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CONTRIBUTORS

Lars Fredrik Andersson is Associate Professor of Economic History and affiliated to the Centre for Environmental and Resource Economics (CERE) at Umeå University. His research is mainly on household and business issues in the areas of energy, insurance, banking and economic growth.

Tone Bleie, PhD, is Academic Director at the Centre for Peace Studies, University of Tromsø, Norway. As a scholar and development practitioner, she has worked on rural production systems in Bangladesh and Central Himalayas. She has done extensive research on the globalization of political ideas, new militant and non-violent movements and the new challenges to the state in South Asia.

Ann Grubbström, PhD, is a researcher and Senior Lecturer at the Department of Social and Economic Geography at Uppsala University. Her research is concentrated on ethnic minorities, landownership, generational change and gender in the Estonian countryside.

Hans Jörgensen, PhD, is Senior Lecturer at the Department of Economic History, Umeå University. His research focuses on agriculture, forestry and property change in the Baltic States, East-Central Europe and the Nordic countries.

Tor Arne Lillevoll is Associate Professor at the Department of Sociology, Political Science and Local Planning, University of Tromsø, Norway. He has experience from both development work and research in rural communities of Northern Norway, and flexible education with pedagogical use of ICT/Geographic Information System.

Magnus Lindmark is Professor of Economic History and affiliated to the Centre for Environmental and Resource Economics (CERE) at Umeå University. He has worked on historical growth issues with special focus on the relationship between growth and the environment, including the construction of environmentally adjusted historical national accounts.

Nicolás J. I. Rodríguez is a doctoral student at the Institute of Biology, University of Bergen, Norway, and affiliated to the interdisciplinary research program Regions and Regionalization. The working title of his forthcoming thesis is *Theory and Method for Ecosystem-Based Management. A Case Study of the Barents Sea Plan and the Challenges of Implementing an Ecosystem Approach.*

Olof Stjernström is Associate Professor at the Department of Social and Economic Geography, Umeå University. He specializes in political geography, urban planning and population geography.

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TONE BLEIE & TOR ARNE LILLEVOLL

Shepherds of the Mountains

Sheep Farming in a North Norwegian Alpine Landscape as a Community of Practice

ABSTRACT We investigated the interface between scientific knowledge of commercial sheep farming and local communities of practice. Through combining socio-cultural and cognitive theories of learning, we applied a concept of community of practice to analysing the importance of the local Goat and Sheep Society for family-based sheep farming in Lyngen after the Second World War. A point of departure for this investigation was the extraordinary results in national rankings and competitions by some of these Lyngen sheep farmers. This paper empirically documents the dynamic, multi-faceted interaction between "barn floor" breeding practices and national-level breeding science. We thoroughly analysed this domain of knowledge as a practice-driven process that involves a particular configuration of practitioners, including newcomers and old-timers, households, local sheep breeding societies and national scientific knowledge institutions. Based on this notion of a community of practice, the relations between masters and apprentices are given particular attention. One particular characteristic of this community of practice is the institutional enmeshment between the local Goat and Sheep Breeding Society and the local Læstadian congregations. We argue that certain focal normative notions of the family and of the order of creation (Norwegian *skaperordning*) to care for the creation and to survive (Norwegian *å berges*) provide the motivational force to these knowledge innovations.

KEYWORDS sheep farming, Norway, alpine landscape, Lyngen, entrepreneurship, breeding, inter-generational learning, Læstadianism

Introduction

The sheep farming community in Lyngen, Northern Norway, contains some of Norway's highest achieving farmers in terms of national standards of meat quality. This impressive achievement has yet to be analysed in depth from a socio-cultural and institutional standpoint. It is essential to analyse the dynamics of this system, linking the micro-processes in these Lyngen communities to sheep farming at the national level. These sheep farmers are engaged in both innovation and entrepreneurship; their innovation entails creating something new while not simply reproducing or imitating others, and their entrepreneurship converts this knowledge, social and physical capital, into new business ventures (Spilling 2006: 39).

In recent years, the actual and potential innovations in Norwegian arctic agriculture have been studied through a focus on entrepreneurship (Spilling 2006, Borch & Førde (eds.) 2010). One prime focus of this research has been on social and community entrepreneurship and the mobilization processes behind collective innovative projects headed by local enthusiasts (Norwegian *ildsjæler*). The rural community as a place (Norwegian *sted*) has been analysed as framed in globalised and regional space with the main concepts being regional and national innovation systems, value chains and clusters (Arbo 2009: 387). However, these processes have mainly been analysed only in the short term and with inadequate attention paid to the role of religion, work ethics and social capital (Arbo 2009). Therefore, a longitudinal perspective is necessary, focusing on intergenerational learning and analysis of both formal and informal institutional processes (including their social and cultural aspects) that generate innovation. In studying the situated nature of collective learning by practitioners (both newcomers and old-timers), particular attention must be paid to the interface between scientific and local knowledge, and investigating how this interface operates in an arctic fjord and mountain environment.

In this analysis, primary focus is placed on innovations in breeding techniques, while recognising that breeding is affected by several other critical areas related to the annual production cycle. As a whole, breeding knowledge is deeply embedded in a vast body of scientific knowledge and local "rules-of-thumb." Particular attention will be paid to the critical phase of grazing in the spectacular mountains of Lyngen. The local history of breeding and a set of other critical institutional factors (Lillevoll 1982) will also be taken into account, in order to explain the extraordinary success of the Lyngen farmers.

Lave and Wenger's socio-cultural model of situated learning, involving the process of engagement in "a community of practice," was initially developed in opposition to classical cognitivists' assertions of learning be-

ing "rule-based" and entirely governed by internal mental operations (Lave & Wenger 1991).[1] However, a synthesis of recent theories of cognitive processes and social interaction may prove to be more fruitful (Bleie 2003: 181, Greeno 1997: 15). The following analysis focuses on collective learning in a shared and evolving domain of knowledge (sheep keeping) encompassing the meetings of the Goat and Sheep Society, the barn floor, the kitchen table, and the mountain pastures: a domain defined by membership and competency.

Over the years, breeding and other sheep keeping practices have become a joint and passionately sustained enterprise. Institutional arrangements and social practices are highly enmeshed and expand the capacity for day-to-day systematic observation and experimentation. Through this, adjustment and revisions can be made and combined with intergenerational learning to produce highly efficient sheep farming communities. A highly functional community develops a shared repertoire of basic ideas, symbolic expressions, commitments, skills, tools, routines and memory. The emergent successful structure is characterised by sophisticated hybrid local knowledge and a high labour intensity, showing innovative adaptive skills not only in the arctic environment, but also in the national marketplace.

Institutional arrangements are pervaded by particular religious beliefs that, contrary to prevailing stereotypes of their stifling nature, promote innovative and adaptive behaviour that responds to complex shifts in the environment in both institutional and market conditions. Instances exist in which these knowledge interfaces create multifaceted, partly unforeseen effects, and are in certain respects innovators of scientific knowledge that coexists with both articulated and tacit (silent) local knowledge.

Even if the organizational initiative in our study case came from national authorities, as a community of practice it has become a local, predominantly self-organising system that is based on trust and a sense of joint identity (Wenger 1999: 4). In particular, it is the process of learning by practice that makes the relationship between elders and newcomers central in the community. Essentially, this relationship can be conceptualised as a relationship between that of a master and his apprentices (Lave & Wenger 1991, Lillevoll forthcoming). Communities may be anything from relatively equitable to highly hierarchical in terms of access, voice, and formal authority. Age, gender, kinship, social status, talent and leadership qualities are all integral to forming a successful farming community.

Study Context

The Lyngen peninsula in North Troms has historically made extensive land use of its fjord and alpine landscape. The rural settlements that lie dispersed

along the fjord contain a narrow landing for vessels, a cultivation zone, and higher elevations composed of lush valleys and tall mountains.[2] Since the Second World War,[3] these settlements have undergone major transformations. However, specific aspects of the agricultural innovations in the mid-fjord area, on the eastern side of the Lyngen peninsula, have yet to be investigated. More specifically, focus needs to be placed on the establishment and development of commercial sheep keeping and its underpinning knowledge and traditions. The fjord people of Lyngen are of mixed Sea Sami, Kven and Norwegian ancestry.[4] Due to the state's assimilation policy before the Second World War and up until the 1980s, people of this region reported their ethnicity as Norwegian. The ethnic revitalization that started in the 1970s in the Sami core areas in Finnmark only started to gain momentum in this fjord area in the 1990s.[5]

The early post-war years set in motion new adaptive combination income strategies. Until this time, the fjord people had pursued a livelihood adaptation in which subsistence agriculture was combined with fishing for both consumption and income.[6] New combination strategies have been developed that vary between outer coastal areas and inner fjord areas. In the inner fjord areas, the overall new combination strategies were due to reduced fish stocks as ocean and fjord fisheries ceased to provide viable incomes. New income earning opportunities were created by the state's massive public post-war reconstruction effort. Men shifted to these new income opportunities in the reconstruction sector, which grew quickly in the first two post-war decades. Farmers, mostly female, shifted from small-scale subsistence agriculture based on livestock keeping to milk production for profit and sheep production for both consumption and for the sale of meat and wool. This new role for women as income earners increased their centrality in community life, allowing them to emerge and become active in forming and running the new Goat and Sheep Society. In these coastal communities, the conservative pietistic denomination Lyngen Læstadianism has been an all-encompassing frame for a close-knit religious world. Until the establishment of the Goat and Sheep Society, the Læstadian congregation had been the principal public arena for communal affairs, apart from education. The 1960s became a period of growing diversification and rapid rise in living standards for these devoted villagers, creating an extraordinary local collective mobilization of innovative on- and off-farm livelihood strategies.[7] These strategies were also aided by state support, principally through infrastructural development that allowed long-distance transportation of milk to new dairies and agricultural extension services, which stimulated the adoption of modern production technology and scientific breeding practices. Moreover, the state established a comprehensive

regime of subsidies and supplementary financial incentive systems, which together with the new opportunities for rapid transportation (by coastal steamers and trucks plying new-built roads) increased the supply of agricultural products at affordable prices. Local producers were members of two national producer organizations; the Norwegian Goat and Sheep Breeding Society, and Norwegian Farmer and Smallholder Union, which both partook in the annual negotiations with the state about subsidies and other incentive mechanisms. In this early period of widespread mixed livelihood strategies, including management of small herds, the extraordinary active local goat and sheep breeding society played a crucial role (Lillevoll 1982).

This early phase of modification of strategies was followed by two decades of decline in the number of households depending on these mixed strategies, especially those involving sheep production. In the two decades following the early 1980s, milk production from cows almost disappeared. A small number of farms started to specialize in sheep keeping with very small flocks in the late 1970s. From the 1980s on, flocks increased to a grand scale with summer flocks containing more than three hundred animals, and a new generation of sheep farmers established themselves (Lillevoll 1982).[8] Heirs to farms and locals without any land could become sheep farmers, since a shift to off-farm income earning created an emerging lease market in local fallowing farmland. Some of these new farmers were even able to rapidly climb to the top rung in the annual national competitions for the best quality lamb meat. Farmers in this region have remained top-ranked nationally every year for the last 5–6 years. In the past ten years in the Norwegian consumer market, sheep and lamb meat has emerged as a relatively highly priced niche product that is valued as very healthy. The health value of these products is due to the animals' declining fat content, which stems from the free-grazing nature of these animals that feed on a variety of wild mountain grasses, creepers, mushrooms and herbs.

In recent years, increasing awareness has been given to the critical importance of low-fat diets for the reduction of modern lifestyle diseases such as heart disease. This awareness has given rise to the demand for meat from free-range animals, including both sheep and game. In the past ten years, lead farmers in the Lyngen communities have observed this emerging national and regional marked trend, and taken a lead in innovative breeding practices, ultimately producing extraordinary lean, high quality meat.

During the last four decades, the Læstadian congregations went through major organisational changes and religious tenants were put under new pressure. Unlike in Southern Norway and parts of Northern Norway, no thorough secularization of community life occurred. Therefore, congregational life remains essential for these farmers.

This study focuses on the communities that have diversified their income opportunities since the 1970s. Currently, many households are entirely dependent on off-farm incomes through local employment in the public sector or urban areas. In our study of approximately 820 persons in 206 households, 23 households are involved in animal husbandry, and all of them have sheep. Currently these 23 farm households have 3,100 winter-fed sheep. The changes over the last 50 years in the number of sheep per farm unit indicate the dramatic change that has occurred. In 1960, each unit had on average 4 winter-fed animals. In 1978 the average number had increased to 12 (Lillevoll 1982). Currently the average is 135 sheep per farm unit.

Data for this study was collected between 2008 to the present. One of the researchers is a native of Lyngen, which greatly facilitated the introduction and rapport with the local farmers. The other one has extensive research experience from Himalayan mountain communities and delta-land rice farming. Open-ended focus interviews and life-history interviews with two generations of acknowledged lead farmers were conducted. In selected farming households, daily routines of the annual production cycle were studied through participatory observation. Lillevoll's comprehensive study (1982) of occupational combinations in Lyngen's agricultural sector, which already by then had become a part-time occupation for many locals, has been an invaluable reference source for this study.

From a layman's perspective, breeding might be perceived as only a hectic mating season, otherwise detached from the rest of the annual cycle of stall-feeding, outdoor grazing and slaughtering. However, results from this study prove that this entire cycle is intimately connected to breeding as a diverse, sophisticated knowledge domain.

The Production Cycle. The Critical Mountain Summer Grazing

The management and production cycle includes shifts between stall-feeding during the long, chilly winter months from October through April and transhumance during the short, moderately warm arctic summer from June to September. In the warmer months, animals are left free grazing in higher elevations from approximately 500–1,000 metres above sea level, in spectacular alpine meadows, with emerald green nutritious pastures. In this arctic climate, late August heralds the first signs of autumn with spells of yellow and red colours, and powder snow on the highest tops. These signs of nature launch a hectic collection season.

Relatively few households opted for large expansion of their sheep, keeping 200–300 winter-fed animals. Given the current fertility rate, the

flock size rises to 600–900 animals after the lambing season. This is a magnificent rise in flock size compared to the numbers in the 1950s and 1960s, when the size was 5–10 winter-fed sheep and a similar number of cattle. Later, in the 1970s and 1980s, the number had risen from 15–20 to about 100 winter-fed sheep or 60–300 summer-fed ones.[9] The rise in the number of animals from summer until the autumn slaughter, for these specialised sheep farmers, has not only necessitated negotiation for access to the vast mountain plateaus and steep mountain sides up from their own farms. Access is also needed to more distant mountain pastures in both their own and in neighbouring counties, in the inner parts of the Lyngenfjord. The most attractive pastures in the Lyngen peninsula are privately owned. The spatial distribution is composed of narrow plots, which range from the fjord up to the highest magnificent peaks. The lowest lying areas within this vertical plot mosaic are privately owned. The low hills have a mix of private (the forests) and common ownership (the pastures) patterns and the high mountains are common land (Norwegian *felles allmenning*), disposed by the nearlying farmers. In order to obtain access to valuable pastures in the inner fjord region, agreements for user rights are made with the owners. Such access is negotiated through social networks, based on kinship and friendship. Often families pool efforts together in order to share a certain pasture area. There has not been such an extensive use of mountain meadows, mountain plateaus and high mountains as grazing grounds for domesticated animals since the seventeenth century, when the erstwhile indigenous nomadic and semi-nomadic Sami used the Lyngen (*Ittonjárga*) mountains for their large flocks of domesticated reindeer.

Sheep farmers are very aware of how breeding is influenced by a range of environmental conditions, including the impact on lamb weight both during and at the end of the extensive free-ranging seasons.[10] Changes in weight are often evident by the increase in mortality rates during summers with more predators. Farmers in this study use composite breeds of Norwegian White Sheep (NWS) of Dala, Rygja and Steigar, a genetic mix of old Norwegian breeds and British breeds (Burditt *et al*. 2008).[11] In order to reduce the mortality rates during the risky outdoor season, farmers will identify high-risk lambs in the spring and keep them on the farm longer, or even for the duration of the summer if necessary. They are also keenly aware that litter size, sex and age of the ewe (dam) affect lamb mortality during the 5-month pre-weaning period both on the home pastures and during the free grazing season.

Monitoring of the well-being of the flocks during the summer and sheep gathering in early autumn are done by effective, coordinated use of our perceptive apparatus, knowledge of instincts of flocks of sheep and shepherd

dogs, and use of modern communication technology. This effective combination is best understood by combining ethological knowledge of flock behaviour and cognitive perspectives of humans' perceptive apparatus.

Current methods of sheep gathering combine an intricate triangular relation among humans, sheep dogs (border collies) and sheep. Modern technology, in the form of binoculars, and mobile phones, is regularly used. Some farmers even make use of a global positioning system (GPS) to help track their sheep. Until the 1970s, the sheep-gathering season from the early transition of the arctic summer to early autumn took place based on local collectors' intimate knowledge of their sheep's preferred grazing grounds in the mountains. The human visual sense and long-term memory were mobilised. The interplay between spatial memory (both place memory and three-dimensional orientation) and hearing faculties (i.e. the direction of tickling bells and animal cries) enabled collections, but collections remained arduous.

Until the 1980s, collecting sheep in the foothills was eased by the intensive grazing of cattle, which checked the growth of dense forestation in this elevation zone. In this period local sheep collectors started to use walkie-talkies as an aid for communicating the whereabouts of the herd. The walkie-talkie was considered a more social technology than the subsequently introduced VHF radio and the most recent mobile network, since the wavelength used was open and could be heard by anyone in the region. Most fjord-side and upper-elevation villagers had their own walkie-talkies, and listened eagerly to the steady, but crackling, stream of communication between the bands of collectors in the mountains. Even though since the mid-1970s the use of walkie-talkies had eased communication and coordination, the consolidation of the dispersed small bands of sheep and their lambs was still a laborious physical task, involving highly coordinated calls and orders from collectors who ran across areas of streams, hillocks and vast berry-clad moors.

Given the steady flock increase in the 1970s and early 1980s, a few young sheep farmers attended courses in sheepdog instruction. They started using Scottish sheepdogs on an experimental basis, utilising experiences from pioneer farmers in Southern Norway as a guide. These early experiences gradually convinced the sheep farmers that these dogs would be invaluable helpers in their increasingly arduous task. The sheepdogs' flock instinct is mobilised by its human flock members through an intricate mix of commands and by approvals and disapprovals that direct the dogs to take up a hunt. Hunts end with the gradual encircling of the escaping flock until they ultimately give in and come to a standstill. This signals the sheep's reluctant acceptance of the sheepdog as their flock leader. After this first run-escape

encounter, the sheep are herded across the majestic mountain terrain under the direction of their human flock leaders. The autumn gathering starts with the collection of the easily identifiable larger flocks, resulting in total herds ranging from 50 to 300 animals retreating from the mountains. The rows of humans and animals descend on narrow trails through the forested foothills. There the tired flocks are herded into temporary enclosures until they are moved onto large tractors that transport the animals to the farms.

The autumn collection process contains a visible social element. If the weather permits, the collectors, who are often close relatives or neighbours, take a few breaks during their long and arduous days. During these cherished breaks, both bawdy joking and serious discussions ensue. Coffee is brewed over open, crackling and aromatic fires and served with salty food and sweetmeat. The well-established practice that any collector who spots other farmers' animals nearby should track them and bring them down is on the decline. However, in certain areas communal solidarity prevails. If other collectors' animals are spotted in farther locations, they are carefully reported as soon as possible. Those collectors, who use a mobile network, will instantly notify owners about the situation. These acts of communal solidarity not only reduce the total time used for collection in each farm household, but also reduce the mortality rates of the sheep themselves. The joint sheep collection gatherings, which take place in closer pastures and often are lively social gatherings, are attended not only by the collectors themselves, but also by villagers who are no longer sheep owners.

Back on the farms, the herds are subjected to full inspection, and lambs and sheep are sorted out for slaughtering. What the locals call "the mother's line" is kept, while those in the "meat line" are sent for slaughter. Sheep that do not have the ideal slaughter weight are driven out into on-farm high quality pastures in order to grow quickly to the desired weight. Ewes that demonstrate weak mothering and have caused deaths in their litter may also be sent for slaughter. Nonetheless, autumn is a hectic season, with animals sent for slaughtering every week while many remain in cultivated pastures. After wool shearing, there is in-door collection, launching the winter-feeding season in December. This begins with treatment for parasites, sorting of sheep in the mother line, sorting lambs by age and growth, and development of a fodder plan for each animal in preparation for the mating season.

The early mating plans from the spring are now adjusted, based on careful observations made during the outdoor season. These observations are supported by physical and visual examinations, based on systematically registered data and indexes for each animal. The indexes measure fertility, meatiness (Norwegian *kjøttfylde*) and growth, and are developed by animal specialists of the national breeding organizations. All of the indexes

can be influenced by barn-level breeding practices and by combining scientific and local knowledge about environment-genotype interaction (affecting morbidity, mortality, weight, etc.). Over the decades, farmers have become very experienced breeders using these indexes. Whereas past farmers mainly relied on natural mating (Norwegian *parring*), artificial (Norwegian *semin*) methods have gradually become more important and common in the herding community. In 2007 some sheep farmers decided to leave the community's only breeding cycle (Norwegian *værring*) and begin in a new cycle. Modelled on trademark development in Lofoten (in Nordland) of "Lofotlam," two trademarks were registered in 2005. The smallest and most recent trademarked producer group (Alpe-ringen) is a kin-based circle comprised of four brothers. The largest and oldest circle of sheep keepers is called "Lyngen *værring*." The circle's carefully selected rams are then sent into a hectic mating tour (Norwegian *bedekking*). Artificial insemination often supplements this process, due to the large number of ewes to be impregnated.

Starting at the third week of pregnancy, ewes (Norwegian *søyer*) and their foetuses are monitored closely. Practical preparations for the lambing are crucial to their survival, and things such as weight are registered in a specially designed data system. Given the large number of pregnancies, the farmers virtually live in the barn around the clock for 3–4 weeks. Continuous observation and birthing assistance are critical in order to ensure that the mother sheep's maternal instinct is triggered. If the mother sheep refuse the lambs, morbidity and mortality would ultimately increase, leading to substantial economic losses. Refused lambs (Norwegian *flaskelam*) have to be bottle fed, and those with many siblings are transferred to sheep with only one or two offspring. The first days and weeks are very important for ensuring stable growth of the lambs. Healthy mothers with fresh udders have a bounty of milk. Animal health depends both on nurture (good stall care, access to nutritious on-farm and off-farm pastures, and regular health monitoring and treatment) and nature. Even after the animals have been let out on the fenced greening home pastures, the mother-child bonding remains critical for survival. If mother and lamb become separated outdoors for more than 24 hours, the lamb will risk not being accepted back by the mother.

The Interface between Barn Floor Experiments and National Breeding Science

Norwegian agriculture authorities established a comprehensive national multi-tiered institutional apparatus, financed breeding science in domestic animals (and later in fish breeding), and mobilised scientific insights for national

breeding programmes. This new apparatus is supported by comprehensive training and extension programmes that are ultimately aimed at spearheading modern sheep farming.[12] From 1947, authorities moved to establish local Goat and Sheep Societies reaching even to the fjord regions of Northern Norway. These different societies were formed under the umbrella of the Norwegian Association of Sheep and Goat Farmers (NSG). Through extension visits, booklets and district and region-level trainings, society members gained exposure to modern scientific notions of animal health, feeding, breeding and meat quality. Local leaders gained access to regional and national level forums, bringing home new knowledge and inspiration from meetings with enterprising sheep farmers from the fjord areas of Western Norway to the Eastern and Central Regions. Whether or not these movements have had a substantial "trickle-down effect" is a matter of considerable interest in this study. When we interviewed the oldest living members in this society as well as current active members in the leadership, we found evidence of a level of self-organization and innovation that cannot be suitably explained or conveyed as a simple protocol. We uncovered that local institutions have been a hub for breeding experiments, based on an extraordinary amount of careful and systematic observation of animals, including local trials that have not been outlined in something like a scientific textbook standard.

Observable phenotypes, the result of lucky genetic imprints, caused farmers to select particular rams on an experimental basis. Incidents of abnormal meatiness in slaughtered lambs were registered by animal specialists in Northern Norway as early as 1938, and documented officially in 1940 (Boman 2007). Our informants report that there were such cases registered by Lyngen farmers in the early post-war period. After the post-war period, decades passed before some Lyngen farmers started using the locally selected ram called *Hjalmar*, which they observed had extreme meatiness. In the 1990s Hjalmar began to be used systematically on an experimental basis in some herds, in order to test out genes and environment-genotype interaction. Local lead breeders took enthusiasm to these barn floor experiments, and the phenotypical qualities of their different breeding experiments were a matter of passionate local discussions both at meetings and on the farms themselves. These local breeding experiments started independently of breeding experts. Sound scientific knowledge of breeding, and recognised national standardized qualities of slaughter, mothering, wool quality and volume were mobilised and complemented with old "rule-of-thumb" knowledge of sheep fertility, mortality, and exteriority (muscle composition, body composition's effect on coping in the mountain, good udder, etc.).

At a Breeding Forum Meeting (Norwegian *Fagforumsmøte*) in 2003, a sheep-breeding specialist was presented with photo documentation from a

sheep farmer in Nordland, a district south of Troms. This photo documentation of abnormal meatiness leads to a scientific "discovery" that prompted the aforementioned Competence Centre of Animalia and NSG to start research on this sensational gene variance. Through comparative genetic research between cattle (Norwegian *storfe*) and sheep, it was concluded that this phenotypical characteristic was a functional mutation of the myostatin gene, which resulted in "double muscles" and a very low fat content. Emboldened by the specialists' results, the sheep farmers continued experimenting in meat quality and fat content, using their own terminology for mating strategies, mainly the "mother's line" and "meat line," wherein Hjalmar's semen was inseminated. The meat line produced extremely lean lambs for slaughtering, while the mother's line lambs were fit for becoming mothers since they had a higher fat content and ample milk production. Observations of genetic variances were discussed at length, involving the Hjalmar gene observed in either both parents or on just one side. In our assessment, this was a systematic breeding experiment that began at a "barnfloor level" that was verified scientifically. Among the scientists, however, there was a considerable controversy. Scientists were divided in their views about whether the positive effects of this gene variance (affecting slaughter class and fat group) outweighed the negative effects. Even after these discussions with the scientists, farmers continued their breeding efforts. Following a 3-year research project by the Norwegian University of Life Sciences on the myostatin gene mutation (Boman *et al*. 2010), project leaders *recommended that* the gene should not be selected for future breeding. The decision was met with considerable scepticism among local sheep farmers involved in our study.

The pioneer breeders who spearheaded these experiments included the mentors of a new generation of breeders. Among these new breeders are the top achievers in the national competition for meat quality and breeding rams, as well as experienced breeders who came to age in the 1970s and 1980s. Until the late 1970s, the breeding effort was an extremely collective one, which nurtured a "community of practice." This community provided for an enriched learning environment for master breeders, competent breeders and apprentices including the community's school going children starting at only 6 years of age.

"A Community of Practice" of Sheep Farmers

Before commencing this study, we were intent on enquiring whether the post-war breeding success story was the result of a particular collaborative effort. Following this question, we wanted to know if the relations between

old and new breeders were best understood through Lave and Wenger's concept of masters and apprentices: a concept one of our researchers (Bleie) has been using in explaining intergenerational learning in Himalayan mountain communities. Furthermore, we argued for an understanding of "communities of learning," which dismisses a polarised view of social versus cognitive theories of learning. Mental representations, neural execution of movements, and observable practices on the barn floor and at summer pastures are always completely interdependent. What goes on inside peoples' heads is both preconditioning and influenced by what transpires verbally and non-verbally between people in a community. Learning is, in this sense, also distributed among co-participants. In our study, the co-participants or community involve the most skilled master breeders, other skilled breeders and apprentices—all of them school children.

We have already defined the learning community in our studied hamlets. It consists of the Goat and Sheep Breeding Society as something more than a local chapter of a national organization. It is found to have certain self-organizing features that surpass the national rules and regulations of NSG. While membership is formally considered individual and usually only one member in each household held membership, most family members were actually active participants. In the 1960s a nearly seamless, yet multifaceted flow of information between this institutionalized public arena and the family-farming units began. Everyone knew from their own observations what was discussed in the Society's meetings. Through daily chores and observations from each barn-floor, information became quite open and shared in the Society's meetings. Since the local chapter was part of a multiscale organization, members and elected leaders had access to centrally distributed knowledge of breeding and a range of other aspects of sheep and goat keeping. Each paying member received a comprehensive Practitioners' Resource Book[13] that was very actively used, typically read thoroughly by most adult household members.

The master breeders, who headed local improved breeding and rearing practices from the 1970s to the early 1990s, grew up in the early post-war years. This was the time when sheep-, cow- and to certain degree goat-keeping gained a proper foothold. The forefathers of the oldest of the studied master breeders had arrived in Lyngen from Tornedalen in Swedish Lapland around 1836 and had a century-long legacy as horsemen and horse breeders. This master breeder sustained his family's history, through oral tales and also a few written texts. The narrative structure of the life history interviews contains an intricately interwoven lineage of his ancestors along with the mares (female horses) that the family kept. The mares were named by the same female name in every generation. This master breeder's oral nar-

ratives represent a rich testimony of an extraordinarily close relationship between men and mares. His family's horse stories are rife with detailed and captivating narratives of their extraordinary natural ability to sense deaths and disasters in advance. The mares are poignantly described as displaying feminine beauty, a varied emotional repertoire of attachment, sadness, fear, disappointment akin to humans, and advanced cognitive abilities in path-finding and sound recognition. This emotional and respectful intimacy that this master breeder was socialized into from his childhood years came also to mark his relationship to his sheep in his mature years. His forefathers practised some level of breeding of the ancient Lyngen horse (Norwegian *Lyngshesten*) in the early decades of the twentieth century. When systematic sheep and goat breeding was adopted by the state's agricultural line agencies after the war, quite a number of Lyngen families, including this master breeder's family, had a proud local record of keeping and breeding horses and sheep.

The late 1950s and 1960s was the early period of communal engagement in improved sheep and cow keeping. The Lyngen Goat and Sheep Breeding Society was established in 1964 and a circle (Værringen) of producers a few years later. The Society mobilised all generations in its regular membership meetings, and tapped into an ore of old local horse breeding knowledge. These meetings were cherished and huge social affairs. The attendance at ordinary membership meetings was so massive that the main hall was so packed that the crowd overflowed into the outer entrance hall.

Though women tended to play a somewhat submissive role in the congregation, the level of active participation of women in the discussions of these membership meetings from the 1960s to 1980s is striking. Women were also responsible for important tasks of hospitality, typically centred on the impressive coffee tables. Men (as heads of households) and leaders in the Læstadian congregation held the formal memberships in the community. Women were often in charge of the family farm, as many men were away on seasonal migration. This division of labour opened up opportunities for women's involvement and leadership in the breeding efforts, even if they were not elected to the formal top positions in the local society at that time (Lillevoll 1982). The names of four pioneers in this period are still remembered with deep respect as the "sheep chaps" (Norwegian *sauekarer*), a gendered terminology, that hides the already mentioned fact that among the remembered pioneers in this vicinity there are a number of female farmers who were talented and active breeders as well as engaged in innovating local agriculture in other respects.

From the 1970s, a new generation of young farmers became active, while the first generation of *sauekarer* were still in business and highly regarded

as mentors (even though they were near or above the pension age). In this period, one of the master breeders (selected for an in-depth study) became chairman of the Society and held the position for 10 consecutive years. After this decade as the Society's leader, this master breeder remained very active in the society for another two decades. In the period, he tapped into his family tradition and pioneered the revitalization of breeding of ancient Lyngen horses, which were nearly extinct.[14]

Over the last two decades or so, new shifts in the gender division of labour emerged on these family farms, as a result of an intricate interplay between macro induced changes through state policies (most notably gender equity policies, increased job opportunities in local government, education and health sectors and incentives for mechanisation of the agricultural sector) and local gender relations. The first ever well-educated generation of young local women chose jobs in the formal sector. Women's entry into the job market was not uncontroversial, yet fairly acceptable, since jobs as cleaners, nurses and teachers could be seen as an extension of their traditional care giving roles. These off-farm occupations for the first time enabled them to earn independent incomes, which made them breadwinners alongside their husbands and gave the family economy a cherished security. The introduction of big machines (seen as an entirely male preserve), and the increasing sophistication of breeding as a knowledge domain, further contributed to the exit of women as fulltime sheep farmers and breeders. The accumulated result was a male-dominated farming system, if compared to the previous generation. Women and school children continued to contribute during peak seasons, when labour shortage was acute.

Life history interviews with the current generation of master breeders demonstrate fully the rich learning environment of breeding and several other aspects of sheep farming. The young apprentices were allowed to accompany their mentors who were in charge of free veterinary services. Transportation of rams and weighing were also offered free of charge by active members. Interested children, especially boys, were allowed to do much of this work. When current master breeders were interviewed, they recalled the excitement and pride instilled inside them when their elders entrusted them with the arduous task of transporting rams along dark slippery autumn and winter roads. The intense engagement through creative play and participation in the daily life of sheep keeping stands out in the life-history interviews, in great contrast to the dull instructional learning in the traditional classroom setting. Lillevoll's study (1982) also emphasised the importance of gender-differentiated socialization and situated learning for interest-orientation and occupational choice. The study contains observation data from the early 1980s of children learning through imitation and

practising a range of tasks. Among the children observed by Lillevoll in his first study are today's master breeders (Lillevoll forthcoming).

The apprentice period lasted from a full decade (from ages 6–16/17), during the 1980s. This was a time of socio-economic changes. Many young people chose to move from Lyngen in order to pursue higher education and obtain lucrative formal employment. However, none of the new generations of master breeders opted for this. New generations were "hooked" on becoming sheep farmers. Their immersion in the world of sheep keeping was not solely due to openness of the Society to newcomers, but also partly to the restrictions on modern leisure posed by religious restrictions. Since sports and other modern out-of school activities were forbidden, these children were left out (if expressed negatively), or freed (if expressed positively) to let sheep keeping become an all-consuming interest, besides daily school and homework. School-going girls were expected to help their mothers with daily household chores in these large families, in which having 4 to 6 children was still common until recently. This might seem like a draconian control (as late as the 1980s and 1990s) of teenagers' freedom. Our interviews do not indicate, however, that these restrictions led to serious conflicts between parents and children. In the retrospective interviews the current lead farmers recall fondly their accommodative masters and the unique practical insights and responsibilities they and their nearest kin entrusted them with at such a tender age.

