandið* (i.e., 'the boat bond' which was abolished in 1865. See

chapter 4.1.) conflicts with the way of knowing the sea and the practise of fishing materialised in the commercial Faroese fisher-fleet.

On a more general note I find it important to my approach to emphasise that the history of historical geopolitics has produced a markedly gendered, sexualised, ethnicised and classed form of knowledge, known as academic and/or scientific knowledge, which has acquired hegemonic status and thereby continues to effect the theories and concepts through which we interpret the world, thereby constructing other knowledges as incomplete because of their local and/or cultural contextuality. With the question 'whose knowledge counts', Escobar has put into critical light the epistemological foundations of academia as he has articulated a 'geopolitics of knowledge', which not only stresses valuable place-based/local/traditional knowledge and knowledge systems, but also questions the universal applicability of western conceptual vocabulary.

This critical recognition of power and politics in knowledge and academia is associated with and empowered by the poststructuralist wave characterising much of the social and human sciences today, which successfully has articulated scepticism to the 'objective' or 'purely scientific' nature of knowledge, arguing on the contrary that "the goals of power and the goals of knowledge cannot be separated: in knowing we control and in controlling we know" (Stanford 2008). Adding the Fouaultian power-knowledge dialectic to Hornborg's materialist definition of power as "a social relation built on an asymmetrical distribution of resources and risks" (Hornborg 2001, 1) therefore illuminates the political nature of doing research. It is from this epistemological awareness that my methodological framework is grounded.

My epistemological grounding and hence my research paradigm can be characterised as radically transdisciplinary. In this thesis I emphasise the intersections of *culture, power* and *sustainability* by taking very seriously the biophysical dimensions of the material processes in the world, herein the *power* of thermodynamics (Hornborg 2001), while at the same time emphasising that the representation of such processes, whether in the language of biology or in folk models, are *cultural* constructs. From this also follows that the poststructuralist emphasis on the political nature (*power*) of academic research makes it crucial to emphasise the non-essential aspects of the very concepts which we use to attribute meaning to material processes, herein the concept of *sustainability.*

2.2 'In the field' and 'at home'

In addition to primary and secondary textual sources (see presentation in chapter 2.3), this thesis

draws upon field notes written in the period from February through April 2011 in my home-country the Faroe Islands.

Figure 1: Map of the Faroe Islands. Permission to use this map is granted under the GNU Free Documentation license and the Creative Commons Attribution Share Alike 3.0 Unported license (Wikimedia Commons 2011).

In place-specific terms, I have been living, writing, reading and conversing with various people, and seeing, smelling, hearing and experiencing things on the island of Sandoy (particularly in the village of Húsavík) and to a lesser extent in my home-town Tórshavn, the capital city (on the island of Streymoy). Besides these place-based localities, I have also had my senses alert when travelling between Húsavík and Tórshavn with the bus and ferry boat from time to time. Moreover, I have paid attention to the national radio channel, the Faroese Internet media, the national TV channel and the local newspapers.

Figure 2: Map of the study area: Sandoy and Tórshavn. Permission to use this map is granted under the GNU Free Documentation license and the Creative Commons Attribution Share Alike 3.0 Unported license (Wikimedia Commons 2011). The size of Sandoy is approximately 112 km^2.

Questions that have guided my senses these three months are: How do people define and talk about sustainability? What role does the Faroese fishing-industry play in people's everyday life? How do people relate to their environmental surroundings? What non-monetary practices do people engage in and why?

More specifically I draw upon conversations with at least ten people (including one in the form of an unstructured focus group of four men) in Húsavík and some more in Tórshavn. These conversations have functioned partly as information that has clarified issues that I was not so familiar with before commencing this thesis, for instance how the Faroese fishing-days system works and how sheep-rearing in Húsavík is organised. In addition to this, I also draw upon these conversations and my other senses documented in my note books as empirical data which I analyse and interpret in relation to my other sources.

The thesis also relies on audio data recorded (mp3 format) at *Fiskivinnuting 2011*; the fisheries' assembly, which was held on the 22nd of March 2011 in *Norðurlandahúsið*, the North Atlantic House on the Faroe Islands and addressed the question on how to make Faroese fisheries sustainable (see more details in chapter 2.3).

Although the conversations that I engaged in were unstructured and spontaneous, thus often not formally agreed-upon interviews, my informants from Húsavík have all been asked for consent on

having their valuable knowledge included in the thesis. This is not the case in relation to observations and things that I have heard or seen in other places, for instance the media, the fisheries' assembly, on the road and so on.

Since being 'in the field' and being 'at home' were in my case fused modes of engagement operating in the same spatio-temporal realm, I have found inspiration and comfort in Wanda Vrasti's argument that the idea that "one [fieldwork] occurs in a faraway land and the other [writing up and interpretation of findings] at home, that one happens in a tent and the other behind a desk – is a mystification of the windy road we take to come to knowledge" (Vrasti 2010, 84). I would argue that my research process is exemplary of Vrasti's point that this hierarchical purity between what goes on in the field and what goes on behind the desk gives a flawed picture of knowledge production as "a linear and deliberate trajectory from ignorance to enlightenment, from raw data to theoretical conclusion" (*Ibid.*).

Besides obvious linguistic, geographic and cultural advantages this fusion of being 'at home' and 'in the field' often worked to my advantage. Perhaps because I was a part of the community which I was writing about myself, it turned out that moments which I initially thought were going to be a break from work often turned out to be intense and fruitful moments of fieldwork in the form of valuable conversations or observations and findings of interesting textual sources.

In relation to this I have found it crucial to reflect on and acknowledge that my role as a researcher has not been characterised by a struggle for detachment, but rather by ethical involvement, dedicated interpretation and ultimately co-construction of inter-subjective meanings.

Although my experience of a constant unstructured accumulation of impressions in homely surroundings did contribute to valuable knowledge I am regretful that in my thesis process I neglected to articulate a more focused and structured field-work design that allowed more space to the voices of those that are *not* speaking at the fisheries' assembly or on the radio or writing economic reports. I have however chosen to take the experience of writing this thesis as a first step in grasping the multifaceted issue of sustainability, fishing and diverse economies in the Faroese context. Inspired by Jenny Cameron and Katherine Gibson (2005) and J.K. Gibson-Graham (2006), I think it could be interesting and relevant for future studies to carry out participatory action research (PAR) with Fareoese fish workers. This would entail more structured methodological tools such as guided interviews or focus groups, surveys, mapping, and others.

2.3 Methodological use of data and review of literature

Chapter four

In chapter four where I seek to write an environmental history centred upon human-ecological relations in changing Faroese fishing practises, I employ an analytical framework that is inspired by Gisli Pálsson's (1991) study of fishing practises in Iceland, and which is briefly introduced in the beginning of the chapter.

In writing this piece I draw information from a variety of secondary sources of which the most significant are: Johnathan Wylie's *The Faroe Islands: Interpretations of History*, which in his own words seeks to define 'the historical and sociopolitical setting' of the Faroes in the period from 800-1920; Jóan Pauli Joensen's numerous published books and articles resulting from his professorship of ethnology and cultural history, based on extensive and intensive research of the period from 1856-1950, which is the period in which Faroese peasant society was complimented with and subsequently became dominated by a monetary market economy and a commercial fishery; Michael Haldrup and Høgni Hoydal's historical and geographical analysis of the economic crisis on the Faroes in the early 1990s; Stefan í Skorini and Jóan Pauli Helgason's analysis of the Faroese fishing-days system in their 2009 MSSc dissertation.

In my readings of the above-mentioned sources I have come upon valuable primary data, which I have found appropriate to make secondary use of. This data consists of: a letter from 1609 written by the Faroese government to the Danish King, which gives insight into Faroese perception of and relation to the marine environment at the turn of the 16^{th}-17^{th} century; a report on Faroese business conditions made by a committee of the Danish State Department in 1939 that captures the importance of non-commercial agriculture on the Faroes at the time; a quote from the Fisheries Yearbook of 1987 (i.e., a book that is distributed to Faroese trade-partners) which supports my argument on machine fetishism (see conceptual definition in chapter 3.1.2) that particularly characterised Faroese fishing practices in the 1980s.

The analysis of recent Faroese environmental history is complimented by own experiences and memory of the economic crisis in the early 1990s, and in the last part of the chapter I employ an ethnographic style of writing as I draw upon observations and conversations I have had with people in Húsavík the past three months.

Chapter five

In chapter five where I seek to characterise the Faroese system of fishing regulation and narratives on sustainable fisheries, I employ an analytical framework inspired by Foucaultian ideas as these are employed by Mitchell Dean (2010), Arun Agrawal (2005) and Maarten A. Hajer (1995).

The most important secondary source for this chapter is Skorini and Helgason's dissertation, which is complimented by some other sources, for instance the latest reports from *Havstovan*, that is, the Faroe Marine Research Institute (FMRI), and *Búskaparráið*, that is, the Economic Council.

Chapter five relies first and foremost on the primary data that I recorded at the fisheries' assembly, which included thirteen speakers (of which only one was female). The speakers represented various actors related to the Faroese fishing industry, herein the ship-owner union (*Reiðarafelagið*), the fishers union (*Føroya Fiskimannafelag*), the coastal fishers union (*Meginfelag Útróðramanna*), the Faroese House of Industry (*Vinnuhúsið*), the Faroe Marine Research Institute (FMRI), the most important state authorised public accountant company on the Faroe Islands NOTA, Statistics Faroe Islands (*Hagstova Føroya*), the bank union (*Felagið Peningastovnar*), a quality inspection company called Sp/f Inspect, an economic scientist from the Economic Council (*Búskaparráðið*) and a political scientist.

In addition to this I also analyse other data, for instance the latest report from the Economic Council, articles from Faroese internet media (nordlysid.fo and portal.fo) that cite actors of the Faroese fisheries on topics relevant to my analysis, and finally things I have heard on the radio and seen in the television of *Kringvarpi* (i.e., the Faroese national broadcasting network).

Internet sources that this thesis derives statistical and factual data from are: 1) http://www.hagstova.fo which is the databank of Statistics Faroe Islands, that is, the national statistical authority of the Faroes, 2) http://www.fishin.fo which is a site produced and updated in collaboration between Faroese fisheries, trade and environmental authorities, research institutes, and the Faroese Ministry of Fisheries and Natural Resources.

3. Theoretical framework

My theoretical framework reflects the human ecological ambition of employing a holistic perspective that transcends traditional disciplinary boundaries between natural, social and human sciences. In so doing, I seek to illuminate how different historically contextualised meanings and

practices related to fishing on the Faroes are influenced and undergo transformation by global and structural relations of economy, and ecology.

The concepts that I employ allow me to analyse the ways that local contexts are influenced by global and decontextualising forces of the market economy, while they on the other hand empower a non-essentialist approach to notions such as capitalism[2] that makes it possible to illuminate some contextual meanings that continue to characterise economic practices on the Faroes until this day.

3.1 Structural forces of society-nature relations

> Without the diversity of material forms available in nature and the regularities of material processes, humans could not have evolved as they have, let alone devised the complex and powerful technologies that serve them. At the same time that it makes these technologies possible, nature also limits their functions; the laws of thermodynamics constrain the ways that humans extract, transform, consume, and discard naturally produced matter and energy (Bunker and Cicantell 2005, 22).

3.1.1 Socio-economic metabolism

In this thesis I employ the concept of *socio-economic metabolism* as a metaphor to describe ”biophysical relations of society-nature interactions” (Singh 2003, 50). The notion implies that similarly to organisms societies extract primary resources and use them for food, machines, infrastructure and so on, and then return them in the form of waste and emissions.

To my context it is useful to distinguish between what Singh calls a *basic* metabolism, describing societies where there is a natural reproduction of resources, wherein metabolic releases are transformed back to useable inputs, and an *extended* metabolism, describing societies where non-renewable resources obtained from geological deposits are mobilised causing an ”ongoing mobilisation of huge geological stores at rates far exceeding their reproduction” (*Ibid.*, 56-57).

In my analytics of socio-economic metabolisms I also emphasise the society’s *stocks* (i.e., ‘fixed capital’), which denotes the physical components of a society, defined as everything that is used by a society for longer than a year, herein the built environment (dams, buildings, roads, etc.) and machines, as well as the ”institutional and cultural variables that organise it” (*Ibid.*, 59). Also it is important for my analysis to note the society’s *flows*, which are ”materials that are set in motion to produce, maintain and reproduce [the] … stocks” (*Ibid.*, 60), herein also human labour. A society’s

2. In fact I have consistently sought to avoid using the concept of capitalism, because I find it to be so problematic. The theories that I rely on however use it a lot, so it has been impossible for me to avoid using it.

stocks and flows are linked so that the bigger the stocks to be maintained, the larger the flows will be.

Carrying out a physical trade balance[3] for the Faroes is beyond the scope of this thesis, and as far as I have been able to tell from the publicly available statistics on imports and exports, it is also a very ambitious task[4]. However, I do intend to use the metaphor of socio-economic metabolism to illuminate the biophysical dimension of changing practices related to fishing on the Faroes. The main reason for why I find this dimension important to include is because of issues related to the asymmetrical nature of metabolic flows in and between societies, which is best expressed in the concept of *ecologically unequal exchange*.

It is so that empirical studies, such as ecological footprint analyses and material flow analyses (MFA)[5] of the EU, support the hypothesis that world-system theorists for long have argued, namely that there exists an unequal exchange between the so-called developed countries and develop*ing* countries (*Ibid.*, 68). In other words the phenomena that André Gunder Frank is famous for having articulated, that is, "the development of underdevelopment" (*Ibid.*, 33) appears to be an empirical fact.

3.1.2 Machine fetishism

In my analysis I am inspired by Hornborg, who captures not only the political-economic and ecological dimension of unequal exchange of metabolic flows, but also its phenomenological and epistemological dimension:

> [W]e are caught in a collective illusion about the nature of modern technology. We do not recognize that what ultimately keep our machines running are global terms of trade. The power of the machine is not of the machine, but of the asymmetric structures of exchange of which it is an expression…the most central "fetish" of capitalism is nothing less than the industrial machine. To make this clear, it is necessary to uncover the material asymmetries implied in contemporary patterns of global trade. I argue that these asymmetries are systematically concealed from view by the hegemonic, economic vocabulary. It is only in making these material dimensions of exchange transparent that it becomes possible for us to assess the *moral* dimension of the global market economy. A cultural critique of industrial capitalism might begin by recognizing that economic exchange (and the vocabulary and institutions that orchestrate it) is *a part of the technology* (Hornborg 2001, 3 *original emphasis*).

3. A physical trade balance is basically a subtraction of "exports from imports, in reverse to monetary trade balances. Deficit in this context refers to the loss of biophysical resources" (Sing 2003, 66).
4. As far as I could tell from the databank of Statistics Faroes Islands (http://www.hagstova.fo), statistics on imports are limited to the tons of fossil fuels that flow into the country; other imports are only available in monetary values. On the export side there is data on the tons of fish exports, and these are undoubtedly connected to Faroese imports of fossil fuels. Something which is also reflected by the fact that Faroes are amongst the top 20s in world statistics on CO2 emissions per capita (Lastein 2002; Wikipedia 2011).
5. Material flow analysis is a method used to analyse material flows in and out of a defined system (for instance a village, city, country, industry).

