NEO-ENTREPRENEURSHIP AS AN ADAPTATION MODEL OF REINDEER HERDING IN FINLAND[1]

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Abstract

Reindeer herding is an old and impressively adapted livelihood supporting a unique cultural continuity of both Sámi and Finnish populations in northern Finland. Through centuries both have adapted to the changing social, cultural and ecological circumstances. This article focuses on reindeer herders as active conformists who try to adapt personally and communally to changing environments. The main focus is on the adaptation models of full-time reindeer herders and especially on the rather new cultural trait that is called neo-entrepreneurship in this article as distinct from traditional reindeer husbandry as economic behaviour. The current discourse in Finland concerning reindeer herding has focused on resolving conflicts between herding and the other land use forms, such as forestry, tourism, nature conservation, hydropower and infrastructure development (Raitio 2001; Heikkinen 2003; Jokinen 2005). This article focuses instead on reindeer herders as active conformists who try to adapt personally and communally to changing economic, cultural and ecological environments.
Keywords: reindeer herding, Finland, neo-entrepreneurship, sustainable development

Reindeer Herding in Finland

Reindeer herding in Finland has developed rather differently than in its Scandinavian counterparts. To understand these differences, for example why reindeer herding is based on the '*paliskunta*' system[2] rather than that of Sámi villages or why the majority of herders are Finnish, we must briefly review the history of reindeer herding in Finland.

In Finland the development of reindeer herding can be divided into two main streams: firstly, a western tradition that developed from or in contact with the nomadic Sámi herding, and secondly, an eastern, somewhat older tradition, of small-scale reindeer herding originally practised by the Forest, Inari and Skolt Sámi and later on by Finnish peasants. An essential trait of all these latter cultures was that they combined several livelihoods (fishing, hunting, small-scale farming, herding, etc.). This eastern tradition in Finland utilised reindeer mainly as a transport animal, but also as a source of subsistence production of meat, pelts and bone. Important also is that almost all families had some reindeer, but only a few had plenty of them (Itkonen 1948; Kortesalmi 1996: 38–41).

The western tradition can be traced to nomadic Sámi culture that spread from central parts of Scandinavia during the sixteenth and the seventeenth

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centuries. The golden age of migratory Sámi culture in Finland was from the eighteenth to the nineteenth century. During this time the backbone of traditional nomadic Sámi culture evolved with milking of reindeer to transhumance between inland winter pastures (and villages) in the coniferous forests to summer pastures (and villages), e.g. along the Norwegian coastal area (Kortesalmi 1996: 36–37; Manker 1953). The historical Swedish district, the Lapland of Tornio, was split up in 1809 when Finland became an autonomous region of Russia. However, migratory reindeer herding lasted until border agreements between Sweden and Russia gradually tightened the policies for reindeer border traffic (1852 onwards). As a consequence reindeer pastures of Northernmost Finland become too small. During the nineteenth century a lot of reindeer Sámi moved to neighbouring areas with their herds or became a sort of contract reindeer herder (*raitio*) in the southern parts of Lapland. For example, Sámi established the *paliskunta* of Lappi to the northern Sodankylä area where only small-scale herding was known before them (Itkonen 1948; Korpijaakko-Labba 2000: 96–106, 142–7).

Nomadic Sámi culture affected the neighbouring communities of Skolts and Inari Sámi, as well as peasants in the municipalities of Muonio, Kittilä, Sodankylä and Savukoski. For example, *raitio* Sámi herders who also took care of most of the peasants' reindeer in the Muonio-Kolari-Kittilä region are still remembered to have milked their reindeer, and shared housing with them at the beginning of the twentieth century. Their traditional clothes are still considered to be the clothing tradition of reindeer-herding professionals (Heikkinen 2002: 94–98, 189, 192). In fact, Finnish peasants from the Tornio valley were first recorded to use reindeer in taxation and trade transportation in the fourteenth century, but the primary herding was already in the hands of the *raitio* Sámi (Kortesalmi 1996: 60–63). Larger-scale Finnish reindeer herding did not begin in the Tornio valley until the agricultural production of Tsarist Finland decreased during the nineteenth century. The cheap crops from Russian granaries might have caused this, and it seems that a lot of peasants compensated for decaying agriculture by improving reindeer herding (Kortesalmi 1996: 61, 74–75; Rosberg et al. 1931: 76–78).

Small-scale reindeer herding of eastern Finnish and Sámi cultures has also affected modern herding in Finland considerably, because Finnish authorities formed the management structure of reindeer herding from the base of this eastern tradition at the end of nineteenth century. According to the studies by Kortesalmi (1996) the roots of the *paliskunta* system lie in the system of small-scale herding of Sámi villages in Kemi valley (Lapland of Kemi). This system was consisted of: (i) free summertime grazing, (ii) village organisations of a specified neighbourhood and grazing area (*palkinen*) to gather reindeer from summer pastures for winter tending, and (iii) utilisation of reindeer mainly as a transport animal. Finnish peasants, mainly slash and burn (*kaski*) farmers, adopted this system when they colonised Sámi areas. This happened partly

through intermarrying and changing of ethnicity and partly by cultural learning. In any event, this kind of reindeer herding became a part of the settlers' traditional combination of livelihoods during the seventeenth and eighteenth centuries, for example in the municipalities of Pudasjärvi and Kuusamo (Kortesalmi 1996: 42–43, 183–191; Tegengren 1952; Onnela 1995: 117–18).

The *paliskunta* system spread from southeast to north from the beginning of the eighteenth century to the end of nineteenth century. It was established in the areas of small-scale reindeer herding and influential peasant culture, because the communally organised *paliskunta* system was developed initially to take care of multiple, but small reindeer herds of permanently settled population with a complex livelihood structure. The co-operative *paliskunta* system confronted prolonged resistance mainly in the areas of nomad Sámi culture, which were organised with their own reindeer village (*Siida*) system that, for example, emphasised kin organisations and year-round tending of reindeer. Despite this, *paliskuntas* (Käsivarsi, Näkkälä, Peltovuoma and Palojoki) in the municipality of Enontekiö, for example, were founded as early as 1894. This was four years before the Senate proclaimed the forming of '*paliskunta* in Crown forest areas used freely for grazing purposes'. The proclamation was based on negotiations that the Governor of Oulu organised between the years 1893 and 1896. The result of these negotiations was that the Senate decide to legalise the *paliskunta* system, maybe because it was already in practice in most parts of the reindeer herding area of Finland (OLKA Ej:1; Kortesalmi 1996: 189; Heikel et al. 1914: 15–42, 66–67).

