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STATE COMMONS AND LOCAL DEMOCRACY IN NORTHERN PERIPHERIES

by

Audun Sandberg
Nordland College

Workshop in Political Theory and Policy Analysis
Indiana University • 513 North Park • Bloomington, IN 47408-3895
phone 812 855 0441 • fax 812 855 3150
workshop@indiana.edu • www.indiana.edu/~workshop

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Theoretical foundations.

This paper attempts to bring together two quite different lines of theoretical development that has been, and still are, very central to the crucial questions of how to govern the use of natural resources in a sustainable way. These two lines of thought might at first glance seem quite unrelated to each other, but as the paper will show, at closer examination they allow themselves to be woven together into a neat fabric that has considerable explanatory powers: In a number of seemingly unresolvable resource conflicts in the modern world, the causes must be sought in deep-rooted societal institutions that lies at the base of modernization itself. The analysis must therefore examine the foundations for these institutions and the necessary remedies might therefore often challenge the vested interests in these institutions.

- The first line of theoretical development is the evolving theories for the modern state through the last millennium and the underlying doctrines that has shaped, and still shapes, the post-industrial state. However, the emphasis here is not on the state in its governing capacity, i.e. on its authority relations - or "rights in persons", but on its property relations - or "rights in things"(Stinchcombe, 1968). These are crucial foundations for the institutions for "control over resources", which in most states develop at a much slower rate than institutions for "control over people".

- The other line of theoretical development is the gradual changes in the environmental discourse and the maturing of analysis of sustainable development. These theories do no longer presuppose an absolute incompatibility between the protection of resources and the human use of resources. The "ecological balance" of the untouched nature is replaced by the dynamics of the biodiverse and resilient ecosystem. The tasks of "integrated ecosystem management" and "political ecology" requires development of new kinds of theories in the borderland between ecosystem sciences and social sciences.

In order to bring these threads together, it is necessary to employ both knowledge about human choice in face of various incentives (also called "methodological individualism"), knowledge about the nature of various categories of goods (as in the Public Choice tradition) and knowledge about the effectiveness and legitimacy of various decision-making arrangements (also called institutionalism).In addition, it is necessary to add an epistemic element to the analysis; the outcomes of human actions - individual or collective - are evaluated through conjecturing, reflecting and judging in relation to common knowledge in communities of shared understanding, (Ostrom 1997). This is required to take care of the potential humans have to learn from their successes or mistakes and consequently to make different choices in the future - or to modify the incentive systems, to change the packaging of their goods and to alter the decision making arrangements. This implies a rather complex form of analysis where not only contemporary variables are involved, but where also the institutional heritage in the form of culture and history is frequently utilized by authorities and resource users alike. The analysis of the "epistemic choice" that societies make, therefore has to be culturally more inclusive than is often the case. Also dormant, outdated or defunct conceptions of e.g. man/nature relations can be important parts of the common knowledge guiding peoples actions in practical matters. A brief introduction to the major conceptual categories of the evolution of property rights institutions in one part of the Northern Peripheries can therefore be a useful element in the analysis of contemporary processes.

The Origin of North-Norwegian Resource Management Institutions:

The earliest traces of resource management institutions in Northern Norway date back to the Saga period, thus the written sources are also here much older than human memory or living customs. From around 900. to 1060 AD. the customary law of the various Norse "tribes" settling the north were gradually codified under a system of local and regional assemblies *(Ting).* These were not legislatures in the modern sense, but "assemblies of all free men", later representative assemblies, that interpreted the old laws and secured the social acceptability of these as *dejure* rules. The Sami communities in the North also had their assemblies, the lineage based *siidas* with codified rules for resource management within their territories. With the simultaneous advancement of Christendom and Royal Power, the rules and laws of the Norse landscapes and regions were written down - often by monks trained in the Irish monastic culture. As first codification of customary law - or "Law books" for particular "landscapes" or regions — they were skilful blends of codified customary law and structuring elements borrowed from Roman law. The strict adherence to customary law was also necessary because the early Viking kings were far from sovereign, but had to rely on the regional assemblies for initial acceptance and for continued legitimacy in the use of power (Frostatingslova 1994). The best strategy for a "candidate-king", was therefore to identify, codify and stick to the "good old laws that had been there from ancient times" *(afar alda)* or at least "from the times of Holy King Olav" (1033). It is important to understand this tradition of the "positivity of law" (Luhman 1985) that originated in a period before a powerful centralised state was established: Law was not something that was decided upon by decrees or designed by committees, it was there from ancient times and was binding both for royal and commoners. Thus it should not be easy to change the law, and when history later proved that the old laws served as the peasants' best defence against arbitrary decisions by greedy kings, this reinforced these sentiments. These basic perceptions on the role of law in society were vividly alive in the rural population as late as in the 16th century, when attempts by

