

CHAPTER 3

The Marsh of Modernity: Iceland and Beyond

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Abstract

Wetlands occur practically everywhere, on every continent, in every zone and biome, in all shapes and sizes. Despite their massive scale, they have usually remained marginal in social discourse. This is reflected in the fact that in only a century humans have reduced global wetland areas by 50%, in the name of modernization and progress, without much concern or debate. Towards the end of the 20th century, however, wetland areas began to be recognized as constituting some of the most sensitive and useful areas on Earth. Focusing on Iceland, this chapter discusses the social history and understandings of wetlands. Any discussion of the resilience of wetlands, we suggest, and of environmental issues more generally, needs to move beyond narrow definitions of the ecosystem, taking into account the mutual interdependence of human activities and the communities and environments in which they are embedded.

Nature, we know, has nasty surprises, among them flooded rivers and perfect storms, and, of course, receding glaciers and global warming. In the modernist language of mainstream ecology, things spin out of control, beyond steady states and points of equilibrium. While some of the surprises may be less surprising than they used to be, they often pose spectacular problems for human society and, as a result, demand close attention and concerted action. Wetlands have repeatedly provided apt examples, refusing to “behave”. Re-

presenting a substantial part of the Earth's land surface (about 6%), wetlands occur practically everywhere, on every continent (except Antarctica), in every zone and biome, in all shapes and sizes. Two wetland areas are in excess of 1 million km², seven are in the order of 100.000 to 400.000 km², other wetland areas are smaller. Despite their massive scale, wetlands have usually remained marginal or liminal in social discourse. This is reflected in the fact that in only a century humans have reduced global wetland areas by 50% (Fraser and Keddy, 2005: 448), without much concern or debate. Towards the end of the 20th century, however, wetland areas began to be recognized as constituting some of the most sensitive and useful areas on Earth. Focusing on Iceland, this chapter discusses the social history and understandings of wetlands (for the comparative literature on wetlands, see e.g. Giblett, 1996, Strang 2005).

One of the central terms often used to address pressing environmental problems is that of "resilience". In an attempt to move beyond modernist definitions of resilience highlighting linearity and equilibria, Berkes and Folke suggest a definition which "emphasizes conditions in which disturbances (or perturbations) can flip a system from one equilibrium state to another. In this case, the important measure of resilience is the magnitude or scale of *disturbance that can be absorbed* before the system changes in structure by the change of variables and processes that control system behaviour" (Berkes and Folke 1998: 12). While such a definition in terms of systemic states is still somewhat modernist, it does allow for uncertainty and fleeting boundaries. One thing to note is precisely the openness and relativity of any demarcation of environmental systems; after all, environmental interactions and ecological processes usually eschew geographical confinement and systemic boundaries are inevitably somewhat arbitrarily defined for specific human purposes rather than "written" in the organic world. Not only are the boundaries of ecosystems relative, depending on the scale of action and observation, they also stretch across both natural and social space, conflating the key terms of dualist, modernist thought (Descola and Pálsson 1996, Pálsson 2006). Once seen as entirely beyond the human domain, climate is now known to become increasingly artificial, a byproduct of human activities. Hurricane Katrina, partly, at

least, the result of human engagement with the marshes of Louisiana, is a case in point. Any discussion of the resilience of wetlands, we suggest, and of environmental issues more generally, needs to move beyond narrow definitions of the ecosystem, taking into account the mutual interdependence of human activities and the communities and environments in which they are embedded.

Nature as we know it

Etymologically derived from the words *natura* (“the course of things”) and *nascere* (“to be born”), the concept of “nature” is a product of Latin translations of the Greek word *physis*. Usually “nature” (and the “environment”) has connoted that which is given from birth or independent of human activities. Nature, then, is often presented as one half of a pair – nature/culture, the natural/the social – in opposition to the “artificial” products of human labor. Highlighting such distinction, the ecosystem approach increasingly seems analytically restrictive and conceptually problematic, although early on it represented important advances. For one thing, it tends to relegate human perception and social discourse to the margin.