Institutional Embeddedness and the Motivational Role of Religious Notions

It may be asked how this North Norwegian fjord area, dominated by a conservative form of Lutheran Christianity, became a vanguard of sheep and horse breeding in Norway. Until the mid-1980s, many households had phased out cow keeping, but had kept small winter-fed flocks of sheep. Peoples' engagement in sheep keeping and breeding was very considerable. Breeding practices and their outcomes in exteriority (phenotypical traits) were ever-present topics at both the Societies' well-attended meetings and in everyday informal interaction. Even at the Læstadian congregation's Sunday services that all sheep farmers attended, news and observations from the barn floor and grazing ground were shared. Everyday talk about the sheep's phenotypes in relation to pursued breeding strategies was part of a larger discourse on survival skills (locally expressed through the verb *å berges*) in times of extraordinarily rapid social and economic changes. *Å berges* is a complex morally grounded concept, with connotations to responsibility for ensuring survival through modest living, hard labour, and

foresight. The concept has connotations that may be explicated in English as surviving through adaptation, resilience and intelligence. The notion, which we like to suggest originated from the Sea Sami concept *gáddjot*, which translated into Norwegian means *berges*, *frelses*, *reddes*, *bli fri* ['be rescued, saved,' 'be liberated'], has been incorporated into the Læstadian belief system (Lillevoll forthcoming). This Protestant sect is marked by Calvinist and puritanical conceptions of ethical behaviour, which were first spread around Norway in the early and mid-nineteenth century by the Haugeian movement.[15] Læstadianism, also in its variant in Lyngen,[16] cultivated a work ethic that emphasized high work moral, prudence and ascetic living. Progress in material terms (*å berges*) is a sign of salvation, being among God's chosen ones (predestination). This notion has placed responsibility and agency on the local collective. This responsibility elevates the family as a primary moral and organizational framework at the level of households, the inclusive patrilineal kin-groups, and in local associational life. The notion of the order of creation (Norwegian *skaperordning*) in Lyngen Læstadianism states that the family is instituted by God, and everyone has to care for this divinely created nature as shepherds of the sea, and for their flocks of domestic animals. These interlinked notions of the order of creation and survival skills provide the motivational force behind the tremendous local support for establishing and participating (on family basis) in their Sheep and Goat Breeding Society. There was a seamless overlap between the Congregation(s) and the Society. These foundational religious values in this close-knit Læstadian congregation formed a solid social capital for the sheep keeping households and the Sheep and Goat Breeding Society as a community of practice. Lillevoll (1982: 256–258) underlines the importance of religious values. He argues that Læstadian values directed young people towards attendance in the congregation, participation in farm work and outdoor recreation, rather than in sports, which were seen as sinful, since they took place on the week's holy day. Analysis of our newly collected data confirms that the institutional overlap between the Læstadian milieu and the Society remained important (during the 1980s and 1990s) for situated learning and recruitment to the farming occupation.[17] We observed that among these biblically learned and believing people, there was a perfect match among their biblical notions of Christ as a shepherd, the Old Testament's vivid narratives of a pastoral society, and their own diverse life world as shepherds of the sea fisheries and domestic flocks.

During the first thirty years of the Society, the sharing of observations of breeding results, animal health, and assistance was nearly unconditional. This changed with the increasing commercialization of sheep keeping in the 1990s, resulting in the splitting-up of Lyngen Værring into the two

trademark-oriented groups named *Alpelam* and *Lyngenlam*. The considerable strain on moral values and social reciprocity of this new competitive situation was observed and articulated during interviews. One of our key informants, the most senior "master breeder," argued that over the last 15 years, a more selfish individualistic attitude had emerged, and the splitting to two *værring*s was a symptom of this regrettable tendency. The weakening of collective control and sanctions of selfish ways to enhance survival and progress is related to a slow but steady erosion of gender and age hierarchies (from the 1980s onwards) in this congregation (Olsen 2008).

From the mid-1990s, a new generation of enterprising farmers successfully developed sheep farming into commercially viable large-scale enterprises. Flock size expanded rapidly, demanding large modern barns and heavy machines. These new breeding masters not only retained their childhood Christian faith, but remained active members of the Læstadian congregation. Their interviews show a reflective attitude to their faith as a motivating force and how their notion of order of creation (*skaperordning*) reminded them that they are threading a precarious line as virtual masters of life through their sophisticated breeding practices. We would like to cite such a statement:

> In agriculture one experiences the work one is doing as blessed. It bears fruits. When we do breeding work on sheep, horses, and dogs, cultivate our land and fertilize it to our best knowledge, [...] you see results. Much is dependent on what one has done oneself. There is blessing in this endeavour, it is about faith, really. One feels satisfaction seeing living life from between ones fingers [...]. It is possible to create, without making ourselves into God. This pleasure is great.

Our late master breeder, expressed himself metaphorically: "The Læstadian faith is like cargo for a sailing ship, enabling it to sail well and keep the direction in our efforts to develop and renew our sheep keeping."

While not all our informants so directly articulated their endeavours through such poignant religious expressions, all felt very familiar with our use of language when we raised the question of whether there are connections between their Læstadian outlook and their struggle to survive (*å berges*). In this community of practice with its overlapping religious and economic domains, "*å berges*," with its connotations to the notion of predestination and ascetical activism and the ancient Sami faith, is constantly referred to in everyday practice as well as in communication as the explanation of why they innovate sheep keeping as a practice. Ultimately, being successful promises salvation. These eminent, hardworking and devout sheep farmers see their responsibility for sustainable and improved uses of

nature. Both their domestic flocks and their cultivated seashore and hilly fields are entrusted them as believers.

Conclusion

This paper documents and analyses the formation and level of self-organization since the Second World War in a selected group of fjord communities in Lyngen, applying the notion of a community of practice. By applying socio-cultural and cognitive theories of learning, we have attempted to unravel quite complex processes that have not yet been fully addressed in recent research on rural transformations in Northern Norway. One key finding is a productive interface between scientific knowledge and local knowledge in successive phases of breeding innovations after the Second World War. This pool of relevant local knowledge was composed of a vast, sophisticated local knowledge of the nature-based life world, including knowledge and skills from a longstanding family-based tradition of breeding of the ancient Lyngen horse. Another important finding of ours is the extraordinary inclusion of young schoolchildren, mostly boys, into this community of practice. We have unravelled certain salient features of these sheep-keeping communities as a thriving community of practice and the social frame-conditions that have enabled the rise of the pioneer generation of master breeders and their dedication to their young apprentices. Many of them are today's nationally ranked medal-earning farmers in lamb and sheep meat quality. They are now facing the quite formidable challenge of enabling their own young children to acquire a vast domain of nature-based knowledge at a time when their children no longer attend the meetings of the Society and are allowed to take part in sports activities and a range of other secular and religious youth activities. This new set of conditions, albeit less strictly religiously determined, still leads to hierarchically regulated family relations. However, apart from the not very encouraging national agricultural policies of particular relevance for sheep farmers, it is the encroachment of a globalised materialistic youth culture that preoccupies the thoughts of the current generation of master breeders when they look ahead for ways to ensure that their generation will not be the last in this successful post-war era of innovative sheep keeping in Lyngen.

NOTES

[1] Their early influential work (Lave & Wenger 1991) was augmented by Wenger (1999) and Lave (forthcoming).

[2] The earliest archaeological evidence of human use of the peninsula dates back to the younger Stone Age and the Iron Age.

[3] The people of Lyngen were directly affected by the German occupation, even if they were not, as the people of Finnmark and North Troms, subjected to the scorched earth tactics in the war's final months. For an authoritative account of the effect of post-war national decentralization policies on Northern Norway, see Brox (2006). For a more contemporary focused study of local transformations due to globalization and changed relations between the Norwegian state and rural communities of the High-North, see Bærenholdt & Aarsæther (2001).

[4] For an account of the farming system the Kvens introduced when they settled in Finnmark and Northern-Troms, see Guttormsen (2000).

[5] The ethnic revitalization of Sea Sami identity has been stronger in the country of Kåfjord on the opposite side of the Lyngenfjord.

[6] Before the Second World War, the men were engaged in the rich fjord fisheries as well as in the more commercialized ocean fisheries in Finnmark and Nordland.

[7] One of these fjord communities converted itself into a small booming industrial community.

[8] For a comprehensive study of the structural changes in family farms in this period, see Blekesaune (1996).

[9] For an overview of regional tendencies in sheep keeping in Northern-Norway during the 1990s, see Hansen and Stornes (1999).

[10] They know that long-tailed *Dala lambs* on average gain higher weights than *Spæl lambs*, and that these breeds have different flocking and foraging behaviours. Ewes and lambs of different breeds have variable ability to climb in difficult terrain and to react to and flee from predators; Spæl sheep are more responsive than Dala sheep.

[11] The main genetic material comes from Steigar and Dala, the use of Rygja has declined lately, and the use of old Finnish races has completely stopped.

[12] The Norwegian University of Life Sciences (*Universitetet for miljø- og biovitenskap/ UMB*), has spearheaded Norway's breeding science in domestic animals (and later in fish breeding), in close collaboration with amongst others, the already mentioned national Goat and Sheep Breeding Society, which directly organises and implements the national breeding plan.

[13] Bergøy 1976. A separate chapter on sheep breeding (pp. 37–72) describes the purposes of breeding, the different races, different kinds of breeding (pure versus mixed), scientific measures, the impact of environmental factors, organization of the breeding effort (some of it was taken care of locally and some centrally/at district level), selection principles and finally monitoring of offspring. Before this invaluable book came out, members had access to smaller pamphlets and lectures on breeding.

[14] The first tractors were introduced in the 1950s and 1960s. By the 1970s most had tractors. This led to larger herd size of cows and larger milk production. As a result of this mechanization, the Lyngen horse, the locality's ancient draft animal, got threatened by extinction.

[15] Hans Nilsen Hauge (1771–1824) preached in towns and the countryside. His preaching was marked by both a capitalist and a protestant spirit. Idleness was a great sin. Hauge knitted as he walked between meetings. Both Hauge and his disciples engaged in trade. Hauge had his own big firm in Bergen. It was organised as a religious cooperative, and exported fish products from Northern Norway. His movement faded away in the 1850s, but his long-term influence on the Norwegian Church and the early Læstadian movement is considerable (Kullerud 1996).

[16] The Læstadian movement emerged in the mid-nineteenth century in *Lappmarken*, a

region inhabited by the indigenous Sami and Kvens, Norwegians, Swedes and Finns. The conservative, pietistic Læstadian lay movement is part of a larger scenario of similar revivalist movements in Northern Europe. For an early but still influential account of the history and theological tenets of the Læstadian movement, see Boreman (1953). Gjessing (1953) saw the movement as covertly continuing ancient Shamanistic practices. Recent works by for example Nergård (2006) and Drivenes & Niemi (2000) have also emphasised aspects of ethnic cultural continuity.

[17] A different outcome of these observed interdependencies is evident in another nearby community. There industrialization replaced agriculture and was accompanied by secularization. Sports and organised football in particular took over the role of the Læstadian congregation as an all-consuming focus of community pride, attention and pooling of voluntary work.

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HANS JÖRGENSEN, ANN GRUBBSTRÖM & OLOF STJERNSTRÖM

Private Landowners' Relation to Land and Forest in Two Estonian Counties

ABSTRACT This comparative study is based on two large surveys of private land and forest owners in two Estonian counties. While more than half of Põlvamaa is covered with forests, Läänemaa has a potential for summer tourism and second homes. We explore different rationales for obtaining landed property and analyse the individual property holders' relations to—and use of—land and forests. Based on the two interlinked restitution and privatisation processes from 1991 onwards, our surveys reveal two main rationales among the owners: emotional and economic. The owners' relations to the property are connected with legacies from both the interwar independence and the Soviet period. In addition, different rationalities, ambitions and attitudes are also related to how the property was obtained. In spite of the demand for land, many resituated landowners have chosen to maintain or recreate family property, even if the property was not actively used. In both Põlvamaa and Läänemaa the emotional bonds to land are strong among the owners of restituted or inherited property, while this is a weaker factor among those who have obtained land or forest through privatisation.

KEYWORDS Estonia, restitution, privatisation, land ownership, forest, emotional bonds, economic rationality

Introduction

The collapse of the Soviet Union and the regained Estonian independence in 1991 were followed by complicated and time-consuming processes in order to recreate private property relations. In this context, the

restoration of private family farming—beyond the level of extended private plot production that appeared from the late 1980s—was an essential objective (Abrahams 1996: 7). Restitution became the most salient principle for re-privatisation of agricultural land, whereas most forests were to become privatised through auctions and sales. However, the policy of restitution was badly synchronised with the overall agricultural privatisation. Frequent legal impediments appeared, since previously collective assets such as machinery had been privatised long before the legal access to land was granted (Alanen *et al*. 2001: 395).

It was important for many former landowners or heirs to repossess their previous family property. In some regions the amount of land claimed for restitution also exceeded the available land area, which both postponed restitution and necessitated a tricky compensation procedure. In comparison to other parts of Central and Eastern Europe (CEE), in which we here include the three Baltic States, the Estonian property reforms thus became more sluggish, not least because of the initial lack of land engineers (Hedin 2003: 68). For the level of generalisation it is thus necessary to stress that the Baltic States—because of interwar independence—roughly spent the same time under Communism as CEE and therefore deviate from the general Post-Soviet pattern. The Post-Soviet reforms after 1991 were more similar to CEE, while the initial reforms already took place under Gorbachev's perestroika. This is important when explaining the differences in space of manoeuvring in the late 1980s and the determination to change after independence in 1991. In terms of property reforms, the choices made were thus specifically aiming at erasing the Soviet period. Thus, the so-called agricultural transformation process in Estonia was guided by political and ideological motives rather than economic efficiency criteria (Rabinowicz 1996: 20–23). However, the institutional legacies from the planned economic period and their impacts on the post-socialist property reforms have been profound. In a CEE context, based on both restitution and different privatisation schemes, the post-socialist land reform experiences are mixed. While all landed assets in Estonia, Latvia, Lithuania and Albania were fully nationalised and collectivised after World War II, the amount of state-owned land in CEE (sovkhoz-land) never exceeded more than one quarter of the total land area (Van Dijk 2003: 150). Formally, however, there were many restrictions on the use of non-state property. Depending on size, parts of the land could be privately managed and inherited, while other parts were managed by the kolkhoz (collective farm) to which the land was attached (Swinnen & Mathijs 1997: 340). The preconditions for de-collectivisation and property reforms were thus different in each CEE-country; however, one similar feature was the fact that for generations, land has constituted a specific political issue. This was the

case prior to collectivisation, during the planned economic period, and after. Another similar feature was the land fragmentation appearing after de-collectivisation due to the division of properties among several heirs (Alanen 1999: 440). Secondly, because of missing skills among the new owners and the general lack of capital for investments, many owners are unwilling or unable to manage the land properly (Stiglitz 2000: 39; van Dijk 2003: 150; Staehr 2004: 60). Finally, in most cases, restitution and the full acknowledgment of legal property rights recreated a property structure that once upon a time was economically viable. However, in the context of the post-war period's productivity development, technology shifts, and competitive trade environment, small-scale farming is obsolete. Property reforms and restitution must therefore be understood in the context of how the individual holder apprehends his or her land. Thus, the individual's preferences provide the key to the understanding of present and future land use.

Land contains an emotional component in the sense that the repossession of previous family land and property implies a reconnection to the place of birth or the link to the previous family residence (van Dijk 2007: 509; Jörgensen & Stjernström 2008: 104–110; Grubbström 2011: 36–37). Land ownership can, but does not have to, generate any economic output or imply an economic relation. On the one hand, this concerns to what extent the property owner can make profits by selling products on the market, leasing out land or generating incomes from hunting or tourism. On the other hand, the property owner may have specific emotional ties to the land, which for example represent social networks, family ties and history, or the well being of the owner. Since the early 1800s a widespread notion in Estonia has been: "Farmer and farm belong together" (Abrahams & Kahk 1994: 15, 65). Restitution therefore refers not only to the repossession of family property but also to the re-establishment of family ties related to a specific place (Jörgensen & Stjernström 2008: 109; Grubbström 2011: 34–35). It has been shown that emotional ties to property can put certain restrictions on the individual forest owner's ambitions: a restrictive impact on felling volumes and/or aversion to modern forestry management. This is the so-called *emotional filter hypothesis* (Jörgensen & Stjernström 2008: 97). However, the ambitions for obtaining land or forest and the aspiration to become property holders are based on a multitude of explanations.

Estonia makes a suitable case for the investigation of the personal relation to land and forest. At first, this small country was exposed to profound property changes and several shifts in political regimes during the twentieth century. During the first years of inter-war independence a radical land redistribution—based on expropriation—took place, while a majority of forests were kept in the hands of the State (Lipping 1980: 282). This was

also the case in Latvia and Lithuania, where somewhat less radical land reforms were carried out. In newly independent Finland, culturally and linguistically closer to Estonia but more politically developed, similar social problems needed to be solved by means of land redistribution in the early 1920s (Siaroff 1999: 107–108, 113). Furthermore, in contrast to the classical Soviet types of kolkhozes and sovkhozes, most Estonian large-scale agricultural production units were based on administrative mergers of the previous farmsteads. Many Estonian kolkhoz families thus continued to reside on their previous property after collectivisation, which also concerned tens of thousands of deported Estonians returning from Siberia after Stalin's death in 1953. Peasants saw the old farmstead as a symbol of continuity, and it was often possible to pass on the right to reside on the farmstead to the next generation. In addition, the private plots cultivated on a household basis were often attached to the place of residence (Nove 1998: 108; Abrahams & Kahk 1994: 86–87). Secondly, the relatively well-preserved property documentation from 1939 enabled—in spite of time-consuming investigations—the re-establishment of a land cadastre. Thirdly, in the midst of perestroika in the late 1980s, the Baltic Soviet Republics became laboratories for informal agrarian property reforms when eternal leases of kolkhoz land enabled small-scale private farming. Finally, restitution after the regained independence in 1991 was in line with the wishes of most Estonians because of the symbolic role of land, both prior to—and during—the first independence as well as throughout the years under Soviet rule. Thus, even though the path towards restitution was set already prior to 1991, the Estonian property reforms became more sluggish and complicated than in many other post-socialist states. While it was relatively easy to claim land back, the formal recognition of property rights after de-collectivisation was blurred by the semi-private reforms during perestroika, which needed to be solved by numerous legal amendments after 1991 (Tamm 2001: 408–416).

Aims and Outline

The aim of this paper is twofold: to compare and explore the different rationales for obtaining land and forest property and to analyse the individual property holders' relations to—and use of—land and forests. This concerns both the present situation and future expectations. Two Estonian counties, the coastal county of Läänemaa and the inland county of Põlvamaa, are in focus. Our main research questions are based on the owners' relations to—and use of—land and forests as a resource, which we investigate by means of data from our two surveys merged with additional interviews. In addition to the surveys we will present some international comparative aspects that contribute to illuminating country specific similarities and differences.

Methods and Data

From August to December 2006, we conducted a postal survey in Põlvamaa and Läänemaa. The general aim was to gain an understanding of the individual owner's relation to the property. Our questionnaires included questions about how and why the property was obtained, what plans the owners had for land use and their estimations of incomes from the property. We excluded properties below one ha, properties in urban areas and villages and land/forests belonging to companies.[1] The questionnaires were sent to 1,165 landowners; 770 in Põlvamaa and 395 in Läänemaa. In Läänemaa it was restricted to the municipalities of Nõva, Noarootsi and Ridala. The selection of these municipalities was due to the easy access to the land register, which contains both names and addresses of all landowners. Thereafter we made a random selection of land holdings. A corresponding methodology was impossible in the other county. In Põlvamaa we began with a random selection of properties from the land cadastre. Thereafter we contacted the Estonian Cadastre Registration Authority for names and social security numbers of the property owners, which we then matched with the population register in Põlvamaa. However, because there were more land and forest owners in Põlvamaa than in the Läänemaa municipalities, our sample became larger in the former case. After a reminder during the autumn, we ended up with a response rate of 36 per cent (n=420) in December 2006. When considering the scepticism towards various authority practices, the relative frequent flow of surveys of this kind, and not least the ongoing generational shifts implying multiple ownerships, we found the response rate satisfactory (Jörgensen & Stjernström 2008: 100; Grubbström 2011: 34).

Out of 420 respondents, 48 per cent were women and 52 per cent were men. The average age of responding land and forest owners was relatively high (Table 1). The share of owners older than 64 years of age was 33 per cent, which should be compared to the national share of 17 per cent in that age group in 2010 (*Statistics Estonia*).

Table 1. Age distribution among respondents in Põlvamaa and Läänemaa

Age	Frequency	Percent
-34	40	9,5
35-64	239	57
65-	139	33
No answer	2	0.5
Total	n = 420	100

Source: Data from Läänemaa and Põlvamaa surveys 2006–2007.

Interviews

In addition to the large survey, we used interviews to gain a deeper understanding of some of the landowners' personal experiences and how their relation to the property has changed over time. Thirteen interviews were carried out in Põlvamaa in September 2007 and ten interviews in Läänemaa in October 2008. These 23 interviews represented a variety of land and forest property owners: six women and seven men in Põlvamaa and four women and six men in Läänemaa. From the interviews we obtained a more differentiated picture concerning the values related to land and the underlying causes of individual land use. We were able to identify a variety of individual strategies and expectations, and not least explanations of the individual owners' emotional bonds to the property. This concerned motives for keeping the land, attitudes to agricultural and forest co-operative associations, possibilities of land leases, or the impact from nature preservation actions or legislation related to the owners' property. Four of the interviewed landowners in Läänemaa lived in the Stockholm area in Sweden. Three owners resided close to their property and three lived in Tallinn. Four out of the thirteen interviewees in Põlvamaa resided in nearby cities, while the other nine resided permanently on the property. In spite of the fact that we do not know how many of the interviewees that had personal experiences from the Great Deportations in the late 1940s, we may assume that a majority of them, themselves, family members or relatives, had links to deported people. The deportations, which comprised around 20,000 people or 3 per cent of the population in 1949, became a means to speed up the forced mergers of family farms, that is forced collectivisation. This may explain one specific emotional link to private land and family farming, which partly was surviving in the cultivation of the so-called private plots (Jörgensen 2004: 150–153). The main results from these interviews will however be used for a forthcoming study with focus on the attitudes to agricultural and forestry cooperative associations.

Põlvamaa and Läänemaa. Inland and Coastal Area

Põlva County in the southeast, with borders on land and across the great Lake Peipsi to the Russian Federation, roughly covers 1/20 of Estonia. Based on thirteen municipalities and one town area it has a total population of 32,000. Because of its richness in land and forests Põlvamaa is a suitable area for the investigation of land and forest property relations. More than 70 per cent of the population is rural and more than half the county area is covered with forests. While the average national growing stock is 200 m^3/ha,

the Põlvamaa average of 217 m^3/ha places the county among the top three in Estonia. Põlvamaa also has the highest number of commercial forests and the largest wood supply in Estonia. However, Põlvamaa has fewer forest areas devoted to nature protection than other Estonian counties (*Yearbook Forest* 2005: 3–4).

From the Põlvamaa cadastre it is possible to analyse the progress of the land restitution and privatization process. The year of restitution mentioned in the cadastre marks the year when the property was legally re-established. The data shows that almost half of the registered properties possess less than 10 ha of land and forest. 57 per cent of all holdings have forests and the other 43 per cent only possess agricultural land. 75 per cent of the forest properties are smaller than 10 ha, which means that most holders possess rather small properties while 3.3 per cent of the forest properties contain 30 ha or more.

Läänemaa, along the northwest coast of Estonia, was traditionally dominated by farming, but since the agricultural conditions are quite poor, fishing and shipping have become important. Today's farming consists of both small plots and a few large-scale farms (Grubbström 2009: 138). According to the Agricultural census of 2001, 42 per cent of the county's total land area is agricultural land and 33 per cent is forested (*Statistics Estonia*).

Among the landowners in the three studied municipalities in Läänemaa: Noarootsi, Ridala and Nõva (with a total population of 4,392), around 70 per cent are absentee owners living in other parts of Estonia or abroad. These areas have a long history of Swedish population (Markus 2004: 126). However, most of the Swedes left Estonia because of the threat from a second Soviet occupation. Estonian Swedes have showed great interest in the restitution of family land and a considerable part of absentee owners, especially in Noarootsi, reside in Sweden. Land fragmentation is profound because of restitution and inheritance, especially significant among owners in Sweden, where 70 per cent of the respondents share the property with family members or relatives. The corresponding figure for absentee and local owners in Estonia is 34 and 25 per cent respectively (Grubbström 2011: 36–37).

During the Soviet period Läänemaa became heavily militarised and the population declined rapidly. Many buildings were destroyed by the Soviet regime and people were forced to move to the cities or to the kolkhoz centres. The present age distribution implies that 30 per cent of the populations in the three investigated municipalities are dependent on pensions (*Statistics Estonia*). Owing to the fact that Läänemaa is attractive for second homes and tourism, the exploitation of the coastal areas has increased since the early 1990s. The "persistence of memory" is significant for tourism in

Estonia and this probably explains why many Scandinavian tourists once again have found their way to the area (Worthington 2003: 383). It is also an interesting area for tourists that want to spend time in the nature reserve that has been set aside along the coast.

The Shifting Landed Property Relations in Estonia since the Nineteenth Century

In the early nineteenth century most land within the present territory of Estonia (the Russian provinces of Estonia and Livonia) was in the hands of the Baltic German nobility, the state or the church. The Peasant Act of 1856 made land purchases possible through the state as an intermediary and land sales increased, foremost in Livonia. By the end of the nineteenth century approximately 50 per cent of the land was in the hands of free peasants. After the declaration of independence in 1918, a land reform was carried out 1919–1926, which ended the Baltic-German supremacy, while the Bolshevik threat was not fully averted. One of the first measures of the radical Constituent Assembly that was elected in April 1919 was to introduce the *land-to-the-tiller* principle implying a radical expropriation and redistribution of land (Kõll 1994: 41; Rauch 1995: 76). In spite of organisational shortcomings, the Estonian land reform became one of the most successful in the 1920s because of its emphasis on economic viability. Family farms were established without a fixed maximum or minimum areal limit. A so-called *viable holding* represented a unit that could support a family with two horses. The average farm size was around 24 ha, with more than 60 per cent of all farm units within the range between 10 and 50 ha (*Konjunktuur* 1940:64/65). A majority of the forestland, however, remained state property, partly as a currency reserve (Lipping 1980: 282; Kõll 1994: 43).

Land reform and the expansion of agricultural cooperative associations enabled a relatively successful agricultural export performance, with the exception of the impact from the Great Depression 1929–1933, which hit all agricultural export countries hard. However, the Soviet annexation in 1940, followed by full nationalization of all productive assets and the introduction of an ad hoc command economy, cut off the Western export markets and terminated private property rights. While the first attempts to collectivize during World War II were interrupted by German occupation 1941–1944, forced collectivisation was—in spite of an earlier promise not to collectivise—completed in the early 1950s.

In June 1991, a few months prior to formal national independence, the Estonian government passed the Law on Property Reform, which stipulated that all property that had been illegally expropriated after June 1940 should be returned to the rightful owners or their heirs based on claims from the

previous owners or their heirs. Restitution and compensation aimed at re-establishing historical justice (Kuddo 1996: 167). However, the unforeseen consequences of the laboratory experiments under Gorbachev after 1988 based on eternal leases of farmland, not to mention the cases when property could not be returned in its original shape, led to a time-consuming compensation procedure and several legal amendments (Jörgensen 2004: 168–170). In many other parts of the former Soviet Union, restitution was not an option since private ownership was abolished already after the Russian revolution or in the early 1920s. Tracing the pre-war property relations would not only have been extremely difficult because of lacking documentation but also hard because of the negative attitudes to private ownership of land in general (Hedin 2003: 51).

The point of departure for agricultural privatisation in many CEE countries was the communist-led land reforms after World War II. This was for example the case in Poland and Czechoslovakia. However, each country has used its specific method based on restitution, privatisation through auctions, or voucher schemes. In CEE land was not restituted to minority groups or to those who had become foreign citizens, which actually was the case in the Baltic States with large numbers of exile citizens (Swinnen & Mathijs 1997: 341–342). Estonia's return to the pre-1940 property relations thus acknowledged those who left the country during and after World War II to be entitled to get their former land back, which for example enabled the Estonian Swedes living abroad to become absentee owners.

The restitution and privatisation reforms in Estonia intended to recreate private property and private family farming. However, because of several heirs, a number of dilemmas appeared; who would manage the farm, who would be compensated and was it possible to have access to suitable buildings and machinery? In fact, most farming was unprofitable (Alanen 1999: 442–452). Thus, it was not a return to viable family farming in the sense people had expected (Holt-Jensen & Raagmaa 2010: 140). Up to around 2004 there was still a considerable number of small plot farms, which could be seen as a continuation of the private plots people had cultivated during the Soviet period (Alanen (ed.) 2004: 33). However, there is also a group of large-scale farmers who are better off due to the access to additional land from purchases or leases.

If the Estonian land market was stagnating during the first 10 years, a change appeared in 2001–2002. Land and forest prices increased when the aspired EU membership seemed to be within reach. Simultaneously, the implementation of new phytosanitary regulations created higher production costs, which limited the possibilities for most small-scale producers to market their produce locally (Jörgensen 2004: 170).

If the legal changes and the deteriorated market situation had an impact on small-scale farming, Estonian forestry was affected differently from the interwar independence onwards. Nowadays, forestry is a multifunctional business or activity. In fact, in the eyes of many small-scale owners, the business perspective referring to felling is barely visible, if not taking into account the private access to wood for heating. For instance, in Põlvamaa only 10 out of 276 respondents stated that they had incomes from the forested activities that exceeded 25 per cent of their total annual income (Jörgensen & Stjernström 2008: 105).

Forestry also differs from agriculture when we scrutinise the Post-Soviet property reforms. While land restitution was connected with numerous compensation issues, forestry privatisation had fewer legal impediments. Since almost all agricultural land in Estonia was redistributed in the 1920s, it created a specific family attachment to land and place that survived the Communist period. In contrast, privatisation of the state-owned interwar forests is a post-1991 phenomenon. If Estonia's main role in the Soviet economy was agricultural production, forestry was thus of secondary importance and many forested areas were left untouched. Natural reforestation took on in the remotely located agricultural fields and in the areas where postwar felling had been substantial. Some fields were deliberately turned into forests through plantation. As a result, a very unbalanced stock appeared, since both forest management and silviculture were neglected. Restitution of interwar farmland has therefore often implied return of forested fields. However, while biodiversity prospered from the neglect and the creation of natural parks and recreation areas, the size and quality of timber was affected in the opposite way. To conclude, the forested area in Estonia, which was around 853,000 ha in 1940 had increased to 1,915,000 ha in 1991 (Dahlin 1999: 103–104). In 2004 the forests had expanded to cover a total of 2,284,600 ha (*Yearbook Forest* 2007: 14).

Starting from an initial draft in 1993, The Estonian Forestry Act was adopted in 1997. This law was stepwise adjusted to EU regulations on biodiversity, preservation and sustainable development. However, it was also stressed that the Estonian forestry sector was to become a main contributor to the national economic and social well being (FAO 2000: 3). According to Hain and Ahas, this neo-liberal order enhanced illegal forestry activities, since the Forest Act abolished the private owners' obligations to present a forest management plan. Felling declarations were not mandatory until 2004. In 2002 it was estimated that more than 50 per cent of total felling—to some extent—was illegal. As Hain and Ahas underlined some years ago:

> It is evident that the high share of illegal logging is directly caused by individuals who are exploiting the weak legal and enforcement system with a desire to gain quick profits (Hain & Ahas 2005: 93–95).

Estonian Forestry in a Comparative Perspective

Forestry and silviculture are not only about logging and planting. In the last 25–30 years increasing efforts at nature preservation and multifunctional land use have played a major role for the development of certificates and price policies related to the lifecycle status of for example forestland. In Estonia, environmental pressure groups and organisations paved the way for the introduction of Forest Stewardship Certification (FSC). This was a set of forest principles, a global approach inspired by the organic movement, which were developed by a network of individuals and organisations after the Rio Conference in 1992–1993. This multi-stakeholder strategy aimed at creating sustainability principles and responsible forest management on a global level (Cashore *et al*. 2006: 11).

In the Baltic States and in several CEE countries where forestry often is small-scale and multifunctional, the introduction of FSC met some common characteristics. Because of the socialist property relations, there were relatively good ecological conditions because of the low exploitation in former state-owned forests. In the first years of transition, however, the proximity to consumers outside the transition countries and the demand for foreign exchange was considered a possible threat. If Baltic and Polish forests were over-utilized in the years around World War II, a so-called *preservation paradigm* followed based on the biological limits. After 1991 Estonia was the only country out of these four to exceed these biological limits on a national level, implying that annual felling exceeded estimated annual forest growth. The most widespread illegal logging, however, in fact took place in parts of the Russian Far East. Russia has a forest reserve roughly 550 times larger than Estonia and a population around 70 times larger (Meidinger *et al*. 2006: 164–167). In this regard Estonian forestry plays, however, a marginal role in a global perspective, but from a national perspective the forest reserves contribute to significant export earnings.

In the present context, forest policy makers recommend large-scale forest ownership and management, while the trend in CEE has been increasing parcelling. It has been shown that parcelling of land can reduce the likelihood and intensity of management, for example the amount of woodland harvested and the rate of planting (Rodríguez-Vicente & Marey-Pérez 2009: 483). Wiersum *et al*. have investigated small-scale forest ownership

in Europe. They highlight the trend that when a family have ended their productive farming, it is more common to transfer forestland than farmland to the next generation. If this continues, the size of the forest holdings will gradually become smaller (Wiersum *et al.* 2005: 10). Fragmented forest ownership is also an obvious trademark of Estonia. In 2006 the average size of a private forest property was around 12 ha. At this point forest privatisation was far from completed and further land fragmentation was expected. Another problem was that very few forest owners had chosen to comply with forest certification, both because of the relative costs per ha and due to limits on felling, which in the end would imply severe limits on incomes.

Rationality, Land Use and Individual Preferences

The following discussion concentrate on how owners value their land and in what way land and forest can be seen as a resource. A majority of the respondents in our two surveys have obtained their land through restitution. In spite of the differences between the numbers of questionnaires sent out and the rate of respondents we can see that the results are generally concordant, based on the relative frequency in the surveys.

Rationales for Obtaining Land and Time Spent on the Property

Many respondents in both counties stated that they felt emotionally attached to their property. Among those who had regained family land, which might have been acquired by their parents or grandparents as early as the late nineteenth century, the historically rooted links are especially common to find. Around 32 per cent of the respondents had their property originating from restitution, somewhat more in Läänemaa than in Põlvamaa (Table 2). The figure is based on information about the first property obtained by the individual owners.

Some owners started out as proprietors by means of a combination of restitution, gift, purchases etc. Inheritance or gift was the second largest category, implying that 29 per cent of the property has already been transferred, either to the second generation or redistributed among siblings or spruces. Within this group, land transfers seem to have been more frequent in Põlvamaa than in Läänemaa. This could be explained by the fact that the coastal minorities left their holdings in connection with the Soviet occupation. Owners who obtained their property from first refusal were owners who either bought houses during the Soviet rule or held eternal leases

Table 2. Respondents' ways of obtaining their first property of land/forest

	Läänemaa (n=144)		Põlvamaa (n=276)		Total both counties
	Frequency	Per cent	Frequency	Per cent	Per cent
Restitution	52	36.1	83	30.1	32.1
Combination, including restitution	14	9.7			3.3
Inheritance or gift	25	17.4	97	35.2	29.0
First refusal	17	11.8	28	10.1	10.7
Purchase or/and auction	25	17.4	63	22.8	21.0
Other comb./missing	3	2.1	5	2	1.9
Total	144	100	276	100	100

Source: Data from Läänemaa and Põlvamaa surveys 2006–2007.

achieved from the kolkhoz from the late 1980s. For the third largest category, the 21 per cent land-owners who obtained their first property through purchases and/or auctions, the tendency indicates that somewhat more people might have seen a rationale in buying productive "forest" land in Põlvamaa than in Läänemaa, which makes sense when considering the different land structures. One landowner who bought land in Läänemaa stressed for example that he valued things like closeness to the sea, a nice house, and that he longed for country life. Since these attributes can be found in many areas it does not presuppose a single unique property, but rather a property that meets a set of preferences.