the Danish colonial powers to modernize the country by introducing new rules were met by protests from Norwegians claiming that these were unacceptable as they had no base in the ancient Norwegian laws (Frostatingslova 1994). Thus encoded customary law continued to shape the perceptions of resource users until the country had its own legislature in 1814 and gradually adopted the "modern doctrine" of a society able to change itself by enacting new legislation (Luhman op.cit.).

Most of Northern Norway was during the Viking age and medieval age part of the Frostating legal area. The exception was the Northernmost counties of Finnmark, where the Sami indigenous rules for both mountain pastures, forests and coastal resource use were respected and were in force up to the liberalization of the 1830s, while the King had the overall jurisdiction after the international peace treaty for the Northern Periphery with Novgorod in 1327 (NOU 1997:4). These sami rules were not written down in codified form and were consequently not developed into a separate legal tradition. During the most intense period of "internal colonization" in the 19th century and a brutal assimilation policy after 1905, most of these rules gradually lost most of their function and were replaced by "modern" rules for managing resources based on the new Nation State.

The Frostating law is preserved almost in total and give valuable insights into the distribution of property rights and the conflict solving mechanisms of the old Norse society. The settlements were usually coastal, with intensive agriculture on the fertile old sea-beds and less intensive grazing, hunting, fishing, logging and gathering from the forests and the "outer fields". In this respect the mountains ("the upper") and the island archipelago ("the outer") had a similar function for the households and were legally treated in a parallel way. The sections of the law pertaining to material objects *(ius in re),* were therefore quite general and well suited to govern a number of different resources in a flexible way. They were also typically "non-roman" in acknowledging "shared property rights" i.e. that the same object could be owned by different judicial persons - for different purposes. However, such general rules required an interpretative body which could apply them to particular cases. Such bodies were the local assemblies *ibygdeting)* which decided in local matters. The exact role of these local assemblies in relation to the governing of resources is not yet fully understood. But initial research into the rich material of *ting-protocols* reveals a central role for these both before and after 1660 (Tretvik 1996).

A central rule in the old legal heritage is the rule of Commons: "So shall Commons be, as has been from ancient times, both the upper and the outer", (Frostatingslova 1994). This central rule was transformed into identical rules in the unified "country law" of 1274 *(Magnus Lagabeters Landslov, 1274)* which is among the oldest country laws in Europe. Through the adoption of this into the "Norwegian Law" under Danish rule *(Chr. IV Norske lov,* 1604 and *Chr. V Norske Lov,* 1687), such uniform rules about both mountain, forest and coastal commons survived up to 1993, when the last remaining original "commons paragraph" was removed from the body of active laws - after 950 years ! However, by 1993 the institutional changes in both mountain, forest and coastal areas had already progressed far beyond the spirit of the codified customary law, and the old "commons paragraphs" pertaining to natural resources in general had been under heavy pressure already since the introduction of supreme rule in 1660. In a modern "Mountain Law of 1920 (revised 1975), and new Common Forests Laws of 1992, the 950 year old customary rules were given a modern legal function for Common Property Resources in the "upper" areas of most of the country. Northern Norway was the exception in this modernized codification of the

Commons Laws, here the special land-property-history of the Northern Periphery made the central bureaucracy define this as State Lands with no Commons rights attached to them. Consequently no Commons Law could apply to such lands. We will return in more detail to this below.