Hornborg's concept of *machine fetishism*, defined as "the inclination to view the technological capacity of a given population as independent of that population's position in a global system of resource flows" (Hornborg 2009, 257), emphasises how the material dimension of modern technology, that is, energy (fuel and human labour) and matter (natural resources) to keep it running, is hidden and suppressed by the ideological dimension of machine technology manifested in the language of economy. At the core of the concept lies that a population's technological capacity in the contemporary world system hinges on that same population's economic power which facilitates access to the material flow of resources. Obtaining economic growth, argues Hornborg, is ultimately the same as increasing ones claims on other people's resources, which is a key necessity to the infrastructure of industrial society. Moreover, since this *technomass* needs specific substances to grow, its existence depends on not being accessible to everyone (Hornborg 2001, 31, 125). Hence, "any attempt to visualize industrial technology as a material reality independent of monetary flows is illusory, for its materiality makes it no less social in constitution, that is, no less dependent on a continuing process of expanding reproduction" (*Ibid.*, 108).

The phenomenon of unequal exchange is also conceptualised by Hornborg as *time-space appropriation*, emphasising how the time and space that a society saves by purchasing more efficient technology, means that somewhere else someone is loosing time and space, as labour (time) is spent and land (space) is degraded and/or resources (space) extracted (Hornborg 2009, 252, 256).

Crucial to Hornborg's argument is *The Second Law of Thermodynamics* which "states that all processes of energy conversion must entail a net reduction of order in the universe. For the earth's biomass, this simply means that, in reproducing the structure of living things, high-quality (high ordered) solar energy is degraded into heat. For the industrial technomass, on the other hand, it means that the Earth's limited stocks of mineral energy are disordered into waste and pollution" (Hornborg 2001, 94).

Although, we know from the *First Law of Thermodynamics* that energy never disappears, in the sense that even in societies characterised by what Singh calls a basic metabolism there is a degradation of energy, the proportions are of an entirely different degree in societies characterised by an extended metabolism that derive their order from a finite inorganic realm, most notably fossil fuels. Moreover, since industrial goods represent significantly less order of energy than the energy that went into their production then "imports and exports are to the industrial infrastructure what

eating and discharging are to organic life" (*Ibid.*, 93).

Thus, I argue that the fact that economic "growth and technological development in some parts of the world system are...organically linked to underdevelopment and environmental deterioration in others" (*Ibid.*, 33) makes it crucial to approach "the world as a system in which one country's environmental problems may be the flip side of another's country's growth" (*Ibid.*).

3.2 Human-environmental relatedness: meanings and practices

> In convincing us that the world is composed of distinct subjects and objects he insulated us from concern with the world and made it next to impossible for us to regard the world as anything but a storehouse of material. But Descartes was wrong (Evernden 1985, 54).
>
> Destruction of meaning and the destruction of ecosystems are two aspects of the same process (Hornborg 2001, 184).

3.2.1 Phenomenology

Whereas conventional science attempts to describe the relation between the *thing* called humankind and the *thing* called the world, phenomenology aspires to describe the experience of *being* (Evernden 1985, 65). Inspired by the phenomenological approach I have enquired into changing perceptions of the seascape and meanings of economic practises (monetary and non-monetary) that Faroese have engaged in throughout history.

Anthropologists, such as Hornborg (2006), Escobar (2008), Ingold (2000), Bird-David (1999) and Blaser (2009) have argued and through ethnographic research documented that different cultures have different ways of relating to the environment. These so-called relational ontologies and epistemologies suggest that the onto-epistemological[6] divide between 'that which thinks and that which is being thought of' (Evernden, 1985), the subject and the object, the knower and the known, the mind and the body, is an unusual exception not found in many other contexts than modern western culture. Many scholars have also argued that there is reason to presume that the environmental dilemma of industrial capitalism is a consequence of this historically specific philosophical divide; metaphorically illuminated with the image of the world as a globe (See e.g., Hajer 1995, 9; Ingold 2000, 209-218).

6. Whether intentional or not, these above mentioned scholars have inspired me to think of ontology and epistemology as two sides of the same coin so to speak. By onto-epistemology I thus suggest that being and knowing cannot exist independently of one another: in being we know and in knowing we are. The way I understand the point on practical engagement raised by these scholars is that the relation between being and knowing is *doing*.

Ingold, for instance, questions the notion of the 'global environment' asking how humans and other beings possibly can be surrounded by a globe, and if it would not be fairer to say that it is humans who have surrounded the globe. His point is that the conception of the environment as a 'global environment', however well intentioned, has moved us, who once stood at the centre of the world (life-world) outside to become circumferential and finally expelled from it (Ingold 2000, 209). With the world conceived of as a globe, he argues, the world becomes a Cartesian *object* of appropriation rather than an environment to inhabit. This way, he argues, we do not belong to the world, but rather the world belongs to us, expressed for instance in discourses on property rights and management of natural resources (*Ibid.*, 214).

To this, I find particularly illuminating Tim Ingold's ethnographic account of the Ojibwa people for whom life is a condition of being rather than a property of objects (*Ibid.*, 97). To the Ojibwa knowledge is acquired by engaging in the environment, rather than being an accumulation of mental content. Knowledge this way comes to be grounded in experience and intuition, conceptualised by Ingold as *a poetic of dwelling* emphasising the coupling of one's awareness and nature as non-separate issues (*Ibid.*, 11, 99). Thus while the Cartesianist approaches the "environment as an external world of nature that has to be 'grasped' conceptually and appropriated symbolically within the terms of an imposed cultural design" (*Ibid.*, 42), the *dweller* approaches and knows its environment through practical engagement.

All these critical ideas on how we conceptualise and relate to the environment serve as intellectual inspirations as I seek to understand how Faroese perceptions of the seascape and relations to the marine environment have changed throughout Faroese history.

3.2.2 Diverse economies

Inspired by Karl Polanyi's understanding of the economy as an instituted process, as well as Stephen Gudeman's understanding of the science of economics as a historical discourse, which constructs western economic models as universals (whether these are neoclassic or Marxist), Escobar challenges the tendency to understand all other economic realities (herein subsistence economies, cooperatives, solidarity economy, etc.) as opposite, subordinate or com plementary to capitalism. He argues that these are never fully understood as economic practises in their own right; as economic differences (Escobar 2008, 73-74). Intrigued by J. K. Gibson-Graham's notion of diverse economies, Escobar proposes an anti-essentialist view of the economy "in which the economy constitutes a realm of heterogeneity and difference rather than a monolithic embodiment of an abstract capitalist essence, [which] makes visible noncapitalist practices and

leads to a rethinking of production from cultural and ecological perspectives" (*Ibid.*, 102).

Crucial to my approach to the economy is to capture not only the structural forces of the market, but also the non-monitised practices that people engage in. This allows me to not only see the wage labourer at the fish factory, but in addition to that a person, which when not working at the fish factory engages in a number of other economic practises for instance tasks related to sheep-rearing. These are all productive practices that are not necessarily dictated by the market, but which manifest meaningful relationships between local people and their environment.

I argue that emphasising a diverse economies framework is a useful tool for grasping the different economic constellations that have characterised productive and reproductive practices throughout Faroese history. It is a fruitful way to stress that although the market economy has acquired more and more importance on the Faroes, people still engage in all kinds of 'noncapitalist'[7] practises whose significance is undermined by capitalocentric analyses of the economy.

This approach to the economy is very much inspired by Gibson-Graham (2006) who argue that emphasising a diverse economies framework serves an ideological purpose as it allows and empowers the critical scholar to move beyond dystopian analyses of capitalism as an essential and universal phenomenon to which everything else stands in relation to.

4. Changing modes of fishing and perceptions of the seascape

In trying to detect how Faroese meanings and practices related to fishing have changed in the course of history, I employ as an analytical framework Pálsson's distinction between similarities and differences of fishing systems by emphasising the '*social* context of production' (Pálsson 1991, 43). This means that I will be looking on the one hand at the mode of circulation (whether the production is 'for exchange' or 'for use') and on the other the mode of access to resources.

To the mode of access, Pálsson argues that in addition to knowledge of ecology and technology, it is important to take into account the *social* space in which spatial managing of fishing occurs. In other words Pálsson tries to complement the spatial criteria of 'territoriality' in relation to fishing, that is,

7. The way I understand and use Gibson-Graham's concept of noncapitalism is as a constructed discursive binary to the concept of capitalism that serves "the deconstructive project of theorizing a "diverse economy"...we [Gibson-Graham] start with the binary hierarchy of capitalsim/noncapitalism and work to identify the similarities between, and differences within, the two categories. This deconstructive process explodes the binary, yielding a queer or radically heterogenous landscape of economy and a new ground for pluralistic economic politics" (Gibson-Graham 2006, xxi-xxii).

the distinction between 'open access' and 'restricted access', with a social criteria that considers the social system of the production, which makes it possible to distinguish between 'tenure'[8] and 'closure' (*Ibid.*, 48). In other words, according to "the distinction between 'open access' and 'closure', the appropriation of fishing space is only a matter of *degree*. Some territorial claims may be strong while others are weak. The contrast with 'tenure', on the other hand, is a matter not of degree but of *kind*. What counts is the social relations involved, the presence or absence of relations of property" (*Ibid.*, 49-50).

In combining the modes of circulation and access to resources, Pállson distinguishes between four kinds of production systems characterising different fishing societies.

Mode of circulation / Access to resources	For use	For exchange
Non-ownership	1	3
Ownership	2	4

Figure 3: Pálsson's social model of fishing economies (table inspired by Pálsson 1991, 69)

In the following I will situate Faroese modes of fishing according to Pálsson's classification, as I apply some of the concepts introduced in chapter three to understand and illuminate crucial human ecological relations and implications of the different historical periods of fishing on the Faroes.

4.1 Bátsbandið: A system of tenure

Without much detailed evidence about how the first settlers organised their production, my interpretation of historical scholarship on fishing on the Faroes suggests that access to fish resources from at least the 16th century until the 19th century was socially regulated through a system of tenure that organised access and property relations of sea resources in ways that fit in Pálsson's second category.

Until the second half of the 19th century two bonds characterised social relations of production on

8. Pálsson defines tenure property relations as "means of disproportionately appropriating resources within given boundaries" (Paĺsson 1992, 48).

the Faroes, respectively a bond of servitude[9], which prevented one to marry unless one had served for four years and owned ½-1 *mørk* of land[10] and *Bátsbandið* (i.e., the boat bond), which was a system that obliged farmers to hold and crew boats with the male gendered village peasantry. Joensen (1982) argues that the system was quite sensible; just like a peasant had to obey when called upon to go fishing, the farmer/boat-owner also had a responsibility in keeping the boat in good conditions, just as he was obligated to crew the boat with members of the peasantry. Moreover a peasant who had a place on a boat did not risk loosing his place, which must have been convenient for those that did not own land (Joensen 1982, 258-259).

In relation to access, it is worth noting that although peasants were allowed to have small boats on their own, they were still tied by the bond and obliged to crew the bigger boat when called upon (Degn 1929, 7). Relations of production in the seascape were thus intimately related to relations of production on the landscape in the Faroese infield-outfield cosmology (For more on this consult Appendix 1).

This is also apparent in a letter from 1609 that the *Løgting*[11] sent to Christian IV, wherein it complained that Scottish ships had gathered:

> Under Your Grace's land and islands and with their small ships sail or row through the land and into all the fjords and harbors, fish and harrow within the fjords and outside them the poor livelihood which we poor folk with our small boats are able to attend to in such places just as on all our fishing hills and banks (Fiskeklakke og grunde). As soon as they see us in our small boats sitting and fishing thus, at once they run out in great numbers, and there right close against us they take away our poor livelihood, which the Almighty God is thus pleased to allow us poor folk; for they all have nets with which they catch herring, and they use the same herring as bait for their hooks, upon which the fish run; but we poor folk have no herring. Wherefore they can fish, but we lie near them and get nothing at all, whereat this poor land, if this shall be for a long time, will in time come upon the very greatest wretchedness, so that we cannot buy anything for our domestic needs and are unable to pay our rents and taxes (Zachariasen (1961) and Joensen (1953) quoted in Wiley 1987, 30).

This letter argues Wiley (1987) shows how the Faroese conceived of fishing grounds as extensions of the land; as part of the outfield. So in the same way that a village had exclusive rights to let their sheep graze on particular areas in the *hagi* (outfield), they also had exclusive rights to particular fishing grounds. In this way the argument that the Faroese were trying to make was that the King, which was not only the Faroese sovereign but also an important landowner, ought to have every

9. The content of this bond changed throughout Faroese history and was finally repealed completely in 1846 (Degn 1929, 3-4).
10. For clarification on Faroese land measurement consult Appendix 1.
11. The *Løgting* denotes Faroese political authority, which has changed shape and content throughout history; in the Norse period it was a yearly popular assembly of free men, later it consisted of representatives appointed by the King (Wiley 1987, 9, 11). Today it is an elected house of representatives, which is democratically elected every four year, and which appoints the executive *Landsstýrið*.

interest in preventing this trespassing in the outfields. They were thus asking the King to "protect the basis of their internal economy, fishing, just as his laws preserved the system of land tenure" (*Ibid.,* 30). Furthermore, the argument appealed to the King's self-interest as protecting the fishing grounds would secure his rent and tax income. It appears that the king did speak to his brother-in-law James VI of Scotland, since in 1618 James forbade his subjects "to fische within sight of land of the Ile of Fara" (Pedersen (1968) quoted in Wiley 1987, 31) which became defined as four miles (16 nautical miles) from the shore.

Thus we can say that access to sea resources was on the Faroes closely related to access to land resources through the conception of fishing grounds as part of the infield-outfield cosmology, of which the production system of *Bátsbandið* was an intrinsic part. We can hence conclude that Faroese fishing practices, at least from the 16th century and until sometimes in the 19th century fit under Pálsson's second category of production system characterised by 'ownership' and 'for use'.

4.2 The introduction of open access

With the introduction of free trade in 1856 and the repealing of *Bátsbandið* in 1865 (Joensen 1982, 270) the mode of access to sea resources went from being restricted access regulated through *Bátsbandið* to open access without regulation. Moreover, since it was now possible to sell the fish catch for money to local merchants, people became more engaged in fishing, and gradually the mode of circulation related to fishing changed from being 'for use'[12] to be more and more 'for exchange'.

However, it should be emphasised that there was no linear change from a subsistence peasantry to a commercial fish society. The infield-outfield cosmology continued to thrive in what was still a peasant society so that along with animal husbandry (sheep and cattle), bird gathering and catching, barley and potato[13] cultivation, fishing continued to play an important role to Faroese internal subsistence economy all the way through WWII (*Ibid.*, 270). What was increasingly changing was as noted above its mode of circulation.