Still the reindeer Sámi *siida* system survived in the open tundra area and even today forms the basis of everyday reindeer activities. Also in many Finnish *paliskunta* several subgroups (*tokkakunta*) take care of all everyday activities of herding. For many reindeer herders *paliskunta* means in practice to belong to an institution which communicates with other official institutions (Heikkinen 2002).

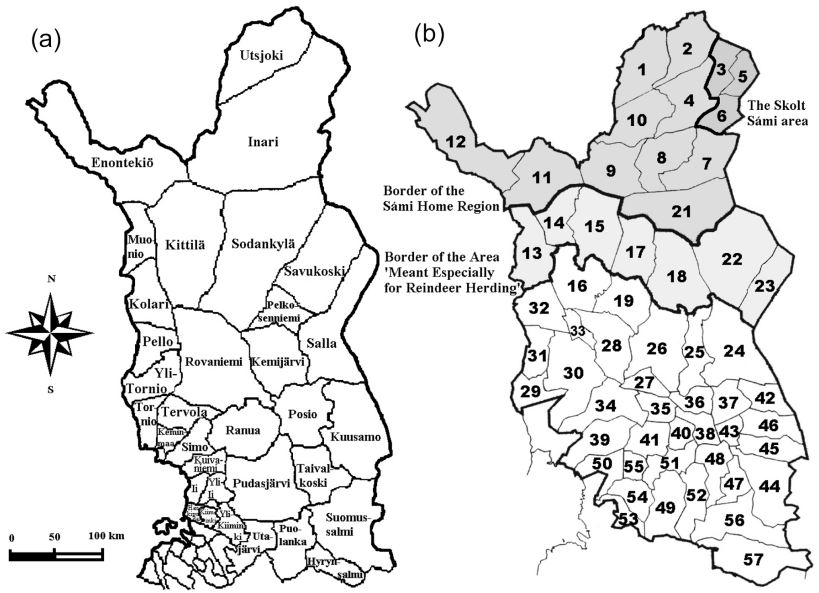
In reality, folk models of proper reindeer tending practices vary a lot in Finland depending mostly on the ecological and socio-historical circumstances. For example, both Sámi and Finnish systems vary from rather free grazing inside the large fences to systems of intensive herding by kin or village communities of reindeer with controlled circulation of pastures. There are also considerable annual variations. Regardless of different folk models for reindeer management, *paliskuntas* are the only legally representative organisations of reindeer herding in Finland (Heikkinen 2002).

The main motivation for the state to regulate reindeer herding was initially linked with the needs of agriculture, but in the beginning of the twentieth century protecting the interests of the rising forest industry become more important. Especially after the Second World War the value of state forests rose quickly, due to war compensation that was paid partly by logging state forests. Rapid industrialisation also meant the building of reservoirs, roads and

mines. The most recent factors to determine the value of state forests for reindeer grazing during the last decades of the twentieth century were, for example, large-scale tourism, the Chernobyl nuclear plant accident in 1986, causing collapse of meat prices, privatisation of state lands and the formation of the Forest and Parks Service (*Metsähallitus*) (Massa 1994, Heikkinen 2002). Of course, the availability of reindeer pastures is crucial, if reindeer herding is to be sustained by free grazing without supplementary winter feeding. However, this goal seems to have become unfeasible, because of the intensification of other land use forms, and supplementary winter feeding is becoming more and more normal and approved practice (Työryhmämuistio MMM 1999: 6; Reindeer herding (accessed 18 May 2006)).

Figure 1(a) presents the municipalities and Figure 1(b) the *paliskunta* of Finland. Today the reindeer herding area of Finland is around 114,000 km^2, around one-third of the entire country. The number of breeding stock (post-slaughter herd – *eloporot*) is about 200,000 head, and some 700 families earn most of their income from reindeer, while it provides supplementary income for another 900 families. The total number of individual owners is around 5500. Only one-third of the reindeer in Finland graze in the Sámi Home region, but the relative economic importance of reindeer has been estimated to be higher there than in the southern parts of the herding area. Annually some two million kilos of reindeer meat come to the markets, and the approximate value of all unprocessed reindeer meat is €10–12 million. Figure 2 shows the trends in the reindeer economy in Finland during the period 1977–2004. Currently there is no information about the gross economic value of the reindeer economy (e.g. inclusive of tourism, refining, indirect value), but it has been estimated to be many times that of the value of unrefined meat markets (Reindeer Herders' Association (accessed 18/5/2006)).

The central administration of reindeer herding in Finland is organised by the Ministry of Agriculture and Forestry (MAF). Issues related to herding are divided between three departments. Most important is the Department of Fisheries and Game, which is responsible for general policies and goals of herding, the maximum amount of reindeer permitted, predator compensations and the national subsidy (€20–27) that is paid for reindeer older than one year. It is also responsible for the implementation of legislation, the funding of the Reindeer Herders' Association and state border fences. The Department of Agriculture, in turn, is responsible for the implementation of other subsidies defined in Finnish and European Union (EU) legislation. Finally, the Department of Food and Health directs and controls issues that are related to the health of reindeer or consumers and the hygiene of the marketed meat and processing facilities. The Ministry also supervises its subordinate research institutes. The Finnish Game and Fisheries Research Institute and the Finnish Forest Research Institute carry out, for example, pasture research. The National Veterinary and Food Research Institute of Finland handles veterinary, animal