For the "outer" Common Property Resources on the other hand, it is the withering away of the coastal commons during the last 350 years which is the typical institutional dynamics. No modern codification has been made of rights and duties in the "coastal commons". On the contrary the coastal and marine laws enacted in this century has placed increasingly more emphasis on the role of the State, both as the sovereign owner of the seabed and the wild marine organisms of the entire 200 mile EEZ, as well as the prime regulatory authority for harvesting operations along the Northern coasts. However, still it makes sense to speak of coastal commons in local Northern coastal communities - here they are today most often referred to as the "fisher-commons" *(fiskaralmenning).* That there is still today local perceptions of property rights systems that started to wither away more than 300 years ago, is linked to a number of single elements that has slowed down the modernization processes on these coasts:

One was a royal prohibition from 1294 on foreigners' and Southerners' sea travel to the coasts north of the Hanseatic trade post of Bergen *(farbann*=prohibition to navigate) (Frostatingslova, VII, Ch.27). Only in 1361 were the traders of Bergen given a general dispensation of navigation and trade along the northern coasts, but no right to fish. This kept foreign and Southern fishermen away from the 13th to the 18th century and allowed local resource governing institutions to evolve and adapt. Most famous among these are the Lofoten Fisheries Institutions which can be interpreted as a large Provincial Commons that lasted from the Kings' pledge to the Haloygs *(rettarbof)* of 1105 and until its gradual breakdown in the 19th century. These flexible institutions governed this large scale indigenous *(Haloyg)* fishing commons with easy access for thousands of regional migrant fishers for several hundred years (Jentoft and Kristoffersen, 1989). In addition there was a large number of smaller and more local fishery governing institutions which has shaped people's perceptions. The easy access large fishery commons of the North has often been misinterpreted as institutions characterized by Public Property Rights *(Allemannsretf)* (Oerebech 1991), and it has been in the interest of the modern state to support this interpretation, since it is the state who is the only possible custodian of public property rights.

Both in relation to coastal resources and in relation to mountain, pasture and forest resources, the notion of state ownership originates in a new doctrine of state from the 16th century. In this, property rights were divided into the King's superior property rights *(dominium directum)* and the subordinate property rights *{dominium utile* - different from *ius utendi* - mere user rights). At the introduction of "sovereign rule" in 1660, the King also claimed to be the owner of the subordinate property rights, thus the Commons of the ancient Laws were termed "the King's Commons" and the right of the indigenous population were reduced to "user rights" (Schiefloe 1957, Tretvik 1996). Although this doctrine of state later proved erroneous in that the nation states' jurisdiction is not a property right, the King's Commons survived into what is today called "State Commons" for the "upper" resources. In the North, however, the Danish/Norwegian kings did during the 17th. and 18th. century sell out the King's Commons to wealthy merchants, both domestic and foreign, in order to raise money for a series of European wars. Despite the age-old prohibition against selling out any part of a "Commons", it was impossible to take the sovereign to court and, when these commons were later bought back by the modern independent state, the

state lawyers' claimed that it had lost all its "commons" attributes and should now be interpreted as the property of the State's alone, i.e. pure public property. This was strongly emphasized during the formation of the new independent Nation State of Norway at the beginning of the 20th. century. As a new state, it was driven by a need to establish unchallenged sovereignty over its territory and therefore both the executive, the legislative and the judiciary part of the state powers were consistent in reducing and eliminating the institutional base of secondary collectives that could challenge the unitary state. And especially in the Northern Periphery which was far away from the power center of the southern capital, it was crucial that the sovereign jurisdiction was unchallenged. Together with a continued confusion of jurisdiction with State property rights, this produced a situation in the North that by some is termed "internal colonization". However, after 90 years of independence - and intermittent constitutional contestations, the supreme court in 1991 made a final verdict that State lands in the North after all were to be regarded as "State commons", although all commons rights were lost, except for some grazing rights for sheep.

The commons of the "outer" resources withered away under the doctrine of *"dominium utile"* and was gradually seen by the state as public property which could be opened up to the use of all national citizens irrespective of origin and which could be exchanged with other nations in return for fishing rights in their territorial waters. Thus the breaking down of the fishing commons and its consequent gradual transfer to public property in the 1830s was an important step towards the later privatization of fishing rights in the 1980s and 1990s. But in spite of the modernization of salt water fisheries and individualization of fishing rights (licenses and individual quotas) that has taken place during the last 40 years, the local political discourse of fisheries resource management and coastal zone management time and again show that the perceptions of a "fisher commons" are still alive in the coastal communities.