In the period from 1865 until WWII Joensen distinguishes between three kinds of production

12. Faroese had of course also traded some fish before, but except from the period in 1300-1600 where they traded fish with the Hanseatics, fishing had been almost exclusively 'for use' (Joensen 1996). The letter above thus dates (1609) to a period of transition in Faroese fishing history.
13. The potato came to the Faroes in 1780, but it was not really grown until 1811 (Wiley 1987, 69).

systems related to fishing of which I will shed light on two: *útróður* and the smack-fisheries[14].

Útróður, that is, 'rowing out' denotes fishing practices that were carried out by the traditional rowing boats which had characterised fishing practices for ages. This kind of fishing was the first type of commercial fisheries on the Faroes. Although the distributional system remained more or less the same as it had been with *Bátsbandið*, wherein there was one part to every fisher and one part to the boat, from a machine fetishism point of view it is worth mentioning that with the arrival of motorised boats and the installation of motors on the rowing boats, which became more and more common in the beginning of the twentieth century, the boat part increased, since now fuel costs had to be covered. In conjunction with this change in the metabolic flows of fishing there was also a significant change in the social relations of production, since now the boat was not necessarily owned by a farmer, but was sometimes collectively owned by up to fifteen households, typically related by kin. Eventually though, the merchants came to own most of them (Joensen 1982, 283, 319, 331; Joensen 1987, 89-90). The success of *útróður* argues Joensen (1987, 46) was that it was easy to combine with the duties on land pertaining to the infield-outfield cosmology (see Appendix 1).

Although increasing mechanisation of *útróður* did make the fisheries more effective, the real transformation in social relations of fishing came with the introduction of smack fisheries[15] in the last quarter of the nineteenth century. Initially the growth of the fleet was slow, but from the 1890s when English and Scottish fisheries converted to steam trawlers, Faroese purchased their old smacks cheaply (Joensen 1996, 33). The first smacks were purchased collectively by fishers, but as the merchants started to accumulate capital through a truck-system[16] they expanded their business by investing in smacks and motorised *útróðrar*-boats, turning them into the first Faroese capitalists (Joensen 1987, 114-115).

The 'smack-period' led to a multidimensional transformation of social relations of production. The working conditions on the smacks were markedly different than on *útróður*. Now the smack-fishers were out fishing all the summer months and only home in the winter. Joensen argues that the

14. The third mode of fishing, which I will not touch upon here, is what Joensen calls til lands; 'to land'. This denotes the practise of bringing *útróðrar*-boats to Iceland, New Foundland and later also to Greenland and fish there for longer periods of time in the summer (For more on this see e.g. Joensen 1985).
15. I would define the smack as a time specific wooden sail boat which could crew at least twenty people. The first Faroese smack "Fox" was purchased in 1872 (Joensen 1982, 270).
16. The first merchants expanded their business by on the one hand engaging in unauthorised banking business, which provided higher interests on deposits than the first Faroese savings bank (*Færø Amts Sparekasse* of 1832) and on the other hand by consistently postponing wage payments and by paying in kind rather than money to the extent that this was possible. This so-called truck-system made it possible for the merchants to accumulate a substantial amount of capital (Joensen 1987, 114-115).

long periods away on the smacks transformed the fishers' relation to the land and decreased their interest in agriculture at home (*Ibid.*, 46-47). He argues that "These people assumed more and more, both mentally and socially, the role of seamen" (Joensen, 1996, 34).

Thus the smack-period led to significant changes in the spatial, social and cosmological relations between humans-land-waters. Contrary to the social relations of fishing that had been based upon traditional regional relationships, the smack crews were composed of men from all corners of the Faroes. Moreover the distribution of the catch on the smacks differed markedly from the fairly egalitarian distribution characterising traditional *útróður.* The smack-crew received a monetary wage per piece of fish that they pulled out of the water; on a weekly basis the catch was counted and noted for the account. This would sometimes lead to considerable inequalities between the fishers, and led to a lot of competition, which also gave rise to superstition about fishers' luck (*Ibid.*, 34-35).

Also there were significant changes in the relations of production on land. The fact that the fishers consistently left around the first of March, and came home for a couple of weeks around May/June, and then left to come back around the first of October, did not only affect patterns of reproduction[17], but also gave their spouses a much heavier workload and more responsibilities at home (Joensen 1987, 66-67, 93).

Another important transformation related to the early commercial fisheries was the processing of clip-fish[18], that is, dried salt cod: this consisted in the feminine gendered labour of washing and drying fish[19]. Joensen distinguishes between local and migrating *fiskagentir*, that is, fish-girls as they were called. The local fish-girls were a diverse category of women in all ages, married and unmarried that resided in the villages where the fish was landed, while the migrating fish-girls were primarily young unmarried women that came from all corners of the country[20] (*Ibid.*, 95, 99-100).

From a phenomenological perspective, I would argue that the spatial and temporal distance

17. Almost 45 percent of all the Faroese children were born in July, meaning that they were conceived right after the men returned in the autumn (Joensen 1987, 34).
18. Small-scale clip-fish production started already with the introduction of free trade in 1856, but with the expansion of smack fisheries, more industrialised fish-processing work evolved (Joensen 1996, 36).
19. The washing was paid per every fifty big cods or hundred small fish while the drying was paid per hour of work (Joensen 1987, 95). In the beginning the washing was done outdoors in the shore, in natural pools or in a stream, while later tubs to wash the fish came and in the 1920s washing sheds with running water became more common. The drying of the fish was done on *fiskastykkir,* that is, stone-paved fish-areas (Joensen 1996, 36-37).
20. The migrating fish-girls were usually around fifteen years old when they started and stopped to work with fish when they got married at around twenty to twenty-five years. A common feature of these girls was that they were saving money for investments into equipment for marriage, typically a sewing machine (Joensen 1987, 100).

experienced by the fishers and the fish-girls affected their relation to the environment as a 'life-world'. Moreover, as wages now provided means to purchase the increasing amount of commodities available either at the local merchant or through hyper-market mail-orders (Joensen 1987, 83-84), it is reasonable to suggest that Faroese socio-economic metabolism also changed from having been relatively basic to become more extensive.

During this same transition, the spatio-temporal exploitation 'embodied' in the commodities that now became a part of Faroese socio-economic metabolism was obscured by market values, making the commodity appear independent of human labour and material flows.

This is not to say that people's consumption patterns were completely mystified from one day to another, but to note a that there was a jump in the historical processes of increasing detachment and decontextualisation of the human ecological relation between the person and her socio-natural life-force acquired through consumption.

Because the Faroes at this time in history were clearly engaged in what has been dubbed a 'double economy' (Hoydal and Haldrup 1994, 120), it is easy to emphasise the usefulness of Gibson-Graham's diverse economy framework. We certainly note that despite the commercialisation of fisheries and the increasing reliance on commodities from abroad, the economic base (Gudeman and Riviera, 1990) of most households on the Faroes up to WWII continued to be subsistence based agriculture, whose importance we can discern as Danes felt it necessary to implement an Act in 1932 called *Gráa bók* (i.e., the Grey Book) that made it easier for landless Faroese to acquire *trøðir* (See Appendix 1). This made it possible for an even larger proportion of Faroese households to hold a small piece of land, on which they would typically cultivate potatoes and maybe also hold a cow (Joensen 1987, 53-54).

The significance of the economic base which this small-scale Faroese agriculture provided was particularly evident in times of down-swings of the ever more dominant market economy. This became clear for instance in Tvøroyri, following the Wall-street crash in 1929 and the subsequent Spanish civil war in 1936[21]. Tvøroyri was the most important economic centre of fish-production at that time, but it was also a *niðurseturbygd* (i.e., a new village, see Appendix 1) in other words a village without any rights in the outfield. So down-swings were particularly felt in places like Tvøroyri, where people lacked a subsistence economy to fall back on (Hoydal and Haldrup 1994,

21. Spain and Portugal were major destinations for Faroese exports of clip-fish, where it is locally known as *bacalhau*. The first building in Tórshavn that housed indoor fish processing is still locally known as *Bacalao*.

120). Joensen quotes from a report on Faroese business conditions made by a committee of the Danish State Department in 1939 which elucidates and confirms the importance that small-scale agriculture must have had:

> Characteristic of the Faroese farming system is the importance of the small [land] use, encompassing a land parcel (trød) of such a size that a family parallel to its job manages to cultivate it and be supplied with potatoes for subsistence and perhaps keep a cow. Of these kind of [land] uses there are approximately 1500, and they weigh quite heavily on a statistic over the agricultural production. For instance it can be mentioned that of the 2147 land-users, which in 1930 held cattle, 1494 had only one cow, this means that around half of the total amount of cows are owned by such small land-users. These relationships give agriculture quite a particular structure, a non-business-oriented touch, which distinguishes it markedly from the organised, industrialised Danish agriculture, and which means that measures of agricultural development to a large extent have a social character (Joensen 1987, 53-54, *own translation*).[22]

Despite a significant transformation in social relations of production through the second half of the twentieth century, making relations between employers/ship-owners and workers/fishers/fish-girls more important, which became evident as people started to get organised in unions[23] (Joensen 1996, 38), the traditional peasant production, with its technological, kin and gender characteristics, distinctive of the infield-outfield cosmology continued to thrive. Moreover, we also note an increasing 'ad hoc' agricultural production from the holdings of *trøðir* (Joensen 1987, 63-64), which clearly indicate the significance of a diverse economy to Faroese subsistence.

With the clip-fish exports to the Mediterranean markets cut off and with the British occupying the Faroes during WWII, Faroese fishing underwent significant changes. Faroese now started to deliver wet fish to British fish auctions, which they purchased in Iceland. Although the number of ships during the war diminished, the lack of fish in Britain gave really good prices from which Faroese fishers accumulated a lot of money that "brought about a new feeling of economic and material independence" (Joensen 1996, 39-40). Most of this accumulated capital was after the war invested in old English steam trawlers, which gave Faroese fishers access to the whole of the Atlantic Ocean,

22. "Karakteristisk for det færøske Landbrug er netop Betydningen af det lille Brug, omfattende en Jordlod (Trø) af en saadan Størrelse, at en Familie, ved Siden af at udføre sit Erhverv kan overkomme at dyrke den op og derefter kan forsynes med Kartofler til eget Forbrug og eventuelt holde en Ko. Af saadanne Brug findes der ca. 1500, og de vejer ganske tungt paa en Statistik over Landbrugets Produktion. Eksempelvis kan nævnes, at af de 2147 Landbrugere, der i 1930 holdt Køer, havde 1494 kun een Ko, d.v.s., at henved Halvdelen af Køerne ejedes af saadanne smaa Landbrugere. Dette Forhold giver Landbruget en ganske Særlig Struktur, et ikke-erhvervsmæssigt præg, som adskiller det vidt fra det organiserede, industrialiserede danske Landbrug, og som bevirker, at Foranstaltninger til Landbrugets Fremme i vidt omfang faar en Social Karakter" (Joensen 1987, 53-54)

23. The skippers were the first to organise in 1896 *Føroya Skiparafelag* (later *Føroya Skipara og Navigatørfelag).* The next ones to get organised were the ship-owners which in 1909 founded *Føroya Reiðarafelag*. In 1911 the fishers organised in *Føroya Fiskimannafelag* and in 1915 the Faroese proletariat, which was based in Tvøroyri started to organise in a workers' union. In 1922 the fish-girls in Tvøroyri got organised and later local worker's unions began to evolve in other corners of the Faroes and in 1925 *Føroya Arbeiðarafelag,* that is, Faroese Workers' union, was founded (Hoydal and Haldrup 1994, 127). The last to get organised in relation to the fish industry were the Faroese fish exporters which joined forces in 1936 (Joensen 1987, 99).

but which at the same time proved highly unprofitable because of high coal prices; a poignant contradiction that led the Faroes into a period of economic stagnation. We thus have a clear example of Faroese machine fetishism, whose dimension of technological inequalities becomes apparent when we also consider that the latest fish technology on the global market at the time were diesel-powered trawlers.

I would furthermore argue that with the introduction of steam trawlers, Faroese socio-economic metabolism was significantly altered; it was now completely dependent on an inflow of non-organic forms of energy. The Faroes were now more and more contributing to the multiplications and widening of metabolic rifts[24] in the world system.

With the home-rule act of 1948[25] Faroese politics acquired a new *raison d'etre* so to speak, which made the Faroese economic recession of the 1950s the first real challenge to Faroese political-administration. Together with representatives of the fisheries the Faroese government made a series of institutional rearrangements that brought about a modernisation of the fisher-fleet. Analysing the intimate and co-dependent relationship between Faroese politics and Faroese fisheries that since then has evolved is beyond the scope of this paper[26]. What is important at this point is just to note that from the 1960s Faroese government subsidies have been the backbone of the technological development of the Faroese fisher fleet[27] (Skorini and Helgason 2009, 51).

If we remember Pálsson's model of production systems related to fisheries that I introduced in the beginning of the chapter, then we may say that at this point in time, that is, post-WWII, Faroese fisheries were characterised by the third category where there is open access to sea resources and where the mode of circulation is 'for exchange', whose telos in a capitalist mode of production, which now dominated the Faroes, is ultimately capital accumulation, in neoclassic economic terminology that is economic growth.

This model of production which Faroese were investing money into was however interrupted by the

24. I use the concept of metabolic rift similar to the way Foster has used it to denote the metabolic disconnect between soil ecology and capitalist agriculture. Inspired by Clausen and Clark (2005) I use it in a wider sense to illuminate the rupture in nutrient cycles or metabolic processes caused by industrial capitalism, herein also the relation between marine ecosystems and industrial fisheries (Clausen and Clark 2005, 25-27).
25. When Danes acquired their constitution in 1844 the Faroes became a Danish county by default. In 1948 the Home Rule Act constituted the Faroes as a self-governing part of the Danish Kingdom (For a brief historical overview of changing political relations on the Faroes see Appendix 2).
26. For more elaborate analyses of this in Danish, see e.g., Hoydal and Haldrup (1994; 1995) and Skorini and Helgason (2009).
27. The Faroese government subsidies to the fisheries increased from 0,8 mio DKK in 1955 to 14,5 DKK in 1969 (Skorini and Helgason 2009, 51).

internationally turbulent decades for fisher nations world-wide in the 1960s and 1970s, as the so-called 'tragedy of the common'[28] became acute. In conjunction with the phenomenological shift that happened with the satellite image of the world as a globe 'to be managed by humans' (Ingold, 2000), the overexploited fishing stocks lead to international disputes over access to fishing grounds, and following the UN convention "The Law of Seas", in 1977 the Faroes, along with most countries in the world, implemented an economic exclusion zone (EEZ) of 200 nautical miles from the shore. Figure 4 illuminates how the North Atlantic Ocean has since then been expropriated and distributed between nations.