Key to *paliskunta*

1 Paistunturi
2 Kaldoaivi
3 Näätämö
4 Muddusjärvi
5 Vätsäri
6 Paatsjoki
7 Ivalo
8 Hammastunturi
9 Sallivaara
10 Muotkatunturi
11 Näkkälä
12 Käsivarsi
13 Muonio
14 Kyrö
15 Kuivasalmi
16 Alakylä
17 Sattasniemi
18 Oraniemi
19 Syväjärvi
20 (discontinued)
21 Lappi
22 Kemin-Sompio
23 Pohjois-Salla
24 Salla
25 Hirvasniemi
26 Pyhä-Kallio
27 Vanttaus
28 Poikajärvi
29 Lohijärvi
30 Palojärvi
31 Orajärvi
32 Kolari
33 Jääskö
34 Narkaus
35 Niemelä
36 Timisjärvi
37 Tolva
38 Posion-Livo
39 Isosydänmaa
40 Mäntyjärvi
41 Kuukas
42 Alakitka
43 Akanlahti
44 Hossa-Irni
45 Kallioluoma
46 Oivanki
47 Jokijärvi
48 Taivalkoski
49 Pudasjärvi
50 Oijärvi
51 Pudasjärven-Livo
52 Pintamo
53 Kiiminki
54 Kollaja
55 Ikonen
56 Näljänkä
57 Halla

Figure 1: *(a) Municipalities in Finland. (b) The* paliskunta *in Finland*

disease, and foodstuff research, while advising and controlling slaughterhouse hygiene inspections. Employment and Development centres (TE-Centre) enforce laws and regulations and allocate subsidies. TE-centres also prepare summary reports about predator compensations, but municipal agricultural authorities make the payment decisions. An exception is the compensation for damage inflicted by golden eagles, which is controlled and paid by the Ministry

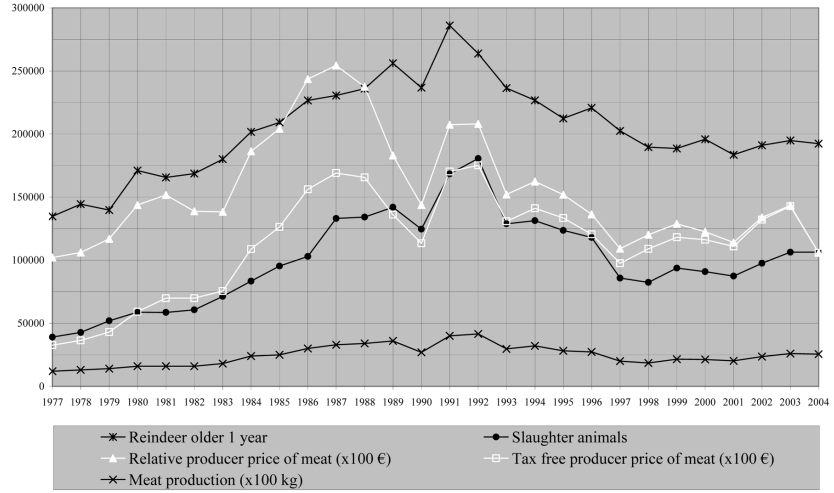


Figure 2: *Quantitative development of reindeer economy in Finland 1977–2004*[3]

of the Environment and its subordinate regional centres (Työryhmämuistio MMM 1999: 6; Finland's environmental administration (accessed 18 May 2006)).

According to the Reindeer Husbandry Act (1990/848), all of the *paliskuntas* form the Reindeer Herders' Association (RHA), which functions as their joint body, develops reindeer herding and its economy, promotes research on reindeer, arranges advisory services and is responsible for public relations (the journal *Poromies*, internet services, research publications). The RHA's general meeting (reindeer parliament) consists of representatives of every *paliskunta* (56). Each *paliskunta* chooses a representative to the RHA's board for a period of three years. In this meeting, every *paliskunta* has one vote for every incipient thousand reindeer they own. The board of RHA has 16 members, one of whom is a delegate of the MAF, and another comes from the Sámi parliament of Finland. The RHA is funded by the MAF. The RHA, for example, approves new earmarks (in pursuance of the right of ownership). New earmarks (and owners) are introduced by the so-called '*merkkipiiri*' – earmarks regions that are responsible for validity and sufficient margins of different earmarks. Earmark regions are set by the MAF, but in reality, for political reasons, many times *paliskuntas* choose representatives to the board of RHA from their earmark region, but this is not an official rule.

A secondary management level is composed of administrative bodies created for other purposes, but they nonetheless affect the prerequisites of reindeer herding. For example, the Provincial Offices of Lapland and Oulu enforce the borders of the *paliskuntas*, handle complaints, maintain registers and

arrange inspections of hygiene and animal protection (Työryhmämuistio MMM 1999: 6). The Regional Councils of Oulu and Lapland influence herding indirectly through strategic planning and regional zoning, i.e. by developing activities that affect reindeer pastures. The Regional Councils also have invested EU regional development funds into projects on reindeer economy (The Regional Council of Finland (accessed 18 May 2006)). The Forest and Park Service (*Metsähallitus*) is a state-owned enterprise that manages state forests and water property. The majority of the land in the reindeer herding area of Finland is owned by the state and managed by *Metsähallitus*. The *Metsähallitus* consists of several rather independent management sub-units that are responsible for wood production (Forestry), tourism (Wild North), land sales and rental (*Laatumaa*) and extractable soil resources (*Morenia*). In addition, the Natural Heritage Services are responsible for the management of nature conservation areas and National Parks (*Metsähallitus* (accessed 18 May 2006)).

The Sámi Parliament in Finland (*Sámidiggi*) is the highest political institution of the Sámi people in Finland. Its purpose is to plan and to fulfil the cultural autonomy of the indigenous Sámi, a right that is protected by the Finnish Constitution. The Parliament works under the Ministry of Justice, but does not belong to the official state administration. It has no decisive power, but it can make initiatives, statements and announcements (*Sámidiggi* (accessed 18 May 2006)). Municipal authorities, for example secretaries of agriculture, manage very practical tasks concerning reindeer herding. Among other things, they advise, help fill out subsidy applications, and forward these to the state administration (Local Finland.fi (accessed 18 May 2006)).