One example of uncodified coastal commons is the existence of "shore commons". Before the boat engine became common, favorable places along the coast were of crucial importance as harbors, beaching places and fishers' chalets. These did often - especially before enclosure - function as commons for the local population and they had to some degree controlled of access so that strangers could not use them. However, neighboring and migrant fishers with long term relations with the local fishing communities could have a status as bona fide users. At a low level of extraction technology, local control over the "shore commons" thus meant control over the coastal fisheries resources without making explicit property rights to the physical fish stocks themselves. When the king started to issue trade privileges also to non-hanseatic indigenous traders, a number of the relationships in fisheries developed into patron-client relationships. Now it was not only the common harbor facility, but also contractual relationships related to equipment supplies, credit facilities and marketing outlets for fish that constituted the basis for coastal society. This new reorganized economic basis facilitated the introduction of new harvesting technology in coastal fisheries during the 19th. and 20th. century and facilitated the primary accumulation of capital on few hands - often termed the vaeraer-system. Some of the "shore commons" was thus privatized and today we can in local perception find a private fishing harbor, a common fishing harbor and a public (municipal) fishing harbor side by side.

Another example is the survival of minor commons like "egg-commons", "berry-commons", "kelp commons" and "pasture commons", "salmon river commons" in many communities. Neither of these are regulated by contemporary laws, but are an institutional reality in the perception of especially older members of local communities and can sometimes be found as

provisions in title deeds to private farms. At enclosure during the 1890s, a number of coastal communities chose to keep for instance their egg rocks and islets in common rather than subdivide them into what would have been very small private units. From these commons, sea-birds' eggs are still gathered at intervals during the season, often connected to intricate institutions of sharing of the egg-catch (Sandberg 1994). For a number of the islands "belonging" coastal communities, we also find local commons institutions for the sharing of cloudberries picked during the season. The existence of such common property arrangements for minor resources contributes to a feeling of local identity and belonging in many local communities in the North, a feeling that often also extends to outmigrants from these communities.

Also the grazing of sheep in alpine forests, mountain pastures and on small islands as well as the gathering of kelp and sea-weeds, required some agreement on property rights. These activities belonged to what was before enclosure termed the "upper and outer commons". Like for birds-rocks, a number of these continued to be "held in common" even after the enclosure, or if subdivided and privatized, the grazing and harvesting practices were often for operational convenience arranged by voluntary contracts in ways that resembled commons institutions. In the mountain pastures, sheep owners went on grazing sheep, goats, cattle and "homestead reindeer" on what was since 1850 claimed to be the "King's Lands". Despite this they organized the grazing in a communal way, with no borders in the pastures, but in the old way where "grazing animals meet hoof against hoof, horn against horn". The supreme court acknowledged this as upholding commons-based grazing rights and emphasized this when they in 1991 ruled that the "State Lands" of the two northern provinces of Troms and Nordland still must be considered as "State Commons".

The Wild Migrating Salmon has also in Northern Norway a very special significance, together with Sea Trout and Anadromous Arctic Char. These three species of fish are the basis for a large variety of common property arrangements, ranging from associations of private river-owners to complex co-management arrangements where river owning communities, anglers associations and government fish managers manage both the enhancement and the fishing activities. The Salmon traverses numerous institutional resource managing regimes along its homing route from the open ocean to its mating grounds in home river. It is therefore extremely vulnerable to institutional decay and incompatibility in these various regimes: Property rights to Salmon have for one thousand years been an important part of river rights, often separated from navigation rights of rivers or the rights to the kinetic energy in the water *(fallretf)*. At the mouths of rivers and in the fjords leading to important salmon rivers, there are also important property rights to permanent net- or weir- sites at strategic points *(kilnot)* with a secure steady catch. These require intricate floating constructions and the property rights are usually tied to individual farmsteads with property rights to shore lines and were part of the old property tax base for the farmstead. Even in rivers where wild Salmon have disappeared, these weir-rights are not lost, only dormant and tend to be revitalized if the river salmon stock is rebuilt through a stock enhancement program (PUSH 1997). Further out towards the open sea, salmon catches were less secure with the use of traditional gear and property rights were less strictly defined. But as in other parts of the North Atlantic, also in Northern Norway a special drift-net fishery for salmon developed after World War II, where certain coastal communities specialized on salmon drift-netting. These were usually coastal fishermen with no previous salmon rights connected to rivers or permanent net-sites. Today the drift-netting for salmon is prohibited along the entire Norwegian coast. The ban was introduced as a temporary measure in 1989 to help rebuild the dwindling stocks of salmon,

after heavy pressure from the river-salmon-rights-owners and the sport fishers' associations. However, the various local stocks of salmon were not rebuilt as a result of the ban, but continued to diminish. This was now allegedly as a result of "genetic pollution" from runaway farmed salmon, but it was probably also caused by a reduction in stock enhancement effort due to a stricter ideology of genetic purity of the separate river stocks (NOU 1999). But in spite of this unclarity in the causal relationships, drift-netting for wild salmon is not likely to be reintroduced along the Norwegian coast.