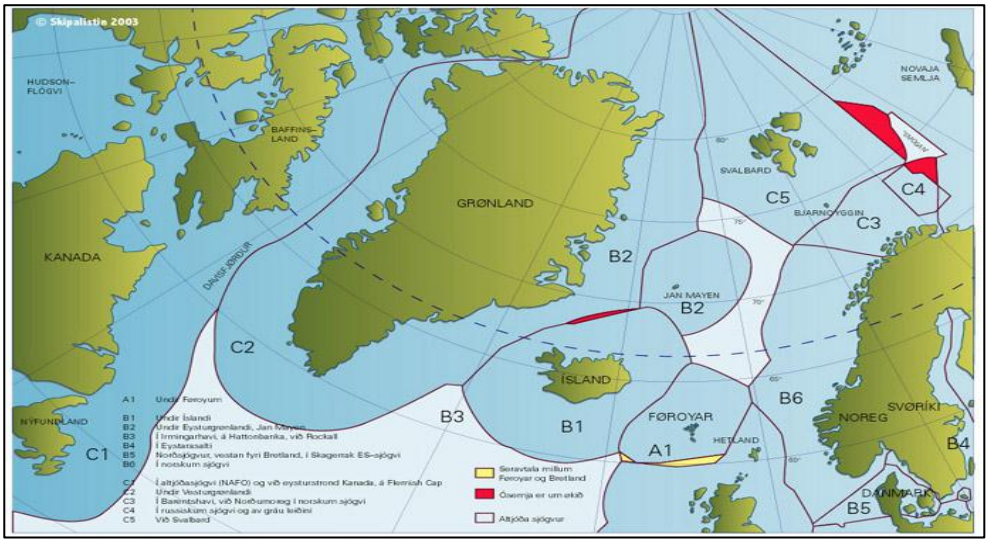

Figure 4: Map of fishing areas in the North Atlantic (Fishin.fo (2011c)). This image is reprinted with the kind written permission of its copyright holder Skipalistin.

This meant that the high-tech fleet of distant fisheries, which Faroese had just invested in, now had their access to marine resources reduced from open access to the world's ocean to a "petite" 200 nautical miles around the Faroe Islands[29] (Hoydal and Haldrup 1994, 159; Skorini and Helgason 2009, 52-53).

28. In this thesis I follow in the footsteps of scholars that find Garth Hardin's hypothesis of the 'tragedy of the commons' problematic. Following Bonnie McCay, Clausen and Clark for instance, argue that rather than being the result of oceanic common-property relations, overfishing is "the result of problematic social institutions and economic relations" (Clausen and Clark 2005, 424). Similarly Malm (2001) problematises the 'western' assumption that common property is synonymous with open access, as he points out that what Hardin refers to as the 'tragedy of the commons', is in the case of Tonga best conceptualised as a 'tragedy of the commo*ners*' resulting from modern commercialisation of fisheries. In a similar vein Pálsson argues that the notion of the 'tragedy of the commons' is problematic since it is based on a mythology of resource use that does not reflect the complex ways people have managed access to marine resources throughout history. Pálsson further makes the point that "[a] scholarly model of nature and resource-use like the tragedy of the commons is no more a straightforward or 'factual' representation of reality, independent of the social context in which it is produced, than the 'folk' models of indigenous producers" (Pálsson 1991, 155).
29. In addition to this Faroese have obtained fishing rights to distant waters through negotiations on historical fishing rights, and in exchange for fishing rights in Faroese waters (For more on this see Fishin.fo (2011d)).

4.3 Machine fetishism on the Faroes

If we follow Pálsson's model dogmatically the introduction of the 200 EEZ in 1977 meant that the Faroese fisheries now would operate according to the production system denoted by category four, where access to resources is restricted through ownership (national property relations) and the mode of circulation is 'for exchange'. However, unlike Iceland, which started taking measures to manage their 'oceanic property' to prevent overfishing with the implementation of a TAC quota system in 1983 (Pálsson 1991, 135), the Faroese strategy was markedly different. In the following I argue that the production system characterising Faroese fisheries from 1977-1994 is best illuminated through Hornborg's concept of machine fetishism.

With the seascape reduced to 200 nautical miles from the shore one would have thought that Faroese were going to introduce some kind of mechanism to regulate the fisheries in their now clearly demarcated seascape. Yet, apart from some insignificant technical restrictions (e.g., on mesh sizes) there was no attempt to regulate catch sizes (Skorini and Helgason 2009, 53-54). Rather the response on the Faroes was quite the opposite: the access to resources that had been lost had now to be won back through nothing less than what was assumed to be the generative 'power of the machine'. This, I would argue, explains the rationality behind the story of how the Faroes acquired one of the most technologically efficient fisher-fleets in the world.

This quote from the Fisheries Yearbook of 1987, which was distributed to Faroese trade partners, illuminates Faroese relation to fishing in the booming 80s:

> *In the Faroes there are several fish factories which are among the most modern in the world, and we have a fishing fleet which is the most modern in the world.*
> *For centuries fishery has been the lot of the Faroese people, and fishery has developed us into a unique nation always looking to the future, and this is what has made the Faroese fishing industry to what it is today* (Bláberg and Jacobsen (1987) quoted in Hoydal and Haldrup 1994, 179, *italics in original*).

Many scholars have suggested a number of socio-institutional and economic explanations for the economic crisis that hit the Faroes in the early 1990s, amongst which a key blame is given to the so-called *Ráfiskagrunnurin* (the wet-fish fund), whose function was to even out international fluctuations in fish prices, taking on the role as a price stabiliser[30] between the fishers and the processing factories by putting "a levy on prices in good years and price subsidies in bad years" (Hannesson 1996, 52). Being managed by representatives of the fish industry, and having its

30. In addition to this the fund also encouraged fishing of alternative species to the limited stocks of cod and haddock through price subsidies (Hannesson 1996, 52).

liquidity secured by the government, the fund, not surprisingly, had an easier time paying subsidies when times were bad than levying prices when times were good. The wet-fish fund and other Faroese subsidy schemes made the Faroese fisheries appear much more productive than they were, which in turn encouraged even more investments (Skorini and Helgason 2009, 55-56; Hanneson 1996, 52-53). Obviously this 'corporate plan economy', as economists conveniently have dubbed the period, had to crash at some point, and between 1992 and 1993 both of the Faroese banks[31] went bankrupt, but were 'rescued' through an economic adjustment programme enforced by IMF (International Monetary Fund) and the Danish state. Subsequently a large proportion of the fleet along with twenty fish-processing factories went bankrupt (Hoydal and Haldrup 1994, 183-184; Skorini and Helgason 2009, 62).

Since the system also worked in a way that made it possible for the banks to lend a substantial amount of money out to people from which they could accumulate substantial interests, a lot of people ended up taking huge loans in this period, since according to the news and the mood of the eighties, things were really going for the Faroes. Hoydal and Haldrup tell the story about how "People were directly hauled in from the streets to take loan for whatever they wanted. The construction market exploded and the prices increased both on houses and lots" (Hoydal and Haldrup 1994, 171 *own translation*)[32]

Although I was only around ten-twelve years old at the time of the crisis in the early 1990s, I still remember experiencing a sudden change of mood. The same people, which in the summers would go on family charter trips in the Mediterranean, all of the sudden had lost their house and had to migrate to Denmark in the search for new jobs and new lives. The radio and the TV brought the same kind of tragic stories of a nation in depression, so to speak. The crisis obviously brought about a tectonic shift from people living out a highly conspicuous consumer culture to a general embarrassment and feelings of shame over the levels of consumption that had characterised the 1980s on the one hand, but on the other as Hoydal and Haldrup point out rage towards the political system which finally expressed itself in deep apathy at election time (*Ibid.*, 187).

This crisis is popularly referred to as the bank-crisis and my experience is that the ecological dimension of the crisis is understood as just that 'a dimension of it'; an aspect of what people

31. The banks were called *Sjóvinnubankin,* that is, the Seaindustry bank and *Føroya Banki*, that is, the Faroese Bank. Later these banks were merged together into Føroya Banki. Recently, Føroya Banki had an identity shift and changed its name to *Bank Nordik*, which reflects the Nordic character that the bank seems to be developing, for instance through its recent purchase (May 2011) of the Danish bank *Amagerbanken*.
32. "Folk blev direkte halet ind fra gaden for at tage lån til hvad som helst. Byggemarkedet eksploderede og priserne steg tilsvarende på parcelhuse og byggegrunde" (Hoydal and Haldrup 1994, 171).

understand as a crisis of economic mismanagement. From a human ecology perspective, I would argue that the crisis provides a lucid example of how machine fetishism and the cornucopian growth paradigm (Hornborg, 2001) undermined marine ecosystems, creating new metabolic rifts and amplifying those that already existed.

The peculiar distribution of the technomass that came to characterise the Faroes would undoubtedly make many world-system scholars scratch their heads. At the heart of the particular character of Faroese technological modernisation is the discourse and development strategy of *Bygdamenning,* which means village development. Hoydal and Haldrup (1995) have suggested that as economic and technological modernisation processes had started to dominate Faroese fisheries all the while a strong egalitarian village mentality with roots in the infield-outfield cosmology continued to thrive, Faroese development discourse gained the particular ethos of *bygdamenning*.

> *Just like the fish seek towards the banks, where the feed is, so people will seek towards the places, where jobs can be found. If we therefore want to maintain a spread settlement pattern on the Faroes and avoid that all Faroese move to Tórshavn, then we must create workplaces in the villages. This has been the most important principle behind the Faroese business* [politics] *and regional politics the last decades, or it has been the motive behind that, which we on the Faroes call* ***bygdamenning*** (Faroese politician quoted in Levinsen 1995, 54 *own translation, italics and bolds in original*).[33]

The fact that there are around 48.000 inhabitants on the Faroes, of which around 17.000 live in settlements around Tórshavn, which is followed by the second biggest settlement Klaksvík of around 4500 inhabitants, means that a large proportion of Faroese live in sparsely populated villages ranging from around 1-1000 inhabitants, which are spread around sparsely populated islands (Hagstova Føroya 2011). Statistics show that this was also the case in the 1980s (Hagstova Føroya 1985), so in order for politicians to secure their seats in parliament at the next elections they had to (and still have to) somehow please their home village.

In the context of the booming 1980s, villagers and the politicians representing them in parliament wanted to secure the survival of the village, which in the light of the machine fetishism characterising the time, meant that the means of production in the villages had to be modernised through technological development (incl. infrastructure). This helps to understand why in the end of the 1980s the Faroes had twenty-five fish fillet factories producing the exact same product (Hoydal

33. "*...Ligesom fiskene søger hen til de banker, hvor føden er, så søger menneskene derhen, hvor de kan få arbejde. Hvis vi derfor vil opretholde et spredt bosætningsmønster på Færøerne og undgå, at alle færingerne flytter sammen omkring Tórshavn, så må vi skabe abrejdspladser ude på bygderne. Det har været det vigtigste princip bag den færøske erhvervs- og regionalpolitik de seneste årtier, eller det har været motivet bag det, som vi på Færøerne kalder for* ***bygdamenning***" (Faroese politician quoted in Levinsen 1995, 54).

and Haldrup 1995, 46-47) with a total capacity of processing about 400.000 tonnes per year, while fish landings on the Faroes were never higher than 140.000 tonnes (Hannesson 1996, 55). According to the speakers at the fisheries' assembly in March 2011, fish landings have never been higher than this up until this day.

Of course it follows that with the expansion of fisheries in the 1970s-80s, the material infrastructure reached new heights, with more of everything:[34] ships, processing factories, construction materials, cars, and thus also an increasing dependency on fossil fuels. The proportions of the growing Faroese technomass is well illuminated in Danish geographer's Levinsen's fascination of the island of Kalsoy, which also illuminates the phenomena of *bygdamenning*:

> I can't for instance travel past Kalsoy, or the recorder [flute] as it is called in people's mouths, without looking at the island with a sense of amazement. The island is 18 km long and 1-3 km wide. There are 128 residents distributed between the island's four villages. There are 15 km between the island's northernmost and southernmost village, Trøllanes and Syðradalur. Today these four villages are connected with a road and four tunnels at the total price of approximately 80 million DKK. The road-connections have thus cost ¾ million DKK per inhabitant (Levinsen 1995, 54, *own translation*)[35].

Today many of the processing factories are closed. For instance on Sandoy, an island where the longest road distance from one point to another is twenty-two kilometres and which is populated by approximately thirteen-hundred inhabitants there are three such factories in the three largest settlements. One of these (Sandoy Seafood in Skopun) is still in business in a tough competition for wet-fish with the other Faroese factories. Immediately after Faroe Seafood[36] went bankrupt in the winter of 2010, there was a more steady inflow of wet-fish to the factory in Skopun, Sandoy; this gave one of my informants from Húsavík who works at the factory more steady work hours. However, the last time I heard from her (May 2011) she complained that work hours were again unstable.

Conflicts over resources are thus an every-day experience to Faroese factory owners and managers that daily compete over the fluctuating fish landings at the Faroese fish auction, whose

34. According to Hoydal and Haldrup statistical data suggest that the development of a modern infrastructure on the Faroes started already in the 1960s, herein: electricity, phone network, water supply, roads, ferry boat connections, the public sector: hospitals, schools and so on, and eventually also a tertiary sector of service, transport and trade, as well as an arrival of engross and detail shops (Hoydal and Haldrup 1995, 146-147).
35. "Jeg kan f.eks. ikke rejse forbi Kalsoy, eller Blokfløjten som den kaldes i folkemunde, uden at kigge på øen med en vis forundring. Øen er 18 km lang og 1-3 km bred. Der bor 128 mennesker fordelt på øens fire bygder. Der er 15 km mellem øens nordligste og sydligste bygd, Trøllanes og Syðradalur. I dag har man forbundet disse fire bygder med en vej og fire tunneler til en samlet pris på ca. 80 mio. kroner. Vejforbindelsen har altså kostet ¾ mio. kroner pr. øbo" (Levinsen 1995, 54).
36. Faroe Seafood was a corporation consisting of many fish-processing factories across the country. According to what I have heard on the radio, on the television and read in local news-papers, the bankruptcy of Faroe Seafood left approximately eight hundred people unemployed overnight.

consequences are directly felt by the 'army' of Faroese factory workers; a predominantly feminine labour force 'on hold' as far as I could understand from my informant in Húsavík, who sometimes spends weeks without being called to come to work. This is also the impression I have from other acquaintances I have that work with fish in other Faroese fish factories.

4.4 A non capitalocentric approach: Contemporary sheep-rearing in Húsavík

This immense capitalisation and expansion of metabolic stocks whose existence relies on flows of fossil fuel and human labour, only accounts for one dimension of contemporary Faroese economy, which is much more diverse.