Challenges to the Sustainable Reindeer Economy in Finland 1980–2000

The discourse about the sustainability of reindeer herding in Northern Finland dominated the period 1980–2000. Ecologically-focused scientists and administrators emphasised overgrazing problems, while reindeer herders and especially socially-oriented researchers were more worried about socio-culturally and economically sustainable reindeer herding. In the late 1990s, simple overgrazing models were challenged by interpretations which stress the role of other land use forms as an important cause of overgrazing and the corrupting of the reindeer economy (Kumpula et al. 1997; Hyppönen et al. 1998; Heikkinen 2002; Hukkinen et al. 2002).

Evidently all these views are partially correct. The 1980s were characterised by especially good weather conditions. The reproduction of reindeer was much better than herders expected. The relatively high meat price (€7– 9.5) fostered an expansionist mood inside the profession, but slaughtering and marketing did not develop as fast as the amount of reindeer (Figure 2). When the Chernobyl nuclear plant accident in 1986 weakened the image of reindeer meat, the market became overloaded. Severe consequences followed in 1988–1989 when the largest reindeer buyer in Finland 'Poro ja Riista ltd' could not handle the

Figure 3: *Field slaughtering in Muonio 1998 for direct sales to consumers (Photo: Hannu Heikkinen 1998)*

enormous quantity of carcasses. Autumn was warm and the cold storage chain failed, causing some of the meat to spoil. A portion of the spoiled meat came to the market, and meat prices fell drastically (from €7 to €5/kg). During the next two years the amount of reindeer increased quickly and caused overgrazing in large areas. Sudden collapses between 1989 and 1992 almost halved the number of reindeer, especially in communities that did not initiate supplementary feeding. Triggering events were severe winters and extremely heavy snowfalls, supposedly caused by the so-called North Atlantic Oscillation phenomenon (NAO) (Heikkinen 2002; Helle et al. 2001).

When the official marketing chain broke down after the bankruptcy of 'Poro ja Riista ltd', herders increased direct sales. In a way herders became salesmen, as they had been before the development of the separate meat processing and market industry after the Second World War. In certain *paliskuntas* almost all reindeer meat was sold directly from field slaughtering sites adjacent to roundup fences (Figure 3). This was rather an arduous system for herders, but also a productive sideline. This system had to be abandoned when Finland joined the EU in 1995 and direct sales were allowed only on a small scale and to first-hand consumers. Instead expensive modern slaughterhouses had to be built for middlemen. The change was gradual, and varying EU directives slowed down the process. Finally, in 2000, the last slaughterhouse was built at Pudasjärvi, and the southern herding area came into compliance with EU-style meat production standards (Heikkinen 2002).

As a consequence of lost and weakened pastures, overgrazing, increasing costs for fodder, machinery and fuel, combined with decreasing meat prices (in 2004 under €4/kg) and decreasing incomes from other aspects of the reindeer economy, many herding families drifted into severe problems at the turn of the twenty-first century. Many of them had built their houses with special loans meant for families and persons practising reindeer husbandry or small-scale 'natural economy' which is legally defined as the utilisation of several renewable natural resources in the seven northernmost municipalities of Finland. Usually natural economy means a combination of small-scale herding, tourist programmes (e.g. reindeer drives), seasonal fishing, trapping of willow ptarmigan, and sales, for example, of berries and firewood. These loans were quite cheap, but the profitability of natural economies decreased rapidly, except in the tourist business, and at the turn of the century, the state had to enact laws to avert a wave of household bankruptcies. Reindeer herding and other natural economies proved to be vulnerable in a modern investment economy that presupposes a more steady and predictable income, far less dependent on natural fluctuations (Heikkinen 2002).

Theoretical, Methodological and Empirical Background

The current study on reindeer herder neo-entrepreneurs builds upon my doctoral thesis. The research area of my dissertation study consisted of four *paliskuntas* from the western part of the reindeer herding area of Finland. In the Sámi Home Region, I studied cultural change in two reindeer villages (*sida*), Raittijärvi and Govan-Labba, in the *paliskunta* of Käsivarsi. From the border of Finnish and Sámi areas I examined the central and largest herding coalition (*tokkakunta*) of the *paliskunta* of Muonio. I studied southern reindeer herding in the *paliskunta* of Kiiminki and Kollaja, especially the herding coalition operating south from the river Ii. Reindeer herders in Käsivarsi are all Sámi, while geographically the area is situated along the border between Norway and Sweden and is characterised by an open semi-tundra environment, with treeless mountains and sparse forests in the lower altitudes and river valleys. Muonio is ethnically Finnish today, but has strong traditional contacts with the Sámi. Geographically its typical features are open semi-tundra and coniferous forests. Kiiminki and Kollaja are situated in the southernmost part of the reindeer herding area and are characterised by marshy lands and mixed forests. Traditionally reindeer husbandry in the south has only sparse historical contacts to pastoralist Sámi and is an example of the development in Finland of a peasant mode of multi-livelihood economy which includes the keeping of reindeer.

A theoretical model to study and explain reindeer herding adaptations was composed of ecological, interpretative and cognitive anthropological theories

(Steward 1972; Bennett 1976; Geertz 1993; D'Andrade 1995; Shore 1999). The primary field method was participatory observation. In the study areas the aim was to take part in every main work period of reindeer herding. As a supplementary method, I utilised both a posted inquiry and theme interviews (42 in total, 28 recorded). The relationship between the larger society and reindeer herding was studied primarily on the basis of newspaper articles (1994–2001) of the *Lapin Kansa* (Rovaniemi) and *Kaleva* (Oulu).

I interpreted and divided the strategic argumentation of reindeer herders, which I found to underlie decision making leading to diverse observable adaptive behaviour, into three cultural adaptation models with seven sub-models. These are: (1) traditional models of reindeer herding as (1a) 'the indigenous', (1b) 'the way of life' and (1c) 'the natural'; (2) economic models of (2a) 'the full-time profession' or (2b) 'the subsidiary livelihood'; and (3) adaptation avoidance models – (3a) 'the opposition to change' and (3b) 'the profit or quit' models. It is important to note that these models are constructed from arguments culled during fieldwork, and personal argumentation given by informants are embedded in layers of motivation which will be revealed differently in different contexts. For example, some young observably economically oriented herders work long periods in other professions and invest their earnings in reindeer herding. They are aware of poor profitability of herding, but economic calculations are applied differently in different spheres because of cultural meanings and value systems.