In many respects the transverse salmon is an excellent indicator organism for measuring the institutional health of the coastal commons. When the stocks of wild salmon are dwindling, it indicates that we have a "commons problem" of overuse and deterioration in the coastal zone. As with "tragedies" of some mountain pastures, mainly reindeer pastures in the Northern Province of Finnmark, this indicates a decay in the resource governing institutions of the Northers Periphery (Hardin 1998). Most of this institutional decay is correlated to a slow process of state usurpation of resource management rights. This is not the same as saying that it is caused by state take-over from community based natural resource management, and between the two processes there is probably a host of intermediary mechanisms. Or perhaps the two processes are connected through some even more fundamental societal processes underlying a number of changes in the western world. One line of inquiry in order to improve our insight into these immensely complex relations, is to address the problem of modernization of resource relations.

The modernization of resource relations.

It can be instructive to take as a point of departure the most modern doctrine of "integrated ecosystem management", based on the virtue of bio-diversity, and work our way back to the institutional foundations for governing northern resource. This requires us not to go back to the Viking-age institutions explained above, but to the start of the great modern project in the 17th century.

The International Convention on biodiversity (1992) is now ratified by 170 countries of the world. Among these, Norway was among the earliest and the most eager to acknowledge this principle. It has also received unanimous commitment from the Parliament and the entire political establishment. Quite explicitly it is stated that the government will contribute actively to further develop and operationalize the convention, i.a. by a follow up of the decisions made in the meeting of the parties to the convention regarding marine biodiversity, biodiversity in farming, animal husbandry and forestry and a further development of the convention's article 8j. on the protection of the knowledge of biodiversity among aboriginal people and local communities (St. meld. nr. 58 1996-97).

But in reality there has been very little operationalization and practical implementation of these superior political goals, and the praxis of "integrated ecosystem management" is hard to identify in contemporary real administrative, organizational or operative life. In gardening and in the green-house sector, the inter-planting of crops and the introduction of prey-insects have to some degree changed the old practices of spraying with pesticides and incesticides. In advanced forestry, the development of new logging practices that utilize bird/insect interactions are taking

place, as well as experiments with timber/moose "multi-cropping". But in Norwegian full-scale agriculture, animal husbandry, salt water fisheries and game management, it is not the biodiversity paradigm that has hegemony. While Norway has been very active in relation to genetic engineering, patenting of life and danger of gene-mining in developing countries, the crucial institutions for Norwegian management of resources are still characterized by sector-based production rationality, specialization, monoculture strategies and maximum sustainable yield from single species populations. The most important tools for agricultural policies, the centrally negotiated agreements between the farmers' associations/ the reindeer sami association and the State are not visibly influenced by this paradigm. The modes of operation in practical farming are not changed towards more "integrated ecosystem management" and the on farm animal husbandry is not changing towards greater variety and adaptation of the genetic material to local conditions.

On the other hand the environmental policy discourse is becoming more polarized than before, with the most fundamentalist utilization and harvesting interests on the one side, and the most fundamentalists animal rights and protection activists on the other side: Typically we find both sides preoccupied with only one mode of harvesting or one specie of wild animals, even one individual animal, at a time, rather than the complex ecosystem. Thus there is little room for an informed public debate on the virtues of the multitude of ecocycles that together make up the resilient ecosystems characteristic of biodiversity. In the politically most heated, environmental debate in Norway in this decade, the predator debate, the ideas in the Bern-convention on the absolute survival values of endangered species has taken precedence over the ideas of the useful role of all organisms in the web of life that, we find in the Biodiversity-convention. This polarization has therefore so far hampered the development of a new type of public discourse which we find emerging in a number of other postindustrial countries, the discourse of political ecology, i.e. an informed debate on what kind of ecology we want.