Attempting to redress the balance, in the context of wetlands research, Strang (2005) suggests, drawing upon phenomenological approaches emphasizing direct perception, that while human sensory and perceptual engagements with water are necessarily informed by particular “cultural landscapes and engagements with water”, it seems that human bodily experience of water exhibits many common characteristics:

common human physiological and cognitive processes provide sufficient experiential continuity to generate common undercurrents of meaning. These undercurrents persist over time and space – inter-generationally and inter-culturally. (Strang 2005: 115)

We would argue, along with Strang, that the experience of water and wetlands poses similar challenges and opportunities for humans irrespective of culture and context. Arguably, however, the global environmental crisis presents unprecedented challenges to human

cognition and discourse. Some of these challenges relate to the limits of direct perception and our inevitable reliance on virtual representations. As Cronon notes,

some of the most dramatic environmental problems we appear to be facing ... exist mainly as simulated representations in complex computer models of natural systems. Our awareness of the ozone hole over the Antarctic, for instance, depends very much on the ability of machines to process large amounts of data to produce maps of atmospheric phenomena that we ourselves could never witness at first hand. Noone has ever seen the ozone hole. However real the problem may be, our knowledge of it cannot help being virtual. (1996: 47)

Another challenge to those concerned with the environment relates to the non-modern or “postmodern” recognition that observers of the environmental crisis and the languages available to them are necessarily embedded in the world they observe. The critical interrogation of the humanities and the social sciences of central concepts in current environmental debates is essential; without it, there would be no way of knowing whether we are taking the “right” track. While it is easy, however, to dismiss the virtualism of climate discourse as just one more social construction, postmodern critique is sometimes paralyzing and beside the point.

The scale of the environmental crisis and its global connections demand new kinds of social institutions and communities, robust and flexible enough to generate the necessary trust and cooperation. The demarcation of the environment as a domain for human concerns and coordination implies, it seems, new kinds of socialities and citizenship. As Latour emphasizes, the global-warming controversy demands a new and hybrid kind of politics: “The sharp difference that seemed so important between those who represent things and those who represent people has simply vanished” (2003: 33) with the imbrications of nature with the distinct sphere consisting “of a specific sort of phenomenon variously called ‘society’, ‘social order’, ‘social practice’, ‘social dimension’, or ‘social structure’ ” (Latour 2005: 3). One innovative perspective in this vein is that of Agrawal (2005: 8), who proposes the framework of *environmentality*, combining the

notions of *environment* and *governmentality* to develop “an approach to studying environmental politics that takes seriously the conceptual building blocks of power/knowledges, institutions, and subjectivities”. The global nature of many environmental problems not only poses difficulties for mitigation, it also presents particular methodological problems for environmental researchers. In recent years, partly as a result of globalization and a growing emphasis on the mutual links between center and periphery, humanities scholars and social scientists have increasingly come to advocate multisited fieldwork. Thus, in her discussion of environmental change in Indonesia, Tsing focuses on a series of sites – among NGOs, peasants, politicians, scientists, etc. – exploring “the productive friction of global connections” (2005: 3).

“Sweet is the swamp”

The recognition of the importance of wetlands is reflected in an international convention, signed in Ramsar in Iran in 1971, entitled *Convention on Wetlands of International Importance*. The Ramsar Convention contains provisions on action and international cooperation that contribute to the protection and intelligent utilisation of wetlands. Currently, 158 countries have signed the convention. A total of 1500 wetland areas are on the Ramsar list, all considered important in an international context. Three of these are in Iceland: Mývatn District in Northeast Iceland, Þjórsárver in the highland interior, and Grunnafjörður in the western part of the country. The Ramsar Convention illustrates a certain global view of the ecological value of wetlands, whose manifestations may be worth studying in a local context.

With the Ramsar rationale, international studies go as far as to approximate the annual value of wetlands, given their ecosystem services and natural capital. The price tag is US\$12.790 trillion, no less than one-third of the presumed total value for the world (Costanza et al. 1997). Dubious price-tagging aside, a metaphor frequently used with respect to wetlands is that of “biological supermarkets”, on the grounds that they are characterised by biological

variety (proportionately large numbers of organisms) and substantial biomass (Fraser and Keddy 2005). The assertion is also often made that wetlands are “biological machines” (White 1996) or “kidneys of the environment” (Fraser and Keddy 2005), a reference to the important metabolism that acts within them, purifying waste from humans and other organisms. In demonstrating their importance, Mitch, a prominent wetland ecologist, constructed an experimental wetland with two man-made ponds in the shape of kidneys to monitor wetland purification processes (see Fink and Mitch 2007). As indicative of the rationale of the Ramsar agreement, the area and the ponds were listed in April 2008.