In the surveys we asked the respondents to rank a number of reasons by valuing these from 1 to 5, where 1 was most important and 5 least important (Table 3). The respondents in both counties stated that the most important motive for obtaining land and forest was to regain family property. A fairly high proportion of absentee foreign owners in the coastal area probably explains why re-established family contacts with a specific place are valued higher than in Põlvamaa. One of the interviewees in Läänemaa, a person living in Sweden, explained this as a way to maintain contacts with his father's family. The restituted and inherited land along the coast that he referred to was thus in his eyes a physical link that gave him access to his father's side of the family. In this way land becomes a symbol of family history and a way to connect different generations to a common past. This is known as vertical connection (Stjernström 1998: 50).

In the forest dominated Põlvamaa, preferences are somewhat different. Forests provide opportunities for a certain kind of self-sufficiency in wood for heating and for construction, which probably explains why this motive

Table 3. Most important motives for obtaining land and forest property

Most important motives for obtaining property. 1=most important, 5=not at all important.						
Reason	Läänemaa N=144			Põlvamaa N=276		
	Numbers	Mean	Std. Dev.	Numbers	Mean	Std. Dev.
Regain family property	100	1.95	1.438	189	2.14	1.56834
Access to wood for heating and construction	100	2.49	1.521	220	2.31	1.43243
Access to second home	88	2.23	1.491	174	2.48	1.52704
Re-establish contact with family home district	86	2.43	1.642	177	2.48	1.57071
Access to arable land for own use	95	3.0	1.624	213	2.56	1.52401
Income possibilities	87	3.13	1.500	191	2.76	1.44440

Source: Data from Läänemaa and Põlvamaa surveys 2006–2007.

is the second most important. Second home is the third most important aspect when both counties are compared. Even if income opportunities were considered relatively unimportant, the interviews show that property is regarded as a long-term investment. In other words, in spite of the owner's present motives, land and forest can contribute to greater economic security for future generations. Thus, it seems that the emotional factor and the sense of place are more highly valued in Läänemaa than in Põlvamaa.

If land and forest are located in a different place than the owner's place of residence, this has effects on the time spent on the property. As shown in table 4, 35 per cent of the respondents spent longer periods on the property. Half of the respondents spent less than two weeks or no time at all on the property, which on the one hand indicates passive ownership. On the other hand, this passive ownership may be temporary, if the present situation offers few economic incentives for, for example, making efforts to improve or maintain the land.

In general, as far as the lengthier stays are concerned, landowners in Põlvamaa spend more time on their property than those in Läänemaa. The greater number of absentee owners in Läänemaa, living abroad or in distant places, thus implies that vacations are used for lengthier stays on the property, while most owners in Põlvamaa can visit their property for a day or two throughout the year. Another difference is that a majority of the owners living in Sweden do not have a house to stay in on their property (Grubbström 2011: 35). Under these circumstances two weeks in a nearby hotel or among relatives are affordable, even though a large majority mentioned that they would like to spend more time on the property. The results partly confirm

Table 4. Estimations among non-residential property owners in Läänemaa and Põlvamaa of the time spent on property 2006

	Läänemaa n=106		Põlvamaa n=176		Both counties	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
Longer periods	33	31	67	38	100	35
2–4 weeks per year	19	18	24	14	43	15
Less than 2 weeks	33	31	56	32	89	32
No time at all	21	20	29	16	50	18
Total	106	100	176	100	282	100

Source: Data from Läänemaa and Põlvamaa surveys 2006–2007.

the importance of access to a second home, while this is not more significant among the coastal owners than in the inland areas.

The Individual Owners' Preferences, Attitudes and Experiences

In both counties the main reasons for ownership, buying land or claiming restitution of land, are emotional, even though several owners nowadays consider property a long-term investment. When the interviewees talk about the emotional links to land, they often mention memories from their childhood and the work efforts of earlier generations. One man living in Sweden said:

> We wanted to go back and show where we were born. It was the emotional values that appeared, the intellectual aspect was put aside and it is still this emotional side that drives us back.

This feeling for the land is reinforced and deepened by the experiences from the Soviet occupation with the loss of land and exposure to terror acts. The emotional links therefore often contain reluctance to sell land. One interviewee strongly emphasized all the hard work that had been carried out by their forefathers for centuries and then concluded that it was not an option to sell what they had been able to regain for free. In fact, most owners want to maintain the land and regard it as important that the land stays in the hands of the family. The negative attitudes to selling land became especially evident during the interviews in Läänemaa, where the absentee owners wanted to maintain property in case someone within the family becomes interested in the years ahead. The older generations expressed hopes that their children would spend more time there in the future and perhaps build a summerhouse (Grubbström 2011: 37–38).

In general, agricultural land is primarily used by local owners residing

on their land. In cases when land is not cultivated, these areas become leases for larger farmers. Among our 23 interviewees only four owners verified significant annual incomes from agriculture or forestry in the last few years. Several of the owners were considering to initiate some tourist activities, but so far only one owner in Läänemaa, involved in agro tourism, had realised any plans. In Põlvamaa there were several examples of incomes from felling between 1996 and 2000, which were made in order to pay for additional forest investments. However, none of the owners had any significant debts. Only two had remaining mortgage payments, but these were not considered burdensome because of the low price paid ten or fifteen years ago. It was more important that eight forest owners had their annual access to firewood secured, which is a benefit that must be added to the relatively modest annual incomes they otherwise presented. Two owners in Põlvamaa also had extra earnings from firewood sales, and for one interviewee the main income was derived from a small sawmill.

While land improvements, for example planting and machinery investments, were modest in both counties, many owners stressed the importance of nature preservation and active land use. Thus, if the owner lived far away from the property—or lacked time for or interest in cultivating the land—it was leased out. In fact, many landowners do not obtain any money rents at all. A majority of the studied landowners in Läänemaa own forest but most of these owners do not regard forestry earnings as important. In fact, several of the Läänemaa landowners were in possession of forests of rather poor quality. But in both counties land investments like planting, thinning or drainage improvements through ditching had already been carried out by the owners themselves. In Põlvamaa most owners had plans for carrying out thinning or clearing up in the near future.

Owing to the fact that small-scale ownership cannot provide enough capital for many costly projects needed in for example forestry, it would be likely to expect a positive attitude to the work and services supplied by local forestry cooperative associations. However, most of the informers claim that they had little knowledge about the forest cooperative associations and their activities. In fact, a few also stressed that they did not want to join. Only one owner had his Forest Management Plan developed by the local private forest association and he would like to see more engagement from their side. Several owners claimed that they were too small for demanding the services offered by the forestry associations, while others just seemed uninterested. In the eyes of most small-scale forest owners the forestry associations are therefore not important. On the one hand, it goes without saying that the impact from the Soviet period can explain why cooperation is discredited. Only two out of the thirteen informers could actually see a ra-

tionale in having access to advisory services, certification, management and logging capacity through these associations. On the other hand, two owners also admitted that they had had substantial informal incomes from their forest activities and therefore did not want to become involved at the moment. The absentee Swedish landowners in Läänemaa rarely use their forest resources, but they express a more positive attitude to the forestry associations than owners living in Estonia. To join a forestry association can in fact enhance the interest in maintaining the ideal that land should be managed and cultivated, even if the owner lacks both time and means to solve this by themselves. This is in line with the so-called "moral responsibility," here implying to look after the land (Rodríguez-Vicente & Marey-Pérez 2009: 489). This moral responsibility was visible among most of our interviewees. In spite of the fact that they often represented small-scale land and forest owners they had a specific purpose for their future land use.

The first ten to fifteen years of the Post-Soviet transition in Estonia were marked by profound problems of a legal character. In this environment the general lack of auditing and efficient enforcement mechanisms opened up for frauds and thefts. We asked our informers about their personal experiences from these illegal activities. Only six owners admitted or could explicitly relate to this. In one case the owner himself had, as he said, by mistake exceeded the legal felling volume and thus he had to pay a small fine for this. Another example was related to a border dispute when logging was accidentally made on another owner's property. Three other owners had either been exposed to illegal logging themselves or seen the effects from these actions in the nearby area.

One informer referred to a giant theft taking place in a protected state forest area in 2004. This illegal logging went on for about six weeks and the theft caused severe damages to the area. Another individual described that just when he had regained the land in the mid-1990s, a volume of 30 m^2 was immediately stolen. A few years later, after he had contacted/notified the environmental services for permission to fell timber, another theft started. Within a few days from his first contacts with the supervising authorities, he was offered several proposals from various business entrepreneurs for the job. These people, however, stole parts of the timber they transported, and he believed that the authorities were intimately allied with the same entrepreneurs that he had hired. After guarding his timber day and night because of continuous stealing, he ended up selling the assortments to a local saw mill without any documentation and of course without any tax payments either. The felling and transportation of timber, however, left his property in a very bad shape.

Conclusions

The general picture of the landowners' relations to—or perceptions of—land, and their actual land use, in the two Estonian counties here explored, has revealed a number of similarities with other CEE. Firstly, the predominance of a small-scale ownership structure. Secondly, the trend towards increased land fragmentation, and thirdly, a strong emotional component guiding the owners' aspiration of both maintaining and cultivating the land possessed. Most important however, regardless of restitution or purchase, land and/or forest possessions provide a connection either to the owner's actual place of birth or to a place in the countryside to which the owner develops emotional links.

The landowners' decision on land use depends on the institutional preconditions, the individual expectations and his/her emotional relation to the property. In the case of Estonia, the supremacy of restitution in the reprivatisation of state assets meant that most previous landowners or their heirs had an initial choice either to receive or to sell the property. This was not the case in all parts of CEE, where the post-war nationalisation of land was less far-reaching. The density and mobility of the population and the Socialist period's impact on the physical land use therefore gave a set of specific patterns in some of the post-Soviet states: Estonia as well as Latvia and Lithuania.

Our surveys and interviews have shown that the emotional links to land and forest are especially strong among owners that obtained land through restitution. This also creates specific ideals and expectations connected to the property. *Firstly*, the owners want to maintain the land within the family and are often reluctant to sell or to parcel the land. Even if the land is not cultivated, older landowners often have expectations that the next generation will take over or at least spend more time at the property. It goes without saying that this also represents some kind of a hidden economic rationality, which must be understood from the perspective of the owner's will to guarantee future generations a better economic outlook. Land or forests, which were low-valued initially, may become far more valuable in the years ahead. Thus the economic rationality may have been blurred by the fact that property was purchased or received at a low cost or restituted for free during the initial years of reform. *Secondly*, many owners stressed that land should be managed and actively used. There is however a difference between land and forest owners. While agricultural land can be leased out to active farmers and thus cultivated and prevented from natural reforestation, a majority of the forest owners did not emphasise any significant economic incentives, beyond wood for heating as a main benefit from the

property, which was due to low or in fact absent mortgages. A *third* difference concerning attitudes seems to be that the land/forest owners living in Sweden do not have the same prejudice against cooperative associations as those expressed by Estonian owners. While we expected to find a somewhat more positive attitude to the cooperative forestry associations among the forest owners in Põlvamaa, because of the long-term costs for productive forestry and silviculture, it seems that this kind of economic reasoning is hardly present.

One way to understand the impacts from the shifting property relations that are visible in a transforming society like Estonia is based on how the informers ranked their motives for obtaining land. It shows that in both counties the motives for regaining family property and re-establishing the connections to the family home district were by far more important than economic returns. The difference may be that in Läänemaa, the specific place was of more importance than in Põlvamaa, suggesting that the countryside itself was sufficient in the latter case for nourishing the emotional links. Since a majority of owners in both counties have obtained land or forest through restitution, our assumption—that the emotional ties to property override rational economic land use—is at least verified for the restituted owners.

In spite of the emotional links discussed above, the economic values or incentives are important, but they must also be understood from the perspective of nature-given preconditions in the specific areas. In Põlvamaa most landowners described the high value of access to wood for heating and for construction works, while the absentee owners in Läänemaa rather stressed the access to second homes. The fact that most respondents want to spend more time on their property also shows that this motive could become even more important in the future. Arable land, which historically would have been the most valued motive for obtaining property, has less significant value because of increased specialisation and the decline of small-scale agriculture. For land use this means that the relatively high proportion of Swedish owners in Läänemaa, especially in Noarootsi, implies that owners living in Sweden often end up as passive landowners, while the properties owned by Estonians are more regularly cultivated by the owners themselves.

We confirm that most owners have stressed that it has been important to regain family property. If not the original property, at least property in the surroundings where the owner spent his/her childhood or where family life was centred. It is, however, reasonable to assume that the subdivision of land may increase in the future when for example siblings take over and divide the existing restituted properties. Furthermore, it is likely that the

younger generation has developed—or will develop—a weaker emotional link to land and forests than the older generation, especially if the economic incentives are increasing. The question is for how long the small-scale structure can survive. With a high degree of absentee owners and owners that really do not need to make any actual profits from their land, it might as well be the case that the Estonian forests can have a period of recovery after the years of excessive felling that characterised the late 1990s and early 2000s.

In the legal vacuum existing during the first 10 years of restitution, illegal logging was common but for agricultural land it rather meant that land was left unused and large-scale farmers could use the opportunity to lease land for free. In the present world market situation, prices for agricultural produce are declining. While it makes sense for small-scale forest owners to have access to their own wood for heating and some timber for construction, the cultivation of smaller land areas is often limited to supporting the household's need for, for example, potatoes and vegetables. The value of these crops, which is consumed by an ordinary household, may be of less monetary value. However, in most rural households in Estonia it is still common to grow these crops, which may express and illustrate the emotional link to a kind of subsistence production that the Estonians and most East Europeans were used to and dependent upon for generations.

NOTES

[1] In Läänemaa we received addresses to the landowners from each municipality. In Põlvamaa, however, this was not possible and we therefore had to begin with the selection of landowners. Thereafter we obtained name and security number from the Estonian Cadastre Registration Authority. In the following process we could use the population register of Põlvamaa to find the individual address of each landowner.

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MAGNUS LINDMARK & LARS FREDRIK ANDERSSON

Household Firewood Consumption in Sweden during the Nineteenth Century

ABSTRACT Household firewood consumption underwent significant changes during the industrial breakthrough. Recent literature on Sweden makes the case that greater energy efficiency drastically reduced rural household fuel consumption, while coal substituted for firewood in cities. This article shows that although coal substituted for wood in some urban areas, rural firewood consumption was not reduced. Higher standards of living indicate contrary to previous results that fuel consumption increased during the industrialisation process. The study shows that households with higher standard of living consumed more fuel and that rural households, due to lower fuel prices, consumed relatively more fuel than urban households. The result shows contrary to previous research that the total energy intensity decreased more rapidly after and not before the industrial breakthrough.

KEYWORDS energy, firewood, economic history, Sweden, biofuels, household consumption, energy intensity

Introduction[1]

In this study we use hitherto unexplored household budget data to estimate the determinants of household firewood demand in the early twentieth century and, in a second step, estimate the development of firewood during the nineteenth century. Firewood was a key energy carrier in Sweden and most other European countries during the pre-industrial era. The pre-industrial energy system was dependent on photosynthesis for its fuel supply, and it has been recognised that the introduction of coal into this energy system was a key component, or at least

a necessary precondition for the emergence of high and sustained economic growth. Already in the 1960s Tony Wrigley (1962; 1988; 2006) stressed that the industrial revolution itself was fundamentally related to a transformation of the energy system, since an energy system based on photosynthesis imposes limits to growth. This limit depends on fundamental scarcity related to the area of land, because solar radiation is appropriated and processed into a useable form by plants, which implies that the supply of energy is restricted to the available fertile land area. Since energy in the form of heat is complementary to machinery and buildings, in the economist terminology known as real capital, and energy in the form of foodstuff is complementary to human and animal labour, this means that the energy supply limits the growth of the factors of production, which puts limits on economic growth. Only with fossil fuels did it become possible to substantially increase the energy supply and accordingly overcome the limits to growth. This idea was later further explored by scholars such as Wilkinson (1973), Pomeranz (2000) and Sieferle (2001).

Estimates of energy supply, including traditional energy carriers during the pre-industrial era, are therefore essential for understanding the broad patterns of economic development and industrialisation (Kander & Lindmark 2004). Lately, a number of articles have been published aiming to assess long term energy consumption for a number of countries (Gales *et al.* 2007). International research has pointed at a steady decline in the long-term development of the Energy-to-Gross Domestic Product (GDP)-ratio, or energy intensity, as a common feature in several countries. It is, however, more or less pronounced and Sweden stands out as the country with the largest reduction in energy intensity and also as the most energy intensive economy in the early nineteenth century. A common problem is, however, that the historical source material is often weak regarding traditional energy carriers such as firewood. This setback is even more pronounced when household consumption is concerned. This is certainly challenging due to the sheer size of household energy consumption in relation to other sectors.

In this paper we will argue that new and fully plausible approaches to estimating Swedish firewood consumption will lower the early nineteenth century consumption levels as compared to what has been previously suggested. As a consequence of this, the reduction of the energy intensity is also reduced.

Theoretical Framework

A crucial factor for estimating household firewood consumption is how demand is affected by technical change. At first glance, the effects may appear straightforward. An improved technology, resulting in less firewood being

required for a certain space heating service, may be expected to result in a decreased demand for firewood. Critique of this simplified analysis was first proposed by the British economist Stanley Jevons in the 1860s (Jevons 1865). Jevons discussed why coal consumption had increased in Britain while steam engines had undergone significant technological improvement efficiency. He explained the paradox as an effect of efficiency and prices. Improved efficiency would in effect lower the price for the heating service. In our case this is so, since the efficiency improvement implies that less firewood is required for producing one unit of heating energy. The price for heat falls. The lower price, following Jevons's reasoning, would in turn lead to an increased demand for firewood, which could fully or partly offset the technical improvement. Thus, the economy may experience increased consumption of fuels as a direct consequence of technical improvement, not despite technical change.

Jevons's paradox has been further developed by contemporary economists and is today known as the rebound effect or the Khazzoom-Brookes postulate (Saunders 1992). For readers in economics a more elaborated presentation of the rebound effect is found in Appendix 1. The rebound effect is an important point of departure for the present investigation. This is because previous estimates of Swedish firewood consumption have overlooked the role of prices. Shortly, they have either relied on obviously crude estimates or on methods that are biased towards large effects of technical improvement, such as tiled stoves. By incorporating prices into the analysis this issue is addressed in the following analysis.

The following section provides an overview of previous estimates in order to show that nineteenth century sources are scattered, based on crude estimates and drawing on a few common sources. Secondly, the overview describes in more detail the household firewood survey of 1924, which remains an important benchmark. Thirdly, the section presents an overview of the techniques used in the latest estimates of the historical development of household firewood consumption in Sweden. This serves the purpose of providing the reader with a fair opportunity to evaluate our approach. Our new estimates are elaborated in the following sections, while the last section concludes.

Previous Research

A relevant starting point for any historical estimate is certainly records and assessments from the historical period in question. As this survey will show, the nineteenth century reports are for various reasons inappropriate as benchmarks (see also Egelrud 2005). One of the earliest attempts to estimate the Swedish household firewood consumption was made by Carl

af Forsell in his Swedish statistics from 1833 (Forsell 1833). The figures were, however, rough guesswork originating from Israel af Ström's (1837) free-hand adjustment of consumption figures for Copenhagen. The next record was published by Carl Ludwig Obbarius in 1851 and implies a doubling of Forsell's estimate. Obbarius argued that this figure was more representative of an ordinary Swedish rural household as compared to Forsell's estimate. In contrast to Forsell it is evident that Obbarius had based his estimate on proper investigations of household consumption at iron works (Obbarius 1851: 5).

Victor Magnus Thelaus (1865) did, however, criticise Obbarius' estimates, which he considered only applicable to certain forest rich areas. In 1865 Thelaus therefore presented an alternative estimate based on firewood consumption data for Germany and Denmark. On the basis of the lower average temperatures in central Sweden as compared to Saxony, Berlin and Copenhagen, Thelaus proposed an annual Swedish consumption of 150 cubic feet per person corresponding to four cubic metres of loose measure or three cubic metres of solid measure.[2]

Yet another estimate appeared in 1882, as Forest officer Johan Olof af Zellén (1882) argued that the national consumption amounted to roughly 6.75 million fathoms of firewood. It is very likely that Zellén simply used Thealus's estimate of 150 cubic feet per capita and adjusted the figure with the population growth.

This shows that the nineteenth century figures of firewood consumption were merely educated guesswork based on empirical material from other countries and generalisations of very limited studies.

The first comprehensive wood consumption survey was undertaken in 1884 at the *AB Finspongs styckebruk* iron works (Ekman 1906). According to the survey, each farm consumed on average 50 m^3 of wood per year, of which 79 per cent was firewood, roughly corresponding to 4.7 m^3 of firewood per person. It is not stated whether this figure relates to solid or loose measure. A loose measure is, however, likely since the solid measure to our knowledge was only introduced in twentieth century consumption surveys as a means to assure compliance with the national forest survey practice to report standing timber volumes in solid measure. For the nineteenth century investigations, we use the conversion factor 0.65 for transformation from loose to solid measure (sm^3) giving 1.9 sm^3 per capita according to Forsell, 2.56 sm^3 according to Thelaus, 3.56 sm^3 according to Obbarius and 3 sm^3 at the *AB Finspongs styckebruk*.

These figures may be compared with the twentieth century surveys. The first one was undertaken at the Västernorrland countryside located in Northern Sweden during the season 1913–1914 (Ödman 1920). The sample was, however, not representative. The average household size was between 6

and 7 individuals, making the investigated farms twice as large as the average countryside household.

It is also worth noticing the Västernorrland survey reports that highly ineffective open stoves were still common and that fodder for the cattle was boiled during the winter (in so-called *murpannor*) (Ödman 1920: 12–13, 17–19). The report also states that rotten fuel was often used for this purpose. Since the energy content of such wood is low, the amount of wood consumed also increases. At richer farms most of the rooms were heated, while poorer farms only heated the kitchen and sometimes one additional room. In all 364 farms were investigated. It is worth noticing that the farmers were sceptical to the survey, since they suspected new taxes. The report also tried to compensate for this suspected underreporting. Thus, we cannot be sure whether the compensation led to exaggerations or not. On the basis of the investigation the project leader, Per Ödman, later estimated the average firewood consumption per farm to 52 sm^3 in Northern Sweden, 35 sm^3 in Central Sweden and 26 sm^3 in Southern Sweden.

The most comprehensive investigation was undertaken in 1924, surveying firewood consumption in the County of Värmland located in the central part of Sweden (SOU 1924:42). This study covered 613 farms, comprising 716 households and 3,422 individuals. Table 1 summarizes the main results.

Table 1.
Annual firewood consumption in solid cubic metres (sm^3), Värmland countryside 1920–1921.

Area in Värmland	Firewood per farm	Firewood per household	Firewood per capita
North	22.30 sm^3	21.30 sm^3	3.65 sm^3
Central	15.97 sm^3	15.00 sm^3	3.19 sm^3
South	17.96 sm^3	13.11 sm^3	2.83 sm^3

Source: SOU 1924:42: 37.

A few years later, Professor Tor Jonson (1923), one of the experts in the Värmland survey, was appointed to estimate the national firewood consumption on the basis of the Värmland survey. Table 2 summarizes Jonson's estimates for the countryside:

Table 2.
Jonson's estimates of rural firewood per capita consumption and total firewood consumption 1923.

Region	sm^3 per capita	Million sm^3
1. Northern Sweden to northern Värmland	5	1.23
2. The Norrland coast and Jämtland	4	2.59
3. Bergslagen	2.5	2.17
4. Southern Sweden	1.7	4.07
5. Sweden	2.4	10.06

As seen from table 2, the countryside average amounted to 2.4 sm^3 per capita, a reduction by approximately 0.6 m^3 compared to the mid-nineteenth century countryside figures. If this is a factual reduction or just an improvement of the educated guesses is an open question.

A simplification of Jonson's estimates was used in the National Income project, a pioneering and very ambitious effort to estimate the development of incomes since the 1860s (Lindahl *et al.* 1937). The National Income project stated a per capita consumption of 2 sm^3 per person in southern Sweden and 3 sm^3 in northern Sweden around 1915. For estimating the nineteenth century consumption, the project stressed several changes that may have affected the firewood consumption. These included improved stoves and the increased use of coal. The overall standpoint was that technical changes and substitution had induced a substantial decrease in the firewood consumption per capita during the period 1860 to 1930. Accordingly, the scholars behind the National Income project did not believe in the rebound effect. For a nineteenth century benchmark, references were made to Zellén and Thelaus and an estimate between 3.90 sm^3 and 4.00 sm^3 was stated for the nineteenth century. However, one should bear in mind that Zellén had based his estimate on Thelaus's educated guess, for which reason the nineteenth century firewood consumption assessments made in the National Income project rely entirely on one person's extrapolation of German and Danish figures. This is the state of art when we look at the contemporary historical estimates.

The figures used today for analyses of long-term energy use and growth were pioneered by Astrid Kander (2002). The approach used in her thesis may be characterised as a back-casting approach based on Jonson's countrywide estimates as a benchmark. Back-casting is a reverse-forecasting technique that starts with a specific outcome, here the 1924 benchmark, and then works backwards to model the historical development leading to this outcome.

In Kander's work the reverse-forecasting is underpinned by an educated reasoning about five semi-quantifiable factors. The first one is increased firewood consumption due to more heated rooms and higher requirements of indoor temperature (Kander 2002: 28). Kander notices that it was common practice during the early nineteenth century to only heat the kitchen during the winter, a claim that is verified by various sources (Socialstyrelsen 1938). Furthermore, Kander argues that it gradually became more common to heat additional rooms as the household economy improved (Kander 2002: 26–28).[3] This is indeed a reasonable assumption, while it is difficult to assess with any precision the exact income effect on the firewood consumption without appropriate data. It is for instance reported

that children, when they grew older, often slept in unheated rooms (*Bygd och vildmark* 1944). Furthermore, the number of stoves did not necessarily correspond to more heated rooms. In an eighteenth century report, Magnus Nordenström ([1894] 1990) points out that even though a farm may have had several rooms equipped with stoves, most of the indoor work was done either in the morning or in the evening by "one and the same fireplace." Accordingly, it seems that most additional stoves were not fired on a regular basis.

Kander's second factor is reduced firewood consumption due to improved insulation. Nordberg reports that it was common practice in Norrland to insulate house ceilings with earth and material from ant heaps during the 1850s. Accordingly, these measures tend to lower the firewood consumption, given a constant indoor temperature. For the back-cast, Kander assumes that insulation precisely balanced increased indoor temperature. Thus, the net increase of firewood consumption in Kander's estimates originates from more rooms being heated. It is therefore essential to assess the number of heated rooms and how they increased in number. This is again an income issue. Kander assumes an average of 2.5 heated rooms per household, including the kitchen, in 1920. Furthermore, she assumes that 30 per cent of the households had two heated rooms in 1800. The number of households with two heated rooms is furthermore assumed to have increased by 50 per cent between 1800 and 1850. For 1800 it is assumed that most of the population inhabited comparatively well-built houses, with glass windows and dampers and so forth, with an exception of approximately 20 per cent of the Norrland population, who were assumed to have lived in simple cottages. This assumption, boldly, we dare to say, draws on assessments of living conditions in western Finland (Kander 2002: 27).[4] It is worth noticing that the characterisation of the poor conditions in Norrland is apparently contradicted by Jon Engström's (1834) report, in which he remarks that the Norrland farmhouses often resembled manor houses, "with two floors and high windows."

In all cases this translates to an increase of heated rooms by 15 per cent between 1800 and 1850, and an increase by 67 per cent between 1850 and 1920. Since these rooms assumingly were only heated half the year, the effect from additional heated rooms is a 7.5 and a 33.5 per cent increase during each period.

Kander's third factor is a reduction of firewood consumption due to more efficient stoves and the increased use of dampers. Dampers were foremost used for conserving heat during the night, when the stoves were not fired. Kander reports that open stoves had a heat efficiency of 10 per cent while the most important space heating innovation of the period, the Cron-

stedt tiled stove, had reached 50 per cent efficiency by 1800 (Larsson 1979). Furthermore, Kander assumes that 20 per cent of the stoves in the year 1800 were of the effective Cronstedt type. By 1850 she assumes that the efficiency had reached 60 per cent and that the efficient stoves were found in 60 per cent of the households. For the 1920s, the efficiency is assumed to have reached 70 per cent, while at the same time 80 per cent of the household stoves were of the efficient Cronstedt type (Kander 2002: 28–29).[5] Kander states that the combined effect of diffusion and efficiency corresponds to decreased firewood consumption by 41 per cent between 1800 and 1850 and a further decrease by 51 per cent between 1850 and 1920 (Kander 2002: 32). In order to arrive at the combined effect of more rooms and improved efficiency, Kander adds the percentage effects from the two factors. Thus, for the period 1800 to 1850 the reduction is 33 per cent, calculated as the sum of 8 and –41 per cent. For 1850 to 1920 the net effect is calculated as the sum of more additional rooms (+34 per cent), improved efficiency (–51 per cent), increased use of coal (–20 per cent) and effects from a higher population growth in northern Sweden (4 per cent), thus a 33 per cent increase of household firewood consumption.[6]

Certainly, any estimate of nineteenth century household firewood consumption is necessarily approximate due to a lack of solid historical data. Kander's estimate is one attempt. It does, however, suffer from not considering actual observations of household behaviour. The floor should therefore be open for alternative interpretations.

New Estimates of Household Fuel Consumption

To overcome the problems associated with scattered nineteenth century data, we will instead estimate the determinants of household energy demand in the early twentieth century. Applying the parameters with corresponding time-series variables provides a historical projection and estimate of household fuel consumption. In short, we are building the historical interpretation upon the earliest recorded data of consumer behaviour.

In both Kander's and in the National Income estimates it is implicitly assumed that consumer behaviour is known, for which reason estimating energy demand is foremost a question of assessing technical change. Our approach, on the contrary, assumes that consumer behaviour is not known, for which reason it is only the first observations of consumer behaviour that may form the basis for educated guesses of nineteenth century demand for fuels. In short: our estimate depends on the assumption that nineteenth century households behaved as households did in early twentieth century.

Information of consumer behaviour is found in the early twentieth century household budget surveys. These data are, as previously stated, used for analysing the determinants for household fuel demand. This is done through an ordinary regression model. The second step is to use time series data corresponding to the variables (a) foodstuff share (b) persons in household (c) coal port (d) fuel price in order to estimate the nineteenth century fuel consumption by applying the estimated parameters and corresponding time series variables. Thirdly, the household coal consumption is estimated directly *on the basis of* the Household Budget Survey (HBS) data. Historical household coal consumption is estimates *on the basis of* this benchmark and projected backwards by the coal imports. When the coal consumption is deducted from the fuel consumption we arrive at a residual estimate of the household firewood consumption. The household budget surveys provide information on the households' expenditures distributed on services and goods. The latter include fuel consumption.

Table 3 presents the fuel consumption per household. According to the Stockholm survey 1907–1908 and the surveys for a number of other towns 1913–1914 (merged in table 3), the fuel consumption was on average 6.6 sm^3 of firewood (all fuels have been converted to birchwood equivalents) per household. The surveys focused on working-class and lower middle-class households in urban centres (Stockholm, Eskilstuna, Uppsala, Hälsingborg, Jönköping, Gävle, Malmö and Göteborg) located in southern and central Sweden. In 1920 the cities covered in the surveys held close to one million inhabitants of totally six million people.

It is important to recognise that the household budget surveys did not provide a representative picture of the Swedish population. When attempt-

Table 3. Descriptive statistics of household budget surveys. Calculations based on Socialstyrelsen (1922); Socialstyrelsen (1938); SOS (1967); SOS:S (1933).

Variable		Mean	Std. Dev.	Min	Max
Coal port	1 if coal port, 0 otherwise	0.46	0.50	0.00	1.00
Days with frost	number	114.52	32.35	76.00	173.00
Individuals per household	number	4.51	0.96	3.00	8.50
Food expenditure share	per cent	47.35	4.22	38.13	55.84
Consumption of fuel	Cubic metre birch wood	6.56	2.22	3.07	11.28
Relative fuel price	Fuel price / food price	10.96	1.39	7.80	14.09
Observations	number	54.00			

Note: All fuels (wood, coal, coke and gas) are converted to birchwood equivalents. The fuel price and food prices respectively are weighted by consumption baskets for each observation to avoid bias due to differences in consumption baskets among different households. The measure of birchwood is based on stacked cubic metre wood (CMSW). This measure may be converted to a solid cubic metre (SCM) [1 CMSW=0.65 sm^3]. See SOU 1923:57. The summarized values are unweighted.

ing to use the surveys as a benchmark for a national estimate, it is necessary to address the sample bias, in other words the focus on working-class households. The national energy consumption would for instance be incorrectly estimated, if the demand for household energy turns out to be sensitive to income changes and income distribution among households. In order to avoid this potential sample bias it is necessary to control for effects on demand from various factors. As previously suggested it is also these variables that are later used for the back-cast. We therefore use a regression model for estimating how income, prices and spatial factors have affected the consumption behaviour. The income effect is obvious and is here measured as the expenditure share of foodstuffs (food expenses/total expenditure).[7] Using the expenditure share of foodstuffs offers some advantages as compared to direct measurement of incomes. Simply put, regional variations in money wages and consumer prices cause the purchasing power to vary among towns. We notice research that shows that income elasticity of foodstuffs is particularly stable over time, and hence the consumption share of foodstuffs is a reliable indicator of real incomes (Costa 2001; Hamilton 2001). But there are also other factors apart from incomes that must be considered. Spatial differences in relative prices are certainly expected to affect household fuel consumption. These differences could be considerable by the early twentieth century too. Prices are measured as the fuel price in a specific town in relation to the price of foodstuffs.

Furthermore, it is likely that household size is positively correlated with fuel demand. A larger household is, *ceteris paribus*, expected to require more energy both for the preparation of food and for space heating. Another common sense factor is differences in outdoor temperature, which are expected to be correlated with fuel consumption, that is lower temperature implies higher fuel consumption. Outdoor temperature is measured as the number of days with frost. A less obvious factor drawn from observation of the surveys is that the consumption of fossil fuels such as coal, coke and gas seems to have been limited to towns with seaports. In the model we will test for a specific seaport factor that is not captured by any of the other variables.

Table 4 shows how household fuel consumption is affected by household size, standard of living, temperature and proximity to coal ports respectively. Household size has, as expected, a positive effect on fuel consumption, that is large households consume more fuel than small ones. The standard of living, measured by the food expenditure share, also has a significant and negative effect on fuel consumption. Households with a higher standard of living consume more fuel than households that are less well off. Concerning prices, the relationship is also the expected one; as

fuels become relatively more expensive the consumption of fuels decreases. However, it is worth noticing that the model does not lend support to the notion that a longer winter causes higher fuel consumption. Several explanations may however be considered. For instance, both temperature and firewood prices could be correlated. If so, the effect may already have been captured by the price variable. Another possibility is that people living in colder climate might have mitigated low temperatures with warmer clothes rather than consuming more fuel. Due to the lack of significance, days with frost along with the time dummies were excluded in the second model. All variables are significant at the one per cent level and because the adjusted R-squared (explanatory power) is 0.76 in model 2.

Table 4. Factors explaining the fuel consumption per household in Sweden 1907–1913.