After almost 10 years of considerable international and national pressure for the entrenchment of the biodiversity principle at all levels of administration and in all organizations that work in relation to the utilization of natural resources, it is a paradox that the breakthrough has been so insignificant. It is therefore reason to pose some fundamental questions connected to the further follow up of the Biodiversity-convention in a society of high modernity:

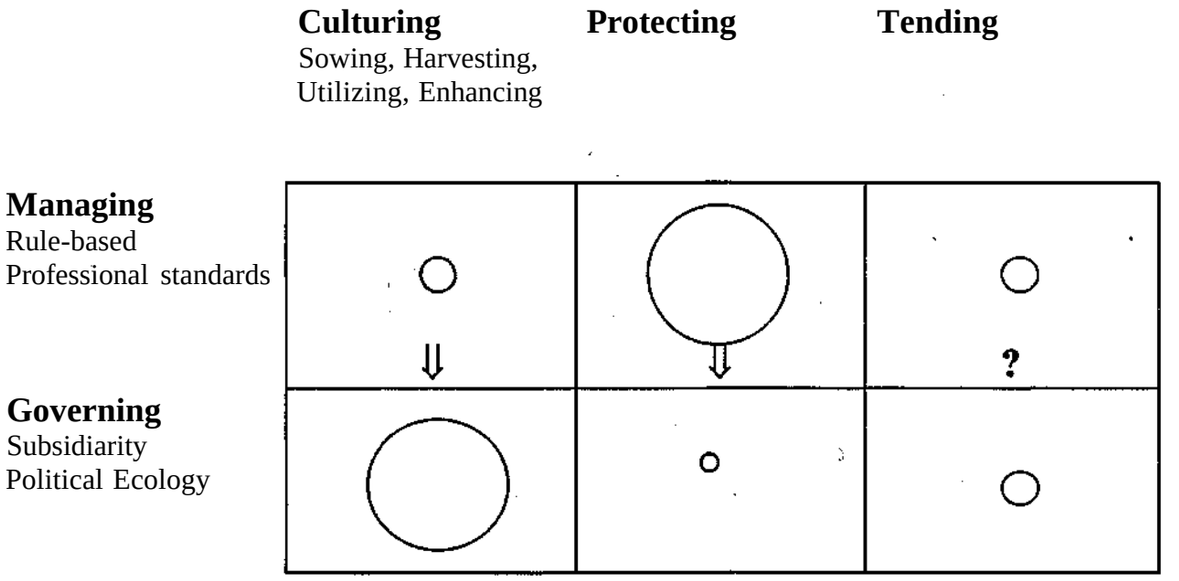
- Can we really base politics, institution building and management procedures on the paradigm that biodiversity is a good thing. Can we be sure that the more biodiversity we achieve in natural and man-made ecosystems, the higher will be the resilience recovering capacity of these in relation to natural or man-made transformations, climatic changes, microbe attacks or all types of "eco-shocks". Or if we are not quite sure, should "the precautionary principle", alternatively "the responsibility principle", still make us employ the biodiversity principle, simply because it is better to have too many species rather than too few?
- Is it because the biodiversity principle is a completely new rationale for governing and managing existing and traditional rationales of simplification and specialization, and thus there will quite naturally be mobilized powerful resistance against the entrenchment of this principle? As this also threatens the currently profitable modes of specialized production and the powers of organized interests, will this resistance have to be actively combated, a process which takes both time, political courage and organizational resources?

- Is there a solid epistemological base for the biodiversity principle, or is only an "abstract construction" with some biologists - the "systems ecologists", which is not even shared by their colleagues, the "population ecologists"? And if the epistemological base is fragile, will the principle ever be able to be practically employed?
- Or can the biodiversity principle become the necessary base for a legitimate devolution of resource responsibility and governing authority from central bureaucracy to local communities that institutional architects have been on the lookout for? And will it as such represent a common interest that is likely to be blocked by organized private interests?

We shall not attempt here to answer all these complex questions, in sum they amount to an entire research program. But in sum they also point to the fact that societal development, often called modernization, the development of the state and the changing "social construction of nature" are closely related processes (Eder 1996). We shall below see how two of these threads can be woven together by the third. But to understand better what is going on in the real world, we shall first submerge ourselves in the Norwegian "predator debate". In social science it is often by daringly penetrate the hottest conflicts that the "new things" *(rerum novarum)* are to be found. That is also the case when we combine the Norwegian biodiversity discourse and the predator conflict.