The ecological valuing sketched above draws its imagery from early Romantic traditions. In poetic and cosmic contemplation of thinkers such as Dante, Milton and Ibsen, wetlands represented the forum of evil. For them, wetlands were an infernal domain where disease and nefarious acts were rampant. Dante said that wetlands encircled four of the innermost circles of Hell, where heretics and those who deliberately lie and cheat are tortured till the day of doom. Staged in the Fens of England, the novel *Waterland* by Swift, perhaps, offers a modern version of Dante’s approach. At the same time, it provides a series of intriguing observations of landscape and water:

Realism; fatalism; phlegm. To live in the Fens is to receive strong doses of reality. The great, flat monotony of reality; the wide, empty space of reality. Melancholia and self-murder are not unknown in the Fens. Heavy drinking, madness and sudden acts of violence are not uncommon. How do you surmount reality, children? How do you acquire, in a flat country, the tonic of elevated feelings? (Swift 1983: 13)

Not to mince matters, children, and to offer you, in passing, an impromptu theory, sexuality reveals itself more readily, more precociously, in a flat land, in a watery prostration, than in, say, a mountainous or forested landscape, where nature’s own phallic thrustings inhibit man’s, or in the landscape of towns and cities where a thousand artificial erections (a brewery chimney, a tower block) detract from our animal urges (Swift 1983: 137).

Wetlands have also been seen as holy territory, as symbols of life and renewal. The protagonist of this reaction, as it were, was the philosopher and environmentalist Henry David Thoreau, sometimes referred to as the protector and lover of wetlands, who emphasized that our ideas about wilderness are always inspired by Nature as reflected within ourselves: “It is in vain to dream of a wilderness distant from ourselves, there is none such. It is the bog in our brain and bowels, the primitive vigor of Nature in us that inspires that dream” (Thoreau 1856; quoted in Prince 1997: 337). To Thoreau, it is absurd merely to make room for Nature exclusively in our minds, since our guts generate the dream of Nature and the Wilderness. Emily Dickinson makes a similar point in her poem “Sweet is the swamp with its secrets.” Addressing a potential editor in 1862, she wrote: “You ask of my companions. Hills, sir, and the sundown, and a dog large as myself They are better than beings because they know, but do not tell: and the noise in the pool at noon excels my piano” (1959: 7).

Literary criticism has for long theorized the relation of place and text, of *oikos* and literary representation. The warp and weft of literature as it is written, read, distributed and translated remains the historically dense and often discordant experiences of language and places in all their complexities. While place alone, Howarth suggests, does not inform literary imagination, “one locale stands out because it has a long history of ambiguous and also evolving cultural status: the wetland, in its manifold guises of bog, fen, marsh, or swamp” (1999, p. 513). In combining literary criticism and the ecological view of natural scientists, Howarth emphasizes the importance of knowing nature, challenging the popular view of literature as imagined territory without any natural limits; “Only those who know little of nature”, he argues, “think imagination can surpass it” (1999: 510). “Ecocriticism”, he goes on,

seeks new ways to concur with nature, to see it as environs, or surroundings, in which human lives transpire. If we include in our readings the wetlands with all their tangled shimmer of meanings, we will begin to imagine territory that has natural limits, for such places tell us what we may hold close, and what we must let go. (Howarth 1999: 533)

Elsewhere (see Huijbens and Pálsson 2009) we have demonstrated how a particular genre of representation, i.e. the landscapes shown on maps, necessarily reflects the pragmatic motives and social bonds of the map-makers, their ideologies, and strife. We argue that it is indeed not self evident what constitutes wetland, as Cosgrove points out (2006: 51): "...the pictorial in landscape incorporates a more visceral and experiential reference".

Arguably, it is not enough to know nature, in Howarth's sense, comparative ethnography is important too. Discussions of resilience need to take into account the mutual interdependence of human activities and the communities and environments involved. In line with this, the notion of "ecological anthropology" popular in the 1970s and the 1980s seems to have been replaced by the more open-ended label of "environmental anthropology", emphasizing the unity of humans and "that which surrounds" (the etymological root of *environ*). Worster rightly suggests (1988: 6) that "we ... have two histories to write, that of our own country and that of 'planet Earth'", adding that "when that larger planetary history gets fully written, it will surely have at its core the evolving relationship between humans and the natural world". As Latour states "we have been taking the whole Creation on our shoulder and have become now literally and not metaphorically in our action coextensive to the Earth" (2008: 4).

In the bog

For centuries utilisation of Icelandic wetlands has been subject to changes. From the time of settlement, Icelanders living on a wet weather island have had to cope with wetlands, avoiding them or tailoring them to their needs, extracting peat from them, ferric oxide and plants for food and fodder. Simultaneously they have given them meaning through art, literature and mythology.