Variable	Model 1	Model 2
1913=1 (year dummy)	1.75*	(dropped)
1907=1 (year dummy)	(dropped)	(dropped)
Coal port	2.60**	1.54***
Days with frost	.007	(dropped)
Persons in household	1.47***	1.48***
Food expenditure share	–0.47***	0.47***
Relative fuel price	–0.83***	–1.01***
Constant	31.36***	36.04***
Adj R-squared	0.76	0.76
Observations	54	54

Note: * denotes significant at the 10 per cent level, ** denotes significant at the 5 per cent level, *** denotes significant at the 1 per cent level.

Back-Casting Fuel Consumption 1800–1920

For the back-cast we first estimated time series for the food expenditure share, fuel prices and household sizes. Before proceeding it is important to consider that the rural firewood consumption was higher than in the cities. A drawback is therefore that the model draws entirely on urban data. Given that the model is valid also for rural areas, that there is no unknown rural factor, it is reasonable to assume that the higher rural consumption is primarily explained by lower fuel prices. While the food expenditure share is assumed to have been equal across the country, we have estimated separate

fuel price and household size series for urban centres and rural districts (see also Lindmark & Andersson 2010).

Concerning the food expenditure share, consumption of food stuffs with domestic origin was obtained from the Swedish Historical National Accounts (SHNA) as the sum of direct domestic consumption with origin in agriculture, horticulture and food stuffs industries (Krantz & Schön 2007). Use of imports for final consumption is missing in SHNA, which unfortunately is necessary for estimating the foodstuff consumption share. The problem was addressed by using unpublished foreign trade series (Schön 1984), which cover imports with both agriculture and food stuff industries as foreign sectors of origin during the period 1830 to 1871. Schön's series are directly followed by corresponding series according to Johansson's (1967) Historical National Accounts.

For estimating the shares of imports for final consumption we used the 1920 foreign trade statistics and divided imported agricultural goods and foodstuffs on final and intermediate consumption. Using import statistics from 1924, we divided the agriculture goods and foodstuffs among investments, intermediate consumption and final consumption. The share of final consumption is 24 per cent for agricultural goods and the share of final consumption is 54 per cent for foodstuffs. We assume that the share of final consumption is constant during the period 1830–1950. The estimated food expenditure share is very similar to the weight of foodstuffs in Myrdal's consumer price index (CPI). For instance, in 1830 the weight of foodstuffs is 0.65 in Myrdal's CPI while it is 59 per cent in our estimate.

Prices for fuels were obtained from SOS's *Detaljpriser och indexberäkningar åren 1913–1930* ['Consumer prices and index calculations, 1913–1930'] from the year 1830. Prior to 1830 prices from Jörberg (1972) were used. While it is difficult to obtain rural firewood prices, the previously quoted Västernorrland study does, however, provide a price for 1913–1914. Generalising from this observation we assumed that rural prices were approximately 60 per cent of urban prices. It is worth noticing that even though firewood could be obtained for free, especially in the Norrland countryside, it still meant an opportunity cost in terms of labour. For the back-cast we calculated the fuel relative prices as fuel prices in relation to CPI and weighted with the actual fuel price in 1913 to ensure compatibility with the model (2). For estimating rural firewood consumption, the price series was divided by 2.

The urban and rural populations were obtained from SOS: *Historisk Statistik för Sverige. Del 1 Befolkning* ['Historic statistics of Sweden. Part 1 Population']. The size of the population is readily available for the full period, while household size is only accessible from 1860 and onwards. For the period 1800 to 1860 estimates of the rural household sizes were obtained

from Lundh (1995), while we assumed that urban household sizes developed in proportion to this. Table 5 summarises our assumptions of average household sizes along with Lundh's estimates.

Table 5. Household size in Sweden 1800, 1850, 1900 and 1920.

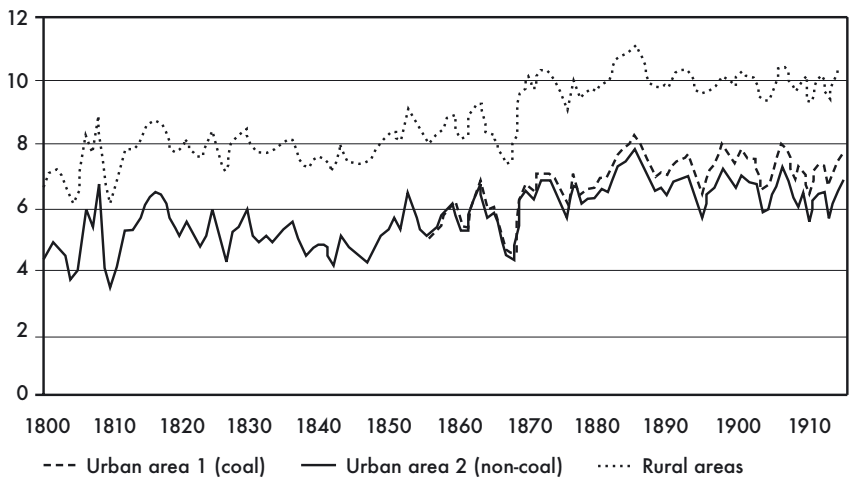
	Rural	Urban	National	Lundh
1800	5.8	4.6	5.7	5.8
1850	4.9	3.9	4.8	4.9
1900	4.0	3.2	3.8	3.8
1920	4.0	3.1	3.7	3.7

Source: Lundh 1995; SOS 1967.

According to the HBS coal, coke (and gas made of coke) replaced 5 per cent of the firewood consumed in the household sector around 1913. In the southern port cities the substitution rate was, however, close to 75 per cent of the total fuel consumption. Firewood was the totally dominating energy carrier in rural areas. Thus, for 1910 we estimate that 218,000 tons of coal were consumed by households. We use coal imports as a variation index for estimating the historical coal consumption, which is assumed to have been zero in 1850.

Fig. 1 outlines the long-term development of fuel consumption per household using the back-casting procedure. The consumption in a rural household was estimated at approximately 8 sm^3 in the early nineteenth century. A pronounced increase is also revealed from approximately 1850 to

Fig. 1. Estimated household fuel consumption (sm^3 per household) in urban and rural areas in Sweden 1800–1920. Source: See table 1.



1890, during which period the fuel consumption per household increased by roughly 15 to 20 per cent.

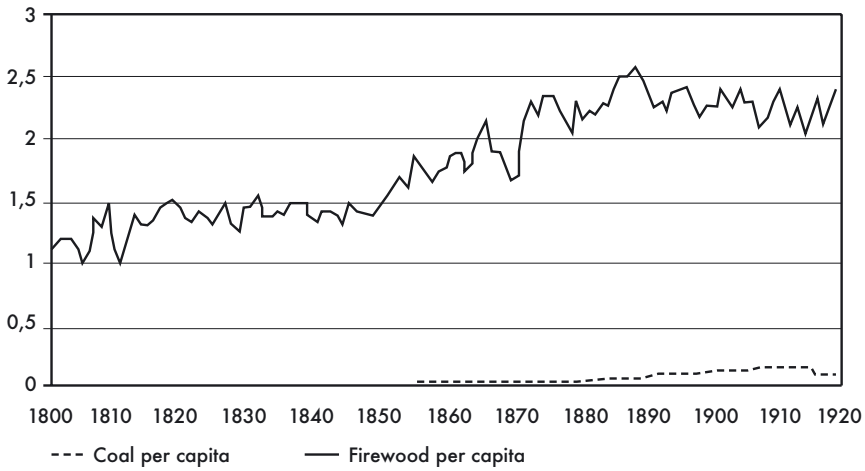
In the back-cast this increase is mainly driven by an improved standard of living, although higher fuel prices somewhat keep down the growth in fuel consumption after the 1890s.

Expressed in per capita terms, the back-cast suggests an even stronger increase due to the declining household size (see Fig. 2). The reason is that each extra household adds more to the aggregated fuel consumption than an additional member to an existing household. It is important to recognise that it is the household, not the individual, that is the relevant unit for accounting for fuel consumption. When the household size decreases, this will, according to the model, lead to larger per capita consumption.

As the household size dropped by one third during the nineteenth century, the per capita growth in fuel consumption also became much stronger than the growth in per household consumption.

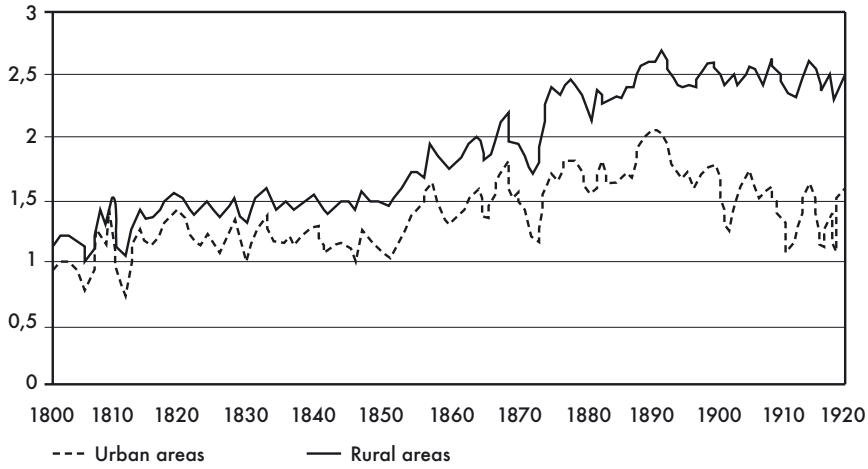
In the twentieth century, the per capita and per household developments are fairly similar.

Fig. 2. Estimated household fuel consumption (sm^3 per capita) 1800–1920. Source: See table 1.



The back-cast shows differences between urban and rural areas (see Fig. 3). Due to lower fuel prices, the consumption of firewood was higher in rural areas. When coal imports started to increase in the second half of the nineteenth century, firewood consumption developed even more slowly in urban areas. Especially in the late nineteenth century and early twentieth century firewood was replaced with coal in urban areas.

Fig. 3. Estimated per capita firewood consumption (sm³ per capita) 1800–1920.
Source: See table 1.



In 1920 the per capita firewood consumption was 2.6 sm³ in rural areas and 1.9 in cities. These figures are close to Jonson's rural estimate presented in table 2. Jonson estimates the rural consumption to 2.4 sm³ in 1923. For urban areas Jonson assumes a consumption of 1.25 sm³ per capita. Taken together, our estimate of firewood consumption in 1920 is somewhat higher than that suggested by Jonson. However, the main differences from the previous estimates are not the 1920 level, but the development in the pre-1920 period.

The previous back-cast technique applied (Kander 2002) indicates that household fuel consumption has decreased over time. The reduction of fuel is believed to have been driven by technological effects (improved heating efficiency and insulation), assuming that the efficiency gains were exclusively used to reduce fuel. One obvious shortcoming of the latter assumption is that the efficiency gains were attributed to the improvement and diffusion of Cronstedt tiled stoves, but these were mainly used for heating *additional* rooms. Cronstedt stoves are rarely, if ever, found it the kitchen, which was the original heated room in a typical homestead. This means that even though an efficient Cronstedt tiled stove implies an improvement of the average household heat efficiency, it happens at the same time as the total household energy increases. This is exactly what we would find if we compared a modern household with an early twentieth century household.

The second major technological improvement during the period of study was insulation. When sawn battens became cheaper from the 1840s, it also became more common to equip the timber-log house with a weatherboarding. Due to the reduced airflow through the walls and the floor, the

weatherboarding helped to improve the insulation. Without weatherboarding it would have been difficult to increase the indoor temperature given the airflow through the walls and the floor. Unless insulation had improved during the nineteenth century, higher fuel consumption would have given a poor, if any, pay-off in terms of indoor temperature.

Given the reasoning of the rebound effect and the result from the regression estimate in table 4, the increasing technical energy efficiency would yield an increase in fuel consumption rather than a decrease. As improved energy efficiency results in a lower fuel per indoor temperature ratio, it will have a similar effect as a lower relative price on fuel. Unless the improved energy efficiency is counteracted by an equal increase in fuel price, the household utility function would imply an increase in the physical fuel consumption, as shown in Fig. 1.

The increase in household fuel consumption gives a rather different picture than the previous estimate of the nineteenth century development. As households tend to increase fuel consumption along with improving living standard, the new estimate gives a significant effect on the total energy

Fig. 4. Energy intensity (energy use /GDP) in Sweden 1800–1920. Both energy series excludes human energy.
Source: Kander 2002, table 1 (Energy intensity 1) and this study (Energy intensity 2).

use. By adding the household fuel consumption to that for other institutional sectors, we can arrive at a new estimate for the total energy consumption (excluding human energy).

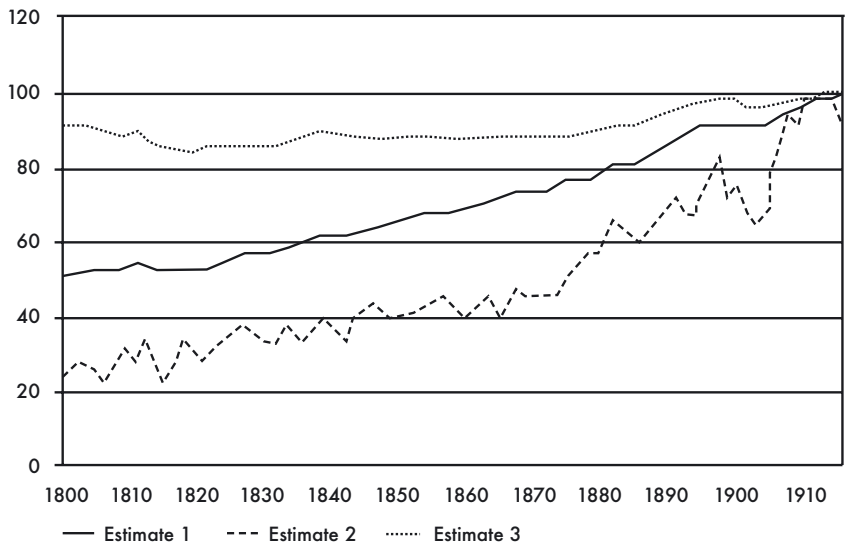
Fig. 4 shows the development of the Swedish energy intensity according to the old estimate (energy intensity 1) and the new estimate (energy intensity 2). Please notice that Kander's energy series is only adjusted with the household firewood consumption. This means that the manufacturing industry fire wood consumption is left unaffected.

The two estimates give a rather similar picture of the early twentieth century development, but a rather different view of the nineteenth century. The old estimate shows that the energy intensity decreased by more than one per cent annually during the pre-industrial period 1800 to 1870. During the early stage of the industrial breakthrough in the late nineteenth century, the energy intensity remained fairly unchanged, while a slow decrease is seen to be evident after 1890.

The new estimate does not lend support for a rapid decoupling process between energy and income during the pre-industrial phase. The energy intensity does not seem to be decreasing more rapidly before the industrial breakthrough than after.

The estimates of household firewood consumption also have implications for the historical estimates of GDP. This is because the logging

Fig. 5. Estimated household firewood consumption and household wood consumption in Sweden 1800–1870. Indices (1880=100).
Source: Schön 1995: 121–123 (Estimate 1), this study (Estimate 2), Kander 2002: 219–221 (Estimate 3).



and transportation of wood for household purposes, of which firewood is a part, are economic activities that are recorded under agriculture and forestry (Schön 1995). Firewood estimates that differ substantially from the SHNA figures therefore call for revision of either SHNA or the firewood estimate. Fig. 5 shows the estimated household consumption of firewood in Sweden between 1800 and 1870 along with the SHNA estimates of household wood consumption.

The first estimate is the SHNR household wood consumption (Schön 1995). This estimate includes final consumption of wood in household and input in services (private services, public services, transport, and building).[8] The consumption figure does not distinguish among different purposes such as firewood, building materials or other purposes. The second estimate is the household firewood consumption according to this study, while the third is the estimate according to Kander.

The first and second estimates show that the consumption of firewood (and wood for other purposes) increased substantially during the nineteenth century. Despite the larger scope of the SHNR figures it shows roughly the same development as the new estimate. The differences that exist could be attributed to other uses (input in services) or other purposes (building materials) in the SHNR figures. The new estimates of firewood do not suggest a major revision of the SHNR figures. However, the figures on firewood consumption according to estimate 3 would provide reason to revisit SHNR. This further means that Kander's figures should not be used for calculating nineteenth century energy intensity without appropriate adjustment of forestry output and GDP.

Conclusion

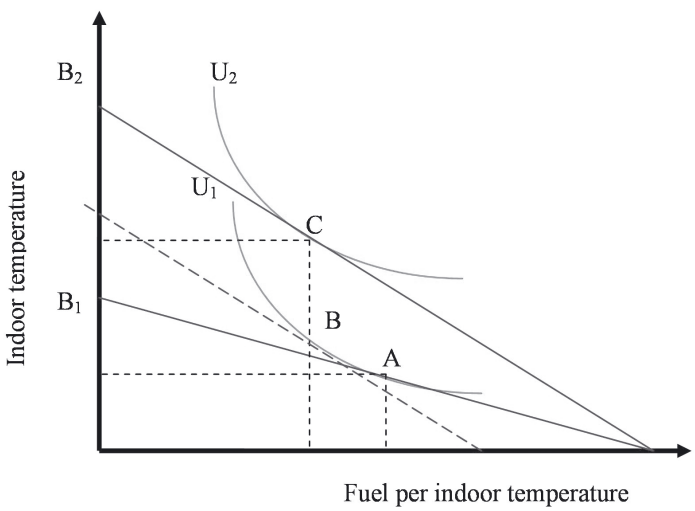
This study shows that Swedish household fuel consumption increased over time due to higher standard of living, although rising fuel prices kept down the growth rate. Given the high price elasticity of demand and the efficiency improvements, a rebound effect is likely to have been at hand. On a national scale, the study shows that higher standards of living indicate that per capita fuel consumption increased during the industrialisation process. It is therefore likely that the per capita firewood consumption was considerably lower in the early nineteenth century in comparison with previously reported estimates. This implies that the role of technical progress inducing a lower demand for household firewood during the nineteenth century may be mistaken. The new estimate shows that the energy intensity decreased more slowly before the industrial breakthrough than after.

APPENDIX 1

The dynamics of the rebound effect are basically the following (the outline is based on Vikström 2008). An initial increase in energy efficiency leads first to an increased marginal productivity of energy. This is to say that the energy service flow from each physical unit of energy increases. If the price per physical unit of energy remains constant, this implies falling energy service unit prices. The falling energy service price makes it profitable to buy more energy services until the marginal productivity corresponds to the new lower price per energy service unit. Besides the size of the efficiency increase, this process is affected by how easy it is to integrate additional energy in the production process or by the elasticity of substitution. From a macro economic perspective, the process of adding energy services to the production process will in turn increase the marginal productivity of the other factors, capital and labour. This is because each unit of capital and labour is now working with more energy service units than before. The process will continue until marginal productivities again correspond to factor prices. This is because the relative price of energy in terms of energy services has decreased.

In this case, when space heating is concerned, it is reasonable to assume that increasing energy efficiency was caused by technical changes such as improved stoves and housing insulation. For the household, increasing energy efficiency (given an unchanged energy unit price) will have a similar effect as a lower relative price on fuel. Depending on the price elasticity, the household may decide to leave the physical fuel consumption unchanged

Fig. A1. Demand schedule for indoor temperature (energy) and fuel efficiency (fuel per indoor temperature) showing income and substitution effects.



or increase the physical fuel consumption. The two different options will ultimately depend on how space heating is valued relative to the cost saving through fuel efficiency. The rebound effect may therefore be seen as a combination of substitution and income effects. Fig. A1 shows a demand schedule with fuel efficiency and indoor temperature.

B1 represents the original budget line and U1 is the corresponding indifference curve. Maximum utility is found in point A. If a technical shift is assumed, implying that a higher indoor temperature is available at a given fuel consumption, the budget line shifts to B2. This is effectively the same as an exogenous price fall in indoor temperature. Maximum utility is now found at the point C where U2 has the same curvature as U1. The substitution effect is the leftward move from A to B, which is a tangency between U1 and the dashed hypothetical budget line, which only takes into account the technical change. The upward shift from B to C is the income effect, which is caused by the technical change implying falling prices for indoor temperature. A falling price for indoor temperature can be attributed to both higher energy efficiency and/or an exogenous fall in fuel price (which also implies a falling price for indoor temperature). A key issue is therefore to examine the price elasticity of demand. An equally important issue is how an exogenous increase in income affects fuel consumption.

APPENDIX 2

Total household firewood consumption (CONS) in Peta Joule (PJ)

Year	CONS_PJ	Year	CONS_PJ	Year	CONS_PJ
1800	18	1840	29	1880	72
1801	19	1841	31	1881	68
1802	19	1842	32	1882	71
1803	18	1843	32	1883	70
1804	16	1844	30	1884	73
1805	17	1845	34	1885	73
1806	22	1846	33	1886	80
1807	21	1847	33	1887	82
1808	24	1848	33	1888	83
1809	18	1849	33	1889	86
1810	16	1850	36	1890	83
1811	20	1851	38	1891	79
1812	23	1852	40	1892	75
1813	22	1853	42	1893	78
1814	22	1854	41	1894	77
1815	23	1855	47	1895	82
1816	25	1856	46	1896	83
1817	26	1857	44	1897	84
1818	26	1858	43	1898	80
1819	25	1859	46	1899	76
1820	24	1860	48	1900	80
1821	24	1861	51	1901	81
1822	26	1862	52	1902	85
1823	25	1863	48	1903	84
1824	24	1864	49	1904	82
1825	25	1865	56	1905	87
1826	28	1866	59	1906	85
1827	25	1867	52	1907	85
1828	24	1868	53	1908	78
1829	28	1869	49	1909	79
1830	29	1870	47	1910	85
1831	31	1871	49	1911	91
1832	28	1872	62	1912	89
1833	28	1873	67	1913	82
1834	30	1874	65	1914	88
1835	29	1875	70	1915	79
1836	30	1876	71	1916	87
1837	31	1877	70	1917	93
1838	32	1878	67	1918	85
1839	30	1879	64	1919	94
				1920	98
				1921	85

NOTES

[1] Financial support from the Swedish Energy Authority (STEM) and The Swedish Research Council (Vetenskapsrådet) is gratefully acknowledged.

[2] Thelaus estimated a population of 4 million people.

[3] No specific sources are mentioned here, apart from the general income growth.

[4] Probably the information on the Finnish houses refers to fishermen's cottages. Such cottages were used for temporary housing also by loggers, but seldom for entire households.

[5] Kander does not exactly show how she does this.

[6] This is unfortunately erroneous algebra, which causes an overestimate of early nineteenth century firewood consumption. Let us consider the operation with a simple numerical example. Assume that a car drives 100 km the first year and 150 km the next year. Thus, the mileage increases by 50 per cent. Also assume that the fuel consumption is 1 litre per km the first year but only 0.5 litres per km the next year. This is an improvement. or efficiency gain by 50 per cent, or minus 50 per cent. If we were allowed to add the per cent changes this would leave us with a zero per cent change in total fuel consumption. However, the correct total effect is calculated as 100 km times 1 litre per km for the first year, leading to 100 litres of consumed fuel, and then 150 km times 0.5 litres per km for the second year, leaving us with 75 litres of consumed fuel. This means that the total effect is a reduction by 25 per cent.

[7] This method finds support in the research showing that income elasticity and foodstuff are stable over time; the expenditure share of food.

[8] This is because total output is divided into consumption, exports and intermediate consumption in the manufacturing industry (mainly iron works and sawmills).

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NICOLÁS J. I. RODRÍGUEZ

Bilateral Approach to Ecosystem-Based Marine Management in the Barents Sea

ABSTRACT In 2006 the Government of Norway presented a marine management plan for the Norwegian part of the Barents Sea, and a Northern strategy was introduced as a supportive regional instrument. For the first time the method of ecosystem approach is applied in a Norwegian context as a principle in the Barents Sea plan. The main elements of the plan consist of ecosystem indicators, management goals and planning maps indicating biologically vulnerable areas where petroleum activity cannot be performed. An important question is the relation between the plan and existing management regimes in laws and through bilateral cooperation in the Barents Sea, in respect of both biological resources and non-renewable resource extraction. A general, political plan such as the Barents Sea plan must have some sort of consistency among already existing legal regimes, sector management and bilateral cooperation in order to succeed. If underlying regimes are not sustainable in their practice, neither can a general plan be. The article examines the basis for an implementation of an ecosystem approach comparing the bilateral management of Norway and Russia in the Barents Sea using the question of fishery resources in the region as a case.

KEYWORDS ecosystem approach, regional marine management, Barents Sea, bilateral collaboration Norway and the Russian Federation

Introduction

Ecosystem-based management has been used for the implementation of a plan for the Norwegian part of the Barents Sea (cf. St. meld. nr. 8 [2005–2006], Ch. 9; Olsen *et al*. 2007). The main aim of the plan, imple-

mented on 30 March 2006, is to resolve possible conflicts between the users of the Barents Sea, detect ecologically vulnerable areas and clear the ground for where industrial activities can be performed in the area without harming the biological resources. In addition the plan contains ecological quality objectives that are used to monitor and assess the status of the ecosystem. Currently a management plan has been implemented only for the Norwegian part of the Barents Sea (Fig. 1), but representatives of the Norwegian Government have several times seized the opportunity to express that their vision is a common management regime for the whole Barents Sea.

Fig. 1. The polygon shows the planning area (2006) for the Norwegian Barents Sea Plan with an approximate size of 1,400,000 square kilometres. The maritime border between the Russian Federation and Norway, which runs through the eastern part of the planning area, is based on the coordinates given in Article 1 (1) of the "Treaty between the Kingdom of Norway and the Russian Federation concerning Maritime Delimitation and Cooperation in the Barents Sea and the Arctic Ocean" (2010). The treaty is signed and not yet ratified. Data Sources: The Directorate for Nature Management (polygon data)/ Google Earth v5.x (satellite data).

Norway and the Russian Federation have two bilateral organisations that are important for resource management and environmental issues in the Barents Sea Region:

The Joint Russian-Norwegian Commission on Co-operation in the field of Environmental Protection has put the question of a common regime on ecosystem-based management for the Barents Sea on the agenda. The commission deals with a wide range of environmental issues, but I will limit the discussion to the Norwegian-Russian working group on the marine environment that was established in 2005.

The Joint Norwegian-Russian Fishery Commission is responsible to set total allowable catch (TAC) and quota distribution for the common fishery resources in the Barents Sea Region.

Since the World Summit on Sustainable Development in Rio 1992 there has been an increasing focus on an ecosystem approach, which since then has been embraced in policies, management and international legislation. In fisheries the management principle has been included in several declarations and agreements. The Food and Agriculture Organization of the United Nations (FAO) has been working on developing guidelines that should be considered as advice to the coastal nations (Garcia *et al*. 2003). They build further on the Reykjavik declaration from 2001 and the World Summit on Sustainable Development in Johannesburg in 2002 (Bianchi 2008). It is a study of the implementation of an ecosystem approach through the bilateral cooperation between Norway and the Russian Federation in the Barents Sea Region that is at the heart of this article.

Outline of the Study

In this article I am interested in the challenges of developing a bilateral regime based on an ecosystem approach for the Barents Sea. It is especially interesting to study how two nations who share a common resource pool can resolve the implementation of an ecosystem approach.

I have organized the study around three points in order to research how well implemented the ecosystem approach is in the Barents Sea Region. These three study points have been chosen since they will give a picture of the extent to which there is compliance with the concept of an ecosystem approach to resource management, and they can also serve to illustrate potential challenges to applying an ecosystem approach in practical management:

(1) A study of international agreements that have relevance for the management of large marine ecosystems that oblige the parties to consider a management system based on an ecosystem approach. Are the Russian Federation and Norway party to such agreements that oblige them to implement a management regime based on an ecosystem approach?

(2) A study of national law. Is the concept of ecosystem approach incorporated into national fishery legislation for the parties in question, which has relevance for the management of large marine ecosystem?

(3) A study of the content of bilateral cooperation that could enhance the implementation of ecosystem approach to the management of a large marine ecosystem. To what extent is an ecosystem approach a part of the bilateral cooperation and do the parties have the intention of collecting data in order to introduce a management system based on the ecosystem approach?

Ecosystem Approach and the Human Dimension

The idea of an ecosystem approach has its origin in the biological concept of *ecosystems*. The travel from a scientific principle to environmental policy, management principle and legislation has been a long one. In 1935 Alfred G. Tansley (1871–1955) first introduced the powerful concept of *ecosystem* in biological thinking in his article on "The use and abuse of vegetational concepts and terms" (Tansley 1935: 297–303). At this time the concept of *ecosystem* explicitly emphasized the living nature as a dynamic system of processes and relationships between organic and inorganic nature. Williams (1993: 26) clearly interprets Tansley as including humans and human activity as part of the 'ecosystem' concept, but a dominating idea in classical ecology has been the so-called "equilibrium paradigm" (Pickett & McDonnell 1993: 312) making the ecologist not deeply involved in the human dimension:

> From an operational point of view, the classical paradigm implied that ecologists, seeking to understand how ecological systems were structured and functioned, should work in areas free of human disturbance.

There is consensus in the theory of ecosystem-based management to include the human dimension as part of the ecosystem, not aligning itself as an idea of studying nature apart from human influence: the ecosystem approach calls for public participation in the planning of nature resources and it includes humans as part of the ecosystem.

D. Scott Slocombe (1998) emphasizes that the ecosystem approach developed within different disciplines all the way back to the 1960s and "even earlier," and it builds on but also constitutes an important supplement to ecology. R. Edward Grumbine (1994) traces the roots and origin of ecosystem management further back to the 1930s and 1940s, but it was not before the 1970s that if found widespread acceptance in resource planning. There

exists an important distinction between ecosystem approach and ecosystem-based management as concepts, which is acknowledged by authors that have written on the concept of ecosystem-based management (Grumbine 1994; Slocombe 1998; Hoel 2005: 43). While the ecosystem approach is a description of the entities in the ecosystem and the way they interact with each other and with the environment, the management regime is thus based on an understanding of these interactions in order to harvest in a sustainable manner, set goals, correct a disturbance or protect elements of the ecosystem (Slocombe 1998). It is possible to distinguish between the ecosystem approach applied as holistic management (horizontal dimension) and as sector management (vertical dimension) for example applied to fisheries (Hoel 2005: 43). In the research literature on ecosystem-based management the distinction is not sharp and often the concepts of ecosystem approach, integrated ocean management and ecosystem management are used in the sense of ecosystem-based management alone (Slocombe 1993). Anyhow, the development of a plan such as the Barents Sea Plan depends on successful strategies for an ecosystem approach to biological resources utilized by humans or which could be affected by human activity.

The Barents Sea Plan contains a broad assessment covering several sectors of human activity that affect the area in addition to assessments of the status of the ecosystem and identification of knowledge gaps regarding the ecosystem and possible consequences of human activity (Table 1). An adaptation of the ecosystem approach to management of large marine ecosystems can be viewed as paradigm changing the present state of the system from sector-by-sector management to an integrated sectoral approach to management (Sherman & Duda 1999). It is a strategy for integrated management that coordinates the effort across sectors (Bugge 2009: 38). This is partially true when it comes to the theory of ecosystem approach and its application, but we should not forget that institutions are not ecosystems but humans interacting through their actions with the ecosystem. A management regime that is not ecosystem-based has been described by Sherman & Duda (1999) as consisting of a focus on "single species, small spatial scale, short-term perspective, humans independent of ecosystems, management divorced from research and managing commodities," but we will see in the next section that the shift of focus away from single species models is contested.

Ecosystem Approach to Fisheries

The ecosystem approach to fisheries can be viewed as a sector principle for how to manage the specific actions of fisheries and effects on the ecosystem.

Assessments	Year
Environmental description of the Barents Sea (5)	2002 – 2005
Transport at sea (4)	2003 – 2005
Fishery activity and aquaculture (3)	2002 – 2004
Petroleum activity (3)	2002 – 2005
Identification of vulnerable areas (3)	2003 – 2005
Pressures and impacts on the Barents Sea (2)	2004 – 2005
Identification of knowledge needs (1)	2005
Society and the Barents Sea (1)	2003

Table 1. An overview of the main fields where assessments have been performed in preparation of the Barents Sea Plan (2006). The numbers in brackets indicates the number of reports within each field. Data source: St. meld. nr. 8 (2005–2006), Appendix II.

Viewed as such, the ecosystem approach to fisheries can consist both of normative principles and of course also of didactic principles in the sense of conducting case studies of best practices (Bianchi *et al.* 2008: 5). It can be the foundation on developing both regimes in a political sense and as normative legislative regimes, but it is also an approach originating in ecology as a scientific viewpoint of researching, describing and searching for understanding relations between species, organisation of food webs, nutrient cycles, environmental change (acidification of the oceans [Monaco Declaration 2008; Orr *et al.* 2005]), climate change (Brierly & Kingsford 2009; IPCC 2007; Thackeray *et al*. 2010) and physical influences.

So how does an ecosystem approach to fisheries differ from today's way of managing fisheries? Some authors emphasize that this is not a new approach to research, but a new approach to management (Bianchi *et al.* 2008: 19). But without doubt it shifts the focus for fisheries ecology to being focused on the ecosystem context. This does not mean that single species studies in ecology or models based on single species are useless for management (Mace 2004; Sígurjónsson 2008)—it is the integration of these studies in an ecosystem context that matters and is meant by an ecosystem approach.

FAO defines the ecosystem approach as:

> An ecosystem approach to fisheries strives to balance diverse societal objectives, by taking account of the knowledge and uncertainties about biotic, abiotic and human components of ecosystems and their interactions and applying an integrated approach to fisheries within ecologically meaningful boundaries (Garcia *et al.* 2003: 6).

When approaching the concept of ecosystem approach to fisheries, several authors in the field wish to do away with misunderstandings about the con-

cept, and to make clear that there is no need for management to have a detailed and complete overview of every component of an ecosystem (Lotze 2004). In order to cope with the uncertainty, the precautionary approach becomes quite important in relation to the concept of ecosystem approach. I will deal with the connection between these two concepts later in this article.

The ecosystem approach to fisheries is about managing human actions and not about managing ecosystems as entities by themselves (Garcia *et al*. 2003: 6). But on the other hand, ecosystem research and understanding are a challenge to ecology and to increasing the knowledge of details in order to supply management with more knowledge. Traditionally fishery management has had a focus on the stock and how to predict the maximum sustainable yield from a population without creating havoc when harvesting from the fish stock—a shift towards an ecosystem perspective would mean considering the elements in relation to each other; Lotze (2004) expresses it like this:

> (1) all the parts (species, habitats) are kept, (2) all parts are kept in a state (of abundance, diversity, complexity) that allows long-term persistence and resilience of populations, communities and ecosystems, and (3) high environmental quality is provided to ensure health and survival.

Several methods have been suggested in order to implement an ecosystem approach to fisheries; some of them are:

The use of biological indicators. Key elements in the food web are identified and time series are collected of the key elements. It has been suggested to create trophodynamic indicators (for example predation) that can measure the interaction between different levels of the food webs, and by this be able to say something about effects of fishing in the marine ecosystem (Cury *et al*. 2005). Other regimes of biological indicators collect several data on both the physical environment (pollution, nutrients etc.) and the biological environment. The indicators are used to assess and monitor the health and status of the ecosystem (Wisnes & Skjoldal 2008). The use of biological indicators is also typical of the assessment and monitoring methods implemented in the EU Water Framework Directive [2000/60/EC] and the EU Marine Strategy Framework Directive [2008/56/EC] (Skjoldal & Misund 2008).