One example is the kin-ordered mode of production related to sheep-rearing in contemporary Faroese villagers. In Húsavík, I learned that in the winter when sheep are on the infields and need to be fed, the families that own land and sheep in the same *hagapart* (part of the outfield) organise the labour of feeding the sheep according to how much land they own, so that for instance if one family owns nineteen *gyllin*[37] then this family has to feed the sheep for nineteen consecutive days until it is the next family's turn, who perhaps only owns five *gyllin* and will thus only feed the sheep for five days, and so on. In Húsavík there is also an appointed shepherd on each *hagapart*, who is paid in kind for his work. Generally speaking there is no monetised motivation for rearing sheep on the Faroes. From what I have understood by talking to people in Húsavík, monetary profits from sheep-rearing are unusual exceptions available to a minority of Faroese land and sheep owners. It appears that the reason why people rear sheep is because they are directly born into and have grown up with it. On the basis of what I experienced in Húsavík this spring (2011) and my knowledge from growing up on the Faroes, I would argue that Faroese village life still has characteristics of the ancient old infield-outfield cosmology[38]. The sharing of space with thousands of sheep and the spending of time on for instance feeding them daily in winter time when the climate is too rough for outfield grazing, carefully attending them in spring time when sheep reproduction takes place, bringing them back to the outfields towards summer, as well as giving them a 'hair-cut' every now and then, are all gendered practises that I have seen villagers carry out basically by default from when they learn to walk until they die. In return villagers enjoy invaluable fruits during the autumn slaughter time when relatives from other parts of the country come to help with the driving of the sheep from the outfield, and in the slaughtering and finally consumption which both encompass a whole set of other gendered practises.

37. For clarification on Faroese land measurements consult Appendix 1.
38. See Appendix 1 for a description.

Describing the practises related to Faroese sheep-rearing is beyond the scope of this thesis, whose focus remains on the practise of fishing. What I just wish to stress is that Faroese engage in a variety of economic practises, one of which is sheep-rearing, which is not a part of the market economy. Property relations of Faroese outfields are still under management as village commons regulated according to village decision-making procedures in the so-called *Grannastevna* (neighbourhood conventions), which are autonomous village assemblies where issues pertaining to landholdings, sheep-rearing and so on are taken up for discussion. According to my informants these assemblies are in Húsavík held when villagers have something that they feel the need to debate.

Some of the other diverse economies related to subsistence that I witnessed or heard people talking about doing during my three months in Húsavík were: knitting (basically all women in Húsavík knit), gathering of wild bird eggs, cutting peat, fishing 'for use', catching birds, cultivating potatoes, cultivating rhubarb, holding geese, whaling. In fact on the bus from Húsavík to Sandur I heard people attributing important meanings to some of these practises:

A: "down? [Denmark][39] I don't know if I would bother to move down"
B: "No, here one has a boat, sheep and 'down' there is nothing to do, so you will just end up sitting on your behind, biting nails"
A: "yeah so it is!"

Finally, I wish to point out that we also benefit from a diverse economy framework in the context of fishing, for instance when we consider the concept of *útróður*, which has a rather ambiguous contemporary meaning. On the one hand it refers to the practise of coastal small boat subsistence fishing, whose origin we can trace already in the first pages of this chapter, while it on the other hand refers to commercial coastal fisheries operating under the fishing-days system (see chapter 5.1 and 5.2). The four informants that I asked in Húsavík had the same conclusion on what *útróður* is as I did, namely that it does indeed mean a lot of different things; they argued for instance that it is the fourth and fifth vessel group in the fishing-days system but that it also means to 'row out for a boil of fish'.

39. The fact that Faroese refer to Denmark as "down" (*niðri*) could be interpreted to express that Faroese are quite attached to place, which is also a central theme in Dennis Gaffin's ethnography called *In Place: Spatial and Social Order in a Faroe Islands Community.*

5. Faroese fisheries anno 2011: Regulatory practices and discourses

> According to the peasants of earlier centuries, fish were responsible for the maintenance of humans. Now, humans are considered collectively responsible for the maintenance of the fishing stocks (Pálsson 1991, 162).

In this chapter I begin by analysing the government rationality of the Faroese fish-regulation system and its technologies of government. In studying the genealogy[40] of governments[41] Foucault introduced the concept of *governmentality* to distinguish the mentalities, arts and regimes of government and administration that emerged with the changing status of liberal government and the recession of the welfare-state ideal (Dean 1999, 2). However, three decades after Foucault's coinage of the term, an abundance of research into governmentality has made it clear that governmentality emphasised a new way of thinking about and analysing all kinds of governments.

In the following I draw from Dean's (2010) appropriation of governmentality as an 'analytic of government', that is, as a framework for thinking about the linkage between questions of government, authority and politics and questions of identity, self and person (Dean 2010, 20). The ethos of this linkage emphasises a focus on how different modes of knowing, in other words the rationality of government, or its 'politics of truth', produce new forms of knowledge, for instance about 'optimal' fishing efforts, which require new domains of regulation and intervention (Lemke, 2002, 7). To this I find further inspiration in Agrawal's (2005) concept of *environmentality*, which emphasises how "knowledges, politics, institutions, and subjectivities ...[...]... come to be linked together with the emergence of the environment as a domain that requires regulation" (Agrawal 2005*,* 226).

With this analytical approach I wish to not only describe the empirical routines of government, but also to emphasise how technologies of government have to be thought. In other words, I seek to understand the rationalities (modes of knowing) that have formed the practices and techniques characterising the fishing-days system. To this I find it paramount to emphasise an approach to power not as " a zero-sum game played within an a priori structural distribution [but rather as] the (mobile and open) resultant of the loose and changing assemblage of governmental techniques, practices and rationalities" (Dean 2010, 40).

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40. I understand genealogy as a technique of critical historical contextualisation characterised by a "*diagnostic* of the present by "problematizing" taken-for granted assumptions and an *anti-anachronistic* refusal to read the past in terms of this present" (Dean 2010, 3). This way genealogy also "upsets the colonization of knowledge by those trans-historical schemas and teleologies which claim to be able to account for the truth of our present" (Dean 2010, 4).

41 Government was by Foucault defined as the 'conduct of conduct', that is, "as any more or less calculated means of the direction of how we behave and act" (Dean 1999, 2)

I have found this to be a good way to understand the rationalities and assumptions characterising the Faroese fishing-days system, which thereby also provides insight into what can be said meaningfully in the context of fishing politics on the Faroes.

This is something that Hajer (1995) also finds important to understand in his methodology of discourse analysis, which I am inspired by in the latter section of this chapter where I approach the idea of sustainable fisheries as a discourse[42]. I have chosen to include discourse analysis because I think discourses are probably one of the most effective technologies of power in representative democracies.

Crucial to my discourse analysis has been to pay attention to how the problem of fish-stock depletion is described in conversations, statements and visual representations. Also I have found it fruitful to draw upon Hajer's concept of story lines, that is, "narratives on social reality through which elements from many different domains are combined and that provide actors with a set of symbolic references that suggest a common understanding" (Hajer 1995, 62) Finally I use Hajer's concept of discourse coalitions, that is, unconventional political coalitions made up of various actors which through the use of specific story-lines come to develop and sustain a particular way of talking and thinking about an issue (*Ibid.*, 65). Important to my argument is to note that although actors united in a discourse coalition "might share a specific set of story-lines, they might nevertheless interpret the meaning of these story-lines rather differently and might each have their own particular interests" (*Ibid.*, 13).

5.1 Faroese expropriation of the sea

> The organic resource in Faroese waters and the rights [achieved through international negotiations]...is property of the Faroese people. Emphasis in the administration of this law is to preserve the resource and exploit and utilise it sustainably in the most sensible way, biologically and economically (Lógtingslóg um Vinnuligan Fiskiskap 1994, §2 *own translation*).[43]

After the crisis in the early 1990s a new era of commercial fishing started on the Faroes. Despite

42. I draw from Hajer's definition of a discourse, which is "an ensemble of ideas, concepts and categorisations that are produced, reproduced, and transformed in a particular set of practices and through which meaning is given to physical and social realities" (Hajer 1995, 44).

43. "Livandi tilfeingið á føroysku landleiðunum og tey rættindi, føroyska heimastýrið við samráðingum hevur rokkið ella eftir altjóða rætti eigur uttan fyri føroysku landleiðirnar, eru ogn Føroya fólks. Dentur verður lagdur á, í umsitingini av hesi lóg, at varðveita tilfeingið og at troyta og gagnnýta hetta burðardygt á skilabesta hátt, lívfrøðiliga og búskaparliga" (Lógtingslóg um Vinnuligan Fiskiskap 1994, §2).

massive protests from fishers and politicians, an individually transferable quota (ITQ) system was in 1993 implemented to regulate the fisheries. The following year, *Løgtingslógin um Vinnuligan Fiskiskap*, that is, the general Act of Fisheries was adopted on the Faroes. This established the legal frame for fishing on the Faroes and thereby a whole new approach to fishing, the purpose of which was to secure a "biologically and economically sustainable fishery" (Skorini and Helgason 2009, 65-66). Extensive criticism of the ITQ system from fisheries, marine biologists and politicians, led to its replacement in 1996 by the fishing-days system which remains in effect today (*Ibid.*, 67-70).

The era of fishing under the fishing-days system fits neatly under the fourth category in Pálsson's model, where the resource-base is subject to rules of ownership and where "Fishing territories are appropriated by regional or national authorities which divide the total allowable catch for a season among producers, often the owners of boats" (Pálsson 1991, 77).

With the introduction of the ocean as a field to be governed and fish-stocks as a resource to be managed carefully by humans, I suggest that the fishing-days system had a profound influence on the phenomenological experience of fishing. This is something that we can visually sense by looking at one out of the many complex mappings of access to fishing grounds (Figure 5), which illuminates contemporary Faroese perception of the seascape.

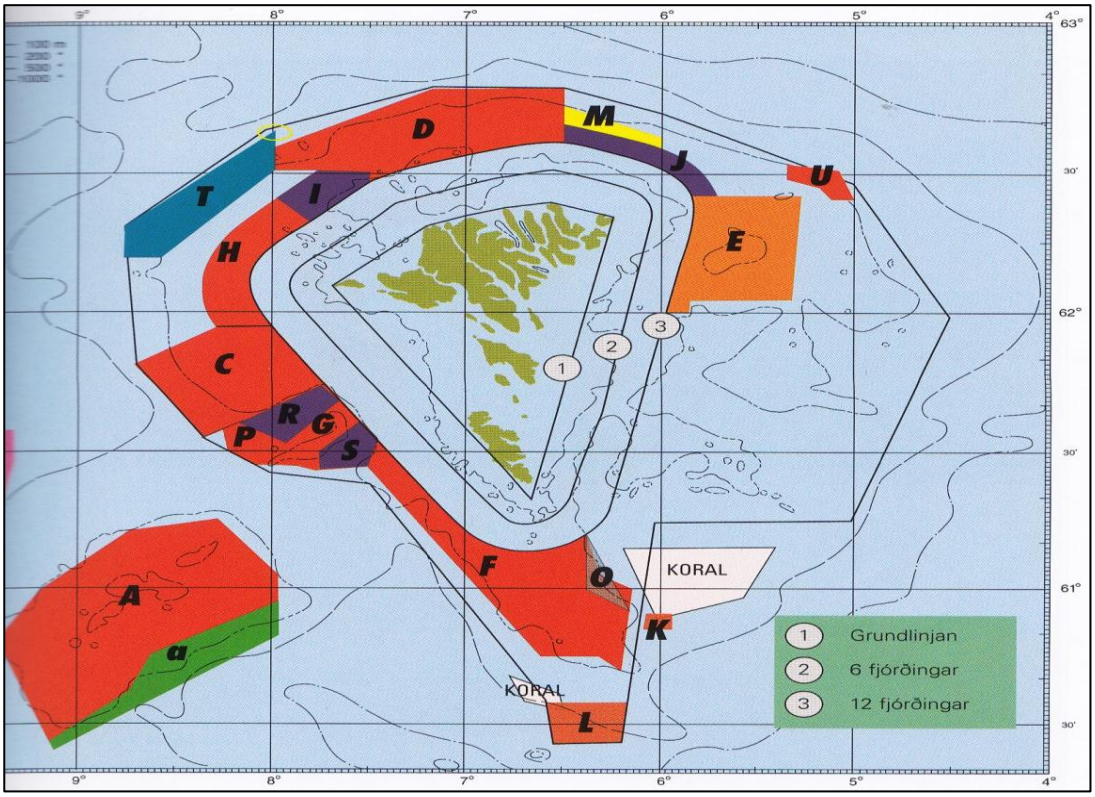

Figure 5: Map of areas closed for trawling in year 2011 (Olsen 2011, 123). This image is reprinted with the kind written permission of its copyright holder Skipalistin.

5.2 Faroese environmentality of fishing

The rationality of contemporary government of fishing of dermersal species in Faroese waters[44] is, unlike the Icelandic TAC system, characterised by an attempt to keep an optimal balance between fishing *effort* and fish mortality (*F*)[45]. This optimal relationship is estimated through an average calculation of the historical relation between fishing effort and *F* which is then expressed in a number of fishing days; hence the name of the system is the fishing-days system (Skorini and Helgason 2009, 81-82)[46]. I would thus argue that crucial to the environmentality of fishing-regulation is marine biological research which constitutes a particular 'mode of knowing' the environment, visually manifested in graphical fish-stock summaries (Figure 6).

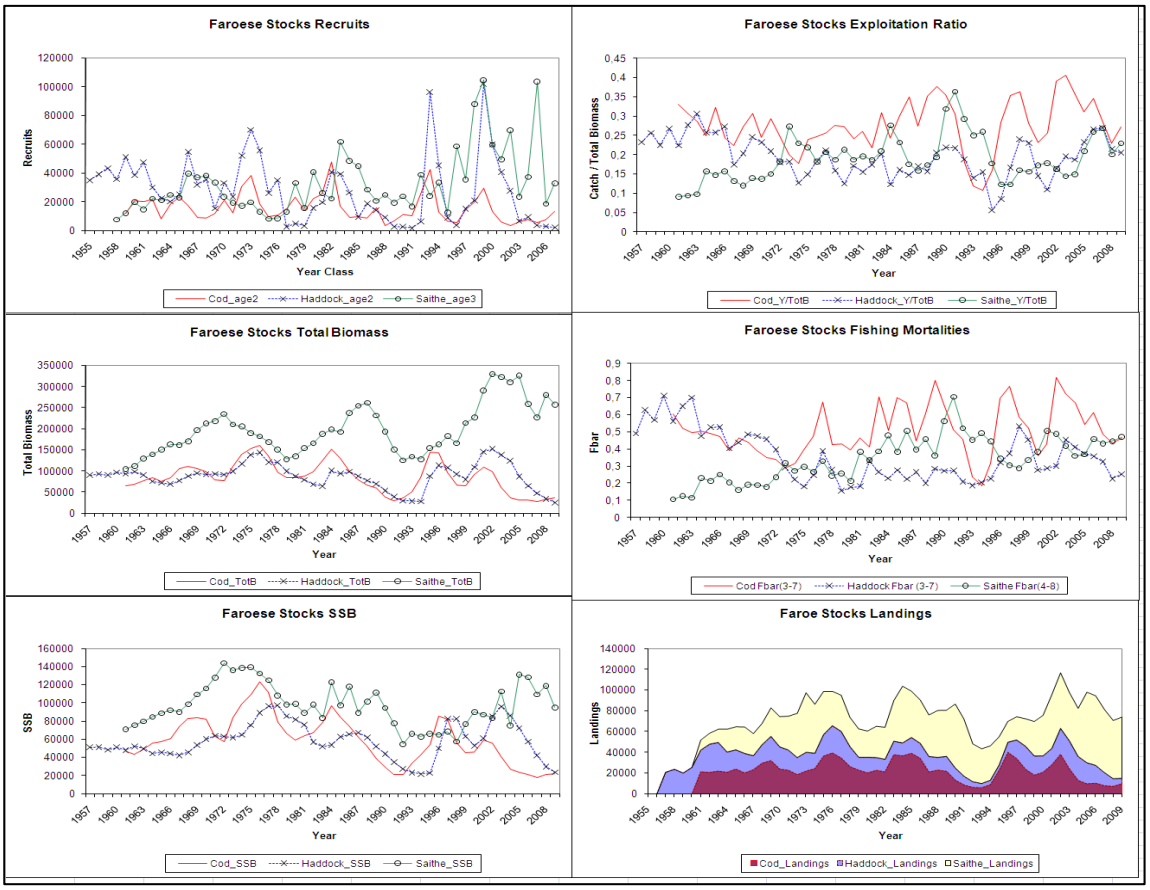

Figure 6: Stock summary from 2010 of Faroe Plateau cod, Faroe haddock and Faroe Saithe (ICES 2010). This image is used with the kind written permission of the International Council for the Exploration of the Sea (ICES).