Common to the 'traditional models' category was that these had similarities with some post-modern media discourses. For example the model of 'indigenous reindeer herding' was typical to Sámi herders and it gets a lot of its content from the global political indigenous movement. 'The way of life' model was a kind of a counter or parallel political reaction of Finnish herders in families with a long tradition of husbandry. Similarities between these models were revealed, for example, when the reasoning of herders about their land rights was compared. The third sub-model was named 'natural reindeer herding' and it had a lot in common with romantic and global notions of organic production and nature conservation. The economic models of 'the full-time profession' or 'the subsidiary livelihood' were recognisable because of modern economic reasoning, focusing on income, expenses and final profit. They also had an orientation to better profit through further investments. The first one also resembles the administration's goals for the future development of reindeer herding. The last category, the adaptation avoidance models, was created to demonstrate the reasoning of the quitters. Characteristic of 'the opposition to change' sub-model was that these herders had a very steady image of what reindeer herding has been, is and should be, and if they cannot continue with that kind of herding, they prefer to quit. In contrast, the reasoning in the 'profit or quit' sub-model was economic, but they had a little or no will to develop their livelihood further.

Neo-Entrepreneurship as Adaptive Behaviour

The economic strategy to prefer and develop reindeer herding as a full-time profession was chosen for deeper study; firstly, because this model seems to be also the development scenario of the central administration (Raitio & Heikkinen 2003), and secondly, because in the field I observed that herder communities are already at their wits' end with an adequate, committed and available workforce. Full-time professionalism of the existing corps of herders is hard to combine with the fact that the state regulates the total amount of reindeer. In practice, increasing the number of full-time professionals necessitates decreasing the total amount of herders or remarkably bettering net incomes directly from reindeer.

Another way to improve profitability while maintaining a reindeer-based economy is to develop reindeer income in new ways, for example through tourism. In reality, herders have severe problems with increasing their income without corrupting their livelihood from other sectors. For example, in some cases the herders' effort to increase the amount of reindeer led to economically unsustainable investments of money, work time and machinery for calving pens and supplementary feeding.

Yet another solution was gathering additional income from part-time jobs to the side of reindeer activities. However, the result of this was that herders had to give up winter grazing, build reindeer pens, and begin expensive full-scale winter feeding, all of which eventually led to their social and cultural alienation from the original herder community. Yet the development of full-time professional reindeer herding is also a shared meaning and value among herders themselves. The principle that every *paliskunta* needs several full-time professionals to operate properly seems to be widely accepted. It was estimated that at least 1–3 professionals are needed per herding unit to organise practical efforts like round-ups and fence repairs. This allows other members to have more choices in building up their adaptation strategies.

For these reasons, research was focused on the adaptation strategies and adaptive behaviour of professional full-time herders, or herders who intended to become such. Special focus was on a new trait: evolving neo-entrepreneurship. Further study targeted all official neo-enterprises that (i) upgrade and utilise reindeer meat (also antlers and pelts) and (ii) are founded and carried on by reindeer herders. In this context, official status means that the enterprises under study must have state authorisation (facility number), a registered business name or be an organisation such as a 'ltd'. Here these are called reindeer neo-enterprises in order to distinguish them from aspects of traditional reindeer culture, with its own traditional modes of meat upgrading and direct sales. Specific research questions focus on (i) the division of labour, (ii) secondary industries and (iii) the organisation of interaction with other communities. The research area consisted of the whole reindeer herding area of Finland.

Neo-entrepreneurship formation is interesting, because it is a logical and gradually progressing adaptation model of traditional reindeer professionals.

Because this kind of modern neo-entrepreneurship seems to be the development target of the central administration of reindeer herding in Finland, it is essential to study at an early stage what limits reindeer herding has with its development as an independent, modern, investment-intensive, but mainly economically valued and supported endeavour.

Neo-Entrepreneurship as a Model of Adaptation

Reindeer herders have several adaptation strategies to deal with current environmental conditions. Here I shall focus on how reindeer herders try to improve their economy by enhancing the processing level of their primary production. In my dissertation the adaptation model of the professional herder was characterised as noteworthy for its economic reasoning. This kind of argumentation was typical for those who owned significant livestock or at least wanted to get full-time earnings from reindeer. Full-time reindeer herding was appreciated by them as a traditional and valuable lifestyle. They evaluated traditions, customs and technologies on the basis of practical results. For example, supplementary feeding was applied if it was considered profitable. This utilitarian cultural model was not weakened by moral or traditional notions of how things should be, e.g. 'naturally'. Only results were counted. This cultural model seemed to be typical in the areas where there was still room for larger-scale reindeer herding, and where other human impacts on the environment were rather local. The content of this model was formulated in the social interaction of the herders' working day. The concept that summarises the salient meanings of this model was reindeer herders' craftsmanship in which the basic criterion was productivity (Heikkinen 2002).

In this cultural model, priority was given to direct perceptions. The most valued information in establishing causal chains was obtained by personal experience. The world was seen as manageable through personal craftsmanship, and hence the model was not focused on avoiding risks. Scientific, professional and traditional information was utilised if considered profitable, but opinions of non-herders were considered of relatively little value. The typical adaptation strategy, of course, was to develop the profitability of the livelihood. Political lobbying for better subsidies or for protection of important winter pastures are secondary strategies. Losses of reindeer in traffic accidents or to predators were not tolerated by these herders, even if reindeer losses were compensated, because these losses decrease herd control and inhibit herder professionalism. Instead the herders keenly tried to avoid traffic losses by building more roadside fences and tried to limit predator damage by hunting them. For these herders, winter feeding, fodder farming, use of parasite medicines and utilisation of helicopters when collecting reindeer at round-ups were seen as totally acceptable, as long as final profits would

increase. Typical action for herders who argued according to this cultural model was to found a modern enterprise to enhance the processing level of sold meat products and in this way improve the profitability of the profession.