The use of multi-species models (Andersen & Ursin 1977). These models are presented as an alternative to the traditional single-species models, but in order to study other aspects of the ecosystem than what is possible with a single-species model. They model dynamically the interaction between

several species in an ecosystem and try to predict the effects that they enact upon each other over time and changing conditions (Lindstrøm *et al.* 2009). The models are fitted to historical data and in addition they can be used to explore uncertainties and to run different scenarios (for example changing stock levels, different harvesting regimes and environmental change).

The use of single-species models in an ecosystem context. Some authors argue that single-species models should not be abandoned and that they function as a supplement to multi-species models (Lindstrøm *et al.* 2009). Single-species models should still be used since they are in "in the spirit of such an approach" (Mace 2004; Sigurjónsson 2008)—they only need to be developed with more discipline and under a more cautious fishing regime.

The Regional Context

The implementation of a management regime based on an ecosystem approach requires a geographical area and of course organisational bodies/states that have jurisdiction over the area. How do we define this geographical area? One proposal is the large marine ecosystem (LME) classification that divides the oceans of the earth into divisions of 64 ecosystems (Sherman & Hempel (eds.) 2009). The large marine ecosystem division is a network of ecoregions (Fig. 2). An ecoregion can generally be defined as a "major ecosystem, resulting from large-scale predictable patterns of solar radiation and moisture, which in turn affect the kinds of local ecosystems and animals and plants found there" (Bailey 1998).

The criteria for speaking about large marine ecosystems (LME) is that they are ocean regions of 200,000 square kilometres or larger. In addition no administrative or national boundaries have been used in identifying the LMEs, and here ecological and oceanographical parameters are used to construct and decide the size and extent of the ecoregion. ICES also gives advice based on ecoregions as an acknowledgment of an ecosystem approach (ICES 2010: 2).

The early stages of ocean law territorialisation ensured coastal nations jurisdiction in their adjacent waters. Newer trends in international legislation propagate a regional territorialisation that does not follow administrative jurisdictional boundaries, but where classification of ecosystems is the basis of creating ecoregions. The division between administrative jurisdictional boundaries and ecoregions is a challenge to modern marine management, when the right to exercise power cannot necessarily ensure holistic ecological considerations in an ecoregion. The Barents Sea is the largest of the Arctic Shelf seas and is defined as a large marine ecosystem, but only half of this LME is covered by a comprehensive management plan.

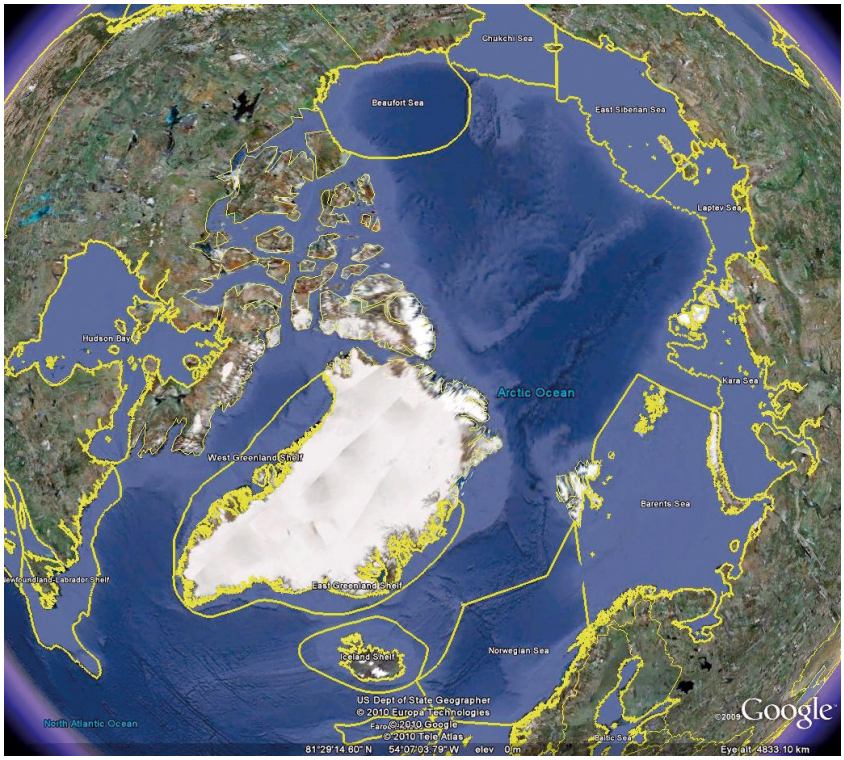

Fig. 2. Certain areas of the world's oceans have been divided into 64 large marine ecosystems (LME) (Sherman & Hempel 2009). The Barents Sea is one of the LMEs according to this division. Data Source: National Oceanic and Atmospheric Administration (LME data)/Google Earth 5.x (satellite data).

International Agreements. The Convention on Biological Diversity and the Ecosystem Approach

Norway and the Russian Federation are both parties to several international agreements that have a focus on both conservation of marine resources and encouraging the implementation of the ecosystem approach in biodiversity conservation. Of special interest in this case is the Convention on Biological Diversity, which asks the parties of the convention to apply the ecosystem approach. There are other international treaties that both Norway and Russia have joined that have a focus on conservation, for example the United Nations Convention on the Law of the Sea (UNCLOS), and implementation of the precautionary approach (UN Fish Stock Agreement under UNCLOS, FAO Code of Conduct and CBD) when managing resources (cf. Table 2).

Treaties/ Agreements/ Declarations	Norway	The Russian Federation
International Council for the Exploration of the Sea Convention 1964	Ratified 26.05.1965	Ratified USSR 28.10.1965/ The Russian Federation 15.01.1992
United Nations Convention on the Law of the Sea (UNCLOS) 1982	Ratified 24.06.1996	Ratified 12.03.1997
North East Atlantic Fisheries Commission (NEAFC) Convention 1982 with amendments in 2004 and 2006	Ratified 03.07.1981	Ratified USSR 23.04.1982/ The Russian Federation 15.01.1992
United Nations Biodiversity Convention (CBD) 1992	Ratified 09.07.1993	Ratified 05.04.1995
The Convention for the Protection of the marine Environment of the North-East Atlantic (OSPAR) 1992	Ratified 08.09.1995	Not a contracting party. Invited as observers.
The Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas 1993 (FAO Conference Resolution 15/93)	Ratified 28.12.1994	Not a contracting party
United Nations Agreement on Straddling and Highly Migratory Fish Stocks 1995	Ratified 30.12.1996	Ratified 04.08.1997
Food and Agriculture Organization of the United Nations Code of Conduct for Responsible Fisheries 1995	Recommendation. Voluntarily to follow up the normative principles in national legislation or policies.	Recommendation. Voluntarily to follow up the normative principles in national legislation or policies.
Protocol between Norway and Iceland under the Agreement between Norway, Iceland and Russian concerning certain aspects of cooperation in the area of fisheries (loophole agreement) 1999	Agreement in force 15.07.1999	Agreement in force 15.07.1999
Reykjavik Declaration on Responsible Fisheries in the marine ecosystem 2001	Declared 18.10.2001	Declared 18.10.2001
Nort East Atlantic Fisheries Commission Agreement on Port State Control 2007	Agreement in force 01.05.2007	Agreement in force 01.05.2007
Cooperation through International Maritime Organization (IMO) on the ship transport route Vardø - Røst	Traffic Separation Scheme decided by IMO, in force 01.07.2007	Supportive of sea route
The Ilulissat Declaration 2008	Declared 28.05.2008	Declared 28.05.2008
Treaty on maritime delimitation and cooperation in the Barents Sea and the Arctic Ocean 2010	Signed 15.09.2010 (not yet ratified by the Norwegian Storting)	Signed 15.09.2010 (not yet ratified by the Duma of the Russian Federation)

Table 2. Treaties, agreements and declarations that are interesting in relation to the implementation of management regimes based on the ecosystem approach and the precautionary approach in the Barents Sea.

To decide when signed international treaties create legally binding obligations for the national state, one must go to national law. In Russian law Article 15 (4) of the Russian Constitution states:

> Universally acknowledged principles and standards of international law and international treaties of the Russian Federation shall be part of its legal system. Should an international treaty of the Russian Federation establish rules other than those established by law, the rules of the international treaty shall be applied (Belyakov & Raymond 1993).

The Russian system is treated as an example of monism, which means a di-

rect incorporation of international law with the same status as national law when ratified. Legal scholars in Russia argue that treaties cannot be in contradiction to the constitution, and thus the formulation in Article 15 (1) and Article 125 (6) gives the constitution of the Russian federation precedence over international law in questions of conflict (Burnham *et al.* 2004: 26). In Norwegian law there is a requirement that treaties that Norway is party to and has ratified has to be incorporated into national law and undergo treatment in the National Assembly as Norwegian law—such a procedure without direct implementation of international law as national law is defined as dualism.

The ecosystem approach has existed and been developed in different fields within resource management, but first occurred in a legal context with the introduction of the Convention on Biological Diversity (CDB), which entered into force in 1993 for the parties who signed the convention on the Earth Summit in Rio 1992 (UNEP 2004). Both Norway and the Russian Federation are parties to the Convention on Biological Diversity (Table 2). An important principle for implementation of the goals of the Convention on Biological Diversity is the ecosystem approach. The concept is not mentioned in the convention itself, but belongs to the so-called *Malawi-principles* that were introduced as a strategy for implementation of the three main objectives of the convention (cf. Art. 1). The Malawi-principles were introduced at the fifth meeting of parties (COP5) in 2000 and the definition of Ecosystem Approach states:

> [It] is based on the application of appropriate scientific methodologies focused on levels of biological organization, which encompass the essential structure, processes, functions and interactions among organisms and their environment. It recognizes that humans, with their cultural diversity, are an integral component of many ecosystems (COP5 2000).

A study performed by Jørgensen and Hønneland (2006) of four environmental agreements suggests a weak follow-up of the Convention on Biological Diversity in the Russian Federation. They describe that the environmental Non-Governmental Organisations (NGOs) and the Government had a good relation in the early 1990s, but that the dissolution of the State Committee for Environmental Protection in 2000 was a major blow to the work on environmental legislation and policy in the Russian Federation. On the other hand the Russian Federation is accredited for having large protection reserves and also a Red List of threatened species in existence independent of the CBD.

According to Article 5 of the Convention on Biological Diversity the parties are encouraged to cooperate in the circumstances of shared resources and the question of biological diversity. The convention can also be applied to the marine area (cf. Article 4). This could be viewed as a supportive means and incentive for both Norway and the Russian Federation to implement the ecosystem approach to their shared resources in cooperation in order to reach the objectives of the convention.

The Connection Between the Ecosystem Approach and the Precautionary Approach

The Convention on Biological Diversity also incorporates the precautionary approach (cf. the Preamble). I wish in this section to discuss the connection between the strategy for the ecosystem approach and the precautionary approach. The connection is important because we are faced with uncertainty when we want to make management decisions regarding marine ecosystems, and thus we need a mechanism to handle uncertainty. In international agreements the precautionary principle serves as a mechanism to handle uncertainty and avoid potential harmful actions. In the Rio Declaration (1992: Art. 15) a general precautionary principle was formulated:

> In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

There is a distinction between the concept of precautionary principle formulated in the Rio Declaration above and the concept of *precautionary approach*. The first concept was seen as signifying the nature of pollution substances during the FAO conference leading toward the FAO Code of Conduct for Responsible Fisheries (1995), where Norway and the Russian Federation were among the nations who where critical towards implementing a precautionary principle to fisheries management (Hønneland 2004: 11). Nevertheless a more modified concept of *precautionary approach* was applied to the FAO Code of Conduct for Responsible Fisheries and the UN Fish Stock Agreement. Later the FAO Code of Conduct for Responsible Fisheries was also supplied with normative principles for implementing an ecosystem approach and a FAO Compliance Agreement. The FAO Code of Conduct is a voluntary agreement, while the FAO Compliance Agree-

ment is legally binding and a part of the FAO Code of Conduct (Henriksen *et al.* 2006: 6).

In addition to the Convention on Biological Diversity, the precautionary approach is also a part of the FAO Code of Conduct (a voluntary party document) and the UN Fish Stock Agreement (a legally binding document for fish stocks of the high seas and in the coastal state jurisdiction).

The origin of the concept of *precautionary approach* can be traced to the *Vorsorgeprinzip* (German *Vorsorge*, 'precaution, foresight') (Bugge 1999: 77; Hønneland 2004: 8), which was developed during the 1970s in German environmental law, and later was first transferred and applied to international law for prevention of ocean pollution. Later the principle has found its way into the national legislation of different countries and as an important principle implemented in international law.

In addition both the concept of *precautionary approach* and that of *ecosystem approach* can be said to qualify as soft law (Kroepelien 2007), but the concept and principle of *ecosystem approach* and *precautionary approach* can both be said to be in the process of being incorporated as more than 'soft law' concepts in Norwegian management legislation. In the Norwegian Marine Resources Act (MRA 2009: §7) the concepts are brought together as a guiding principle for the management regime of ocean resources (in effect 1 January 2009, see MRA 2009: § 7). The same is the case with the Norwegian Nature Diversity Act (NDA), which also covers territorial waters (12 nautical miles) of the ocean area (in effect 1 July 2009, see NDA 2009: § 9). The concept of *ecosystem approach* functions as a guideline for management decisions in natural resource management.

ICES has recognized the concept of *ecosystem approach* (ICES 2002; ICES 2004), and that it can be developed to be part of their advice regarding fishery management and as a basis for the science of marine spatial planning. Unlike the precautionary approach, which is included in their model predictions as a factor, the role of the ecosystem approach has been formulated as something that the organization will introduce stepwise and defined as:

> A holistic management of human activities based on knowledge about the ecosystem functions in order to achieve a sustainable use of goods and services from the system, and maintain their functions.

According to the 1995 FAO Code of Conduct for Responsible Fisheries, the precautionary approach should be applied in situations where

> the absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to conserve target spe-

cies, associated or dependent species and non-target species and their environment (cf. Section 6.5 in the FAO Code of Conduct for Responsible Fisheries 1995).

Viewed in this manner the precautionary approach becomes an important part of an ecosystem approach ensuring a mechanism for handling uncertainty. Currently ICES is working on developing a framework for Maximum Sustainable Yield (MSY) to be implemented in quota advice, which will replace the precautionary approach by 2015. It is argued that MSY is consistent with a precautionary approach, but that MSY will lead to better results in stock management than the latter alone (ICES 2010: 8).

The Ocean Resource and Environmental Cooperation

In the dawn before the establishment of exclusive economic zones or economic zones (1976–1977), quota allocations and fishery protection zones (1958–1978), the basis of a marine scientific cooperation between Norway and the Union of Soviet Socialist Republics (USSR) arose during the 1950s. The cooperation was introduced in the aftermath of a controversy regarding the reason for the fluctuating fish stocks of the Barents Sea, and especially the fluctuating stocks of North-East Arctic cod (*Gadhus morhua*) (see Fig. 3) and Norwegian spring spawning herring (*Clupea harengus*) (Røttingen *et al*. 2007). In 1957 official cooperation on marine scientific exploration of the sea was introduced in spite of both nations already being members of the International Council for the Exploration of the Sea (ICES), but the organization was not at that time involved in direct management issues and therefore there was a need for closer cooperation. In 1960 treaties between Norway and the USSR were signed on fishery zones along the two nations' coasts that neither of the parties was allowed to enter, but later a new treaty was negotiated and signed on 15 March 1962 concerning the right for USSR vessels to fish in the six to twelve mile limit off the Norwegian coast in exchange for Norwegian vessels to fish in the territory of the USSR (Moon 1964). The will to create treaties and negotiations on the issue of fishery illustrates the importance of the biological resources of the Barents Sea.

Further in 1974 Norway and the USSR agreed on establishing a Joint Norwegian-Russian Fishery Commission. The formal cooperation was established as a supplement to the international management efforts taking place at that time within the North East Atlantic Fisheries Commission (NEAFC) (Hønneland 2007a: 8) and the commission has held yearly meet-

ings since 1976. North-East Arctic cod, haddock (*Melanogrammus aeglefinus*), capelin (*Mallotus villosus*) and red king crab (*Paralithodes camtschaticus*) (until the year 2008) stock of the Barents Sea have been managed in cooperation (Fig. 4). The parties have agreed on a division rule 50:50 for cod and haddock, the capelin divided according to a rule of 60:40 in favour of Norway (Hønneland 1998) and 50:50 for the red king crab in the years 1994–2001 (limited research harvest). In the 29th session the parties agreed on commercial harvesting of the red king crab from the autumn of 2002 (St. meld. nr. 40 2006–2007: 15).

The total allowable catch (TAC) has since 1959 been set by ICES for the Northern Waters (Eikeland & Riabova 2002). Norway and the Russian Federation are not bound to follow the advice and they can decide otherwise in their negotiations. ICES introduced the precautionary approach in their advice from 1999, and this also represented a regime change for the Joint Norwegian-Russian Fishery Commission (Protocol of the 27th session 1998: section 5.1).

I will discuss two examples of the specific co-management of species in the Joint Norwegian-Russian Fishery Commission with importance for an ecosystem approach and the use of the precautionary approach.

1. The case of the cod fisheries

Disagreement has especially centred on the most important commercial fish stock of the Barents Sea: North-East Arctic cod (Hønneland 2007b). In general the cooperation between the Russian Federation and Norway has been a success story (see Fig. 3), but during the 1990s there was disagreement about discrepancies between scientific recommendations and established quotas (Hønneland 2007b). A relatively stable level has existed for the TAC for the North-East Arctic cod seen as an average, but there have been variations in the TAC from 160,000 tons in 1990 to 850,000 tons in 1997 (Eikeland & Riabova 2002) for North-East Arctic cod, and since the 1960s Norway has also claimed that the Russians have been overfishing in the Barents Sea (see Table 3). These claims have been documented through a series of reports (Fig. 3 and Table 3) from the Norwegian Directorate of Fisheries (Status reports for 2002–2008).

Table 3 gives an overview of the estimates covering the years 2002 to 2008 on the estimated rate of overfishing according to the agreed quotas between Norway and Russia. For the year 2004 the Directorate of Fisheries calculated overfishing of cod to be in the range 80,000 tons to 107,000 tons (Status report for 2004: 10). This trend showed a small decrease from the estimated overfishing in 2003. Further in 2005 the estimations showed a new breach of agreed quota for cod in the order of 101,300 tons (Status

Year	Agreed TAC	Russian Quota	Norwegian Quota	Approximation	Overfishing – NOR	Overfishing – RUS	"Overbooking"
2002	395000	183550	155550	70000 - 100000 (68%)	90000	21716	
2003	395000	183550	155550	60000 - 115000 (51%)	115000	27748	
2004	486000	212600	204600	80000 - 107000 (46%)	117000	30000	
2005	485000	213700	204700	101000 (69%)	166000	41000	
2006	471000	207700	198700	117000 (62%)	127000	28000	
2007	367000	187500	179500	40000 (75%)	41087	8757	13000
2008	408000	179650	170650	15000 (84%)	15000	0	7000
2009	507000	222100	213100	0	0	0	0

Table 3. Estimates on overfishing 2002–2009 of North-East Arctic cod in the Barents Sea. The column "Approximation" gives the yearly estimates presented by the Norwegian Directorate of Fisheries on Russian overfishing. The Russian Federation and Norway have presented different estimates for ICES on Russian overfishing in the Barents Sea. Overfishing has been a high priority issue in the Joint Norwegian–Russian Fishery Commission in the last few years. Both parties agree that bilateral cooperation and the NEAFC agreement on port state control 2007 have been successful in reducing the problem of overfishing in the Barents Sea (estimates by Norway and the Russian Federation given as "Overfishing–NOR" and "Overfishing–RUS"). The column "Overbooking" represents Norwegian overfishing of cod in the Barents Sea for the years 2007 and 2008. The "overbooking" situation was due to how quota allocation was practised, and the incident of 2007 and 2008 was openly communicated to the Joint Norwegian–Russian Fishery Commission. In 2009 no overfishing was detected. Data sources: Reports from the Norwegian Directorate of Fisheries 2002–2008 (Status for 2002 [2003]–2008 [2009]; Protocol of the 37th session (2008); Protocol of the 38th session (2009) of the Joint Russian-Norwegian Fisheries Commission; ICES (2008).

report for 2005: 13), and the year 2006 an overfished weight of 77,300 tons of cod (Status report for 2006: 8). The numbers show a further decrease towards 2008, which has been attributed to the success of the port control and cooperation between authorities in the Russian Federation and Norway.

The cod quota is shared 50:50 between the Russian Federation and Norway after about 15 per cent is given away to third countries. The third countries are EU countries, Iceland and the Faroese Islands (Hoel 2005: 38).

A new management rule for the North-East Arctic cod was applied at the 32nd and 33rd meetings of the Joint Norwegian-Russian Fishery Commission. This new harvesting rule is based on the precautionary approach with a forecast for three years for the cod stock and the variation should not be more than +/– 10 per cent from year to year (Protocol of the 32nd session 2003; Protocol of the 33rd session 2004). This rule is also known as the management plan for North-East Arctic cod. A similar harvesting regime based on the precautionary approach was also applied to the other stocks under the commission. However, at the 37th session in 2008 the commission did not apply the precautionary harvest rule because the North-East Arctic cod stock was estimated to be in quite a good shape, but it was underlined that the precautionary harvest rule would be considered when setting TACs in the future (Protocol of the 37th Session 2008: 3). The TAC was set at a total of 525,000 tons for North-East Arctic cod in 2009.

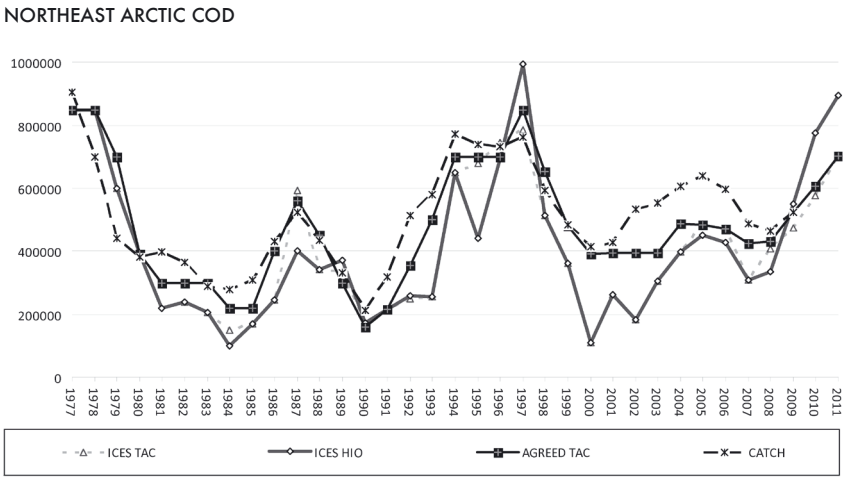

Fig. 3. Statistics for the catch of North-East Arctic cod in the Barents Sea 1977–2011 (Y-axis: tonnes; X-axis: years). The International Council for the Exploration of the Sea (ICES) was established in Copenhagen in 1902 and is an international organisation for scientific investigations of the marine ecosystem. The first meetings that led to the formation of ICES was held in Stockholm (1899) and Christiania (1901) respectively. The figure includes both recommendations (ICES TAC), highest catch option that gives an increase in spawning stock biomass (ICES HIO), agreed quotas between Norway and the Russian Federation in the Joint Norwegian–Russian Fisheries Commission (AGREED TAC) and actual catch in total (CATCH). The ICES TAC is a primary recommendation given as best scientific advice to the Joint Norwegian–Russian Fishery Commission. The advice is not legally binding. Data sources: Hønneland 2007a and reports from ICES regarding stock advice for the North-East Arctic cod (ICES 1976–2010).

2. The case of red king crab

The Barents Sea has been exposed to two invasive crab species; the best known of them is the Kamchatka king crab also known as red king crab (*Paralithoides camtschaticus*), that was intentionally introduced to the ecosystem by Russian scientists between 1961 and 1969 (Orlov & Ivanov 1978). The other species is the snowcrab (*Chionoecetes opilio*), which is assumed to have been introduced by release of ballast water from a ship/ships, but other explanations are possible. In research performed by PINRO the species' core area has been located to the Goose Bank, and in a conference paper for ICES S. A. Kuzmin (2000: 6) stated that the species is able to form a significant commercial stock and that it does not represent a threat with regard to competition for resources with the red king crab.

Norway and Russia have since 1994 managed the king crab population together through the Joint Fisheries Commission. At the meeting of the Joint Norwegian-Russian Fisheries Commission in 2007 the parties agreed not to manage the stock of red king crab (*Paralithodes camtschaticus)* in cooperation (see Fig. 4), but instead have separate management regimes for the species (Protocol of the 36th session 2007, Section 9: 6–7).

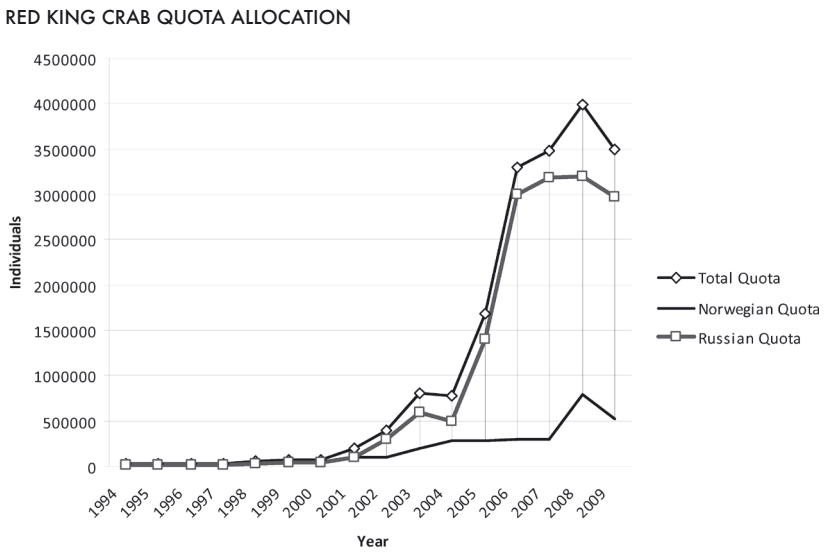

Fig. 4. Statistics for the total amount of allowable catch for the red king crab stock in the Barents Sea 1994–2009. Data Source: Ministry of Fisheries and Coastal Affairs and Protocols from the Joint Norwegian-Russian Fisheries Commission 1994–2009.

A hypothesis that has also been introduced about the possible harm that the species could cause to the endemic species, is that it could possibly be linked to the transfer of *Trypanosoma murmanensis*, which is a protozoan that act as a blood parasite in fish (Hemmingsen *et al*. 2005). The parasite *T. murmanensis* is transferred to marine fish by the leech *Johanssonia arctica*. A favourite substrate where the leech puts its eggs is the carapace of the king crab. Measurements of the Varangerfjord-area by Hemmingsen *et al*. (2005) suggest a link between high rates of *T. murmanensis* in the blood of marine fish and the presence of king crab. Another fear is how the crab might possibly affect the ecosystem in other manners, such as predation and competition with endemic species (Oug *et al.* 2010).

The red king crab is a challenge to a management regime based on the ecosystem approach. What policies to implement against invasive species? Here the contradictory response has been to manage the red king crab as a commercial stock instead of as an invasive species through the Joint Norwegian-Russian Fishery Commission. In the Norwegian management regime the red king crab is treated as an invasive species west of 26° E (free catch area) and as a commercial species east of 26° E (quota regulated). In February 2009 the Norwegian Ministry of Fisheries and Coastal Affairs (MFCA 2009a) reported that it feared a negative influence of the free catch area on the quota regulated area, and decided to reduce the TAC by 200,000

individuals. In contrast, in October 2009 the ministry (MFCA 2009b) gave 5 million NOK to rent vessels in order to conduct increased fishing for red king crab west of 26° E and deplete the presence further here as part of the five-year management plan for red king crab (St. meld. nr. 40 2006–2007).

The Specific Fishery Management Regimes of Norway and the Russian Federation

I will here focus on the current status of the Norwegian and Russian fishery regime established for the Barents Sea at the national level pertaining to the fishery legislation. Understanding of the current established regimes is important in order to assess the possibility of cooperative management of the Barents Sea implementing the principle of ecosystem-based management. The Russian part of the Barents Sea is a part of the Northern Fishery Basin, which constitutes the second most important fishery region in Russia (Hønneland 2004: 4). The fishery regions in Russia are connected to certain administrative regions and not to specific sea areas, for example the Northern Fishery Basin consists of the federal subjects of Murmansk, Arkhangelsk Oblasts, the Republic of Karelia and the Nenets autonomous okrug (Hønneland 2004: 4). Characteristic of the development in the post-Soviet area are rapid changes in the structure of the fisheries management and the power struggle for control between the regional and federal level.

An observation of the Russian legal system is that many of the resolutions, decisions and decrees issued are not enforced at all. This makes Hønneland (2005a) conclude and characterize the legislative work done as "inertia at the higher levels of the governing hierarchy and a flood of legal documents at its lower levels."

Today the fisheries are under control of the State Committee for Fisheries, despite the power conflict between the regional and federal level for control of the fisheries industry (Hønneland 2005b: 60). The State Committee for Fisheries also has the administrative responsibility for research and regulation. The Federal Border Service, which is now a unit of the Federal Security Bureau, is responsible for border control and enforcement.

The preparatory work on the Russian fisheries law was started early in the 1990s by the Federal Parliament and after several rejections the State Duma approved the law on 19 July 2000 (Hønneland 2005a). After this there followed several rejections in the further document treatment of the law; it was first rejected by the Federal Council because of a dispute among regional leaders, and later on it was rejected by the President of the Russian Federation, and finally there was a new rejection by the State Duma of the revised draft in 2001 (Hønneland 2005a). The main disagreement con-

cerned the distribution of power between the regional and federal level in the management of biological resources, and another characteristic is continuous reorganizations of the bureaucracy regarding fisheries management (Hønneland & Jørgensen 2006: 96). Finally a law on fisheries and conservation of aquatic biological resources was adopted on 20 December 2004 (cf. Federal Law No. 166-FZ). In the above-mentioned Fishery Act from 2004 there are no remnants of concepts like *precautionary approach* or *ecosystem approach*, but instead one finds wordings in article 1 (7) such as preservation of biological resources:

> meaning maintenance of aquatic biological resources or restoration thereof to a level that ensures the maximum sustainable procurement (catch) of aquatic biological resources as well as the biological diversity thereof by means of using scientific data to implement measures for study, preservation, reproduction, rational use of aquatic biological resources and preservation of the habitat thereof (Korolev & Sigurdarson 2005: 17).

The wording can be interpreted as being in consistency with an ecosystem-based management.

In the research literature Geir Hønneland (2004: 5) has investigated the following question regarding the Russian fisheries: "To what extent Russian fisheries management practice since the early 1990s qualifies as precautionary." He concludes that there are few traces of the precautionary approach in Russian national legislation and that the concept is absent from Russian legislation at the federal and regional level, but that Russia has agreed to the concept by being part of international agreements and international cooperation forums that emphasize this approach (Hønneland 2004: 167–168).

Discussion

What needs to be done in order to implement an ecosystem approach in the Barents Sea? I set out to discuss the possibility to implement the ecosystem approach as a regime of management for the fisheries in the Barents Sea on the basis of bilateral cooperation.

Even if Article 15 (4) in the constitution of the Russian Federation opens up for a direct incorporation of the foundations of the Convention on Biological Diversity in Russian law, the treaty's goals are not currently prioritized by the Government of the Russian Federation (Jørgensen & Hønneland 2006). On the other hand, the Russians actively discuss the policies on both the ecosystem approach and the precautionary approach through the meetings in the Joint Norwegian-Russian Fishery Commission

and the Joint Russian-Norwegian Commission on Co-operation in the Field of Environmental Protection.

Even if the precautionary approach and the ecosystem approach are not actively used explicitly in the Federal law on fishing and preservation of aquatic biological resources, the law explicitly mentions that it is going to base the management regime on scientific advice (cf. Article 2). In Article 4 of the Federal law on fishing and preservation of aquatic biological resources there is also an opening for international law to prevail above the federal law:

> If international treaties of the Russian Federation on fishing and preservation of aquatic biological resources have established rules that differ from the ones available in the legislation on aquatic biological resources the rules of these international treaties shall prevail.

The wording of the new law from 2004 is open and for the regime based on bilateral cooperation in the Barents Sea this indirectly opens for a regime that can develop on the basis of a precautionary approach and ecosystem approach, but it is a basis that is possible to change as long as the principle is not directly codified in law.

The example of cod being harvested several hundred tons over the TAC in the period 2002–2006 undermines the use of all biological predictive models and efforts by the authorities to create a sustainable harvest regime. Important in this context is the NEAFC agreement of 1 May 2007 on harbour control of fish landings. This regime is expected to keep a better control of fish landings and control the levels of fish being harvested. Statistics presented at the 37th session of the Joint Norwegian-Russian Fishery Commission indicated a further reduction in illegal overfishing in 2007 (Protocol of the 37th session 2008: see section 5.1). The two last years have also shown a further reduction in overfishing (Table 3). According to a report from V. K. Zilanov (2005), a long time member of the Joint Norwegian-Russian Fishery Commission, the solution should be to:

> 1. establish a joint Russian-Norwegian fisheries monitoring and control centre for the whole Barents Sea and give this centre necessary authorities to carry out joint Russian-Norwegian control over fishing activities at sea and in ports as well as the rights to close and open areas and stop fishing when the TAC level is reached; 2. harmonise legislation of both countries in the field of fisheries management, control and enforcement in the Barents Sea.

Even if the Norwegian government has put emphasis on the Barents Sea, the Russian Federation has management responsibility for several great sea areas. According to an interview (Seljeseth 2008) with Minister of Fisheries Andrey Krainiy, a prioritized area for the Russian Federation is the Far East Fisheries and the Caspian Sea:

> Det ville jo være trist hvis vi skal bli husket som den generasjonen som utryddet støren. I Iran har de dødsstraff ved henging for ulovlig størfiske. Jeg sier ikke at vi skal innføre det samme her, men jeg ser at det virker.
>
> ['It will be sad if we are remembered as the generation that eradicated the sturgeon [Huso huso]. In Iran they have the death penalty by hanging for illegal sturgeon fishing. I don't say that we will introduce such measures, but I see that this actually works.']

It is the unregulated fisheries in the Far East Fisheries and the Caspian Sea that will be prioritized. In the same interview, published in *Nordlys* on 25 January 2008, Krainiy states that the major dispute in the Barents Sea is the fisheries protection zone around Svalbard: "Det at Norge valgte å utvide sonen rundt Svalbard fra 3 til 200 nautiske mil er noe vi aldri har godtatt og ikke vil godta" ['We have never accepted and will never accept that Norway chose to extend the zone around Svalbard from 3 to 200 nautical miles'] (Seljeseth 2008). During the spring of 2008 it was expected that the Russian Federation would issue 27 new regulations in the field pertaining to fisheries in a major clean-up of the Russian fisheries. Among regulations that have been introduced is that all fish caught in the Russian economic zone should be delivered to Russian ports (cf. Federal Law No. 333-FZ). An important step forward is the agreement on a borderline between the Russian Federation and Norway in the Barents Sea and in the Polar Sea announced on 27 April 2010. The agreement was signed in Murmansk on 15 September 2010, but is still awaiting a formal ratification by the Russian Duma and the Norwegian Storting before it can be concluded that 40 years of negotiations have ended. Article 4 (3) in the new treaty states that Norway and the Russian Federation shall to a wide extent apply the precautionary approach in questions of common fishery resources (TNR 2010). In article 4 (2) close cooperation in issues of shared fishery resources is emphasised.