A cultural attitude to marshes can be detected in the Icelandic sagas. Marshes are there described as both oases and treacherous obstacles. Hrafnkel's Saga offers the following narrative:

They now ride westwards out of the lava field and then arrive at another marsh named Uxamýri. It is grassy. The area is very wet, so that

it is barely passable for those unfamiliar with it. (Halldórsson et al. 1987: 1413)

Vatnsdælasaga tells about a struggle in the middle of marshland between a man named Thórólfur and a Norwegian:

The Norwegian ran after him down towards Vatnsdal river. Thórólfur reached a point where there were deep pits or bogs. Thórólfur then turned against the man, seized him and placed him under his arm saying: “You are now instigating a race that we will both take part in” and he ran into the bog, where they both sank and neither one came up. (Halldórsson et al. 1987: 1877)

The marsh, here referred to as a *fen*, is grassy but barely passable. Those familiar with it can use it, even to get rid of unwelcome strangers. The sagas, one may note, and indeed much Scandinavian mythology and literature (Hastrup 1985), similarly often contrast, on the one hand, the wild and uninhabitable domain of mysterious beings and, on the other hand, the domesticated world of the farm or the estate, *óðal*, symbolically demarcated and protected by a fence.

Prominent in the dealings of the early Icelandic settlers with the land, is a dual use, so to speak, of wetlands. Some of the best hayfields were associated with wetlands or river floodplains subjected to cyclical inundations, especially those of the glacial rivers, e.g. Hvítá in Borgarfjörður. But also accounts of the wetland's nefarious potential echo some of the notions of wetlands via Dante, Milton and later Ibsen. In more recent accounts, the barely passable fens are often veiled in humour, but tinged with seriousness. In a tale of his travels in 1862, the Californian John Ross Browne describes his trip to Þingvellir in the company of Geir Zoega (Magnússon 1976). At the outset Browne had difficulty understanding why his guide consistently avoided what appeared to be easily traversable flatlands and persisted in laboriously climbing hills and slopes. At one point he decided to demonstrate how folks in western parts of North America travel and he sallied forth into the flatlands, but his steed refused to continue when it reached the marshland. Finally, John managed to coax the horse to move but as soon as they were in the marsh they began to sink. Zoega's speedy reaction enabled him to

rescue the horse from drowning, but Browne had in the meantime found safety on a small hummock nearby.

When they were back on dry land and Zoega was scraping the mud off the horse, John commented: "It was rather wet out there." Zoega stoically replied: "Yes, sir ... that is why I was planning to go around it" (Magnússon 1976: 87). It is safe to assume that the Californian was not familiar with the old Icelandic proverb which roughly translates "better to go around than end up in the bog" (Ic. *betri er krókur en kelda*). After this adventure, he describes the marshland as follows:

It is a strange feeling to look over such a stretch of land where the hummocks almost equal the height of a man. It is as if the treacherous ground had swallowed a group of bellicose Vikings, making their way through the wilderness, leaving them still standing there, covered up to their necks, with their ruffled heads exposed and defenceless against the elements.

You can often see human expressions on the hummocks and on moonlit nights, it does not require much imagination to see in them the phantoms of slayers struggling to get out of the swampland. Indeed, the ignorant farmers have, with their lively imaginative skills, endowed these phantoms with life and enjoy telling tales about their pranks on dark, foul weather nights, when the apparitions have allegedly been seen thrashing about and kicking in the swamp. Hoarse shrieks can be heard through the wind squalls and solitary travellers take a round-about route so that those uncanny spectres, seeking companionship, do not pull them into the bogs. (Magnússon 1976: 88)

Drawing on other literary accounts of wetlands, *Iceland's Bell* by Laxness contains a lengthy account of an escapade in "ugly bogs", meant to take place in the 18th Century. It reads as follows:

It was after nightfall that men rode off from Galtarholt and they were all quite drunk. But because of the ale they had imbibed, they lost their way as soon as they were outside the home field wall, when they found themselves in rotting marshland with deep pits, swamps, ponds and peat bogs. This landscape seemed to have no end and the travellers wallowed in this entrance to Hell for the better part of the night. (Laxness 1943: 18-19)

In these two more recent writings, referred to above, the marshland is clearly the abode of evil, “entrance to Hell” or the home of “uncanny spectres”. This description also applies to the Icelandic sagas cited, where the marsh serves as an appropriate place to get rid of strangers, but therein on the other hand, is also a hint that Icelanders have always utilized wetlands for cutting grass and for grazing purposes. How the benefits of wetlands could be reaped came to the fore towards the end of the 18th Century. The marsh gradually ceases to serve as material for tales about the infernal domain of dark deeds and fades into the shadow of logical reasoning and modernism.