Meat Processing Neo-Enterprises

During the period 2004–2005, I studied 17 enterprises and interviewed 20 reindeer herder neo-entrepreneurs. Depending on definitions, the total number of herders' neo-enterprises in Finland is currently approximately 22–24. The number of active entrepreneurs is at least three times as high, because many limited companies, co-operatives and different coalitions have 2–14 associates. Currently only three of the studied enterprises are managed by Sámi. However, if all Sámi neo-entrepreneurs are taken into account, about one-third of the neo-enterprises are in Sámi hands. Also entrepreneurs from the south-east corner of the reindeer herding area of Finland (Kainuu) are missing from this analysis, since local meat processing is only at the planning stage. The great distance to the nearest EU-qualified slaughterhouses can partly explain this underdevelopment, because transportation of reindeer back and forth decreases the profitability of meat processing. This means that the initial investments are rather high including EU-certified slaughterhouse and processing facilities.

The lowest organisational level is with the entrepreneurs who sell and process reindeer meat without any particular form of company. They are still taxed and administered through the common reindeer herding regulations of Finland. They differ from traditional modes of direct sales because they utilise in one way or another modern registered meat processing facilities, and their end products are prepared to modern commercial standards instead of being simply whole carcasses. Their customers are also partially middlemen, such as restaurants. Usually one partner has invested in modern meat processing facilities, and others pay rent or compensation per kilo of processed meat and share expenses according to verbal or formal contracts. Oula Kustula from Inari, for example, is this kind of entrepreneur. The Kustula family owns the processing facility, built in to their abandoned sheep shed, but expenses are shared with their associates (14 families) according to the number of reindeer owned by each family, a traditional model in reindeer herding in Finland. Some herders have built their own, usually very small facilities, like Veijo Leppäjärvi from Savukoski. Common to this kind of enterprise is that the processing has been kept as flexible as possible and marketing is committed only as direct sales of reindeer to individual customers. However, this kind of entrepreneur usually co-operates with other local enterprises from the same traditional herding unit.

A steadier organisational level is revealed in the business names (tmi), which still are usually more or less family enterprises, although some of these families have rather extensive businesses and operate in diversified industries. For example 'Isto Hietala tmi' from Savukoski operates in small-scale meat processing, tourist programmes and maintenance services (maintenance of

several cottages of the Forest and Park Services). 'Tannilan porotuote tmi' from Yli-Ii is a family enterprise, which renovated their facility from their old cow barn after abandoning agriculture. Their processing is rather extensive and also includes activities such as meat chopping schooling that they organise in their facility.

The co-operatives are a more complex form of local neo-enterprise. For example 'Kuivaniemen tilaliha' was founded together by herders from the *paliskunta* of Oijärvi and farmers from Kuivaniemi, but herders have since bought the farmers out, and the co-operative has concentrated on both slaughtering and processing of reindeer. Processing is focused on the meat from the reindeer of the 11 partners, but half of the work is devoted to freight contracts and slaughtering for other herders. The municipality of Kuivaniemi, the *Paliskunta* of Oijärvi and the turf producing company 'Kuivaturve' are supporting partners. Common to the co-operative model enterprises is that they buy reindeer meat processed from partners and one herder has specialised in organising meat processing and marketing. Other partners participate when needed. The natural resource co-operative of Lokka village from Sodankylä engages in a broader range of activities, ranging from processing and marketing fish and reindeer under the trademark 'Lokan jaloste', to contract maintenance services, which include, for example, a local school and rental cottages.

The most numerous and maybe modern and strict organisational form is the public limited company. Their size varies from a one-man company, such as

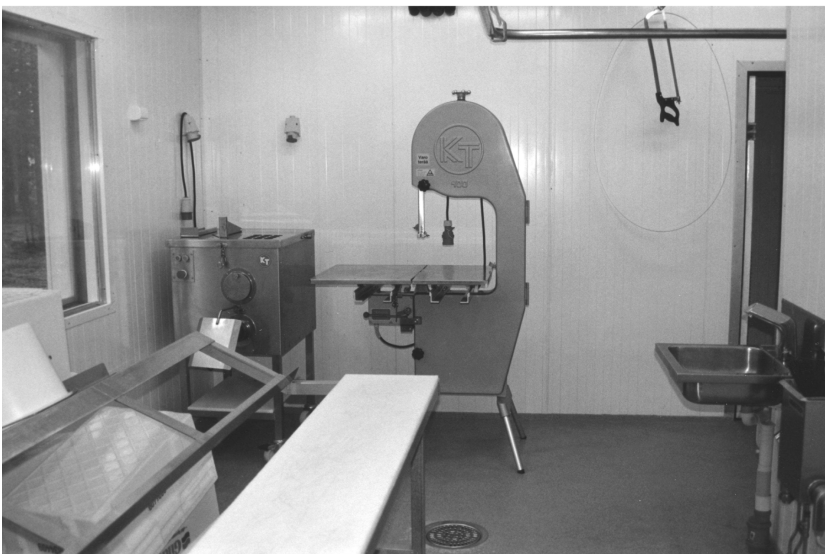


Figure 2: *Meat processing facility of 'Sevetin Kiela ltd', enterprise of four Skolt Sámi herders from Sevettijärvi (Photo: Hannu Heikkinen 2004)*

'Maltiolan jaloste ltd' from Salla, to rather large companies, such as 'Levi Food ltd' from Kittilä that has seven equal shareholders from five neighbouring *paliskunta* and an appointed managing director. Limited companies might also include non-herders as supporting shareholders like 'Arctifood ltd' from Kittilä.

The largest and 'loosest' neo-enterprise currently is the 'Consortium *Poromiehet*' which has six partner *paliskuntas*. All but one has a Sámi majority. The management of the consortium is in the hands of the leaders (*poroisäntä*) of the partner *paliskunta*s, but the only hired employee, Timo Moilanen, organises all practical work. The scale of their processing is rather large, 7500 carcasses in 2004, but only minor work such as packing, marketing and delivering is done in their rented facilities in Vuotso. Their logistical business idea is to organise, store, market and deliver the bulk of their reindeer on the basis of freight contracts with other enterprises. In fact, at least four of the herder neo-entrepreneurs studied do freight processing (subcontract processing) for 'Consortium *Poromiehet*'. Hence the company is a good example of modern network economy.