The Norwegian Government states in its strategy document for the northern area: "The Government emphasizes that Norwegian policy towards Russia should be pragmatic, based on interests and a focus on cooperation" (Regjeringens nordområdestrategi 2006: 9). The strongest link at the moment to a possible ecosystem approach to the Barents Sea fisheries is

present in the scientific cooperation and the bilateral cooperation between Norway and the Russian Federation. Since 2005 a more formal focus has been emphasised on the ocean environment through the ocean environment group as a subgroup under the commission. As noted by researchers at the Fridtjof Nansen Institute, this has given the commission a more specific and detailed working area than the more widespread agenda that existed previously (Rowe *et al.* 2007: 14). At the Joint Russian-Norwegian Commission on Co-operation in the field of Environmental Protection meeting in Molde, 20 November 2007, the parties agreed on making a joint report on the environmental status and biological resources of the Barents Sea (Protocol from the 13th meeting 2007, HAV-1: 1). The two bilateral commissions have been in support of making a joint ecosystem assessment for the whole Barents Sea (Quillfeldt (ed.) 2008: 91). The proposed data collection will be one step further in support of introducing an ecosystem approach to the whole Barents Sea region. In 2009 a historical joint Norwegian Russian report (Stiansen *et al.* (eds.) 2009) was published on the state of the Barents Sea ecosystem. In the press release from the Norwegian Ministry of Environment it was claimed that this was viewed by Russian authorities to be a first step towards a management plan for the Russian part of the Barents Sea.

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Reviews/Comptes rendus/Besprechungen

Hanna Eglinger & Annegret Heitmann, *Landnahme. Anfangserzählungen in der skandinavischen Literatur um 1900*, München: Wilhelm Fink Verlag 2010, ISBN: 9783770549740, 193 S.

> Sind Landnahmen Anfänge? Und dienen Rückbezüge auf frühere Landnahmen der Legitimation von Neugründungen? Kann man um 1900 noch 'Land nehmen'? Mit diesen Fragen werden verschiedene um 1900 publizierte literarische Texte Skandinaviens beleuchtet, die Besiedlungs- und Kolonisierungserzählungen zum Inhalt haben.

So wird das behandelte Thema auf dem rückseitigen Buchdeckel vorgestellt. In einer allgemeinen Einleitung definieren die Autorinnen Hanna Eglinger und Annegret Heitmann das Thema ihres Buches und stellen die Landnahme um 1900 in den historischen Kontext Skandinaviens. Es folgen vier Kapitel, in denen Heitmann Siedlererzählungen von Auswanderern in Bezug auf die Landnahme in neuen Welten und die Landnahme als Verlusterzählung am Beispiel von Karen Blixens Afrika-Buch *Out of Africa* darstellt, während Eglinger einerseits die widerspenstigen Wege von Knut Hamsuns *Markens Grøde* zwischen Mythos und Modernität und andererseits die Landnahme am Pol anhand von Polarliteratur als Phantasmen der Unberührtheit analysiert. Diese Untersuchungen werden in zwei Teilen unter den Überschriften "Siedlung und Gründung" und "Entdeckung und Vergeblichkeit" angeordnet.

Gemäß Buchdeckel betrachten die Autorinnen,

> wie sich Landnahmeakte als räumliche Figurationen des Neuen im Zeichen einer modernen Ursprungsfaszination niederschlagen. Dabei wird die These verfolgt, dass die Ambivalenz der Landnahme in der Überlagerung von Erstmaligkeit und Wiederholung, von imperialistischem Anspruch und postkolonialen Gegendiskursen auch der narrativen Konstruktion der Texte eingeschrieben ist und damit zu einer postmodernen Problematisierung von Linearität und Eindeutigkeit beiträgt.

Diese Sätze spiegeln den verwendeten akademischen Fachjargon des Buches wider. Wer als Polarforscher oder Polarhistoriker den Umgang mit dieser Art wissenschaftlicher Begrifflichkeit nicht gewohnt ist, mich eingeschlossen, tut sich mit solchen Texten einigermaßen schwer. Es wäre schön gewesen, wenn die von der Deutschen Forschungsgemeinschaft geförderte Forschergruppe "Anfänge (in) der Moderne" an der Ludwigs-Maximiliams-Universität München die Ergebnisse ihrer Forschertreffen in Hamburg, Tromsø, Umeå und Venedig inhaltlich etwas zugänglicher publiziert hätte. Das wäre der heutzutage geforderten Öffentlichkeitswirksamkeit mehr entgegengekommen.

Zunächst aber zu den Siedlererzählungen. Sie beschreiben nicht nur die Besiedelung neuen Landes durch Einwanderer, sondern auch die Besiedelung des ei-

genen Landes in sehr abgelegenen Regionen, sozusagen die interne Kolonisierung wie in Schweden oder wie sie sich in Selma Lagerlöfs Geschichte von *der wunderbaren Reise des kleinen Nils Holgersson mit den Wildgänsen* widerspiegelt. Schon damals standen sich Agrarexperiment, Forschung, Romantik und Tourismus einander gegenüber. Typische Merkmale der Nybygger-Romane, bzw. Siedler-Romane werden an verschiedenen Beispielen sowohl in der Originalsprache als auch in deutscher Übersetzung aufgezeigt. Die Beschreibung der Vorgeschichte, des Weges, des Panoramas, des Plots, des Hüttenbaus und schließlich der Landnahme und der damit im Zusammenhang stehenden Gesetzgebung wird hauptsächlich für die Auswanderung nach Nordamerika aufgezeigt. Dabei werden auch Bemerkungen aus den Romanen über die Ureinwohner und die sexuellen Begegnungen zwischen Siedlern und indigener Bevölkerung sowie die gemeinsamen Kinder eingeschlossen. Ebenso wird auch das Geschlecht des Landnahme-Aktes selbst diskutiert. Ist es typisch männlich, oder gibt es auch weibliche Aspekte? Der technische Fortschritt gipfelt schließlich im Bau der Eisenbahnlinien und der Telegrafenleitungen. Am Beispiel des Romans *Ross Dane* von Aksel Sandemoses wird ein Gegenentwurf des typischen Siedlerromans erläutert. Das zuvor Dargestellte wird zum Abschluß am Beispiel von Vilhelm Mobergs vorbildhaften Auswanderer-Epen *Invandrarna* und *Utvandrarna* resümiert.

Einzelaspekte wie der Weg als Romananfang, die Landnahme als Neubeginn, verspätete Rituale der Landnahme, Namensgebung sowie die Ambivalenz der Kolonisation werden anhand von Knut Hamsuns *Markens Grøde* verdeutlicht und in den Zusammenhang der postkolonialen Narrativik gestellt, wobei zum Abschluß der Besprechung innerhalb von elf Zeilen gleich dreimal die Adjektivpaare "metaphorisch" und "metonymisch" verwendet werden.

Interessant ist die Untersuchung einiger Berichte und Expeditionsfotos von Nansens, Amundsens und Scotts Polarexpeditionen. Leider ist dieses Kapitel für Nicht-Fachleute an einigen Stellen etwas schwer verständlich, denn der Text ist teilweise sehr theoretisch überlagert. Ausgangspunkt ist Karl Kraus's Frage aus dem Jahr 1909 "Wem gehört der Nordpol?", die fast hundert Jahre später in der modernen Version im Jahr 2007 lautet: "Wem gehört die Arktis?" Zunächst aber beherrschen imperialistische "Phantasmen der Unberührtheit" (p. 113) die polare Landschaft. Als erster skandinavischer Protagonist wird Fridtjof Nansen vorgestellt, der seine Expeditionen zum Nutzen von Wissenschaft und Fortschritt in den Dienst nationaler Interessen stellte. Roald Amundsen wird unterlegt, daß er seine Polarexpeditionen mit dem Ziel unternahm, um "neues Land in Besitz [zu] nehmen" (p. 115), wie es der Amundsen-Biograph Tor Bomann-Larsen aufgrund Amundsens Brief an das norwegische Innenministerium nahelegt, in dem er 1894 nach den Besitzverhältnis von Spitzbergen fragt. In seinen späteren Expeditionsberichten und auch in seiner Autobiographie erwähnt Amundsen dieses vorgebliche Ziel nie, selbst als er 1925 eine Flugzeugexpedition von Spitzbergen aus startete. Darüber hinaus hatte Amundsen während seiner ersten Expedition durch die Nordwestpassage (1903–1906) sowie auf seinen nachfolgenden Expeditionen niemals Land für den norwegischen Staat in Besitz genommen, obwohl er auf den von ihm erreichten nördlichsten und südlichsten Punkten den zeitgenössischen Gepflogenheiten folgend die norwegische Flagge gesetzt hatte. Das zog aber keine norwegischen Besitzansprüche geschweige denn Landnahme nach sich. Hier hätte die Autorin besser Amundsens Expeditionsberichte

heranziehen sollen, als sich auf die Interpretation eines Biographen zu beziehen. Unter der Überschrift "Paradoxa der kolonialen Überheblichkeit" erfahren wir etwas über die Überlegenheit der norwegischen Polarforscher am Beispiel von Amundsens Verhältnis gegenüber den britischen Vorgängern. Dem ist zuzustimmen. Ein anderes Beispiel wäre Amundsens erste Begegnung mit der indigenen Bevölkerung während der Nordwestpassage. Wenn es jedoch um die Absenz von Frauen in den Polargebieten bzw. um den geschlechterspezifischen Raum geht, muß ich widersprechen. Hier wird nur aus westlicher Sicht des Polarfahrers/forschers argumentiert, ohne dabei die indigene Bevölkerung selbst zu beachten, die sehr wohl in Familien oder größeren Gruppen im Hohen Norden heimisch ist. Immer wieder werden Ehepaare oder Familien als Führer für Expeditionen angeworben. Sogar kleine Babys werden mitgenommen, die ja in dieses Umfeld hinein geboren werden. Ohne die Frauen, die für Amundsen Fellkleidung genäht hatten, hätte er keinen so gut angepaßten Schutz gegen die Kälte gehabt. Das beste Beispiel für die Beteiligung von Frauen an europäischen Polarexpeditionen lieferte Knud Rasmussens 5. Thule-Expedition (1921–1924), auf der die alleinstehende Amarulunguaq bei der Durchquerung der Nordwestpassage ein wichtiges und den Männern gleichgestelltes Expeditionsmitglied war. Daneben beschrieb Amundsen während der Nordwestpassage, daß er anläßlich der dritten Überwinterung in der Nähe von Herschel Island auf ein gestrandetes Walfangschiff traf, dessen 2. Steuermann mit seiner Frau und seiner kleinen Tochter, sowie der Harpunier mit seiner Frau ebenfalls den dritten Winter in der Arktis verbrachten. Auch auf Walfangstationen waren Frauen keine Seltenheit, aber auf Polarexpeditionen fand man um 1900 bei der Abfahrt aus der Heimat keine Frauen. Nur von Robert Peary ist bekannt, daß ihn 1893–1894 seine Frau Josephine begleitete, die ihre erste Tochter während der Überwinterung an der Küste der Bowdoin Bay in Grönland auf 77 °N zur Welt brachte. Sowohl Nansen als auch Amundsen verwendeten zum Ausdruck ihrer eigenen Sehnsucht weibliche Attribute zur Beschreibung der Polarnacht. Die Verbindung von Richtung (*Vorwärts*) und Vitalität erscheint tatsächlich eine Parallele von Expeditionsbericht und Lebensgeschichte zu sein, wie es sich sehr schön bei Amundsen selbst nachweisen ließe, aber von Eglinger anhand seines Begleiters Godfred Hansen während der Nordwestpassage aufgezeigt wird. Richtig anschaulich wird das Kapitel durch die Analyse und Gegenüberstellung von Expeditionsfotos der norwegischen und britischen Expedition zum Südpol. Gäbe es keinen Abbildungstext, könnte man die Bilder von Amundsens und Scotts Gruppen am Südpol schwer dem Sieger und dem Besiegten zuordnen. Ein Hinweis auf die Bedeutung der Namensgebung auf solchen Expeditionen wird an dieser Stelle auch gegeben. Der letzte Abschnitt behandelt "die Versuche der Verschriftlichung des erhabenen Gefühls [...], die sich im folgenden Zitat als 'Geburt der Dichtung aus der Frustration am Land' oder auch als pathetische Metaphorik beschreiben lassen" (p. 141). Aha. Die Polargebiete werden zudem als Gedächtnisraum organisiert, was das auch immer sein mag. Es ist schon sehr erstaunlich, wie Nicht-Polarforscher Berichte von Polarexpeditionen deuten. Das Buch von Eglinger und Heitmann fordert direkt dazu auf, einen zweiten, aber diesmal interdisziplinären Workshop von Skandinavisten und Polarhistorikern durchzuführen. Auf die neuen Ergebnisse bin ich schon jetzt gespannt.

Nachdem die Analyse des Buches O*ut of Africa* von Tanja Blixen unter dem

Stichwort "Landnahme als Verlusterzählung" geographisch zu weit vom Thema des *Journal of Northern Studies* entfernt ist, möchte ich nicht weiter auf diesen gut lesbaren Text eingehen.

Mit einem Ausblick auf das Thema Landnahme in der deutschen Literatur des 20. Jahrhunderts und insbesondere auf Ingeborg Bachmanns Gedicht "Landname" endet das Buch.

Wer den elaborierten Texten folgen kann, dem sei das Buch gerne empfohlen. Insbesondere Skandinavisten werden sicherlich ihre Freude an diesem ausgearbeiteten Thema haben.

Cornelia Lüdecke
Bereich Geschichte der Naturwissenschaften
Universität Hamburg
Germany
c.luedecke@lrz.uni-muenchen.de

Tatiana S. Fedorova, Peter Ulf Møller, Viktor G. Sedov & Carol Louise Urness (eds.), *The Journal of Midshipman Chaplin. A Record of Bering's First Kamchatka Expedition*, Århus: Aarhus University Press 2010 (The Beringiana Series 5), ISBN 9788779343146, 320 pp.

This book is the fifth volume in the Beringiana series published by Aarhus University Press under the chief editorship of Peter Ulf Møller. He is Professor Emeritus at the University, affiliated with its Department of East European Studies within the Institute of History and Area Studies. The series is related to Vitus Jonassen Bering, a native of Denmark born in Horsens, where he features in a museum, and a local college plus an Innovation Park now bear his name. Sometimes he is called the *Russian Columbus*. For most people, Bering was, however, for a long time only a name associated with a strait, a sea and an island in the far north of the Pacific. Otherwise, except for a small group of scholars, geographers, specialist historians, librarians and connoisseurs of older Russian literature, culture and tales of exploration, plus a few modern travel buffs, his life and work have been buried in relative obscurity. The Beringiana series is dedicated to correcting this situation, as well as more broadly to promote studies of historical connections between Denmark and Russia, voyages of discovery in the northern Pacific, Russian culture and history, including topics concerning Siberia and Russian America.

Møller is a specialist in Russian language and literature and has written both on the history of Russian culture and literature, and on early travel literature as a lens on the past. Together with his colleague Natasha Okhotina Lind he edited the first volume of the Beringiana series. Its title is *Under Vitus Bering's Command. New Perspectives on the Russian Kamchatka Expeditions* (2002). They also produced *Until Death Do Us Part. The Letters and Travels of Anna and Vitus Bering* (University of Alaska, Fairbanks, 2008). The latter is an edited volume containing sixteen letters between Vitus Bering and his wife Anna, who on the Second

Kamchatka Expedition (1733–1743, also called the Great Northern Expedition) accompanied her husband to Okhotsk over a period of two months in 1739–1740 and corresponded with him when he was in the field. Amazingly, she managed to take a clavichord and two young children with her on the long trip from St. Petersburg—and back again. The letters provide a window on eighteenth-century customs, as well as the explorer's family life and daily routine.

More recently Møller has been assembling a great number of copies of source material from Russian archives, documents that also relate to Vitus Bering. They cover the period from 1730 when he began to plan his second major expedition up to the time of the seafarer's death in 1741. A small number of these documents have been translated into Danish and are being successively posted on a new homepage (see link below, under "Bering på dansk" 2010). The hope is that the history of the colourful son of Denmark will become better known in his homeland.

The life and work of Bering, particularly during his first Kamchatka Expedition, were recorded by his right-hand-man Piotr Chaplin, who kept a logbook that for us today throws new light on the history of early northern and Arctic exploration, mapping and imperial expansion. The editors' annotations and supplementary explanatory chapters, which follow Chaplin's chronicle, nicely contextualize the expedition, its purpose, and subsequent controversies regarding Bering's exploits. The handsome volume that has been put together provides an understanding of past conditions of Siberian overland travel, Kamchatka trekking and northern Pacific seafaring, conditions that differ radically from those in our own day. To highlight the contrast, the next section of the present review will first take up some experiences relating to travel, interest in natural resource exploitation and globalisation today. Thereafter I will delve into the nitty-gritty and significance of Piotr Chaplin's 280-year old logbook as it now lies before us in its entirety in what also is the first-ever complete translation from Russian into another language.

II

In the summer of 2009 a pair of Bremen-based German merchant ships passed from East to West through the Northeast Passage, also called the Northern Sea Route (NSR) with only occasional assistance from Russian nuclear powered icebreakers. Starting from the industrial city of Ulsan, South Korea, and stopping off in Vladivostok, they worked their way up along Kamchatka, passed through the Bering Strait and deposited some engineering equipment at the mouth of the Ob River for further transport by barge to the oil and gas centre of Surgut inland in Siberia. Thereafter they continued to proceed westward to a final destination in Rotterdam. The journey cut off about 3,000 nautical miles and ten days compared to the traditional route from Asia via the Gulf of Aden and the Suez Canal. On the new route the vessels had no pirates to contend with either.

In the summer of 2010 the present-day Norwegian polar explorer and adventurer Børge Ousland and his shipmates, starting from Norway on what they called the Northern Passage 2010 Expedition, sailed a trimaran in the opposite direction from Oslo to Murmansk, through the Kara Sea before they zigzagged between ice floes off the Siberian coastline. Thereafter they passed Wrangel Island, crossed the Chuckchi Sea above the Bering Strait and sailed on to Alaska

to reach Point Barrow before continuing eastward along the Northwest Passage (NWP) through the Canadian archipelago (first navigated by Roald Amundsen 1903–1905). They finally arrived in Oslo four months after their Midsummer Eve departure from that city.

Concerning the critical area north of Siberia, Ousland wrote en route in his blog (which is illustrated with pictures) how it was obvious that the conditions met by the early explorers such as Vitus Bering, Adolf Erik Nordenskiöld and Roald Amundsen no longer exist. Ousland's boat was able in a few weeks to pass through areas at sea where the early explorers were forced to overwinter once or even twice.

Still the conditions are not just free sailing, they can be hazardous, risky and unpredictable. The window of opportunity is only a small one concentrated to a couple of summer months. Following weather forecasts regularly and using the GPS on board to keep track of bearings are invaluable aids; they belong to a new technological dimension that on the human side also make for travel conditions so radically different from those in Vitus Bering's day.

Decline in the Arctic sea ice cover during the northern summer associated with climate change has spurred speculation that in future we will be seeing a lot of traffic through the two fabled northern passages. Entrepreneurs have their eye fixed on potentially easier access to natural gas and oil reserves in the seabed north of the Arctic Circle. Governments of several countries therefore engage geoscientists in research and deep seabed exploration, among others along the Lomonosov Ridge (for critical reflections on this in poetic form written en route on the icebreaker *Oden II*, see Hansson 2009). The point is to shore up their cases for extending national territorial claims in documents already submitted to the New York-based Commission on the Limits of the Continental Shelf under the auspices of the United Nations Law of the Sea Convention.

In its data for 2004, *The Arctic Marine Shipping Assessment (AMSA) Report* for 2009, published by the Protection of the Arctic Marine Environment Working Group (PAME), one of six Arctic Council working groups, shows that about 6,000 vessels were active in the Arctic that year, many of them in connection with oil and gas related activities in the Barents region north of Norway and Russia. Possibly in the light of such facts, in Sweden, Dan Sten Olsson, the owner and corporate head of Stena Line, otherwise known for its container and passenger ferries in several countries, has recently made a spectacular investment of 8 million SEK in a specially equipped vessel for oil drilling at sea in the Arctic, ready for delivery in 2012. "Stena" Olsson says he is certain that when ready it will be leased by customers who are looking for oil (*Göteborgs-Posten* 23 November 2010).

In his book *How the World Will Change with Global Warming* (2006), Trausti Valsson, Professor of Planning at the University of Iceland, predicts that over the next fifty years we may see a gradual five-step scenario of retreating ice that will open the Northeast Passage for regular shipping activity. He expects that this will be followed by a slower but similar development until 2100, when the Northwest Passage will also be clear. In the meantime new settlements will develop in resource-rich regions in Siberia, Alaska and northern Canada, leading to a radical reconfiguration of northern spaces. Ultimately by the year 2100 the Bering Strait might geopolitically attain the importance as a passage that the Strait of Gibraltar had in earlier periods of world history.

The 2007 report of the Intergovernmental Panel on Climate Change (IPCC)

indicates that the Arctic Ocean may be ice free for part of the summer already 2015 and continually ice free by 2040–2050, but that regional variability will still present challenges to Arctic shipping. Canada and Russia take the position that the NWP and NSR, respectively, are internal waters within their respective territories while the United States contests this and claims they are international straits, that is, straits used for international navigation. The legal strength of the opposing positions continues to be a matter of controversy. Some observers believe intensification of oil and gas related activities in the Arctic in the future might aggravate this and other hotspots for conflict (cf. IBRU 2008, updated 2010).

Other analysts are more sober and warn against too much hype. For example, in a recent article in the journal *Foreign Policy* (Sept/Oct 2010) Lawson W. Brigham, Professor of Geography and Arctic Policy at the University of Alaska, Fairbanks, admits that the Arctic is certainly a vast storehouse of natural resources, but the relative reduction of sea ice does not necessarily mean the Arctic will become a shipping superhighway, nor that economic and security interests will inevitably generate conflicts of a kind that cannot be managed within the framework of intergovernmental conventions and fora for dialogue that are already in place as instruments of governance. In support of this view one can cite the recent historic Norwegian-Russian agreement, signed 15 September 2010, on delimitation of the two countries' maritime boundary in the Barents Sea and Arctic Ocean. The agreement marks the end of decades of negotiation.

III

Whatever the long-term future more precisely will bring, changing conditions of travel and increasing focus on the Arctic are here to stay. Public interest in the regions discussed here is already visibly reflected in an increasing frequency of adventure-, culture- and eco-tourism to areas that have become easier to visit since the collapse of the Cold War. An example is Kamchatka, which has become a popular region for visitors looking for something beyond the ordinary (cf. Balfour 2010).

The end of the Cold War has also opened new opportunities for scientific collaboration. A striking example is the large multidisciplinary Swedish-Russian Tundra Ecology-Expedition -94. Some call it the most remarkable Swedish-Russian enterprise since the war of 1808–1809, when the Swedes lost Finland to Russia. Using the Russian ice-going scientific vessel *Akademik Fedorov*, the expedition involved 150 researchers—60 from Russia and 70 from 8 Western nations, visiting 18 different coastal sites ranging along the entire NSR (Grönlund & Melander (eds.) 1995).

With the new political situation various primary archival sources valuable to historians of science and exploration are now accessible to scholars in the West. Joint archaeological and ethnographic projects are also enriching northern studies. The exhumation of Vitus Bering's grave at Commander Bay on Bering Island by a Soviet-Danish team of archaeologists and forensic physicians in 1991 is a telling case in point. As a means of commemorating Bering's death on that island 250 years earlier, the project successfully created a stir in major media that led to many articles in the academic literature, which sparked further interest amongst scholars.

One spectacular facet that stimulated popular imagination was when analysis of skull measurements showed that Bering could not have had such a round face as is depicted in most pictures. So now the puffy-faced portrait most frequently attributed to Bering is believed to be an image of his uncle, the writer Vitus Pedersen Bering. Skeletal analysis suggests that Vitus Bering the seafarer was a man of strong stature and a more angular face—a physical fact perhaps more in keeping with his final Russian Imperial Naval rank and historically constructed image as Captain-Commander (among Russian sailors nicknamed *Ivan Ivanovich*).

All the developments cited above naturally stimulate a keener interest in the history of exploration and mapping as well as trade and adventure during and after the turn of the seventeenth century, when Tsar Peter I actively sought to modernize, expand, globalize and reconfigure Russia. The wealth of Kamchatka's natural resources had just been discovered. The Russian government feared British, Dutch and Spanish influence in the North Pacific and saw a need to devote much greater attention to the north-eastern region of its empire. The motives were strong for mapping the empire's eastern extremities and determine whether or not there was a land connection with North America.

Peter I died in 1725 just before Vitus Bering's famous First Kamchatka Expedition (1725–1730) was beginning to get underway. In commissioning Bering to lead this expedition, the Tsar initiated a process that led to the discovery of Bering Strait and an expansion of Russia to Alaska attended by the advent of a lucrative fur trade subsequently developed after Bering's second expedition to the region. It was during the course of his second expedition, 1733–1743, that Bering made good his earlier failure to spot Alaska. This time he actually sighted it. But, it cost him his life and that of several seamen whose remains archaeologists also uncovered in the cold lonely graves on the barren Bering Island.

The study of this history of territorial mapping with an eye to natural resource exploitation and security almost three centuries ago is not only interesting in its own right. It also provides insight into and cause for reflection on the entirely different conditions of travel and methods of surveying and mapping that existed in those days. The book under review here contains a wealth of information to this end.

IV

In terse taciturn descriptions of events, places and problems, Midshipman Piotr Chaplin's handwritten logbook recorded, day by day, blow by blow, the story of the entire journey from the date of his departure from St. Petersburg on 24 January 1725 until his return to the capital 1 March 1730. At first by sled and later by river barges with portages between numbers of different Siberian rivers, several detachments of men carried vast amounts of equipment to build ships once they arrived in Okhotsk.

A large part of the way the rivers dictated the route, the Ob and the Lena being two of the major highways. At each river Bering's men had to construct new barges and boats to carry men, cattle, large loads of provisions. There were also craftsmen to build and equip the ships to be built in Okhotsk and later on upon reaching the Kamchatka River. More precisely, the list of items and men transported all the way from St. Petersburg included sails, anchors, ropes, clothes, medicines, canons, weapons, instruments, blacksmiths, many carpenters, a stove

setter, a turner and two coopers. All the craftsmen had with them the specific tools of their trade.

As they trekked laboriously across the Urals and then Siberia, Chaplin recorded positions, made sketches for maps and succinctly described the places they passed. Along each stretch he noted the character of the waterways, embankments, mooring places, interaction with local authorities and other personages, conditions of travel, weather conditions, and logistical problems: after St. Petersburg we have Perm, Yekaterinburg, Tyumen, Tobolsk, Khanty-Mansiysk, Surgut, Tomsk, Yeniseysk, Ust-Ilimsk, Ust-Kut, Yakutsk, Ust-Maya and, finally, over the mountains, Okhotsk.

Sometimes along the way local indigenous people were recruited—or even press-ganged—to assist. At the museum in Ust-Kut there is a Bering cabinet with a display including a set of shackles once used on crews of forced labourers, indicating that Bering was not as mild a Commander as he liked to portray himself in his reports.

The first detachment of the expedition arrived in Okhotsk on 1 October 1726. Several more months passed before another group—after getting stuck, snowbound and frozen in—finally caught up. They had been forced to stop and build shelters to overwinter along the way near Yakutsk. As early as possible in 1727, members of the earlier party went back from Okhotsk to help them. The slower contingent had requisitioned 600 horses from locals around Yakutsk and built numerous sleds driven by indigenous people. When they too reached Okhotsk, less than half of their horses were still alive; the ones still living were now slaughtered because there was no hay at the site. On the way to Okhotsk many men had also died, among them a surveyor, carpenters and soldiers, while some of the local people who had been press-ganged had defected and in some cases died.

Okhotsk in the winter of 1726–1727 was a village with only eleven homesteads plus a number of state-owned storehouses. Like many other settlements it was the Cossacks who formed the spearhead of Tsar Peter the Great's empire in those parts, subjugating native populations and taxing them with "tribute" in the form of manpower, furs and other resources.

The expeditioners had to build their own lodgings for the winter. In the spring local timber hauled out of the forests was also used to construct two boats to sail across the Okhotsk Sea for Kamchatka Peninsula. On the peninsula the expedition continued overland to reach the Kamchatka River and followed it out to the Pacific. One more winter was spent and a new vessel built, the *Holy Archangel Gabriel*, for a final leg of sailing in the summer of 1728. This time the route went up along the north-eastern coast of Asia to the point where land turned north-westward at the top of what Captain Cook later called the Bering Strait.

Had Bering continued he could have done the reverse of what a Russian, Semyon Dezhnev, did in the middle of the seventeenth century; Dezhnev had come in the other direction sailing from the Kolyma River on the Arctic Ocean to the Anadyr River on the Pacific, thus proving there was open water. His exploit was reported and archived, but forgotten for almost a hundred years and hence unknown to Bering when he passed the Arctic Circle. Foggy weather moreover meant that Bering also was unaware that the waters now just south of him constituted a strait between the Chukchi Peninsula and North America (Alaska).

The Bering Strait, located just to the south of the Arctic Circle at the north-

ern edges of the Bering Sea, is a somewhat narrow sea passage between the easternmost point of the Asian continent and the westernmost point of the North American continent. This strait separates the United States and Russia by 85 kilometres. In 1898 the eastmost mainland point of Eurasia, 66° 4' North latitude, was named C*ape Dezhnev*.

Being cautious and not wanting to get caught in sea ice Bering turned the expedition around on 16 August 1728 at a point 67°19' north latitude and headed back to Kamchatka. There he and his men spent the winter. Come spring they meandered down the coast of the peninsula to map it before rounding its southern cape, then hugging the western coast to about the same point where they had originally landed. From there they crossed the Okhotsk Sea back to Okhotsk to set off—in the end of July 1729—for the long trek back to St. Petersburg.

Positions, places, events, etc. along the entire route of 10,000 kilometres from St. Petersburg to the turnaround point at sea and then back again largely the same 10,000 kilometres to St. Petersburg are faithfully recorded in Chaplin's daily and sometimes (when at sea) hourly entries in the logbook. Much of the journal records the calculations of longitudes and latitudes that were essential for the mapping done by the expedition.

The details are fascinating but at the same time, if one only reads the logbook, the text is dense. The modern reader requires history and context in order to gain an overview and understand the significance of the various places, events, encounters with "provincial" governors, indigenous peoples, names of various types of craft used for local travel and much more. In copious annotations and supplementary chapters the editors of the published English version of the logbook supply this.

V

The original manuscript on which the book is based exists in the Russian State Naval Academy Archives in St. Petersburg. It is written in small handwritten Cyrillic script that only a trained specialist can manage. The production of the book is the result of several steps in the course of many years of collaboration by members of an interdisciplinary team with scholars located in Denmark, Russia and the USA. The first step was to prepare a typewritten transcript of the original handwritten manuscript. A translation from Russian into English was then made and more linguists were consulted to decide upon interpretation of different expressions and terms before a final version was ready for meticulous editorial work with a useful glossary and explanations in hundreds of footnotes.

Additionally, the four informative chapters written by the editors provide the reader with background information on both the political and scientific context of the First Kamchatka Expedition and biographical details. The latter situate the main personae in the drama, Vitus Bering, Piotr Chaplin and other leading personalities involved in the expedition, as well as the expedition's historical achievements. For example, as a result of the expedition the map of Russia was corrected, immensely improved and detailed. The country's far eastern coast was moved 30° longitude further east than geographers had traditionally assumed before that time. We also learn how Bering's declaration that there is a northeast passage making it possible to proceed by water from the mouth of the Lena River to Kamchatka was not based on his own observations, but rather deduced on

the basis of interviews with indigenous people (the Chukchi) he encountered, a proud freedom-loving people the Russian government found impossible to subjugate to press tribute from them, as was done in the case of less fortunate native populations. Their language by the way belongs to the ancient paleo-Siberian linguistic group.

Previously only extracts from Chaplin's journal have been published. The maps he drew nevertheless had a considerable influence on cartographers in European centres. However, comparison between the incomplete account found in these extracts and parallel accounts based on Bering's own bureaucratic reports to imperial authorities and talks with scientists, as well as comparison with the logbook of another leading member of the expedition, Lieutenant Aleksei Chirikov, reveal different interpretations of some key events and other aspects.

In particular there was criticism of Bering for being overcautious and not having pressed on and completed the task Tsar Peter I had given him. Contemporary accusations of shortcomings and errors led historians to join opposite camps in a controversy around conflicting interpretations of the original purpose of the expedition, its significance and final results. The present volume is unique in that for the first time it makes available Chaplin's entire journal to give a fuller picture. The further significance of this publication, as already noted, lies in the editors' annotations and supplementary chapters. These add a more authoritative interpretation than almost all earlier accounts. Particularly valuable to the reader is the inclusion of an interesting review of the history of controversy surrounding Bering's mandate and accomplishments. That analysis takes up historiographical problems, and indicates also how—as time goes on—images of past exploits and explorers continue to be influenced by the geopolitical context together with changing political conjunctures and cultural forces in different countries.

Tatiana Fedorova (St. Petersburg) has provided an explanatory chapter that outlines the course of the expedition and its historical context. Carroll L. Urness (Minnesota) has written a useful chapter on the Russian Navy and mapping, and together with Gary Davis (Minnesota) she has written a chapter on relevant knowledge relating to navigation and surveying at the time of the expedition. Her earlier book reoriented scholarly interpretation of Bering's own understanding of the *purpose* of his first expedition in a direction away from a previous very critical assessment that may be found in the literature (Urness 1987). Peter Ulf Møller, who for a long time has studied the life and work of Vitus Bering, is responsible for the chapter that further reviews the reception history relating to the various reports and maps emanating from the First Kamchatka Expedition and the controversies that emerged regarding the "real purpose" of the task Peter I had given Bering and the latter's possible misinterpretation of the same.

At issue in these chapters as well as in the Editor's Introduction is the long history of the reception and dissemination of various reports and maps of the expedition as influenced first by members of the St. Petersburg Academy of Science and later by other specialists and writers who, in turn, were influenced by contemporary discourses in their own day. For example at various conjunctures in history it became customary to downplay Bering's achievements because he was not a home-grown Russian but a foreigner. Then one would emphasize instead the role of his Russian lieutenant, Aleksei Chirikov, the main contender for fame, who apparently had a different, perhaps more enterprising, concept of the expedition's

mandate since he was upset by Bering's refusal to sail beyond 67° 19' N.

After the Second World War when Zhdanov launched his anti-cosmopolitan campaign in the Soviet Union, the politically correct (Stalinist) position was to strongly endorse the xenophobic position. Interesting too is how the image of Bering in Denmark has mostly been positive and even celebratory (an example is Jacobsen 1992). On the other hand his image in Russia has sometimes been very negative. In both cases some narratives traded on speculative claims and stereotypes. However, recent scholarship both in Denmark and Russia is now informed by a broader range of documents while discarding the old ideological "nationalist" lenses. This has led to a more nuanced assessment, with Fedorova having taken the lead in Russia and Møller in Denmark.