Grand engineering

The marsh that for long had been a concrete obstacle to travel later turned into an impediment to the ideology of modernism where humans in the company of God were to shape the world to their needs (Glacken 1967: 680 & 689). This can be gleaned from the detailed descriptions in the travel books of Eggert and Bjarni (Ólafsson 1978), Sveinn Pálsson (1983) and Stanley (1979) and also from the district descriptions of the 18th and 19th centuries, prepared at the behest of the Icelandic Literary Society. Along with these travel accounts, the first ever detailed account of land in Iceland in the *Book of Farmlands* by Árni Magnússon and Páll Vídalín (1982 [1703]), heralded the dawn of the Age of Enlightenment in Iceland. The descriptions of wetlands in the above travel accounts resemble in many ways the excerpt taken here from the travel book of Ólafur Olavius from 1775-1777:

Kaupangur Parish is ... grassy, but land there has gravely deteriorated because of marshes and ponds, which can possibly be drained, in a similar way that road improvements could be implemented there by building bridges and digging ditches. (Olavius 1965: 18)

Illuminated by the progressivism of the Enlightenment era, wetlands underwent more radical changes at the hands of humans than previously known. By innovative creativity in Icelandic agriculture in the past century and with the equipment then introduced (e.g. excavators, tractors and ground levelling equipment) wetlands in most

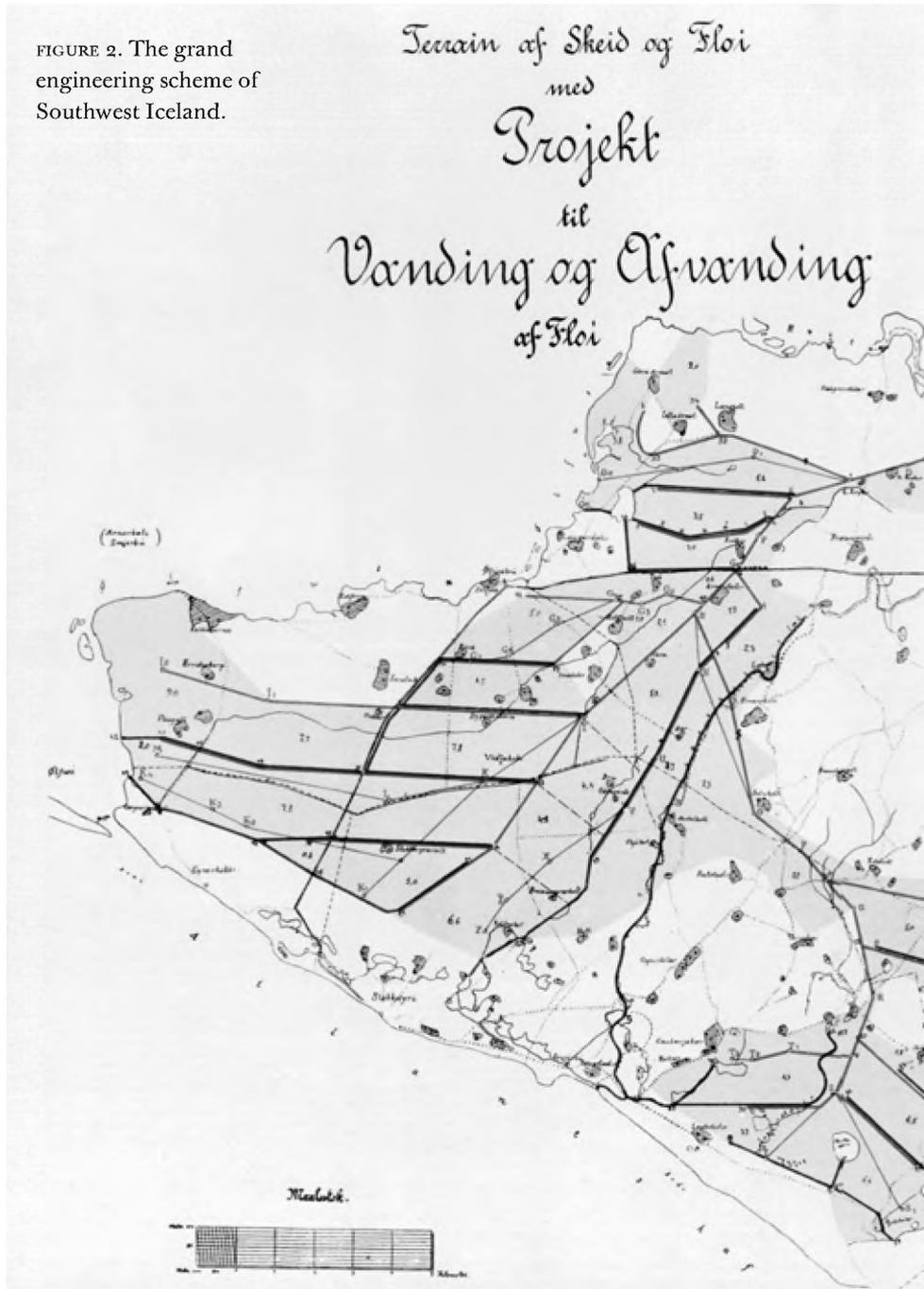
areas were drained. The use of powerful heavy equipment made it possible to manage wetlands, drain them, plan and bring order in accordance with current requirements relating to economy and profitability. For the proponents of modernism and progressivism the marsh is regarded as destructive to land and shameful, but the solution consists in digging ditches, much like the solution to transportation problems consists in road construction.