44. Faroese fishing outside the Faroese EEZ and foreign fishing in Faroese waters is regulated through TAC quotas that are agreed upon at yearly negotiations between the affected parties (Skorini and Helgason 2009, 77-78).
45. Since pelagic species (i.e., fish species that live near to the surface) are migratory/mobile, the regulation of these species is done according to internationally agreed upon TAC quotas, hence effort regulation is exclusively related to the stationary demersal species in Faroese ocean, the most important of which are cod, haddock and saithe.
46. This calculation suggests that the average *F* should not exceed 0.45 (of cod, saithe and haddock), which corresponds to an annual catch of 33% of the exploitable stocks (ICES 2010, 14).

In addition to the technologies used in marine biological research, the technologies of regulating the fishing effort is characterised by the allocation of fishing days[47] in the form of fishing-licenses distributed to vessels with catch-licenses.[48] These fishing-licenses, which differ in content according to vessel group distinctions, also include a number of technical restrictions which might vary from year to year (for instance gear types, mesh sizes and area closures[49]). These fishing-licenses are transferable, that is, they can be bought and sold between ship owners[50] (Hansen and Jákupsstovu 2010, 7-8).

The first step in the yearly allocation of fishing days is when the ministry of fisheries receives its yearly report from FMRI (Faroe Marine Research Institute or *Havstovan*)[51]. This report is passed on to the Fishing-days committee (*Fiskidaganevndin*)[52], which writes another report based upon FMRIs recommendations and the fishing businesses own experiences. On the basis of the report from FMRI and the report from the Fishing-days committee, the minister of fisheries makes a proposal of the next year's fishing effort (i.e., fishing-days). This proposal is then evaluated by the Fishing Council (*Fiskivinnuráðið*)[53], which presents the final proposal to the parliament, which then has the final vote (Skorini and Helgason 2009, 92).

Thus, the rationalities guiding the fishing-days system are primarily: 1) the FMRIs mode of knowing, that is, marine biological research, and 2) the Fishing-days committee's mode of knowing, that is, advice from FMRI and since the committee consists of representatives from the fisheries, we must assume that there is also a business rationality involved, and last but not least 3) the parliament's mode of knowing which is guided by an assemblage of yet other modes of knowing,

47. In the calculation of fishing days, there is a geographical distinction between the inner and outer seascape, the inner refers to the Faroe Plateau, while the outer refers to deep-sea areas. One fishing day is valid in the inner area, but can be traded for three fishing days in the outer. This is to encourage fishing in the deep sea and thereby discouraging too much pressure on more traditional demersal species (Skorini and Helgason 2009, 87).
48. The number of catch-licenses in the Faroese fleet is limited to the distribution on the first of January 1995. These catch-licenses were given to the vessels operating in Faroese waters at that historical time for free, but have since then been sold and bought between ship-owners, so that most owners of catch-licenses today have paid a high price for them. It is however possible to acquire a temporary and limited fishing-license without a catch-license (Hansen and Jákupsstove 2010, 7).
49. Skorini and Helgason (2009) distinguish between closures of spawning areas for a limited time period on the one hand and a complex system of area closures that regulate which vessel-group is allowed to fish where (Skorini and Helgason 2009, 78, 87). Figure 5 is an example of the mapping of areas closed for trawling in 2011.
50. If they belong to different vessel groups they are converted accordingly (Hansen and Jákupsstovu 2010, 8).
51. The report is made in collaboration with recommendations from the International Council for the Exploration of the Sea (ICES).
52. The Fishing-days committee is appointed by the minster of fisheries and consists of representatives from the fishing business (the Ship-owner union, Fishers union, the Skipper union, etc.) and one president, which is not part of the fishing business (Skorini and Helgason 2009, 91).
53.The Fishing Council is a hearing body under the Minister of Fisheries which has to be consulted in connection to any changes in fish political matters. The council consists only of representatives from the fishing business (Skorini and Helgason 2009, 95).

but whose decision making takes point of departure in the two reports from respectively FMRI and the Fishing-days committee. Moreover, I would argue that the representatives of the parliament also make decisions on fishing days based upon a power-knowledge dynamic between voter and politician; a dynamic of significant importance to the Faroese context as we already saw in relation to the discourse on *bygdamenning*.

5.3 Problematisation of the fishing-days system

Dean (2010) argues that fundamental to an analytic of government is to identify and examine the specific situations in which governing is called into question or the moment and situation in which government is problematised (particular dates, places, institutional arrangements, and contexts) (Dean 2010, 38). Thus I seek to uncover when, where and under what circumstances the fishing-days system was and is called into question.

For many, a big mistake was already made right after the crisis in the early 1990s, when the so-called catch-licenses were given for free to the ship-owners that were active in the business at the time. Initially these catch-licenses gave the owners the right to a yearly fishing-license for ten years. However, in 1998 the law was changed so that every year that the fishing-licenses were distributed they would give the recipient the right to fish for the 10 years that followed. This new technology of government, became a so-called 'rolling system', in which the yearly distribution of fishing-licenses simultaneously gave the recipient the right to fish the next ten years ahead, unless the parliament would choose to withdraw the fishing-license, which had to be done with a ten years notice (Skorini and Helgason 2009, 109). After years of a fishing fleet running on economic deficit (Búskaparráðið 2011, 11) and overexploitation of fishing stocks (Havstovan 2010, 1-5), in 2007 a revolutionary change in the general Act of Fisheries was made, in which all the catch-licenses would be withdrawn the first of January 2018. Since then, the big question of what will happen in 2018 has, not surprisingly, triggered a lot of debate on the Faroes.

In relation to this another problematisation which I have heard mentioned in Faroese media and which was also brought up at the fisheries' assembly is the asymmetrical power-relations in the institutional arrangements of the fishing-days system. Voices communicated by these media argue that since its introduction, business interests have consistently been favoured over scientific advice from both marine biologists and economists. In other words, the Minister of Fisheries has a tendency to follow the recommendations of the Fishing-days committee at the expense of the

recommendations from FMRI. This view is also expressed by Skorini and Helgason[54] who point out that for the fishing year of 2007-2008, for instance, FMRI recommended reducing the fishing-days with thirty percent, while the Fishing-days committee proposed to not make any changes in the number of fishing-days. In the end the minister of fisheries proposed a symbolic fishing-days reduction of one percent (Skorini and Helgason 2009, 93).

Skorini and Helgason argue that the fact that the representatives of the fisheries are themselves an institutional part of the political system, notably through the Fishing-days committee and the Fishing Council, can be traced to the historical bond between politicians and representatives of fisheries (*Ibid.*, 95). Moreover, they argue, the fact that there have been no environmental groups lobbying for a better regulation of the fisheries, and that a relatively big proportion of the population either works in the fisheries or is indirectly connected to it, in addition to the fact that the general assumption on the Faroes is that 'fishing secures Faroese welfare', a story-line that many speakers at the fisheries' assembly used, has meant that financially supporting an active and thriving fishing sector has been and continues to be a smart tactic taken by many politicians to secure their popularity and re-election (*Ibid.*, 97-98); a lucid example I would argue of governmentality mechanisms.

Dean argues that governments are problematised by what he calls programmes which are "deliberate and relatively systematic forms of thought that endeavour to transform ...[regimes of] practices" (Dean 2010, 32). For the purpose of this thesis, I think it is relevant to distinguish between at least two such programmes in relation to the fishing-days system, namely a marine biological one and an economic one.

One problem for instance that marine biologists have noticed is that the fishing-days system has an inbuilt-assumption that the fisheries are self-regulatory according to relative stock-abundance. Research suggests however that there are other processes such as price compensation that govern the behaviour of fisheries, which partly explains why since 1996 the spawning stock biomass (SSB) of cod (the most valuable species on the market) has decreased markedly and *F* increased (Jákupsstovu et al. 2007, 731-736).

54. Skorini and Helgason (2009) are also of the opinion that the problem of overcapacity is in part connected to the prevailing definition of fishing capacity, which is measured in the following way: "1) Vessels that fish with hooks: length x width x depth 2) Vessels that fish with trawl: length x width x machine-power (HK or kW)" (Skorini and Helgason 2009, 120 *own translation*). This definition, they point out, does not account for traction, which can be increased without changing any of the above mentioned variables (e.g., new gears, bigger ship propeller, new nozzles), and since improving the traction significantly increases the capacity to catch fish, this, probably explains why the fishing intensity has grown although the number of fishing days has been reduced (*Ibid.*, 120-121).

The fact that the Faroese fisheries have been running on an economic deficit for so long is on the other hand a natural reason for why economists question the system. They argue for instance that the fact that Faroese fisheries receive a substantial amount of subsidies and public financial support means that in those cases where the fishing stocks are so poor that they in reality are uneconomical to exploit, the Faroese vessels continue to fish since they are secured economically by public money (Skorini and Helgason 2009, 102).

As we shall see later on, although these two programmes problematise fish-stock depletion according to radically different 'modes of knowing', they have nonetheless formed a discourse coalition based upon a common story-line, namely that 'there is an overcapacity in the fisheries which stands in the way for ecological and economic sustainability': the marine biologist's argument is that there are too many vessels fishing too many fish at rates exceeding the ability of fish to reproduce, and the economist's argument is that the total productivity of the fleet is too capacious or overcapitalised, in other words there are too many costs on wages, keeping the machines running and so on, compared to the poor income from the poor fish catches, hence there is no surplus.

This discourse coalition has put the representatives of the fisheries in a difficult situation. They are of course very frustrated that catches are so poor, but from their point of view, this is exactly the reason why they are fully entitled to receive governmental subsidies, since according to their common story-line, despite the economic difficulties that they are experiencing, they continue to stay in the business that is 'the foundation of Faroese welfare'.

5.4 Sustainable fisheries

> The reason for having a sustainable fishery is so we can have as steady yearly profits from the stocks as possible; greater fish and more stable profits. By setting the fishing-days according to the advice from Havstovuni [FMRI] we will also get an economically sustainable industry. And an economically sustainable industry is a precondition for having a fleet and a production that renews itself and develops itself to future challenges (President from the House of Industry speaking at the fisheries' assembly 2011).

This pretty well captures *Burðardygg fiskivinna* (i.e., sustainable fisheries), which I define as a discourse characterised by different ways of dealing with or representing the problem of fish-stock depletion that share the notion of a homoeostatic fishery. I argue that sustainable fisheries is a powerful discourse which figures in Faroese radio, television, newspapers, internet media, marketing, and hence Faroese consciousness. Moreover, I argue that this discourse is characterised

by constructing fish-stock depletion as a problem of techno-scientific regulation and institutional mismanagement.

5.4.1 The need for institutional reform

Most Faroese agree that the fishing-days system is in general a good system. Some even argue that "it is the best in the world" since there is no throwing out of excess fish: a huge problem for TAC systems. Nevertheless, judging by the data I gathered at the fisheries' assembly there is also a consensus that the institutional arrangements of the current system are not satisfactory.

It was for instance pointed out by a political scientist that "experiences show that the allocation of fishing-days quickly turns into a political game" and that it "thus would be sensible to put it somewhere else. An independent institution, which was not political in their allocation". Similarly many, especially economists have argued that such an institution "should have one perspective, one interest and that would be the interest of the Faroese people". Even representatives of the present institutional bodies of the system were of similar opinions. A fisher argued that "the current system with advice from Havstovuni [FMRI] and the fishing-days committee is not satisfactory. Instead of having two advisories there ought to be one" and he went on asking "why not put them together to advice?" One marine biologist took it a step further arguing that there is a need for a "general report, which takes into consideration everything: biology, economy, business and societal needs."

Of course there would be much to say about these ideas, for instance in regards to what is meant by an independent institution, which a fisher also asked without receiving a response. Similarly, I would argue that it is problematic that built inside the economists' argument is the notion that the interests of the Faroese people is to profit economically from the ownership of their sea resources.

I will however not say more about this but just note that this story-line that 'the institutional arrangements of the fishing-days system are not satisfactory' is an important dimension of the discourse on sustainable fisheries. I would be tempted to say that this is what unites all the public actors that are currently investing meaning into the discourse, and judging by what I have heard on the radio, most politicians seem to agree.

5.4.2 The representatives of the fisheries

> I have been involved in fishing since I was a young man and I am still involved. I am going to talk about my own experiences and there will be no diagrams, cause I don't have any (*Útróðrar-*

fisher[55] speaking at the fisheries' assembly).

A common feature of all the representatives of the fisheries that spoke at the assembly was an attempt to evoke *pathos,* for instance the trawl ship-owner who talked about the past, and how the first Faroese fishers were progressive for their time. The trawl-fisher in a different way, pointed out how "a fisher, who has been on the seas for several years knows how one survives there and how one can provide for himself and his family from there, so he should be considered an expert in the area". He then argued that because of this it is necessary to take the knowledge of fishers seriously in the consultancy, thereby using one of the most dominating story-lines of the day, which everybody agreed upon, namely that 'the current institutional arrangement of allocating fishing-days is no good'. Another storyline, which was used particularly by representatives of the fisheries was as a fisher uttered "the fact is that we live off fishing on the Faroes. The fishing industry sustains the welfare. It is the fishing industry that pays everything"

Also characterising this session was competition over fishing-days between vessel groups, wherein the trawl ship-owner and the trawl-fisher pointed out that it is a big problem that *Útróðra*-boats are fishing all the small fish, since the bigger fish have a much higher economical value. The ship-owner presented a spread-sheet that showed prices according to fish size, making the point that if the small fish had been allowed to spawn, there would be much more fish, which would be more profitable. In response, the presentation of one *Útróðra*-fisher was basically a long argument on how the theory that it is unsustainable to fish small fish does not hold in praxis. Through biological research from Iceland, he showed examples of how a prohibition of fishing small fish over an extended period of time did not lead to a larger amount of big fish, arguing that things were much more complex, "it doesn't work to just calculate how fish grows and so on, since it doesn't always grow, its weight decreases. It is the food foundation which decides how the stock develops". He then proceeded by also pointing to research that shows how the lack of feed leads to cannibalism amongst the same fish species, arguing that the Faroes has to invest more money into research of the marine ecosystems as a whole.