VI

At a young age Vitus Jonassen Bering left Denmark to join the Russian Navy as a ranking officer. This was at a time when Tsar Peter the Great, a forward-thinking westward looking monarch, was in the process of building up a naval force to successfully challenge Swedish great power supremacy and established St. Petersburg as a fortified city on the eastern end of the Baltic Sea. In rapid succession were created the institutions and industrial capacities without which the enormous campaign Piotr Chaplin was involved in would not have been possible. This is important to remember when reflecting on this early exploit. Then as now geopolitical context and interest, economic ambitions, the lure of rich natural resources and trade, networks of organization and regional communication, some local infrastructures, logistics and technology were all important factors.

The Tsar had instituted the Imperial Russian Navy in 1696 as part of his strategy to consolidate control over his empire. The Northern War 1700–1721 in which Bering participated dislodged Sweden from its grip on the region. St. Petersburg was founded in 1703 and made the Russian capital in 1713. The Naval Academy was founded in 1715, a printing house and an engineering school followed in 1719, as did the St. Petersburg Museum with collections of minerals, scientific instruments, geographical maps and valuable books. The St. Petersburg Academy of Science, patterned on the Académie des Sciences in Paris, was created in 1725. It was formed around a nucleus of eighteen members, natural philosophers, astronomers, mathematicians, geographers and other scholars, all from foreign countries. By the end of the 1720s St. Petersburg was the centre for almost all Russian foreign maritime trade, as well as domestic shipbuilding, manufacturing of weapons and munitions, brick making, crafts industries, foundries and mechanical workshops.

As in other countries bent on modernizing, the mapping of sovereign territory and natural resources was a central task. In this case it involved covering vast expanses of unexplored lands and coastal regions in the Russian Far East. The newly established navy, overseen by the Naval Academy with its incorporation of foreign expertise, was the driving force. Some members of the science academy also played an important role, even more for the Second Kamchatka Expedition wherein some of them participated personally.

Expeditions were meant to test the possibility of a north-eastern Arctic marine passage above Siberia and from there via a possible outlet over to the largely unexplored coastal regions of the Northern Pacific Ocean. And then there was

the puzzle whether there really existed a waterway separating Russia and America in the far north or if the two were joined by land. Further there was the task of charting islands and coastal lines along the islands and seas of the North Pacific. A tangible result of the Second Kamchatka Expedition was the emergence of "Russian Alaska"—in this connection Chirikov was a primary figure.

The volume, *The Journal of Midshipman Chaplin*, with its translation of the historic logbook together with the editors' contributions, throws new light on the First Kamchatka Expedition. It is the result of the latest state-of-the-art scholarship on the subject. The book is handsomely illustrated with copies of several pages of the original handwritten logbook interleaved among the pages of the English text, which exactly follows the structure of the original manuscript. Other pages display copies of many original maps based on observations made during the expedition.

Further, it is illustrated with drawings and images of ethnographic importance since they provide information about the dress, customs and culture of various groups of indigenous peoples. These old maps are complemented with modern maps divided into several sections on which one can easily follow the route of the expedition from St. Petersburg to the point of return above the Chuckchi Peninsula and back again to St. Petersburg along a line that the editors have pedagogically plotted with dates and the names of pertinent places to provide an overview. Thereby the reader is helped to better understand the story line of the logbook, as well as the original maps, and of course the information packed into the book's extensive notes and the supplementary explanatory chapters.

VII

Summing up

Midshipman Piotr Chaplin's journal is very topical. Reading his report today is relevant if one wants to understand the vast difference between travel conditions then and now.

The editors have added their knowledge of the history of exploration in the Russian Far Northeast, the geopolitical context of expeditions, techniques of surveying and map making in the past, and much more.

Then there is the implicit challenge to the reader's hermeneutic sensibilities: to induce greater reflexivity in a time when everything seems to be moving and changing so fast. Despite its non-moralizing style Piotr Chaplin's narrative reminds us of the human-made historical preconditions (think of the sweat and blood expended in slowly trekking with heavy burdens across a roadless Siberia and serendipitously sailing hazardous uncharted waters) that helped shape the process now glibly depicted as if it were a self-perpetuating trend, "globalisation."

The book's bibliography is an excellent entry for anyone who wants to dig deeper and compare various assessments of Bering's Kamchatka expeditions and other reference works relating to discoveries in the early eighteenth century.

Last but not least the publication of the volume at hand is an important event because it illustrates how scholars in the humanities are contributing to deepening our knowledge of the past, which in turn is an important precondition for understanding the present and the call to the Arctic.

For an overview of topical themes plus the question of archival sources that still occupy leading scholars in the specialized field, the very first volume in the

Beringiana series (Møller & Okhotina Lind 2002), is still a good staring point. That volume is an anthology emerging from the international workshop held at Copenhagen University in December 1998.

The following themes are covered there: debate on the "real purpose" of Bering's first voyage; organization of source materials scattered over many archives and the need for translations; the images of Vitus Bering in Russian and Danish historiography; the history of the organization of various administrative arms of the hierarchical Tsarist state and their multiple roles and that of leading personalities within them in orchestrating expeditions, science and exploration; likewise the roles of the professors affiliated with the Academy of Sciences, especially in Bering's second expedition; relevant work in archaeology; the Second Kamchatka Expedition's contribution to the development of ethnography as a separate science; and the study of the Kamchatka Expeditions in the Soviet Union when the recreation of the past was most directly affected by events in the present such as periodic shifts in reigning ideology and politics.

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Aant Elzinga
Department of Philosophy, Linguistics and Theory of Science
Gothenburg University
Sweden
aant.elzinga@theorysc.gu.se

Kåre Hoel, *Bustadnavn i Østfold 9. Varteig*, Utgitt av Institutt for lingvistiske og nordiske studier, Universitetet i Oslo, ved Tom Schmidt, Oslo: Novus Forlag 2010, ISBN 9788270995721, 202 pp. + 1 facsimile and 1 map on endpaper + 1 loose map.

Bustadnavn i Østfold (BØ) is a revised and strongly widened version of Oluf Rygh's Norske Gaardnavne (NG). The ninth volume of BØ, which deals with the names in Varteig, has recently been published. In Kåre Hoel's (and the publishers') edition many more names are included than those accounted for in NG. In addition, the treatment of the individual names is more detailed in BØ than in NG.

When Kåre Hoel died in 1989, he left a very voluminous manuscript, comprising no fewer than 7,789 A5 pages, which it was decided to publish. Since 1994 nine volumes have been published on the basis of this manuscript, where volumes 1, 3, 5, 7 and 9 have been published by Tom Schmidt and the others by Margit Harsson. These two publishers have added many comments of their own in the volumes. Each name article is arranged so that, when the entry with the land number and possibly the property registration number have been given, the pronunciation and older spellings with source references are rendered. Similar names and the status of the land are also mentioned. Then there follows the derivation as it appears in NG, in brevier, followed by Kåre Hoel's comments cautiously edited and, in addition, mostly comments made by the publishers too, the latter put in vertical lines, thus | |. It might be said that there are different layers in the text. The reader must therefore take care in order to know who really "speaks" in the different sections—on the other hand the advantage may be that one is given a kind of dialogue where the publisher comments on and deepens Hoel's derivation, which in turn relates to the interpretation in NG.

As for *Varteig* we are told that the main element is a counterpart to Old Norse *teigr* m. '(bounded) large or small piece of land' and the attributive element a *vara* f. that designated a stony forest hill or some such formation referring to the hilly terrain in Varteig (p. 21).

Quite a few observations can be made while reading this volume of BØ. Some corrections of Rygh are naturally made, for example (p. 25) concerning a **Sóllaus(u)nes* behind a *Sulesnes*, which appears to be rejected on reasonable grounds. In the derivation of *Gapastad* (pp. 115 ff.) it is shown that indentations, "gaps," in the terrain could probably have been the basis of the name. Examples of standpoints like the last-mentioned ones are frequent.

There are naturally also details where the reader may get stuck and wish to be given more information. Despite good attempts to find a derivation, the name is sometimes not definitely explained. This applies for example to *Mortaua* (pp. 63 ff.), which may contain a main element *hagi* m. 'enclosed pasture, fenced piece of land, pasture land' and whose attributive element is highly problematic but perhaps consists of a personal name.

In the discussion of *Bjørneklemma* (p. 97) it should have been considered that similar names are found not only in Norway (which is mentioned) but also in Sweden. *Ortnamnen i Göteborgs och Bohuslän* ['The Place-names in County of Gothenburg and Bohus'] volume 10 (p. 118), thus mentions three *Björneklämman* in the parish of Hjärtum in the hundred of Inlands Torpe: in the first a bear is

said to have been shot, and in the last-mentioned one a bear and an ox are said to have met, which ended in the death of both. There is also a *Björneklämman* in the parish of Ryr, in the hundred of Väne. The fact that there are names based on *björnklämma* independently of one another in several places might indicate that an appellative may have been the basis of the names—as suggested in the volume (p. 97), it might have been a catching tackle of some kind. One is reminded of the section on the place-names *Lämmemossen* and *Båsane* in Jöran Sahlgren's paper "Forna tiders jakt och djurfångst belysta i ortnamnen" ['The hunting and catching of animals in times past as illustrated in toponyms'] in the author's *Valda ortnamnsstudier* (Opuscula Toponymica Selecta) (1964, pp. 152 ff.). There are ideas to be further studied here.

This volume of BØ is concluded by some names of no longer existing properties and local and village names being included and discussed, the most interesting of which is **Lækjandi*, which is dealt with in BØ 7 (pp. 328 f.). Topographic elements are briefly and instructively described (pp. 141 ff.). Then there follows a literature and source list, and finally there are indices, both a name and a word index.

The detailed descriptions and the ambition to balance different interpretation alternatives against each other and the knowledge of the district that always supports the interpretations characterise BØ as a whole and makes this an exceptionally useful and highly readable work on toponyms. One may hope that the publishers will continue in the same way and that the high pace of publishing can also be kept up.

Lars-Erik Edlund
Department of Language Studies
Umeå University
Sweden
lars-erik.edlund@nord.umu.se

Åsa Mickwitz, *Anpassning i språkkontakt. Morfologisk och ortografisk anpassning av engelska lånord i svenskan* (Nordica Helsingiensia 21), Helsingfors: Finska, finskugriska och nordiska institutionen, Helsingfors universitet 2010, ISBN 9789521062421, ISBN 9789521062438 (PDF), 215 pp.

Åsa Mickwitz's thesis, *Anpassning i språkkontakt. Morfologisk och ortografisk anpassning av engelska lånord i svenskan* ['Integration in language contact. Morphological and orthographical integration of English loanwords in Swedish'], presented at Helsinki University, deals in detail with the morphological and orthographic adaptation of English loanwords—and marginally, despite the title, of a few loanwords from other languages too—in Swedish, as it appears in a fairly extensive contemporary newspaper material. The thesis was produced in a scholarly productive Nordic project about loanwords in the languages in the Nordic countries, managed by Helge Sandøy, University of Bergen.

The introductory chapter provides a brief but substantial research back-

ground covering the most important aspects of the topic. The second chapter is more extensive, 35 pages, and accounts for the theoretical points of departure of the thesis, both such that may be taken from contact linguistics and such that have their basis in language planning theory. Previous research on loanwords, which is fairly extensive, is taken into consideration in an essentially good way. There is however an important exception: attention ought to have been paid to Göran Inghult's thesis *Neue Anglizismen im Deutschen und Schwedischen 1945–1989* (Stockholmer germanistische Forschungen 60, Stockholm 2002), since, at any rate in some parts, it deals with the same theme as Mickwitz's study and her results are confirmed and even strengthened by Inghult's study. In addition, Inghult's investigation places Swedish in relief against German in an interesting way. His work would have been clearly relevant for Mickwitz. The rich terminology in the area of loanwords is also described in chapter 2, as are also in a more general manner theories and concepts in contact linguistics. This section of the thesis provides a good overview.

The newspaper material that forms the basis of the investigation is briefly described in chapter 3. The selection of newspapers, both Standard Swedish and Fenno-Swedish newspapers from 1975 and 2000, and both national and local ones, seems reasonable to me, although the author does not pay a great deal of attention precisely to the different types of newspaper material. The total material comprises 832 types and 4,633 tokens. The numbers vary however a little in the thesis, but it is a matter of fairly harmless divergences. In some individual substudies the material is complemented, chiefly with electronically available newspaper corpora from Språkbanken ('The Swedish language bank,' University of Gothenburg). These later complements are well justified.

A quantitative survey reflecting the morphological adaptation is given in chapter 4, and it is obvious here that the division of the material into different categories chosen in the thesis could have been made in a different way, which is also practised in the research project. This concerns chiefly the establishment of a group of "morphologically neutral loanwords" as a category by the side of the categories that constitute different types of morphologically adapted and morphologically non-adapted loanwords respectively (p. 74). A different division would however have created other problems than those now mastered by the author.

As for the two qualitatively oriented investigative chapters of the thesis, the one on morphology is very extensive, while the other, on orthography, is short. Chapter 5 makes a qualitative analysis of the morphological adaptation of the loanwords. The section on hybrids emphasises among other things the greater compulsory adaptation of the last elements (the main elements) vis-à-vis the first elements (the attributive elements). The section on derivatives discusses the existence of borrowed suffixes (in words like *corny*, *dirty*) and their status. The gender allocation of loanwords and the circumstances that can govern this adaptation are paid attention to in a long section, and the perspectives are laudably widened here and made more general. The plural inflection of borrowed nouns is dealt with in a separate section on the basis of a large number of angles of approach. In the last part of chapter 5 borrowed verbs and adjectives are discussed. The strong demands on the adaptation of verbs to enable them to function in clausal contexts are stressed, and possible development trends concerning con-

cord are discussed—the occurrence of incongruent adjectives in predicative position is emphasised and discussed here (pp. 152 f.).

The sixth chapter deals with the orthographic adaptation, thus what the spelling of the loanwords looks like, with "re-spelling" of consonants and vowels. The chapter is perhaps not very surprising to the reader, but it is still a useful survey and also rich in examples.

A discussion and a summary (chapters 7 and 8) round off the study. The author discusses here some problems with the very concept of 'adaptation' but also with the selected newspaper material as such (p. 192). This reflecting attitude feels fresh. The interaction between the roles of structural and socio-cultural factors for the adaptation of the loanwords is dealt with—and it is stated, not entirely surprisingly, that it is hazardous to point out a factor that influences the adaptation to a higher degree than another one (p. 195). The question of the socio-cultural pressure from English as a high-status language is discussed, but it is emphasised that, although there is some structural borrowing from English into Swedish, this is not done systematically. At the very end the author goes back to the discussion conducted initially in the thesis of globalisation versus glocalisation, and the importance this may have for the English influence. Her conclusion is: "På ett högre plan spelar [...] fenomenen globalisering och glokalisering, och balansen mellan dessa, förmodligen en viktig roll för hur anpassningen av lånorden kommer att ske i framtiden" ['At a higher level [...] the phenomena of globalisation and glocalisation and the balance between these probably play an important role for how the adaptation of the loanwords will take place in the future'] (p. 199).

The topic of this thesis is well chosen, since English now plays such a big role for Swedish. What can be done to adapt the English words, morphologically and orthographically, to Swedish, is focused on in the thesis, and this is a topic well worth scholarly attention. The study is adequately delimited, the chosen empiricism is systematically analysed, and the thesis contains several well-founded research results, albeit the readers may sometimes naturally allow themselves to make other judgements.

With a broader approach the results could evidently have been further underpinned and modified, and they might also have become more generalisable, for example if substitutes had also been included—this could also have been done fairly easily, at any rate summarily, if the author had sought support from Inghult's above-mentioned thesis. The results could also have been discussed on the basis of the different text types that are represented in the newspapers, and not only on the aggregated level that was chosen. On the basis of further electronically available newspaper material but above all on such material as is available on the Internet, it might have been worthwhile to study the change processes, for example absence of concord of adjectives in predicative position, that possibly/probably are now in progress. Had Åsa Mickwitz chosen these routes, it would have been a quite different thesis. However tempting it might have been to widen the investigation in different directions, it is still basically a good thing that she stuck to her original approach and analysed the material she had gathered based on the questions initially posed.

The concluding discussion of the thesis sticks to the basic empirical approach, although the topic includes an interesting discussion of globalisation

versus glocalisation, to the English influence on the private and global sphere and the societal sphere and on the role of language planning in this context. Precisely here, in the concluding discussion, the author should perhaps have taken a broader view. It is obvious that she is greatly committed to language planning issues. Her judgement of the Standard Swedish language users' interest in language issues and attitudes to the English influence as well as the Standard Swedish language planners' efforts (pp. 28, 32 f., 37, 197 f., 201) is critical and provides, in my view, too simplified a picture. Åsa Mickwitz has evidently several points of view in the area of language planning, and it would have been valuable to be informed more explicitly about the area precisely on the basis of the empiricism of the thesis and the analyses she makes. This will hopefully be accounted for in other contexts.

Lars-Erik Edlund
Department of Language Studies
Umeå University
Sweden
lars-erik.edlund@nord.umu.se

Helena Andersson, *Interkulturell kommunikation på ett svenskt sjukhus. Fallstudier av andraspråkstalare i arbetslivet* (Skrifter utgivna av Institutionen för nordiska språk vid Uppsala universitet 77), Uppsala: Uppsala universitet 2009, ISBN 9789150620450, 250 pp.

The overall aim of Helena Andersson's thesis is to find communicative factors that have a positive impact on immigrants' integration in the working environment. By means of interviews and audio recordings the author has concretely studied a number of individuals' everyday work situation in a Swedish hospital. The oral communication is focused on, and an important goal is to elucidate the socio-cultural climate in the place of work and to show that the participants constitute a part of a working community. The first four chapters make up the framework of the work: the theme of the thesis is placed in a larger social context, research on communication at work and on second language speakers is presented as well as theoretical perspectives, material and method. In the interview investigation that is presented, 21 second language speakers participated, while the case study concerned five participants, two doctors and two nurses, to whom oral communication is important, and one cleaner who does not need to use language to the same extent in the work. On the other hand, none of them writes a great deal in the their work. In the foreground there is an analysis of communication strategies, humour, and the institutional talk, the doctor's round. The author describes how speakers solve the problems that arise during a conversation, whether and how the second language speakers express that they do not understand, whether they ask for help when language problems occur, and finally whether mutual understanding can be achieved. In the summarising table (p. 121) one can see different types of communication strategies and their

frequency: all or nearly all participants in the case study use code switching, recovery strategies, paraphrases, or ask for help or clarification. Humour is a social resource and a means of showing solidarity among people. The question is here whether second language speakers joke to the same high degree as first language speakers, and how the second language speakers' jokes are treated. The function of the jokes is also studied. The study shows that the five participants in the case study are highly capable of understanding and producing jokes, even if they also describe how difficult it is to handle jokes and irony in a second language. The doctor's round is a talk with professional participants, targeted at the profession—the thesis studies how the second language speakers actually take part in the talks. In conclusion Helena Andersson states that many more investigations of different places of work would be necessary in order to design the education of immigrants optimally to prepare them for the challenges offered by working life. When outlining these studies, one of the points of departure is this thesis.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Henric Bagerius, *Mandom och mödom. Sexualitet, homosocialitet och aristokratisk identitet på det senmedeltida Island*, Göteborgs universitet 2009 (Avhandlingar från Institutionen för historiska studier), ISBN 9789188614711, 310 pp.

Through studies of romances Henric Bagerius tries in his thesis *Mandom och mödom* ['Manhood and Maidenhood'] to uncover the interaction between politics and sexual strategies in Icelandic society in the late Middle Ages. The idea is that, through emphasising certain sexual norms, the Icelandic elite tried to define themselves as a group. Furthermore, sexuality seems to have been an important component in the formation of the aristocratic self-image. Two overarching problems may be formulated: one of the focuses on sexuality as group generating, the other on sexuality as sex generating. The author starts by describing the Icelandic societal change from the Free State period to the late Middle Ages, which shows, among other things, that the concubine system was losing its political importance on Iceland. In addition it was becoming increasingly important to restrict the number of children in order to keep the properties together. The Icelandic inheritance legislation got a stronger patrilineal character over time. It also seems that in the late Middle Ages virginity became a sign of affection and love. Through the influence of the church, marriage was formed into a more personal contract between man and woman. The material that constitutes the basis of the study is the many romances (riddarasögur) that were produced on Iceland in the late Middle Ages, a material seldom used by previous historians in order to mirror the social conditions. The romances "återger inte den isländska aristokratins levnadsförhållanden [---] [d]e är snarare idealbilder av hur en fullkomlig värld kan vara, ett slags utopier" ['do not reflect the living conditions of the Icelandic aristocracy [---] they are rather ideal pictures of what a perfect world might be like, a kind of utopias'] (p. 18). All these preconditions are described in the comprehensive first chapter. The following chapter is about Iceland and Europe, one conclusion being that we

are given here "en studie av ett europeiskt samhälle som blev alltmer homogent" ['a study of one European society that was becoming increasingly homogeneous'] (p. 43)—a society where organised governments were growing strong, where the norm system of the church came to characterise society and where political elites were trying to justify their power. The chapter entitled Könskartan ritas om ['The gender map is redrawn'] shows how manhood and womanhood were reformulated in late Icelandic society. Some of the sources of the chapter are wedding speeches and confessions, for example the interesting source Confessio turpissima (Skriptamál Ólöfar Loptsdóttur). In an instructive way the author then goes through his chief source material, the romances. Then there follow the three analytical chapters, whose many individual results cannot be related in this short survey text. One chapter describes male sexuality and homosocial relations, another focuses on the virgin as the aristocracy's intellectual construct, the paradoxes of virginity and the view of chastity, and the third studies the intercourse between man and woman as a sex generating act. In order merely to comment on a couple of details, one may, just like the author, reflect on how the stories of violent sex can be interpreted in the light of sexuality as a means of power, and how sexual intercourse may be said to establish a gender order, where the virgin becomes a woman and the knight a man. It is also interesting to see how what is monstrous is sometimes used to bring out in full relief the chivalrous human being and his desires. Among other things this comprehensive thesis shows that a concept such as 'homosociality' may be fruitful in medieval research and that the Icelandic romances can actually be used in historical studies of Icelandic society. Historically, theoretically and methodologically this thesis thus yields substantial results.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Tove Bull & Anna-Riitta Lindgren (eds.), *De mange språk i Norge. Flerspråklighet på norsk*, Oslo: Novus Forlag 2009, ISBN 9788270995103, 241 pp.

This book is about multilingual Norway. In the introductory survey by the editors—entitled Einspråklegheit kan bøtast ['Monolingualism may be cured']—perspectives of the old multilingualism are given, and the reader is struck here by the earlier official attitude with a "minoritetspolitikk utan basis i kunnskap om minoritetsspråka og minoritetskulturen" ['minority policy with no basis in knowledge of minority languages and minority culture'] (p. 10). But this has changed; from 1990 onwards Sami is an official language in Norway, and by its side there are national minority languages, languages spoken by Kven people ("kvener"), Roma people ("romanifolket") and Romani people ("romer"), the national minorities. Jews and Forest Finns ("skogsfinner") also belong to the national minorities but their languages are no longer spoken in Norway. The languages in the book are presented in reverse order to the introduction: the languages that we claim are ranked lowest in the Norwegian language hierarchy are thereby placed first in the book. This has no doubt a symbolic value. After a general survey of the immigrant languages in Norway by Marjatta Norman has been presented, there follow

a chapter on multilingual Philippine immigrants by Bente Ailin Svendsen and a description of the multilingual practice in a Pakistani-Norwegian environment by Finn Aarsæther. The former article shows that a large number of factors have to be considered when studying a language shift or a preservation of an immigrant language, and the latter provides insights into what the multilingual everyday life of people with a Pakistani background is like in practice. Arnfinn Muruvik Vonen then describes in a many-sided way the Norwegian sign language where a development is imminent that might seemingly turn in quite different directions. The situation of the Kven language in Norway is described by Anna-Riitta Lindgren—among other things she touches on the relation to Standard Finnish and the problem that is caused by the variety being constantly compared to the Standard. Two chapters are devoted to Sami: in one of the contributions, by Nils Øivind Helander, there is a broad description of all the three Sami languages in Norway, even though the emphasis is placed on North Sami; in the other, by Jon Todal, South Sami and Lule Sami are in focus. Hilde Sollid's contribution is about ethnolects—"å snakke gebrokkent" ['to speak broken Norwegian'] or *kebabnorsk* ['Kebab Norwegian'], as it is sometimes called—in Norway. Anne Brautaset deals with Norwegian as a second language, Tove Bull Norwegian, and Tove Bull and Toril Swan jointly "Engelsk i Norge och engelsk i norsk" ['English in Norway and English in Norwegian']. It is regrettable, however, that there is no chapter at all on Roma and Romani people. Wider Nordic perspectives might also have been of value. The book gives a survey of the contemporary Norwegian language situation, although, naturally enough, the different articles have varying levels of ambition and somewhat different approaches to the subject. The guiding introductory chapter connects the contributions, however, thereby giving the book a cohesive character.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Birgit Falck-Kjällquist, *Ortnamnen i Göteborgs och Bohus län. XIV. Ortnamnen i Sotenäs härad. 2. Naturnamn*, Göteborg: Institutet för språk och folkminnen. Dialekt-, ortnamns- och folkminnesarkivet i Göteborg 2009, ISBN 9789172290594, 191 pp.

This volume provides yet another contribution to the onomastic mapping of the County of Gothenburg and Bohus. The former archives manager Birgit Falck-Kjällquist is the author, and we get a picture of a richly varied stock of place-names in Sotenäs; names of lakes and water courses, islands, islets, skerries, roads and fords, hills, slopes and dells, mosses and bogs, as well as fields and meadows, forests and individual trees and very much more. The introductory sections provide a brief picture of the area's natural conditions, economy and language followed by a survey of the names in the different categories. In each section there is first a survey of a number of important basic topographic words in the toponymic category (*sjö*, *vatten*, *floge*, *hölj*, *damm*, *dape*, etc. as regards bodies of water), then there is an account of the localities in the category with fairly short information about pronunciation, location and the backgrounds of the names, whereupon there follows a section in which a few names are analysed in somewhat greater detail.

In these sections different alternatives are compared with one another in the customary manner. In this volume most of the names do not offer any great etymological problems, in spite of which the reader can still find interesting things. Personally, I took notice of the treatment of the fjord name *Soten* or *Sotefjord*(*en*)—probably a formation based on **suht* related to *suga* (p. 27 f.) 'suck'—, the river name *Dossa* (p. 33), the islet names *Barrlind* and *Bonden* (p. 73, pp. 74 f.) and the island name *Hållö* (pp. 78 f.), the bog name *Faxhällemossen* (p. 128), the name *Jalmegel*, probably a formation on an onomatopoeic *jalma* and *gel* 'gap' (p. 133), and the obscure field name *Jalmången* (p. 163). Among individual analyses may be mentioned the one concerning the element *skede* n. (pp. 90 f.), which is found in place-names with different meanings. The fact that a considerable number of toponyms are dealt with here is shown not least by the toponym register covering more than ten tightly printed pages. The registers of first names, bynames and names of soldiers and boatmen are also valuable as well as the register of words and conditions of cultural history. In the latter there is for example information about the names referring to landmarks used in connection with navigation and taboos in connection with fishing. The volume gives a good picture of the district's nature names, and it makes a good addition to the many previous works in the series.

Lars-Erik Edlund
Lars-Erik.Edlund@nord.umu.se

Kari Ellen Gade (ed.), *Skaldic Poetry of the Scandinavian Middle Ages*, vol. II, part 1–2, Poetry from the Kings' Sagas, Turnhout: Brepols 2009, ISBN 9782503518978 (applies to both volumes), CVII + 914 pp.

A broadly organised publication in nine volumes, of which this is volume 2 (in two voluminous semi-volumes), in the series Skaldic Poetry of the Scandinavian Middle Ages (SkP) has been planned for a long time. SkP volume VII was published as early as 2007 and dealt with Poetry on Christian Subjects; Margaret Clunies Ross was the editor of that volume. The driving forces of the project are the abovementioned Clunies Ross, the editor of the current volume Kari Ellen Gade, and Guðrún Nordal, Edith Marold, Diana Whaley and Tarrin Wills, and with this strong crew the level of ambition behind the publication is also high. The basis of the edition is available manuscripts but naturally also previous editions, and the aim is to produce a critical edition of the texts in question with an English translation and a detailed commentary. In the present volume poems dedicated to Scandinavian rulers from about 1035 to 1280 have been included. The broad introduction gives a detailed picture of the sources of the edition: manuscripts, facsimile editions and previous editions. Norwegian king's sagas, sagas relating to Denmark and Orkney are listed as are sources such as Snorre's Edda and the grammatical treatises. The survey of biographies that is given is valuable with its brief description not only of kings' but also of a number of other dignitaries' biographies, such as Jón Loptssons, Skúli Bárðarsons and Waltheofs of Huntington and Northumbria. Metres and poetic diction are described and the normalisation is briefly accounted for. The poetry that is then presented and that constitutes the more than nine-hundred-page edition is divided into poetry by named skalds and anonymous poetry. The stanzas are presented very systematically in the edition. The text of a stan-

za is first rendered in its normalised form and then in prose. An English translation is given, kennings are interpreted and heiti containing names are explained, manuscripts where the stanza is found are accounted for as well as readings from the different sources. The careful analysis of the different words in the stanza is not least valuable. Just to note some individual elements in the vast number of details meeting the reader, there are interesting analyses of *brennir Bolgara* ['the burner of Bulgars (=Haraldr)'] (p. 113), *elgvers* ['of the elk-sea (LAND)'] (p. 163), *orm búinn kilju ilvegs* ['the reptile clad in the covering of the sole-path (FOOT > SHOE)'] (p. 172), *skokkr* 'decking' (p. 255), *spjalli gauta* ['the confidant of the people (KING)'] (p. 354), *hákesjur* ['oarport-spears (OARS)'] (p. 367), *barka* ['boats'] (p. 489) and *randǫlun* ['by the rim-fish (SWORD)'] (p. 557). There are quite a few foreign toponyms in the texts as well as a number of words borrowed into the Old Norse language. The reader's attention is naturally caught by certain details where more information would have been useful or where the editors might have arrived at more decisive conclusions, such as for example in connection with *fundra* ['ponder'] (p. 14), *Bǫrr* ['tree'] (p. 75), *Þǫll* ['fir-tree <woman>'] (p. 153), *hvéldan* ['curved'] (p. 187) or *óls* ['of the troll-woman'] (p. 383). Among skalds that one pays attention to when reading the edition, Óláfr hvítaskáld Þórðarson may be mentioned; his production is found in the second semi-volume (pp. 656–672). One also comes across some highly remarkable stanzas such as this "*Dúsið ér, en Ása/ — atatata – liggr í vatni, / — hutututu – hvar skalk sitja? — / – heldrs mér kalt — við eldinn*" (p. 587); "Ér dúsið við eldinn, en Ása – atatata! – liggr í vatni – hutututu! Hvar skalk sitja? Mérs heldr kalt" ['You are [all] sitting around by the fire, while Ása – atatata! – is lying in the water – hutututu! Where shall I sit? I am rather cold']. It is actually difficult to break away from the reading of this monograph, which so impressively elucidates these difficult old language texts but also manages to communicate the texts' literary value to the present-day reader—**not least this latter** aspect is important. On her/his part the philologist can feel satisfied with both the detailed commentary that knowingly conveys the present-day research situation and also provides good ideas for further research. One looks forward to the other parts of the publication with the greatest expectation.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Frans Gregersen, *Københavnsk sociolingvistik. Festskrift til Frans Gregersen på 60-årsdagen.* Redigeret af Tore Kristiansen, J. Normann Jørgensen & Inge Lise Pedersen, Oslo: Novus Forlag 2009, ISBN 9788270995127, 280 pp.

In spite of its title, this Festschrift, consisting of seventeen texts by Frans Gregersen produced from the late 1970s to 2005, has a wider task: as pointed out in the editorial trio's foreword,

> [o]pgaven er ikke blot at beskrive og forstå hvordan talesproget varieres og forandres i brug, men også at frigøre talesprogets brug(ere) fra normative spændetrøjer af enhver art – herunder ikke mindst den ensrettede standardsprogsideologi der følger med skriftsprogsindlæringen i skolen

['the task is not only to describe and understand how the spoken language varies and changes when used, but also to free the use(rs) of spoken language from normative straitjackets of every kind—including not least the unidirectional standard language ideology that results from the learning of written language in school'] (p. 1).

The articles collected in the volume focus on the areas of literacy, linguistics and sociolinguistics. Only a few of the contributions can be mentioned in this survey. In the article Hvor dansk? Noter om mål og midler i nutidens sprogforskning ['Where Danish? Notes on objectives and means in modern linguistics'] (published in 1994), the construction of Danish in the history of language is discussed from different perspectives and the discussion is illustrated with contributions from Danish linguistics, for example with informative quotations from Peter Skautrup and Lis Jacobsen. In another article, Historicitet og situation ['Historicity and situation'] (1990) it is argued, among other things, for sociolinguistics having to become more anthropological, more searching. Ten of the articles are sociolinguistic in a narrower sense. The area of sociolinguistics is critically reviewed in a couple of them, and since this is done with good insight and argumentation, there is good reason to really adopt Gregersen's analyses. The articles Hvordan undersøger man københavnsk? ['How to investigate the Copenhagen dialect?'] (1989) and Sociolingvistikens forandringer. Indledende knæbøjninger før Projekt Bysociolingvistik eventuelt genoptages ['The changes in sociolinguistics. Initial genuflections before the Project Urban Sociolinguistics possibly is taken up again'] (1999). The texts in this omnibus are often easy to assimilate in one sense, as they are rich in examples and sometimes unexpected ideas, and in addition there is a kind of lightness in the very style. On the other hand the reading is demanding, since from more philosophical perspectives and the scholarly creed formulated initially, the author regards the research problems from so many, sometimes also divergent points of departure: he argues all the time with himself and with us readers. At the same time this makes the reading of the texts a challenging experience. In my view the omnibus might have been given a title with a more general reference—there is certainly a great deal about "Copenhagen sociolinguistics," but there is infinitely much more between the covers of the book.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Göran Hallberg, *Skånes ortnamn. Serie A Bebyggelsenamn. Del 15 Oxie härad och Malmö stad*, Lund: Institutet för språk och folkminnen. Dialekt- och ortnamnsarkivet i Lund 2009, ISBN 9789172290655, 349 pp.