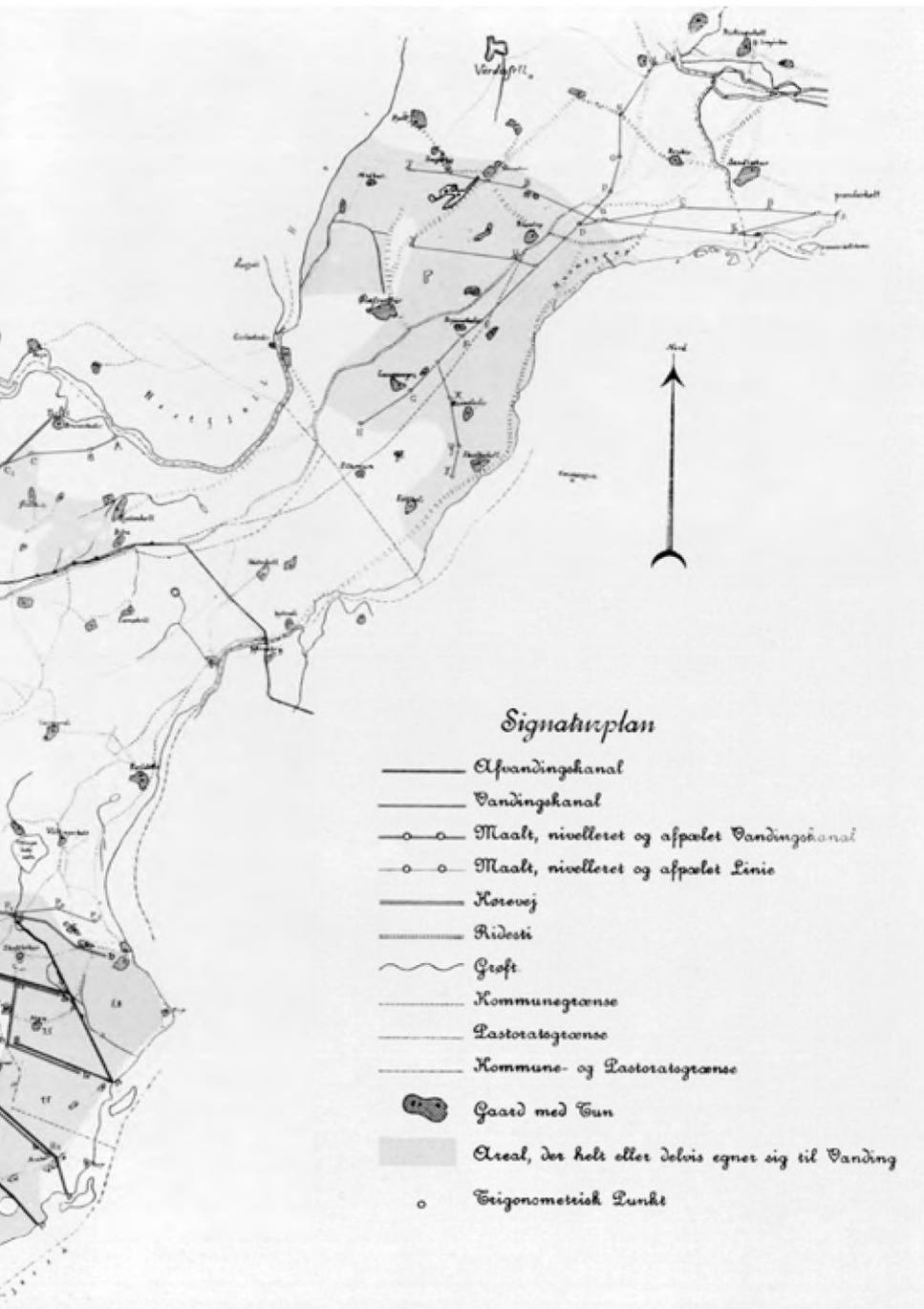
Many projects in Iceland and elsewhere have either not lived up to modernist expectations or proven to be dubious investments. Amongst them are many attempts by the Icelandic state authorities to gain control of marshlands, including large irrigation projects in the southern regions of Skeiðar and Flói (Kjartansson 1988; see Figures 1 and 2). Here, a grand engineering scheme was launched in 1914 with the financial aid of the national authorities, for the purpose of facilitating flexible management of water on individual farms and for increasing overall productivity in agriculture. An Icelandic engineer was in charge of the project, drawing upon plans developed by the Danish engineer Carl Thalbitzer. The project demanded massive funding, but the results were disappointing. Ironically, when the project was “completed” it turned out to be more or less obsolete, due to other innovations in agriculture.