As mentioned above, a story-line which is proving very powerful in relation to the discourse on sustainable fisheries is that 'Faroese marine resources are property of the Faroese people'. This is a notion, which fishers remain quite sceptical about, not being able to deny it, but at the same time feeling the need to problematise it. A well known charismatic *útróðrar*-fisher argued "property of

55. Note that in this chapter whenever I use the word *útróður* or *útróðrar* I am referring to commercial coastal fisheries, that is, vessel group four and five in the fishing-days system and thus not the 'noncapitalist' practise of fishing 'for use' that has characterised and continues to characterise the diverse economy on the Faroes.

the Faroese people!? This is perhaps true. It is ok. But if nobody goes out to fish it, then what will we do?" and later in the afternoon the same fisher argued on the same topic that "it sounds really strange in my ears, because I think that the one who has fished the fish has always owned it. So I understand this as an expropriation. I would argue that you don't own anything in this fish, it is us that fish the fish that own it."

In general the discussion that the representatives of the fisheries found important in relation to 'how to make Faroese fisheries sustainable and profitable' revolved around better planning and more research into the correlation between the size, quality, and the price of fish. Moreover their interventions were also characterised by a conflict between vessel groups over fishing-rights. On the other hand, we will see towards the end of this chapter how representatives of the fisheries have joined 'discursive forces' against the introduction of a so-called 'resource-pay'; a strategy to make the fisheries sustainable and economically profitable currently being proposed by Faroese economists and many politicians.

5.4.3 Economic profits and optimal fish-stock sizes

One of the first news programmes that I saw on national television after my arrival to the Faroes in mid February 2011 included a piece on the effect that fish-stock depletion has to Faroese economy. I was fascinated and listened attentively to an analysis of the problem given by an economist representing *Búskaparáðið* (the Economic Council), who repeatedly underlined the importance of making Faroese fisheries sustainable. His dedication to prevent further technological development of the fisher fleet with the purpose of getting growth back in the fisheries and thereby also a growth in the national economy struck me as rather confusing. How could the Faroes get economic growth by diminishing their fishing efforts, by diminishing their fishing catch, by diminishing their fish exports?

I then realised that marine biologists and economists have in fact joined forces in a powerful discourse coalition that merges economic growth and ecological sustainability into one singular logic. On the fisheries' assembly I thus paid particular attention to how marine biologists and economists have created a particular way of thinking and talking about the problem of fish-stock depletion by employing a particular set of story lines.

With complex long-term research made simple and graspable in convincing graphical images, an FMRI marine biologist showed the correlation between the Faroese cod stock-size and the cod recruitment (*R)* the last fifty years. He pointed out that when the stock is around 100.000 the *R* is

highest. From this he presented some calculations that he had done on how to get the biggest long-term catch of cod. His conclusion was that with optimal effort it is possible to arrive at a steady cod-catch of 25.000-30.000 tons. Today catches are poor because, and so the story-line goes, "the catch-effort is too high" or said in its alternative more politicised version "there is an overcapacity in the fleet". The marine biologist's argument was thus that "there is a lot of profit to gain by decreasing the efforts". In fact his calculations suggested that in the first three years of optimal efforts there would of course be an economic loss, since there would be little-to-no fish catch, but that this loss would be won back after six years. The other representative of FMRI that spoke at the assembly said that he would speak from the perspective of a biologist and "from the perspective of somebody that looks at how we can get *the most out of our resource*". With a pedagogical picture of the marine food chain he then described what he called the "frame that we have to adapt to" and argued that "our job is to learn how to optimise it. First and foremost to get money out of it. It is the money which we have to focus upon. That is after all what it is all about". If the marine biologists seem to be obsessed with money, it appears as if economists are just as fascinated with *optimal* fish-stock sizes.

In the latest report from the Economic Council it is stated that:

> As we already know and *unlike* the production and service industry the fishing industry is a resource industry. As *the* resource (fish-stocks) is limited in size, and as the catch-capacity is in total greater than the fish-stocks can bear, it is necessary that the public sector limits the access to the resource (Búskaparráðið 2011, 19-20, *own translation*, *my emphasis*)[56].

So at Faroese economists have learned that there is a limit to at least *one* natural resource. It is however, regrettable that they continue to believe that the production and service industry is somehow independent of biophysical restrictions. Where does the matter that goes into production and that is embodied in the utilities of the service industry (computers, transport, fossil-fuels, etc.) come from? Again, I would argue, that despite the recognition that fish-stocks are limited in size, the economic growth paradigm in conjunction with machine fetishism continues to haunt the Faroes.

That economists now are pointing out the importance of not increasing the capacity of the fleet, scolding politicians for not paying enough attention to the technological development of the fleet, should perhaps be seen as some kind of achievement in the light of the environmental dilemma of

56. "Sum kunnugt og ólíkt framleiðslu- og tænastuvinnum er fiskivinnan ein tilfeingisvinna. Við tað at tilfeingið (fiskastovnarnir) er avmarkað í stødd, samstundis sum veiðikapasiteturin samanlagt er størri, enn fiskastovnarnir tola av veiðitrýsti, er neyðugt hjá tí almenna at avmarka atgongdina til tilfeingið" (Búskaparfráðgreiðing 2011, 19-20).

industrial capitalism. Jørn Astrup Hansen, previous president of *Búskaparáði*ð wrote already in 2008 that:

> *A constant number of fishing-days presupposes that the efficiency of the fleet remains the same. This is in no way the case. Anyone that takes a walk on the quay knows this. The ships have become bigger and more efficient. A constant fishing effort presupposes that improvements in efficiency are equalised with a reduction of fishing days. It is obvious that the ritual reduction of the amount of fishing-days, which we have witnessed since 1996, has not been sufficient to neutralise the growth in the fleets' efficiency* (Hansen (2008) quoted in Skorini and Helgason 2009, 118 *own translation, italics in original*)[57].

This economic rationality of the correlation between optimal fish-stock size and profit maximisation is best explained in the so-called Gordon Schaefer model (Figure 7).

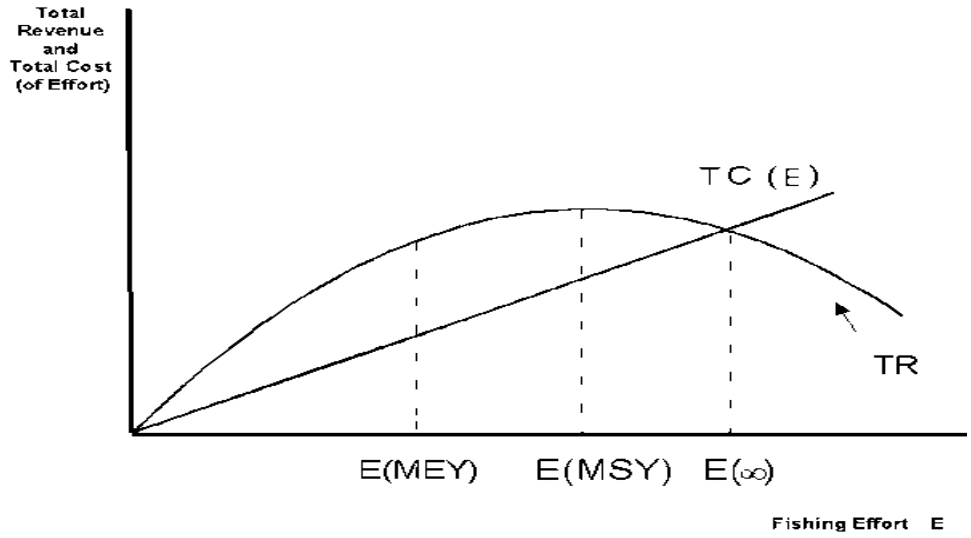

Figure 7: The Gordon Schaefer model. E(MEY) stands for Maximum Economic Yield; E(MSY) stands for Maximum Sustainable Yield; E(∞) is the bionomic equilibrium (FAO, 2011). This image is used with the kind permission of the Food and Agriculture Organisation of the United Nations (FAO).

In economic terms then the optimal level of efforts (E) is E(MEY), since that is when we get the highest resource-rent[58]. Moreover, whenever E >E(MEY) the fleet is overcapacious and when E=E(∞) there is no resource rent (FAO, 2011).

I have studied the latest economic report which the Faroese Economic Council publishes twice a

57. *"Men et konstant antal havdage forudsætter også, at flådens effektivitet er uændret. Det er ingenlunde tilfældet. Det ved enhver, der færdes på kajen. Skibene er blevet større og mere effektive. En konstant fiskeriindsats forudsætter således, at effektivitetsforbedringer i flåden udlignes ved en løbende reduktion i antallet af havdage. Det er åbenbart, at den rituelle reduktion i antallet af havdage, som vi siden 1996 har været vidner til, ikke har været tilstrækkelig til at neutralisere væksten i flådens effektivitet"* (Skorini and Helgason 2009, 118).

58. At the fisheries' assembly an economist defined the resource rent as the economic value that the owner of the resource can get by selling access to use the resource in the best thinkable conditions (i.e., optimal fish-stock conditions and optimal market conditions).

year, and in conjunction with some concept clarifications on FAOs website, the way I understand the rationality of this model is in its most simple form that economic profits will decrease if E > E(MEY). The fish-stocks will yield their maximum at E(MSY), since that is when TR is highest, but the TC (E) when E=E(MSY) makes it less profitable than when E=E(MEY).

The Gordon-Schaefer model I argue is a visual manifestation of the rationality characterising the discourse on sustainable fisheries, which was also communicated by the speakers at the fisheries' assembly in the frequently used story-line namely that 'we have to get as much money out of the biological constraints as we can'.

5.4.4 Getting growth back into the fisheries

Although most Faroese economists argue that "we seem to have reached the limit of how much we can get out of this" and "it is difficult to get more tons out of this" they do have a clear proposal on how to "get growth back into the fisheries". Based upon the rationality of the Gordon-Schaefer model and the notion of a resource-rent an economist presented the idea of a *resource-pay* at the fisheries' assembly. He argued that:

> The proposal is about, and yes I know that you have heard the concept before. It is about market conditions. You all know about the concept! Free competition on the market. We use it everywhere else in the Faroese economy. What the Economic Council recommends is that also this mechanism will be used to decide which ship-owner gets access to how much of the resource that we Faroese think is responsible to put out on the market. The resource-pay is then what we get out of it (a Faroese economist speaking at the fisheries' assembly).

The proposal to sell fishing days on an auction has not been well received by representatives of the fisheries. The various unions representing the larger vessel groups (the fishers union, the skipper and navigator union, the engineers union and the ship-owners union) have joined forces in a discourse coalition against the resource pay, arguing that: "It is true that a huge part of the fleet needs to adjust and get a more profitable operation, but this will not be done by putting on extra burdens" (Portal.fo 2011b)[59]. From the point of view of an *útróðrar*-fisher "it is a principal question whether one has to pay to be able to fish and we do not support this fundamental idea. Men that own boats today are in huge debt...A huge investment is required to be able to fish, so it is not true that the rights are free" (Norðlýsið, 2011a)[60].

59. "Tað er rætt, at stórir partar av flotanum hava brúk fyri at tillaga seg og fáa ein meira lønandi rakstur, men tað verður ikki gjørt við at áleggja eyka byrðar" (Portal.fo 2011b).
60. "Tað er eisini ein prinsipiellur spurningur um man skal gjalda fyri at sleppa at fiskað og hesum grund tankanum taka vit ikki undir við. Menn sum eiga bátar í dag standa í stórari skuld sum teir hefta fyri. Tað krevst stór íløga fyri at sleppa at fiska, so tað er heldur ikki rætt at rættindini eru ókeypis" (Norðlýsið, 2011a).

The argument in favour of the resource-pay however, is a strong one, which is receiving more and more attention from Faroese politicians. The discourse on resource-pay figures around the notion of sea resources as 'property of the Faroese people', a quest 'to get as much out of the fisheries as possible' and the assumption that, as an economist uttered at the assembly "it is market conditions and competition, which give the best societal result, also when it concerns sensible use of resources, *just as we agree* that this is what gives the best result in so many other areas".

Judging from the tone in the Faroese media and conversations that I had with differently positioned Faroese people, it appears that in addition to the proposal of a resource pay, a popular faith in fish-farming as a viable alternative to wild-fisheries has gained foothold and is thriving on the Faroes. This idea is further enhanced by the fact that unlike the wild-fisheries, fish-farming has had a steady economic growth the last decade and is thus making a positive contribution to the Faroese national economy (Búskaparráðið 2011; Fishin.fo 2011b).

Disease and parasite risks, as well as health issues related to the use of antibiotics and other chemicals (DDT, PCEBs, etc.) to combat diseases and parasites (Clausen and Clark 2005, 437-438) are well known concerns related to fish farming. It is beyond the scope of this thesis to discuss Faroese fish-farming, but because of its rapidly growing significance to Faroese economy, it is worth to at least make a critical observation on its intimate metabolic connection to wild-fisheries, which I feel is not entirely recognised in conventional discourse on fish-farming on the Faroes. For instance, I find it important from a human ecology perspective to note that a quarter of contemporary (2005) global fish catch is actually used to feed artificially raised fish. Following Clausen and Clark, I would argue that this illuminates an inherent contradiction of the so-called 'Blue Revolution'; it appears that the expansion of fish-farming, rather than being a solution to fish-stock depletion, is in reality increasing the pressure on wild fish stocks through its dependence on marine biomass[61] (*Ibid.*, 437).

6. Discussion

In approaching sustainable fisheries as a discourse characterised by a consensus on 'getting the most money out of fishing as is biologically possible', I argue that the contemporary paradigm of

61. Crucial to Clausen and Clark's argument is the notion of metabolic rifts. Hence, experiments to produce fish-feed out of soybeans rather than promising alternative solutions, such attempts will from Clausen and Clark's analysis merely unite the already existing soil nutrient rift and rifts within the ocean; "The nutrients contained in soybeans are transferred to offshore pens to be fed to fishes, where ultimately the food is converted into waste and pollutes the immediate aquatic environment" (Clausen and Clark 2005, 437).

fishing represents a particular perception of the seascape that through expert knowledge (biology and economy) comes to attribute new meanings to practices of fishing unlike any of those that characterised Faroese fishing practices in earlier times. The seascape has been expropriated by the abstract notion of 'the Faroese people' and its complex ecosystems have been dissected into areas that now serve human ends. The economic paradigm guiding these ends has however characterised Faroese fishing practises since the repealing of *Bátsbandið* in 1856, which as I suggested in chapter four has transformed Faroese socio-economic metabolism (Singh, 2003) from being a relatively basic one to a markedly extended one, characterised by a huge industrial stock, or technomass, whose reproduction requires a huge amount of material and energy flows.