The publication of the toponyms of Skåne is now taking place at a tremendous pace. Oxie härad [hist. 'hundred'] and the city of Malmö are in focus here, and the expert interpreter of the rich toponymic world is the former archives manager Göran Hallberg. *Oxie härad* seems to be a primary name of a hundred, a part of which is likely to be the genitive of the village name O*xie*. The village name in turn is based on the name of a hill and has in its attributive element *os* 'spring,' 'river mouth'—where the original reference may however be discussed—and in the

main element *høghi*, which frequently occurs in the place-names of the area, dative singular of *høgh* 'hill.' As far as can be judged, the city name *Malmö*, which stems from an Old Scanian **Malmhøghi* 'the sand hill,' originally referred to the flat high ground where the early buildings of the mainland were erected. Some of the toponyms have a more easily transparent background although they may seem difficult to interpret for a present-day observer: Hallberg assumes that the attributive element in *Bunkeflo* is the plant name *bunke*, used about species of grass and sedges (p. 36), while the name *Vanmåda*(*n*) is supposed to be based on a dialectal word *vattenmåta* 'wet, muddled, sludgy mass with a lot of water' (p. 142). Names that are more complicated to interpret are for example *Käglinge* (pp. 69 f.), *Skrävlinge* (pp. 77 f.), *Hyllie* (p. 88) and *Törringe* (p. 172), where different alternative interpretations may be placed side by side. Some of the names of farmsteads presented in this volume are also of interest, such as *Babels torn* (p. 42) and *Tuggalite* (p. 85). *Stattena* (pp. 55, 98, 277), which is found in several places in Skåne and Denmark, means 'stand alone' and refers to buildings in lonely spots. Since the city of Malmö is also included, the urban stock of names is also accounted for (buildings, districts, urban parts), which is of a different nature than the one in the countryside. It may be assumed that new naming takes place within different language groups in immigrant districts such as Rosengård in Malmö, but this naming is not reflected here, most likely because very little is known about it. This is a remaining task for the onomatologists.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Åse Mette Johansen, *"Velkommen te' våres Norge." En kvalitativ studie av språkbytte og språkbevaring i Manndalen i Gáivuotna/Kåfjord*, Oslo: Novus Forlag 2009, ISBN 9788270995172, 233 pp.

This book is a revised version of a Master's thesis that was presented at the University of Tromsø in spring 2007. The author's aim is to elucidate the question: What individual profits or/and costs does it entail to live with language change and language preservation in the language community of Manndalen, a Sea-Sami-Norwegian district in Nord-Troms. Manndalen and its linguistic background are first described, the method and data collection are presented, and the study's basis in sociolinguistics and socio-psychological research is accounted for. This part elucidates ethnicity conditions and the question of what language has to do with ethnicity. Among many other things, the author states that the loss of a language does not necessarily imply that the ethnic identity is lost. In the macro-analysis it is then shown what has happened linguistically to the languages in Manndalen during the last one-hundred-year period. In the late nineteenth century Sami was the majority language in Kåfjorden and the language had its strongest position in Manndalen. A hundred years later Norwegian had taken over the majority language role. The reasons for this are discussed in fairly great detail: Norwegian immigration, mixed marriages, increasing contact with society at large, altered communication conditions etc. At the same time Sami has been better preserved in Kåfjorden, and best of all in Manndalen, than in the rest of Nord-Troms. Læstadianism may be one reason for this. The revitalisation work from

the 1970s onwards and the language law are also emphasised in the macroanalysis. Through a microanalysis based on interviews the emphasis is placed on eliciting personal experiences. In my view this part is the most important contribution of the study. Different experiences are discussed, such as the consequences that the language change has for the individual people and what challenges it involves to use the Sami language, both in society at large and in the family. The six youngest informants' motives for learning Sami are discussed in one section (5.2.1). The part is interesting that is about the informants' experiences of a Norwegian dialect that has clear features of Sami substrate (5.3.2). It is important that different problems connected to the Sami revitalisation are discussed in such great detail, for example the relation between the local Sami dialect in Kåfjorden, which is used by elderly people and what might be called "book Sami," which young people learn at school and in language courses and which an older generation of speakers find alien and unfamiliar. Åse Mette Johansen's study illustrates the problems that exist at the societal level, the group level and the individual level in connection with processes of both language change and language preservation. Thereby the study also has more general interest.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Karl G. Johansson & Maria Arvidsson (eds.), *Barlaam i nord. Legenden om Barlaam och Josaphat i den nordiska medeltidslitteraturen* (Bibliotheca Nordica 1. Eds. Odd Einar Haugen, Karl G. Johansson & Jon Gunnar Jørgensen), Oslo: Novus Forlag 2009, ISBN 9788270995196, 207 pp.

In 2004 a conference was arranged at University of Oslo about the Barlaam legend. The presentations have now been revised and compiled in this volume, the first in the series Bibliotheca Nordica, which with this omnibus and not least Jonas Wellendorf's large monograph *Kristelig visionslitteratur i norrøn tradition*—presented elsewhere in this survey—has got a flying start. In the Middle Ages the legend of Barlaam and Josaphat became known throughout Europe. Versions in Arabic and Georgian were spread from India at an early stage, and in addition Greek and Latin translations were made as well as translations into the vernaculars. The popularity of the legend is obvious not least from the fact that about 200 Byzantine and 170 Latin manuscripts are preserved besides 46 German and 25 Nordic ones. The first article in the volume consists of Odd Einar Haugen and Karl G. Johansson's presentation of the legend's background and survey of its existence in Nordic sources. The following four articles deal with the Nordic translation, Barlaams ok Josaphats saga. The literary context in which the legend arose is knowingly described by Magnus Rindal, which underlines that it originated in an environment where the translation could be based on a learned tradition connected to the church, the monasteries and the king's court. Odd Einar Haugen shows among other things that interpolations from different sources have been inserted in the text. The picture of the heathen king Avennir is drawn by Vera Johanterwage, who asks herself whether he can be regarded as a chivalrous ruler. Jens Eike Schnall makes a comparison between the Nordic text about Barlaam and Kongespejlet, and finds that everything points to a direct influence from Barlaams saga on

Kongespejlet (p. 130). Which in its turn lends support to the traditional dating of Barlaams ok Josaphats saga to about 1250, a dating that has recently been called into question. The last two contributions in the book widen the perspectives in different ways. An iconographic transformation of the unicorn fable from the Barlaam legend in the Nordic Middle Ages is described by Kristin Bliksrud Aavitsland, the point of departure being a fresco from about 1400 in Vester Broby church on Zealand, Denmark. The perspectives are widened here in an interesting way towards the European contexts. Maria Arvidsson concludes the volume with her study of the Vadstena translation (Holm A49) into Swedish that was made in the fifteenth century and was partly based on the Norwegian text. Some final registers, for example of manuscripts, increase the volume's value, as do some colour pictures.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Inger Larsson, *Millefolium, rölika och näsegräs. Medeltidens svenska växtvärld i lärd tradition* (Skogs- och lantbrukshistoriska meddelanden 45. Supplement till Kungl. Skogs- och Lantbruksakademiens Tidskrift), Stockholm: Kungl. Skogs- och Lantbruksakademien 2009, ISBN 9789185205837, 256 pp.

Within the framework of a project supported by the Bank of Sweden Tercentenary Foundation, Inger Larsson has produced this monograph. In its first part the work presents popular determination of species—**and al**most classical problem—, the sources utilised in the study, such as medieval laws, medical and herb books, and quite a few other things. In this part of the monograph we are given a picture of sources and source problems and a connection to the extensive existing literature. The second part of the work is a commented list of the so far known medieval plant names, which may be compared with Wilhelm Heizmann's *Wörterbuch der Pflanzennamen im Altwestnordischen* (1993). The material consists of about 500 plant designations referring to about 300 plants. This part explains the title of the book: *millefolium*, *rölika* and *näsegräs* are the three known Old Swedish designations of *Achillea millefolium*, which is now called *röllika* in Modern Swedish. This plant is among other things said to be taken "fore häfft at pissa," that is against difficulty in urinating. The book abounds in this type of information and is for this reason a rich source to draw on not only for linguists but also for ethnologists and culture researchers. Under the heading "Några enskilda växtnamn och deras referens" ['Some individual plant names and their reference'] the author discusses the different Old Swedish names for, for example *älggräs* ['meadowsweet'], *baggsöta* ['purple gentian'], *brakved* ['alder buckthorn'], *gullviva* ['cowslip'] and *smultron* ['wild strawberry']. Obviously there still remain some linguistic problems to elucidate, for example what is really the meaning of *brak(a)*, which is a part of *brakved* (p. 201 f.) or what might really be the background of the mystical *sugha röff* for thyme (p. 201 f.). In places in this part the author might have been able to go somewhat further, not least if a larger language material had been included. In the very short concluding part some of the many threads are at any rate twined together. The book is richly illustrated with pictures from older floras. Kjell Lundquist's introduction—with the

heading "Dygden att veta vad det är man talar om. Om relationen mellan levande växter, växtnamn och växtavbildningar genom tvåtusen år " ['The virtue of knowing what you are talking about. On the relation among live plants, plant names and plant pictures through two thousand years']—gives the reader an entry into the book's theme worth considering, and as a whole the book is a valuable documentation of a rich and many times challenging research material.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Inger Larsson, *Pragmatic Literacy and the Medieval Use of the Vernacular. The Swedish Example* (Utrecht Studies in Medieval Literacy 169), Turnhout: Brepols 2009, ISBN 9782503527475, XIV + 250 pp.

In this book Inger Larsson makes a survey of writing in Sweden from the late twelfth century up to the early fifteenth century, a period in which Swedish was increasingly finding its place as the language of administration, management and jurisdiction. The study, which is based on her own research but above all on other researchers' studies, shows where in society letters were produced, who wrote them, and for what different purposes they were written. What is on the other hand left out of consideration are palaeographic and linguistic analyses of the documents, and nor are for example issues concerning individual literacy competence dealt with. After an introductory chapter that briefly describes previous research, there follows an initial section dealing with "Actors and Literate Milieus." This section describes and discusses the contours of "administrative" writing during two centuries and the reigns of three kings: Knut Eriksson, Magnus Ladulås and Magnus Eriksson. The author describes the provincial laws and later on Magnus Eriksson's national law and urban law and the environments in which these were generated, and their importance for the establishment of Swedish as a written language is emphasised. Interesting subsections are "Women as Issuers, Sealers and Landowners" and "The Role of Witnesses, the Use of Seals and Personal Names." Among other things, a summarising section stresses that

> [o]wnership of a seal in itself indicated [---] an active participation in literate culture, and we must assume that those who had seals also must have issued written documents at some point or other, even if this cannot be proven in every case (p. 101).

The chapters of the book's second section, "Charters and Legal Transactions," deal with the various types of letters that arose in the period up to the early fifteenth century: that is deeds of sale and purchase, deeds of exchange, deeds of gift (wills, morning-gifts and dowries), title deeds, letters of attornment, mortgage deeds, boundary deeds, but also other types of charters as travel permits, safe-conducts and letters of protection, letters of judgement, receipts, inheritance distribution documents, and other charter types. We are given large numbers of data concerning when the Old Swedish words for the different types of documents are found for the first time in the material and in what context this takes place. At the end Larsson discusses elements of standardisation and formulas and models

developing over time. In addition she elucidates the traces of orality that seem to survive. A concluding chapter summarises but also describes issues that research might focus on in future. It is praiseworthy that, through the publication in the series Utrecht Studies in Medieval Literacy, the study is made available to an international audience. The book is concluded with 23 medieval documents rendered in colour, which also makes it a beautiful book.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Jakob Løkke, *Modersmaalets Formlære i udførlig Fremstilling. Innledning ved Svein Lie*, Oslo: Novus Forlag 2009, ISBN 9788270995370, 303 pp.

Knud Knudsen's *Haandbok i dansk-norsk Sprog-lære* ['Manual of Danish-Norwegian Grammar'] (1856, reissued by Finn-Erik Vinje in 2002) and Løkke's *Modersmaalets Formlære* ['The Morphology of the Mother Tongue'] (1855) are the most important documents from the nineteenth century concerning the Danish-Norwegian variety that started developing in the eighteenth century and eventually resulted in what is called *talt riksmål*. Jakob Løkke (1829–1881) was a pedagogue but also politically active. The mother tongue—in practice Danish or Danish-Norwegian—is dealt with many-sidedly in sections on phonology, vocabulary and morphology. On the other hand there is no section on syntax in the book, the reason being that the book belongs to a historical-comparative tradition that leaves out syntax in this manner. The phonological section describes individual "Letters" and accounts for different kinds of sound changes, for example assimilation, dissimilation, vocalisation and metathesis. Moreover there is an analysis of the tonemes of Norwegian. In the part dealing with words one finds for example that adverbs, prepositions and conjunctions are brought together in the class of particles, which was common in contemporary grammars. Otherwise there is an expected description of word-formation with a basic division into irregular derivation, regular derivation and compounds. Of particular interest, among many other things in the traditionally organised morphology, is a section in the chapter on nouns dealing with the background of gender belonging where semantic and formal criteria of gender belonging are described (p. 216 ff.). Svein Lie's introduction indicates that Løkke's grammar got a mixed reception from his contemporaries, in all likelihood depending on where the reviewers stood in the Norwegian language policy debate. In his book *Norske grammatikker på 1800-talet* ['Norwegian grammarians in the nineteenth century'] (1987) Bernt Fossestøl states that Løkke's grammar "er så detaljert at den neppe kunne egne seg til skolebruk. Den blev da heller ikke mye brukt i skolen" ['is so detailed that it could hardly be used for educational purposes. Nor was it used very much in schools']. This is no doubt quite correct. Present-day readers are however given good insights into the language of the period, and it is therefore a good thing that it has been reissued.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Hanna Óladóttir, Shake, sjeik *eller* mjólkurhristingur? *Islandske holdninger til engelsk språkpåvirkning* (Moderne importord i språka i Norden 11), Oslo: Novus Forlag 2009, ISBN 9788270995677, 149 pp.

The project Moderne importord i språka i Norden ['Modern Loanwords in the Nordic Countries'] has published yet another monograph, this time on attitudes among Icelandic language users to loanwords, neologisms and foreign influence on language in a more general sense. Hanna Óladóttir's study is a translation and revised version of a Master's paper presented at Háskóli Íslands in 2005. After a historical and theoretical background to the study and presenting its material—consisting of interviews with 24 informants aged 27–36 years and active in different societal areas—, there follows an extensive analytical section. It is obvious that English is playing an increasingly large role in the Icelandic society which is shown by the fact that English has established itself in certain domains, for example at some places of work and in some subjects in higher education as well as being used in popular music. Judging from the study, English seems to have higher status among the interviewees that have superordinate posts, even if the whole group seems to be more generally agreed about the need for English and teaching of English in Icelandic society. On the other hand, the informants are also positive to new Icelandic words being created, but opinions are divided regarding the use of them. The tolerance is greater as regards imported words in the technical vocabulary than in the general vocabulary. In the concluding chapter—entitled Konklusjon, spekulasjoner og sluttord ['Conclusions, speculations and final remarks']—it is among other things emphasised that one

> skimter også den idéen at den reine islandsken ikke alltid trenger å være i bruk; det er nok om den fins ett eller anna sted; det vil i praksis si i skrift. Derfor er det ingen overraskelse at konservatismen viser seg å være knytta mer til skrift enn til tale
>
> ['also discerns the idea that pure Icelandic is not always necessary to use; it is enough if it exists in one or the other place; which in practice means in writing. For this reason it is not surprising that conservatism turns out to be connected more to writing than to speech'] (p. 136).

The results presented in Hanna Óladóttir's study are hardly surprising but they still illustrate conservative and liberal language attitudes existing side by side as well the symbolic and the practical value that Icelandic has for the Icelanders.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Helge Omdal & Rune Røsstad (eds.), *Språknormering – i tide og utide?*, Oslo: Novus Forlag 2009, ISBN 9788270995189, 299 pp.

The contributions to this omnibus emanate from the language standardisation conference "Behov for eller trang til å normere?" ['Need to or desire to standardise?'] that was arranged at the University of Agder in Kristiansand on 1–3 November 2007. Nineteen articles with varying themes have been collected here. Three of them make up the plenary talks of the conference: Kerstin Güthert, Current standardiza-

tion as a necessity: The genesis of the new official orthographic guidelines, Olle Josephson, Allt eller inget? Om svensk språkvårds lustar och behov i normeringsfrågor ['All or nothing? On the desires and needs of Swedish language cultivation in issues of standardisation'] and Jørn Lund, Sprognormering och sprogpolitik i Danmark – et overblik ['Language standardisation and language policy in Denmark—a survey']. The first article presents the German "Rechtschreibereform" that was launched in the late 1990s, thus demonstrating the problems that arise when launching a proposal for language standardisation where there are not least different opinions about language policy. Special problems also arise when reforming a language that is the written language in several countries and, in addition, is also used internationally. Josephson's and Lund's articles summarise various aspects of the work with language standardisation in Sweden and Denmark respectively.

One of the articles, by Ari Páll Kristinsson, is about a specific attempt at morphological standardisation of Icelandic. Charlotta af Hällström-Reijonen's article deals with Fenno-Swedish language cultivation and shows that Hugo Bergroth's attempt to counteract Finlandisms has so far not been particularly successful. Wim Vandenbussche discusses the multi-faceted "language struggle" in the Flemish area.

Norwegian conditions are dealt with in the other articles. Gunnstein Akselberg's contribution is about standardisation of and practice in spoken language among pupils and teachers. Endre Brunstad asks "Kva er god nynorsk språkføring?" ['What is good Norwegian language use?'], and in a somewhat multi-layered contribution Helge Dyvik discusses the standardisation in the "post-samnorske æra". Vidar Haslum makes a comparison from a language standardisation perspective between Ivar Aasen's *Norsk Grammatik* and *Norsk Ordbok* on the one hand and his *Norsk Navnebok* on the other. Svein Lie discusses the transcription of foreign names in Norwegian from the point of view of language standardisation and Inge Særheim writes about the challenges that arise when standardising Norwegian toponyms. Helge Omdal deals with the placing of commas, which he wants to "downgrade" as a category of errors, Lars S. Vikør with the "restandardisation" of New Norwegian after 1996, and Helge Sandøy with the Norwegian Language Board's submitted proposal of 2006 for a Norwegian standardisation policy. There are also articles by Øystein Eek, Jan Olav Fretland, Ragnhild Tønnessen and Magnhild Vollan.

Many angles of approach to linguistic standardisation work are presented in this omnibus, and it might have been advantageous if the connections among the different articles had been described in a somewhat broader introduction.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Inge Lise Pedersen, *Fra folkemål til multietnolekt – og 23 andre artikler inden for nordisk dialektologi, sociolingvistik og sproghistorie. Et udvalg af artikler fra Inge Lise Pedersens forfattarskab, redigeret af Frans Gregersen og Tore Kristiansen i anledning af hendes 70 års fødselsdag 5. juni 2009*, Oslo: Novus Forlag 2009, ISBN 9788270995233, 430 pp.

When Inge Lise Pedersen was seventy years in June 2009 this voluminous Festschrift was dedicated to her. It contains scholarly texts that she has published through the decades.

The volume starts with an article about modern gender conditions in the dialects on Western Funen and about Funen *j*-links. A pilot study with a broader approach is the investigation that deals with main clause word order in subordinate clauses in Danish dialects, and that not least demonstrates the potential there is in a dialectal material. How an empty conjunction field can be interpreted is dealt with in another article, and the preterite forms of weak verbs in Danish, Norwegian and Swedish dialects are treated in a couple of other, partly overlapping, works. In a very interesting way Inge Lise Pedersen writes about dialect boundaries in an article entitled "De ferske vande og dialekterne" ['The waters and the dialects'], whose very heading indicates what it is all about. Broad research perspectives are delineated in the survey of the dialect research in Denmark and its relation to structuralism and sociolinguistics, and in the work dealing with the articles in the journal *Danske Folkmål* 1927–1999—what is described, what theoretical perspectives are brought to the fore in different periods and what is the primary target group of the studies? The selection is much stricter in the survey published in 2000 concerning the development of Nordic dialectology since 1969. Regionalisation is elucidated in a number of contributions, where for example the concept of 'region' is in itself discussed. To borrow words from a subheading, the author asks whether it is "begrundet at tale om regionalitet i Danmark" ['justified to talk about regionality in Denmark'] and in another contribution the headings asks: "Hvornår er en kode ikke længere den samme kode – og hvem afgør det?" ['When is a code no longer the same code—and who determines this?']. The contribution "Linguistic Variation and Composite Life Modes" from the Nordic omnibus *The Sociolinguistics of Urbanization* is a self-evident part of the volume. The dialect change on Funen is studied in one of the volume's articles with the aid of an implication analysis, and in another different attitudes to dialect and speaking dialect on Funen. Studies in the area of gender and language are also represented in the volume, and some articles also bring more longitudinal perspectives to the fore; among other things, the question is posed: "Er det svenskerne der har bragt uorden i diftongeringen i Sønderjylland og på Vestfyn?" ['Is it the Swedes who have caused disorder in the diphthongisation in the dialects in South Jutland and on Western Funen?']. The omnibus gives us a picture of a linguist who can take her point of departure in previous research but also constantly find new perspectives. Not least methodologically there is a great deal to be learned from the contributions to this volume.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Anita Schybergson, *Kognitiva system i namngivningen av finländska handelsfartyg 1838–1938* (Nordica Helsingiensia 17), Helsingfors: Institutionen för nordiska språk och nordisk litteratur, Helsingfors universitet 2009, ISBN 9789521056918, ISBN 9789521056925 (PDF), 355 pp.

At the centre of this doctoral thesis are the names of the ships of the coastal towns. Onomastic patterns and innovation routes are analysed against the background of for example the naming that exists among farmers' ships and ships from earlier periods in Finland and the other Nordic countries.

One aim is to see the names of ships as part of the contemporary culture—in what way do the names of ships reflect the society in which they were formed? In addition the metaphorical nature of the names of ships is studied as well as the cognitive systems that can be discerned in the names. The primary material consists of 2,066 instances of the towns' names of ships, while the comparative material consists of 2,535 names of farmers' ships and 482 names of merchant vessels from earlier periods, in other words a large and well-composed name material. Cognitive linguistics is dealt with in a theoretical section, and it may be observed that is has not been used to any appreciable extent in onomastics, although it has had a strong position as a theoretical foundation in other parts of linguistics, not least in Scandinavian studies. An important background chapter deals with shipping as an industry in the hundred-year period that is in focus here. The names of ships seen in a historical perspective are described in chapter 4, while chapter 5 is a quantitative analysis of the names in the merchant fleets of the Finnish coastal towns based on the categorisation. The following, real investigative chapters (chapters 6–11) reflect the naming variation chronologically and geographically, and the inclusion of the names of the farmers' ships also points to social variation. The naming, not least the system-bound naming, is elucidated in a chapter, and morphology and language belonging in others. It is interesting to see that names may be said to reflect different cultural vogues, technological development and different political ideals. The point of departure in cognitive linguistics elucidates metaphors and the prototypical character of the names. This also puts the reader a little closer to people's way of thinking about ships and shipping. Anita Schybergson's thesis gives us a deepened picture of an interesting onomastic material, more precisely a complete "nautonomasticon."

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Martin Skjekkeland, *Språk og samfunn i endring. Ein studie av tilhøvet mellom lokal identitet og talemålsutvikling*, Oslo: Novus Forlag 2009, ISBN 9788270995639, 261 pp.

Martin Skjekkeland's monograph *Språk og samfunn i endring* ['Language and society undergoing change'] deals with tendencies towards change in young people's spoken language in Kvinesdal, a district situated in west Vest-Agder in the southern part of Norway. What is left of the traditional language among the young people, and what development tendencies in the spoken language can be observed? But it is just as much a study of the connections between the degree of local identity and local belonging, on the one hand, and linguistic strategies, on the other, and hence the study has a more general significance. In the theoretical part the author describes the social variables that have come to be considered in the last decade, among other things based on Un Røynland's studies of language change in Tynset and Røros (2005) and Reidunn Herne's investigation of the Os dialect (2006). The background also includes identity research and research on social relations. It is also interesting to see how the author emphasises "personality thinking" in the work. He uses the terms *homo domesticus*—"den 'heimekjære' typen, som gav ut-

trykk for sterk tilknyting til bygda" ['the 'home-loving' type, who manifested strong association with the district']—and *homo dynamicus*—"den 'utovervende' typen, som såg fram til å koma i eit anna miljø" ['the 'extrovert' type, who looked forward to getting to a different environment'] (p. 65). The author emphasises that these terms should not be regarded as evaluative. This theoretically vigorous part, which comprises nearly 100 pages and contains far more than what I have been able to relate here, is followed by a broadly organised empirical study of the spoken language development. The language material was collected through group talks about the language and the view of the future and several interviews, for example a follow-up interview about identity and local belonging, and through an individual conversation about a comic strip. In all 41 informants took part in the study. A large number of results are accounted for, for example, as regards the development of final vocalisation in the dialect, secondary diphthongisation of for example long *u* and *o* and *i*-mutated present tense forms of strong verbs. In summary it is found that the *Homo domesticus* group has about 60 per cent traditional language forms on average, while the *Homo dynamicus* has an average of slightly less than 40 per cent of such forms—there is also a small intermediate group with slightly more than 40% traditional forms (p. 153). At the end of the book the author discusses what influence other dialects have on the Kvinesdal dialect and what role internal language development might have. Naturally, Martin Skjekkeland is also interested in regionalisation, and observes that linguistically the large municipalities of Flekkefjord and Kvinesdal "går i kompaniskap, og utviklar eit felles regionspråk" ['are acting in partnership and developing a common regional language'] (p. 225). The investigation of the current language change is well conducted and confirms many of the processes of change that are noticeable in the young generation in other places in the Nordic countries. Through its connection to the theoretical discussion, the study will no doubt serve as a model for other sociolinguistic studies in the Scandinavian area.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Jesper Swedberg, *Swensk Ordabok. Utgiven efter Uppsala-handskriften, med tillägg och rättelser ur övriga handskrifter, av Lars Holm* (Skara stiftshistoriska sällskaps skriftserie nr 46; Acta Bibliothecae Scarensis. Skrifter utgivna av Stift- och landsbiblioteket i Skara nr 12), Skara: Stiftelsen för utgivande av Skaramissalet 2009, ISBN 9789197736589, ISBN 9789185980284, 719 pp.

In 1986 Lars Holm defended his thesis *Swensk Ordabok – bakgrund och tillkomsthistoria* ['Swensk Ordabok ['Swedish dictionary']—background and history of origin']. It is laudable and very gratifying that he now publishes this edition of the dictionary based on the Uppsala manuscript with additions and corrections inserted from the other manuscripts. The edition starts with a broad background description where Swedberg's work is placed in a wider context. The dictionary may be characterised as pragmatic; it is sometimes normative but otherwise largely descriptive, open to largeness of vocabulary but, unlike some contemporary works, moderate with regard to etymologies. The de-

scription of Swedberg's lexicographic method is interesting. It is noticeable that over time he develops an increasing interest in "low language" such as swearwords and sex words. The sources and the references of the dictionary are also listed by the editor. There are many things in the voluminous dictionary that capture the present-day reader's interest: there are, to give some examples, words like *belghund*, *dyngiopuß*, *farnöte*, *fleck* [which has four meanings, for example 'village, small town'], *landamäre*, *räfwel* och *skamfärar*. Interestingly enough, some words are not explained, for example *fagermätt*, *feßbracka* och *ragaskerska*, and one might in some cases wonder about their meaning. The explanations of the words are often fairly short—which is regrettable for the present-day reader. The editor finishes his introductory part with some modestly worded "forward-looking considerations," for example the need for a survey of the dictionary's Latin equivalents. It is to be hoped that, based on the solidly edited publication, somebody will initiate research on Swedberg's Swedish dictionary. It must be said that the publication is a cultural feat in itself for which there is every reason to feel very grateful.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Kjell Venås, *Hans Ross. Målføregranskar, ordboksskrivar og grammatikar*, Oslo: Novus Forlag 2009, ISBN 9788270995400, 264 pp.

Kjell Vennås, who published a book on Ivar Aasen in 1996, has now written a biography of another important dialectologist in Norway, Hans Ross (1833–1914). The first chapters are about Ross's background, his studies and his authorship up to *Norsk ordbok* ['Norwegian dictionary']. Venås describes for example his temperamental dispute with Ludvig Kristensen Daa in some articles in the journal *Morgonbladet* in 1861. They give us the picture of a rather polemic writer. In order to understand Ross's linguistic achievements, where the keywords *race*, *nation* and *language* are important, chiefly in the discussion of the relation between nationality and language. In contrast to some other "dialect scholars," Ross has a liberal view of international words in the dialect. The work on the dictionary constitutes a central theme in the biography. We are given insights into different phases of the dictionary work. It is of course natural to compare Ross with Aasen's dictionary (1873). Ross obviously complements his predecessor with a large number of words. There are also differences in what the two dictionary editors include. Ross has thus more words with reinforcing prefixes than his predecessor, for example *bi-* in *bistira* ['stare fixedly and long'], *bæl-* in *bælfast* ['immovable'] and *stuv-* in *stuvbidja* ['pray tirelessly']. In addition Ross accounts for more derivations. There are also more expressive words in Ross's dictionary, words that may be said to shed light on "folkets sprogliv og aandsliv" ['people's linguistic and spiritual life'], in Amund B. Larsen's words. The numerous words in the dictionary denoting how people walk and move may also be mentioned in this context, words that might also be said to have an expressive semantic component. Ross's dialectological activities in other respects are described in the biography, above all his work with *Norske bygde-maal* ['Norwegian dialects']. In the last chapter we meet Hans Ross, the human being, although we hardly

get especially close to him. Some of the existing speculations about his person do not add much of interest either. Naturally enough the strength of the book lies in the description of Hans Ross's linguistic work.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Jonas Wellendorf, *Kristelig visionslitteratur i norrøn tradition* (Bibliotheca Nordica 2. Eds. Odd Einar Haugen, Karl G. Johansson & Jon Gunnar Jørgensen), Oslo: Novus Forlag 2009, ISBN 9788270995561, 437 pp.

Jonas Wellendorf's voluminous and highly readable monograph consists of a description of the Christian Nordic vision literature. The book is based on the author's doctoral thesis, which he defended at University of Bergen in 2007. After the first chapter, which presents the medieval view of translation and the research problems connected to the study of medieval translation literature, there follows the long chapter that makes a closer presentation of the vision literature. The definition section makes a detailed an initiated analysis of the term *leizla*. In contrast to Latin *visio*, this term accentuates "at visionæren rent faktiskt *ledes* gennem den anden verden. Videre betoner udtrykket *leizla* både patiens ('den ledte') och agens ('den ledende')" ['that the visionary is actually *led* through the other world. Furthermore, the term *leizla* emphasises both 'patiens' ('the person who is led') and 'agens' ('the leader')'] (p. 55). It is moreover shown in the chapter that the editors of the individual vision texts rather than the visionaries have been of importance for the design of the vision. Then the chapter presents a broad survey of literature and motive history describing the route of vision literature to the West Nordic area. The classical, Jewish and early Christian apocalyptic tradition is described, and there follows a section on Celtic (chiefly Irish), Persian and German traditions. The following chapter gives the reader a broad and interesting account of the Nordic vision literature that meets the author's criteria:

> (1) Den visionære skal få indtryk af at blive hensat til en anden verden (2) hvor flere lokaliteter besøges. (3) Oplevelsen skal forvoldes af en overmenneskelig magt, (4) finde sted under trance og (5) være beskrivelig
>
> ['(1) The visionary is to get the impression of having been moved to another world (2) where several locations are visited. (3) The experience is to be controlled by a superhuman force, (4) take place under trance and (5) be describable'] (p. 59).

These criteria tally with Gregory the Great's visions as well as with Furseus' *leizla*, Drychthelm's *leizla*, Duggal's *leizla*, Gundelinus' *leizla* and Rannveiga's *leizla*, texts that in most cases are fairly forgotten. Different problems are illustrated in this survey, such as examples of the problem of finding the original of the Nordic text. The fourth chapter, Den anden verden og Skt. Michael ['The other world and St. Michael'], gives a broad overview of the Christian personal eschatology from the introduction of Christianity in the West-Nordic area to about 1200. The fifth and last chapter follows up the previous chapter, goes through the classification of sin according to *Speculum penitentis*, and sin and

punishment in some translated visions and in other texts, for example an Icelandic woman's confession from the latter half of the fifteenth century, Skriptamál Ólöfar Loptsdóttur. Many different types of text are presented and analysed in Wellendorf's book, and several of them stay in the reader's mind after the reading, not least the texts about the painful punishments presented in the last chapter. Vision literature has previously been dealt with in survey articles, and details have been described in less voluminous scholarly works, but Jonas Wellendorf takes a firm hold of the subject, thereby laying a firm foundation of further research on the Nordic vision literature.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

Camilla Wide & Benjamin Lyngfelt (eds.), *Konstruktioner i finlandssvensk syntax. Skriftspråk, samtal och dialekter* (Skrifter utg. av Svenska litteratursällskapet i Finland 716), Helsingfors: Svenska litteratursällskapet i Finland 2009, ISBN 9789515831736, 300 pp.

The research presented in this volume was done within the framework of the project Svenskan i Finland. Syntaktiska drag i ett jämförande perspektiv ['Swedish in Finland. Syntactic features in a comparative perspective']. In the editors' informative introduction the reader is told, among other things, that the theoretical foundations upon which the project rests are construction grammar, interactional linguistics and, at any rate to some extent, contact linguistics. These theoretical perspectives are brought out to varying degrees in the individual contributions but are never completely abandoned, and they thus serve as a cohesive element among the different articles. The eight contributions may be listed under three main themes. The first theme consists of contributions in the area of argument structure. There is Nina Martola's article on constructions with *åt* ['to'] seen in a comparative perspective, and Beatrice Silén's contribution on construction patterns with bitransitive verbs with material from Fenno-Swedish and Standard Swedish conversations. These two deal with verb complements with prepositions. Martola shows for example that the Fenno-Swedish use of prepositions may sometimes cause difficulties in communicating with Swedes in Sweden. Pirjo Söderholm focuses on *komma* ['come'] as a particle verb, bases her study on a written language material and treats the subject with a certain diachronic depth. A second theme consists of the contributions dealing with the area of conversations and interaction. Mona Forsskåhl writes here about the phrase *de e bra* ['it's fine'] in Swedish conversations, and Jan Lindström deals with a phrase such as *Inte e de ju rimlit* ['It doesn't make sense'] with the negation *inte* in initial position. Lindström says for example that the feature of placing *inte* initially seems to have been more common in older Swedish and to have support in Finnish. It may then be concluded that an older Swedish linguistic feature has been given support by a structural parallelism in Finnish, which has both a preserving and a stimulating effect on placing *inte* initially in Fenno-Swedish (p. 187). The last three articles in the volume deal with problems in the regional syntactic variation. Siv Björklund analyses the use of *att* ['to'] after the auxiliary verb *börja* ['begin'] among Fenno-Swedish and national Swedish pupils,

and Ann-Marie Ivars describes in fairly great detail the Ostrobothnian genitive syntax. Camilla Wide deals with the definite article in the Fenno-Swedish dialects in an interesting and multi-faceted way, thereby providing impulses for further studies of this phenomenon in other Scandinavian dialects too. As a whole this is a readable volume illustrating linguistic empirism from different theoretical perspectives.

Lars-Erik Edlund
lars-erik.edlund@nord.umu.se

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Use indentation instead of a skipped line to mark the beginning of a new paragraph.

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3. References

Book

Paasi, A. (1996). *Territories, Boundaries and Consciousness. The Changing Geographies of the Finnish-Russian Border*, Chichester: John Wiley & Sons.

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Smith, J. (1998). "Social Work Education in Scotland," diss., University of Glasgow.

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Simmons, I. G. & Innes, J. B. (1996a). "An Episode of Prehistoric Canopy Manipulation at North Gill, North Yorkshire, England," *Journal of Archaeological Science*, 23, pp. 337–341.

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