FIGURE 1. From the Flói irrigation system (Photo: Gísli Pálsson).

FIGURE 2. The grand engineering scheme of Southwest Iceland.





The drainage schemes were later heavily criticized by, among others, Laxness (see, especially, his article “The warfare against the land”, 1971). Eventually, the “reclaiming” of land gave way to a strong social movement favouring the reclaiming and protecting of wetlands along the lines of the Ramsar Convention. Many of the regions heavily drained in early decades have seen the rebirth of wetlands with renewed vegetation and bird colonies. This is the result of both government initiatives and those of NGOs (as were the drainage schemes before). In some contexts, wetlands have turned out to provide new opportunities for local communities, underlining the resilience of human communities as well as environments. Thus, one of the communities in the Flói region engineered last century, Stokkseyri, now offers canoeing for tourists in the coastal wetlands (see Figure 3).

The scenic and the unscenic

One important issue to emerge from recent discussions of wetlands is the aesthetic notion of the unscenic landscape and the resultant devaluation that tends to inform environmental practice and politics. Rolston emphasizes that for many people wetlands are by definition ugly: “A ‘beautiful bog’ or a ‘pleasant mire’ are almost a contradiction in terms. Mountains are sublime; swamps are slimy” (2000: 584). Swift’s *Waterland* presents a nice example of the unscenic in the context of wetlands:

For what is water, children, which seeks to make all things level, which has no taste or colour of its own, but a liquid form of Nothing? And what are the Fens, which so imitate in their levelness the natural dispositions of water, but a landscape which, of all landscapes, most approximates Nothing? (Swift 1983: 10)

Whereas Rolston (2002) challenges the notion that the landscape of wetlands “most approximates Nothing”, and is ready to see scenic beauty almost everywhere, Saito remains sceptical. The picturesque emphasis on vision, Saito argues, clearly reduces some parts of nature to being “scenically challenged” and, moreover, the unscenic deserves more attention and appreciation. But on the other hand,



FIGURE 3. Canoeing in the “Dælur” of Stokkseyri (Photo: Gísli Pálsson).

she suggests, it makes no sense to claim that “everything in nature is aesthetically appreciable” (2000: 109). Thus, wetlands constitute part of a larger pattern in nature. The literary interpretations of wetlands counter modernism by pointing out that not all is gained by the mechanisation of agriculture and the resulting drainage of a substantial portion of marshes and wetlands. Wetlands are not necessarily the manifestation of evil or obstacles to progress.

In modern Iceland, wetlands can be seen in a variety of roles created by writers. *The Mire* by Indriðason (2000) and a film by the same name render the North Mire in Reykjavík the scene of crimes and nefarious acts. Daníelsson (1981) and Laxness (1971) on the other hand both write about wetlands as something very different from and much more significant than muddy bogs requiring drainage. Water, including its currents and flow, is, as Kress (2000) points out, an important and familiar theme both in Icelandic and foreign literature.