From this follows that contrary to the narratives analysed in chapter five which constructed the problem of fish-stock depletion as a consequence of institutional mismanagement and techno-scientific issues related to fleet capacity, I argue that fish-stock depletion is a material manifestation of the biophysical limits to economic growth. As this is revealed to the Faroes, a country whose export economy is completely dependent on fisheries (from extraction to production to trade), distributional conflicts over resources on different levels become more noticeable. As the discourse analysis on sustainable fisheries suggested, there is on the one hand a conflict between representatives of the fisheries and 'the Faroese people' expressed in the economic discourse on resource-pay, while on the other hand there is a conflict between different vessel groups on who should be allowed to fish what sizes of fish.

Emphasising a political ecology perspective (Paulson and Geezon 2005), I argue that these distribution conflicts have profound socio-economic consequences to Faroese people, particularly those that work in the fishing sector (for instance fishers and factory workers), as was recently revealed with the bankruptcy of Faroe Seafood, wherein eight hundred people lost their jobs. In employing a zero-sum perspective on the economy (Hornborg 2001; 2009) it follows that the question of whether or not Faroese should implement a policy on resource-pay is entirely irrelevant to the discussion on how to confront the socio-ecological challenges of fish-stock depletion. Although fish-farming is currently contributing positively to the Faroese economy, I have pointed out that it too is problematic. Not only because it is directly dependent on wild-fisheries, but also because as the fish-farming industry grows metabolic rifts in oceanic nutrient cycles will tend to amplify and multiply (Clausen and Clark 2005). Hence, I argue that the question Faroese fishers and the Faroese people should be debating is how the prevalent economic paradigm of growth can be deconstructed.

In my opinion such a deconstruction should on the one hand emphasise the structural asymmetries in the world system, which in this thesis have been conceptualised as machine fetishism (Hornborg, 2001; 2009). The concept of machine fetishism captures what many (see e.g., Hornborg 2006; Evernden, 1985) argue to be a kind of 'relatedness-lost' caused by the onto-epistemological crisis of modernity, which in the Faroes context helps us to understand why Faroese chose to invest in processing plants with the capacity to process almost four times the amount of wet-fish per year than what has ever been landed in Faroese harbours. Moreover, the concept of machine fetishism captures the ecologically unequal exchange which research (Singh, 2003) suggests is 'embodied' in industrial technology; how the machinery of fish-processing plants is 1) materialised in the loss of space from whence the raw resources to produce the machinery and the fuel to run it were extracted, and 2) experienced in the loss of time by humans who invested their labour power in their extraction and production. From this perspective, the policy proposal on 'resource-pay', I argue, only conceals and exacerbates the structural asymmetries of metabolic flows (including its ethical dimension) resulting from market economic transactions. Moreover, the discourse on a 'resource-pay' as well as the discourse on sustainable fisheries in concealing the onto-epistemological dimensions of how and why fish-stock depletion came about in the first place, undermines other ways of knowing and being in the world, for instance those that characterised Faroese fishing practises during *Bátsbandið*, but also the modes of knowing (rationalities) related to the diverse economic practises (Gibson-Graham 2006) that Faroese people engage in on a daily basis, of which sheep-rearing is exemplary.

Similarly, in relation to fishing, I argue that the concept of *útróður* undermines the capitalocentric (Gibson-Graham 2006) approach to fishing and instead expresses the use-fullness of a diverse economy framework. The place-based concept (Escobar 2008) of *útróður* refers on the one hand to the contemporary practise of coastal small boat subsistence fishing, which can be traced all the way back to the Norse period, while it on the other hand refers to commercial vessel groups in the fishing-days system. *Útróður* thus expresses the shortcomings of a capitalocentric approach to the economy, since it conceptually diffuses the boundary between capitalist practises and 'non-capitalist' practises and thereby stresses the significance and validity of the "deconstructive project of theorising a "diverse economy"" (Gibson-Graham 2006, xxi). Moreover, I suggest that we from a phenomenological perspective might contend that the concept of *útróður* expresses a merging of the Faroese infield-outfield cosmology with modern fishing technology emphasising how Faroese eco-cultural attachment to place (Escobar 2008; Gaffin 1991) figures despite the fact that the Faroes, like much of the contemporary world, seems to have a fetishised relationship to machine technology.

7. Conclusion

By drawing attention to the diverse ways that Faroese have organised socio-natural relations of fishing and the different meanings and perceptions of the environment that these have drawn upon I have problematised the dominating understanding of fish-stock depletion as a problem that can be solved through techno-scientific policies and institutional reform and instead argued that fish-stock depletion is a biophysical manifestation of the economic growth paradigm. Through a discourse analysis of narratives on how to make Faroese fisheries sustainable, I have shown that although economic discourse recognises that there are biological limitations to the rate at which fish-stocks reproduce, the economic growth paradigm persists in the discourse on sustainable fisheries. This is most clearly manifested in the policy proposal of a 'resource-pay', through which 'the Faroese people' can derive economic profits by letting fishers buy rights to fish according to market economic principles.

By drawing upon the concept of socio-economic metabolism I have suggested that parallel to the changing meanings and practises of fishing in the course of Faroese history, there were also changes in Faroese metabolic flows. In particular I drew attention to the way Faroese socio-economic metabolism developed from being relatively basic before the Faroes became a monetary society to become increasingly extended. This has been particularly true following the technological modernisation of the fisher fleet that started in the 1950s.

Drawing upon the concept of machine fetishism and my environmental history of Faroese fishing practises I have argued that the neoclassic discourse on economic growth does not go in hand with biophysical processes, but rather reproduces asymmetric flows of matter and energy. This, I suggested implies that not only are there practical problems related to the growth paradigm, such as biophysical laws, but that there is also an ethical dilemma attached to the very notion of economic growth and hence also to the discourse on sustainable fisheries which, as I pointed out, is characterised by a consensus that 'a sustainable fishery is a fishery that obtains as much economic profit out of fishing as is biologically possible.'

Hence, rather than positioning myself within the discursive realm that imagines how Faroese commercial fisheries and Faroese marine ecosystems can come to work in a homeostatic symbiosis, and how the Faroese people will profit economically by the new found business opportunity of selling the rights to fish by implementing a resource-pay, I have suggested another strategy.

Inspired by the diverse economy framework and a phenomenological interpretation of the different meanings Faroese have attributed to the non-monitised practises that they have engaged in throughout history, and especially the ones that they engage in today, I suggest that an emphasis and celebration of economic practises and transactions that are not motivated by capital is a good way to begin deconstructing the growth paradigm.

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Appendix 1: The Faroese infield-outfield cosmology

Most of the early Faroese settlements were by the coast, which allowed for a domestic economy based upon the cultivation of cereals on the infields (*bøur*), the utilization of sea resources and bird cliffs and shieling activity (summer pastures) in the inland areas. Research suggests that shielings probably phased out during the 11thand 12thcenturies, when sheep grazing in the outfields (*hagi*) developed (Arge et al. 2005, 609-610; Edwards 2005, 591).

In 1361 we know that the King of Norway started to rent exclusive trading licenses to the Hanseatics[62] with which Faroese traded fish from 1300-1600 (Joensen 1996, 28). After that the most important export good until the abolishment of the monopoly in 1856 was wool, herein wool stockings, which back then had a similar importance to Faroese subsistence as general purpose money have today, hence the Faroese proverb *Føroya ull er Føroya gull* (i.e., Faroese wool is Faroese gold). Other goods, which were exported from the Faroes included tallow, feathers, sheepskins, butter, train oil, and dried fish (Joensen, 1996, 28; Wiley 1987, 26).

Throughout history Faroese have carried out a domestic economy based upon a mode of production that divided the land into 1) *bøur,* that is, the infield used for barley cultivation, later also potatoes and for sheep grazing in the winter, 2) *hagi,* that is, the outfield where the sheep graze in the summer and where villagers would cut peat and catch birds (Wiley, 1987).

Although Faroese do not cultivate barley, nor cut much peat any more, the practise of grazing sheep on the infields in the winter and on the outfields in the summer persists, and is still today a kin-ordered mode of production.

The land on the Faroes was at some point divided into 85 *marktalsbygdir*, that is, villages based on number of *mørk* (sing.) / *merkur* (plur.). In Húsavík I was told that 1 *mørk* = 16 *gyllin* and that 1 *gyllin* = 5 legs of sheep.

How many sheep can walk on a mørk differs from village to village: from only 9 in one village to 68 sheep in another. These variations are partly, but not only, related to the fact that also a mørk is different in size from village to village: ranging from 0,14 to 1,98 Km^2 (Heimabeiti.fo 2011a).

62. A Germanic trading brotherhood (merchant league) which in the early middle ages traded fur and fish acquired from Bergen and wool acquired from England (Wolf 1987, 107, 158, 121).

These villages own all the land on the Faroes and the communal rights that belong to the land, herein the right to cut peat, to catch birds, to catch seals, to look for driftwood, seaweed and other coastal rights. Out of the total 2400 merkur of land on the Faroes, half is *ognarjørð,* that is, land which descendants and/or inhabitants of *markatalsbygdir* own, and the other half is *Kongsjørð,* that is, land which the Crown owns and initially gave as lease-holdings to Danish priests and nobles and whose descendants inherited.

Niðurseturbygdir, that is, the newer village settlements, do not hold such rights as *marktalsbygdir*, since their land is *traðajørð,* a classification of land which originates from the population growth starting in the 18th and 19th century, in which parts of the King's land started to be rented out as *trøðir*, that is, parcels of land on which people could cultivate crops and/or keep domesticated animals but which did not give them the above mentioned rights to other resources[63] like the ones of holders of *ognarjørð* and tenants of *kongsjørð* (Joensen 1987, 17, 21-22).

The sheep ecosystem on the Faroes is estimated to consist of approximately 70.000 sheep, and it is still regulated according to some of the key principles stipulated in *Seyðabrævið*[64] of 1298, for instance the notion that there should not graze more sheep on a mørk as there grazed the year before (Poulsen and Zachariasen 1971).

Húsavík has 31 merkur of land of which 26 is *ognarjørð* and 5 is *kongsjørð* (which nowadays is called *Landsjørð*; Country land). Each mørk in Húsavík is 0,29 Km^2, and there is a total of 641 sheep grazing in Húsavík. In other words there are 21 sheep per mørk, which in Húsavík means that there are 70 sheep per Km^2.This corresponds to there being 1,4 hectares per sheep (Heimabeiti.fo 2011b)

In addition to distinct relations of production, the Faroese cosmological order was marked by mythological beliefs about a variety of supernatural beings, for instance *huldufólk* (hidden people), *vættrar* (pixies) and a variety of water-beings (nixes, seal-women, sea monsters, mermaids, sea cattle, and others). The rich Faroese oral tradition that lives on in ballads and folklore is charactersied by fusing the boundaries between "real" historical episodes in Faroese history and

63. An exception is the mode of production characterising whaling, which was traditionally (and still is) organised in yet another way.

64. *Seyðabrævið* is a legal Act stipulated by the King of Norway in 1298 AD and is probably the most important document of early Faroese History: a valuable source to understand how Faroese sheep-rearing, the ecological niche of the Faroes, has structured social relations of production throughout history There are two original copies, one is preserved in the Faroese National Collection and the other one is preserved in Lund University Library, Sweden.

what most people would classify as belonging to the "supernatural" realm. For scholarly work on Faroese folklore and its significance, see the work of Faroese folklorist and Professor of Oral Literature Eydun Andreassen.

Appendix 2: Supplemental information about the Faroes

Faroese *Landnám,* that is, the Norse-settlement[65], whose earliest archaeological findings date to the turn of the 8th –9th century[66], took place in a dynamic landscape dominated by sedge-heath-grassland and a declining amount of willows, juniper and birch scrubs (Edwards 2005, 586; Arge 2005, 601). The settlers introduced subsistence farming systems that relied upon imported domestic animals (sheep, goats, cattle, pigs and horses)[67] used for secondary products (milk, cheese and wool). This pastoral economy was supplemented with the cultivation of cereals (Arge 2005, 601) accompanying a diet consisting mainly of birds, fish and shellfish (Lawson et al. 2005, 763; Vickers 2005, 686). Although wood growth was limited[68] the settlers found abundance of peat and turf, which they used for fuel (Edwards 2005, 591).

Up until the 15th century the Faroes were tributary to Norway, but following the union between Norway and Denmark, political, ecclesiastical and trade affairs gradually shifted from Bergen to Copenhagen (Wiley 1987, 18). As Denmark obtained its constitution in 1849, the Faroe Islands became a county of the Danish Kingdom, until it thanks to the Home Rule Act of 1948 obtained its contemporary status as a self-governing community within the Danish state. The Home Rule Act divides governmental responsibilities between the Danish state and the Faroese government. Although Denmark has full authority of foreign affairs on the Faroes, in praxis foreign negotiations for instance concerning fishing agreements are carried out independently by the Faroes. Moreover Danish membership in international organisations does not imply Faroese membership. For instance whereas Denmark is part of EU, the Faroes are not, but instead have a separate agreement with EU. With their own language, flag, passport, banknotes, stamps, and customs area, the Faroes

65. The exact dating of human contact on the Faroes is disputed. There is a theory of an early Irish settlement based upon an essay from 825 AD written by an Irish monk, which is corroborated by charcoal and cereal pollen data that suggest human activity as early as 570 AD (Hannon et al. 2005). According to *Færeyinga Saga* and popular Faroese belief, the first settler was a man called Grímur Kamban and he arrived in 825 AD. However, since there is no archaeological evidence supporting such early human activity, the theory of any pre-Norse settlement is by archaeologists considered an unproven hypothesis (Arge 2005, 598-599).
66. The earliest archaeological sites on the Faroes are: Toftanes on Eysturoy (see Vickers et al. 2005) and Undir Junarkinsfløtti on Sandoy (see Lawson et al. 2005).
67. Sheep was by far the most dominant mammal, although it is noteworthy that a substantial number of pigs seem to have characterised the early economy, but that these together with goats, lost their importance already in the 11-13th century (Lawson et al. 2005, 675-676) .
68. Findings of other non native timber species (larch, pine and spruce) indicate exploitation of driftwood, a common feature of Norse societies (Lawson et al. 2005, 672).

nevertheless use Danish currency (Guttesen 1996, 4).

Despite changing power relations, and modes of controlling trade, Faroese domestic economy seems to have changed little during the first millennia of human activity, being characterised by bird catching, whaling, peat cutting, barley cultivation, sheep rearing, cattle pasture and last but not least fishing, which, although it historically has had relatively little importance for trade has always been crucial to Faroese subsistence (Wiley 1987, 26; Joensen 1996, 28-29). Although the Faroes are today an evolved part of modern society some of these practices, such as bird catching, whaling and sheep rearing continue to characterise Faroese subsistence figuring parallel to the official market economy with their distinct modes of access, circulation and production, marked by distinct socio-economic relations, some of which date all the way back to *Seyðabrævið* of 1298.