Meat Processing and Products

The lowest level of upgrading is the traditional carcass-based direct sales that almost all herders still carry on. Instead only neo-enterprises that have their own small-scale slaughterhouses like co-operatives 'Kuivaniemen *tilaliha*' and 'Kotaporo' engage in it on a larger scale. The next level and fast-spreading upgrade trend is to chop up reindeer into basic body parts. This kind of simple butchering is practised by almost all neo-entrepreneurs and even traditional herders in their own direct sales, but entrepreneurs also do contract butchering for other herders and even customers who have bought whole carcasses. The common opinion of neo-entrepreneurs is that the time of carcass-based direct sales are over. Currently the bulk of even local customers want their reindeer meat appropriately processed and chopped into ready meal portions. The culture of consumption has changed, and today customers do not even have the cutting equipment, freezers and time and skills to handle carcasses. Instead, fresh-meat marketing to middlemen has become almost insignificant.

The most prevalent up-grade level in small-scale reindeer meat processing is frozen meat products and traditional dried meat. This is common to all neo-enterprises. Primary products are different boneless roasts, fillets and sliced meat (reindeer fry meat – *poronkäristys*), but minced meat is rather rare and frequently processed further to sausages. Almost all neo-entrepreneurs have some special products like shin disc or rib cuts. A far-flung slogan is that 'we chop reindeer into portions that the customer orders'. This principle is especially important when operating with restaurants and if enterprises want to compete with bigger producers. Nearly half of the enterprises produce reindeer meat assortment boxes (*poropoksi*). The idea is to cut a half or whole

reindeer into ready meal portions, to be packed in a cardboard case and sold directly to customers. Many want to be proclaimed as father to this excellent idea. The basic problem with the higher level processing mentioned above, is the lack of standards. For example, what body parts are used for certain products? Can the same names be applied to products derived from reindeer which have been processed or cut differently? The current free-for-all situation, most importantly in relation to naming and pricing, might become clearer with recently published regulations (Vääräniemi 2005).

The highest processing level of these small-scale producers is cold, warm and 'cool' smoked reindeer and special groats of smoked meat for restaurants. Different cold cuts and wurst-type sausages are also common, but only one enterprise processes grill (flour added) sausages, because these were considered rather uncompetitive compared to bigger producers' products. Rather rare are also different canned meats. Many had tried them, because of their long shelf-life and sales period, but the profit is considered rather weak compared to the time spent processing and developing canned products. Almost all enterprises have some smoked meat products, especially cold smoked reindeer meat, but the typical arrangement was that some neo-enterprises specialised in smoke-curing and also carried this out for other entrepreneurs. Freight processing, especially meat cutting for bigger companies, was common business for entrepreneurs who had made big investments in production facilities.

The Emergence of Neo-Enterprises

There are three prominent traits in the development of reindeer herders' neo-entrepreneurship in Finland. The first one is the personal influence of one trainer of professional meat carvers, Pentti Juotasniemi. He has schooled almost every neo-entrepreneur, and many said that, without his personal enthusiasm and developmental support, they would not have founded their enterprises. Secondly, there have been two waves of development of entrepreneurship; the first was in 1988–1992 after the havoc of the Chernobyl nuclear accident and the 'rotten meat quarrel' that led to the bankruptcy of 'Poro ja Riista ltd' and the collapse of reindeer meat markets. The second was in 1996–2004, as a consequence of the current market disorder that began with the bankruptcy of the Norwegian company 'Renprodukter', the import of reindeer from Russia, and the forced slaughtering in Finland. The third notable factor is the applied 'folksy prudence principle': the low profile of monetary investment, the use of equity capital, the large portion of personal and voluntary work time investment and the gradual development and acquisition of machinery.

We can see frugality also in the utilisation of recycled material and machines and innovative solutions in delivering, in which neo-entrepreneurs utilise a certain kind of reciprocal human relations system. Here a sort of friends, often called *väärti*, from southern Finland work as middlemen who

collect commissions, organise payments and arrange local delivery of ordered products. This kind of direct marketing is organised, for example, in southern residential suburbs, workplaces and universities. Innovative is also the common economic arrangement that companies buy reindeer processed from their partners. In this way the surplus value is included in the meat price instead of the salary.

Current trends in neo-entrepreneurship are specialisation, networking and contract freight processing (subcontract processing). It seems evident that this kind of co-operation is needed and fruitful, but it necessitates minimal internal competition. Specialisation might be a key for this and it is already taking place. Entrepreneurs estimated that 30–40 small-scale meat enterprises might be a suitable number to bring healthy competition to the reindeer economy in Finland that is otherwise in the hands of a couple of big buyers who can more or less dictate the producer prices. But this can happen only if these small-scale producers specialise in separate markets like the servicing of local tourism.

Also different starting points and pricing create contradictions. Some use equity capital for investments, while others had to take loans, and under pricing of own work time was mentioned as common problem. Pricing differences are considered to be due to the poor education of herder neo-entrepreneurs. Only two of the studied entrepreneurs had taken separate economics schooling. However, almost all had taken at least a few market meat-processing courses. The widening education of entrepreneurs in the economic sector should be the next target for government educational policy.

Herder entrepreneurs have severe problems with the division of labour between their enterprises and their traditional reindeer profession. Almost all entrepreneurs were also full-time herders, and they had a lot of responsibilities in the labour of their entire *paliskunta*. Gathering reindeer, organising round-ups, and working on meat processing must be done nearly simultaneously from the end of September to December. Many entrepreneurs said that it is common that they process meat at night while working as traditional herders during the day. Only minor processing can be done, for example in the spring, when traditional herding jobs demand less attention. One solution has been to decrease the size of round-ups and organise slaughtering according to a more scattered schedule. Then entrepreneurs can process more local reindeer, but on the other hand, round-ups are delayed, and the reindeer lose weight. Another adaptation strategy is to build bigger facilities, especially with more freezers and coolers, and to hire meat carvers during the seasonal rush. Many had done this, but it creates additional pressures on pricing, which is possibly the basic problem of the current reindeer economy. Also in many *paliskuntas* the availability of skilled workers is a problem, because all potential skilled and educated helpers during the busy periods are also herders, who are likewise busy organising round-ups.