The fickleness of the self-image was the constant interest of the novelist Ásta Sigurðardóttir. In a book published in 1961, she de-

scribes the areas where she grew up, i.e., in Hnappadalur valley area and in Mire area. She says: “The Mire area is not particularly beautiful, as we generally understand the meaning of the word” (1961: 13). Ásta on the other hand talks about the “beauty of the marshland”: “blessed peace pervades the hilly marshland and the spirit of God hovers above the swamps in the form of the plover that sings glory, glory” (1961: 13). She describes the fragrance of the plants and the lovely colours of the marshland. She walks about the marsh and depicts how “the pitch black lye water billows up from each footprint.” It presumably was a valley bog, near the childhood home of Sigurðardóttir, which she walked through. Some Icelandic writers have described wetlands as inspirers of emotions, kindlers of both self-image contemplation and understanding of nature, in a manner similar to that described in the words of Thoreau: “This inimitable charm of the marshland simply oozes through you, especially when you are barefoot” (Sigurðardóttir 1961: 14).

Conclusion

In recent years, the writings of natural scientists have been oriented towards the ecological context of drainage and protection. “Reforms” of wetlands have, on the one hand, initiated controversial ecological changes and, on the other hand, have occasionally turned out to be anachronisms, of little use or even at odds with other innovations in agriculture (see e.g. Robertson 2000: 463-464). Many natural scientists have pointed out that wetland areas are very important in terms of climate and its changes (see e.g. in an Icelandic context, Ólafsson 1998, Óskarsson & Guðmundsson 2005). Little attention has, on the other hand, been paid to the analysis of the perceptions, attitudes, and relations of those who are in close contact with wetlands and involved in discussions about them, their drainage, reclamation, management and research thereof. In their writings, natural scientists often refer to the usefulness of wetlands. Thus modernism appears, but laced with ecological valuation that draws on a more holistic understanding. The progressive ethos remains, aiming to gain the perfect understanding in order to utilize and harness resources for human benefit. It seems essential to expand the

notion of resilience, to allow for communities as well as “environments”. In an international context, the ambiguous relation between place and its literary representation, the dream of nature, and its generation are echoed in the expanded ecological understanding presented by Mitch. Partly with reference to the catastrophes in New Orleans in 2005, he explains how local urban development, through its neglect of the needs of the water and the drainage projects of the wetlands surrounding the city, had actually caused these catastrophes, which will recur (see Mitch and Gosselink 2007: 353). Mitch contends that in our approach to wetlands we must “think like water” and realise that it will always find its way.

For Deleuze and Guattari (1988) deserts and water are examples of smooth space while the land, subject to the control of humans, is constantly striated, distributed and divided. Borders and property boundaries can be drawn on land, even in the form of walls. This is more difficult at sea, and ownership boundaries in marine regions must be controlled from shore. Wetland falls, on the other hand, between land and sea:

The two spaces in fact exist only in mixture: smooth space is constantly being translated, transversed into a striated space; striated space is constantly being reversed, returned to a smooth space. (Deleuze and Guattari 1988: 474)

From the unmolded mass of water of the marshland of the mind, ideas are shaped that are controlled by the discussion and technological competence of the day. These ideas are transformed into action and have now striated the land with ditches. Nowadays these ditches are occasionally filled up and in the course of time marshland is formed anew – we let the water sometimes decide. Thus, the wetland is transformed into a mass of water, which is never the same from one day to another, smooth under foot, the source of endless ideas – smooth space.

When the rhetoric of modernism was at its peak, in the 18th and 19th centuries, marshes and wetlands constituted obstacles to progress. This approach reached its climax in the grand engineering schemes developed in southern Iceland at the middle of the last century. Later on, a strong social movement advocated the reclaiming

of wetlands. A somewhat romantic reaction to modernism created the ideological flexibility needed to see wetlands in another light. Holistic ecological valuation became the founding understanding of wetlands as an ecological system of global significance. Modern Icelanders are concerned with retreating glaciers, dynamic water-courses and the implications for the resilience of marshes and nearby communities, aware of the recycling and movement of water both locally and globally.

By now it seems patently clear to most people that the “natural” climate of the globe has a lot to do with human activities (Crate & Nuttall 2009). Not only have humans significantly contributed to global warming during the last decades, also they have had an important impact on climate for thousands of years, particularly through their use of fire. For some scholars, the notions of “naturecultures” and “biosociality” capture the fact that nature is increasingly being remade through technique, becoming more and more artificial. This is an issue often addressed by the social sciences and the humanities, including anthropology, through discussions of human perceptions and understandings of short-term and long-term atmospheric fluctuations, weather and climate of which wetlands and the social attitudes towards them form an integral part.

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