Discussion

To conclude, my findings on the development of neo-entrepreneurship of reindeer herding in Finland are as follows:

1. The markets for meat processing and other sidelines are dependent on the development of the local tourist sector in northern Finland. Only minor markets are accessible for small-scale enterprises from more southern areas.
2. Healthy neo-enterprises do not guarantee healthy traditional reindeer economy (primary production) without developing a proper strategy for division of labour, because both are tied to the same the seasonal rush (autumn round-ups), albeit local processing decreases the pressures to increase the number of animals.
3. Economically healthy investment level and good internal possibilities for co-operation could be achieved with the help of specialisation. In this way, internal competition is reduced and not all entrepreneurs have to buy expensive facilities. Also co-operation might possibly be a culturally and sustainable solution, because reindeer herding is traditionally a communal-based way of life.
4. The socio-historical circumstances create different starting points in the development of neo-entrepreneurship among Finnish and Sámi herders. The common situation is that Finnish neo-entrepreneurs have roots in northern agricultural production, and hence they can utilise abandoned farm facilities in new modes of production, but they have rather fewer reindeer. On the other hand, Sámi herders have many more reindeer per owner, but few of them possess the know-how to utilise old agricultural facilities and machinery.

The central administration of Finland has tried to improve the profitability of reindeer herding by increasing single herd sizes by subsidies and by withdrawing support from small-scale herders (Työryhmämuistio MMM 1999: 6). As a consequence the workforce is decreasing, and the division of labour is already a problem for the reindeer economy. Mechanisation has been the common adaptation strategy, but equipment like a helicopter is expensive, and the invested money goes outside the local economy. All this may lead to a vicious circle of increasing cost and expanding production without improving profits (Heikkinen 2002; Hukkinen et al. 2002).

The development of neo-entrepreneurship is an adaptation model of full-time reindeer herders, whose prime intention is to get 'honest' earnings from reindeer in a situation where herd size is limited and production cannot be extended in an ecologically, economically and socio-culturally sustainable way. Almost all neo-entrepreneurs considered themselves firstly reindeer herders and secondly entrepreneurs. Besides, all but two neo-entrepreneurs, who intend to expand production, define the limits of expansion to the level where they can still take part in traditional reindeer herding. Families formed

steady support networks for neo-entrepreneurs. In this way, too, the development of neo-entrepreneurship seems to be a direct continuation of full-time professional herder engagement. The development of neo-entrepreneurship in Finland as a solution to weakening profitability of primary production is limited by the constraints of work time and workforce and by the need to keep investments as low as possible.

The cultural division of labour model in which all are expected to do the same jobs as everyone else creates very tight limits for development. It is almost impossible to find time to do every job needed, such as round-ups, meat processing and marketing. The question is, will the collective nature of the livelihood loosen or tighten up? Currently two models are developing: (i) a model of competing individual entrepreneurs that have monetary transactions between each other (buying and selling of services) and (ii) a model of intensifying co-operation according to public deals and negotiated divisions of labour made in advance. In the latter model it might be crucial how the benefits of enterprises will affect the rest of the community. If, for example, the meat price rises, readiness to co-operate might increase accordingly and vice versa. The decentralising of reindeer round-ups might help the autumn rush, but it also creates challenges. Winters are harsh even in the southern part of the reindeer herding area of Finland, and full-scale feeding is not popular and may not even be an effective way to prevent reindeer from losing weight. Seasonality also means that trade will be focused on frozen meat products, cold storage and reliable transport systems. Also, it seems evident that the entrepreneur either has to hire a periodic labour force, predicated on the future availability of that skilled workforce, or develop the division of labour.

Reindeer herding is an old and impressively adapted livelihood supporting a unique cultural continuity, but society needs to consider how to support it. It seems evident that reindeer herding is hard to develop as an ordinary modern economy that can be managed with directives which are similar from the Mediterranean to Scandinavia. For example, even in Finland there is so much regional climatic variation that while in southern Finland transportation needs cooling systems to keep meat cold, in northern Finland the same systems are used during most of the slaughtering season to keep carcasses unfrozen. Meat processing organised as locally as possible might be the key to economically sustainable reindeer herding, but how can a fragmentary administration govern a fragmented field? The reindeer herders' worst nightmare is the repetition of 'the rotten meat quarrel' – that again someone, a customer or a producer, will blunder, for example with hygiene or cold storage, and the media will get a 'scoop' that will ruin the image of reindeer meat as a healthy food. Instead, if decentralised processing succeeds, the EU, for example, can be utilised as a new gourmet market of traditional products like wind dried or cold smoked meat. In any case, the reindeer economy needs public support in one way or another. European markets are far too lacking in support for small-scale

producers. So the question might be: what kind of reindeer herding does the administration want? At least the herders try to adapt, but maybe the administration should focus more on the everyday problems and solutions of their subordinates. In this way administrative decisions might better fit the needs of reindeer herding cultures.

Notes

1. This article is based on my doctoral thesis (2002) 'Models of Adaptation – Adaptation of Reindeer Herding to the Post-industrial Environment in the Western Part of Finnish Reindeer Herding Area 1980–2000' (only in Finnish) and a current further study 'From Herder to Entrepreneur and From Entrepreneur to Herder – Adaptation of Reindeer Herding in Finland to Changes of the 21:st Century' funded by the Academy of Finland.
2. Even the reindeer herding practices and organisations alternate in Finland, *paliskunta* is always sort of a co-operative. The verbatim translation of *paliskunta* is reindeers' (and herders' living) district. Certain herders' neo-enterprises are also co-operatives and to separate these from each other, I use the Finnish word *paliskunta* to mean reindeer herding co-operatives.
3. Statistics are from the journal of the Reindeer Herders' Association, *Poromies* (1978 –2004).

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