First we have to explain briefly the current devolution processes tied to the management of natural resources: In recent years the responsibility for planning and management has formally been transferred to the municipalities. Environmental and resource plans for agriculture will now be a part of the municipal area development plan that is based on participatory principles and decisions in elected, representative bodies. The same is the case with the planning of forest development and the management of forest resources within the municipality. Also the coastal zone planning is transferred to the municipal level, with the aim of solving user conflicts at the lowest possible level. Recently also the conservation sector has started a process of devolution to the municipal level, in so far as a number of local governments have been asked to take over the management and "tending" of smaller natural landscapes which have already been protected by the central government. It can here be useful to distinguish between natural resource **Management,** which is often based on centrally decided rules and professional standards, and the **Governing** of natural resources which is carried out by elected representative bodies and which in addition to efficiency and sustainability also has to take into consideration the legitimacy of the decisions. The very idea of devolution implies a movement from Management to Governing, and a movement, from long-distance governing to nearby governing, the latter often termed the subsidiarity principle. If we then deconstruct the managing/governing of natural resources into 3 major categories: **Culturing, Protecting** and **Tending,** we can summarize the current Norwegian situation in a 3x2 table (Fig 1.):

Fig. 1: Devolution of responsibility for natural resources in Norway 1999



The size of the circles indicates where the majority of the responsibility/authority is placed. Thus we can see that we have the familiar situation where central government bureaucrats have most of the responsibility for "protection of nature", while political bodies, and increasingly local government, have the responsibility for "utilizing nature". At the same time the responsibility for a third and new field of action, "tending the nature" is still embryonic and undecided. To complicate things further, the importance of centrally conducted negotiations for farm subsidies and reindeer herding subsidies, means that the influence of local government is restricted to the area use of farming and animal husbandry, while the political influence on their modes of operation, and consequently much of their environmental impact, takes place through the corporate channel of negotiations between organized interests and central government bureaucrats. Complicating matters are also the "objection instrument" which means that even if agreement for a plan or a solution is reached at the local level, the specialized state agencies at provincial level or central level can object to these solutions and thereby lift the question out of the local sphere. In coastal zone planning for instance, use of the "objection instrument" has been the rule rather than the exception. And even if the decentralization process should gain more real political content in the coming years, it still seems like democratization and popular participation are not sufficient conditions for a true devolution of responsibility; there is also a need for new cognitive models that can form the basis for a shift from managing natural resources to governing natural resources. That leads us to briefly examine the cognitive models of nature that has been the *raison d'etre* for the management of nature in the north since the start of the modern project.

In order to understand the deep dilemmas of the State in trying to advocate the biodiversity principle at the stage of High modernity (Giddens 1994), it is crucial to understand that the state itself has been the major agent of modernization in the north for the last 250 years. Since 1747 the state has initiated and supported the settlement of both fjord-shores and mountain valleys in

the north, often both as development agent and as a major source of credit *(jorddroti).* On this northern, marginal fringe, the potato also became an important element in the advancement of culturing to these areas. The reason for the centrally initiated settlement programs was to be found in the rationale of the old mercantilist state: a higher self-sufficiency in food production would save on foreign exchange and leave more of the funds in the treasure coffers for soldiers and expensive weaponry. Thus it was to a large extent central State policies that created a number of the northern farming communities in what was previously areas dominated by low intensity sami reindeer herding together with hunting and fishing. When the same State now changes its cognitive models and through devolution tend to withdraw its responsibilities for the continued viability of these settlements, it is branded as a traitor who betrays its role as the main modernizing agent of the North. Therefore the rural depopulation, the "thinning" and impoverishment of the rural communities, the reforestation, the varmint hazard to livestock and the general rural pessimism is blamed on the retreat of the state.

The cognitive models that set the scene for the early modernization of the North, were the early modern ideas of a nature that could be subjected to human reason - a rationalized nature was an integral part of the early modern project. The most striking examples of this line of thought are found in the state initiated bounty systems for eradication of varmint from 1730-33. This was labeled a program for "eradication of non-useful game" and included financial incentives for eradication of 29 speciesf!] which were not considered useful in the ecosystems of the 18th century (Kingdom of Denmark/Norway, 1795). The game laws of 1845 and 1863 also reflects this early modern idea of a rationalized nature, the "Law of eradication of harmful game and protection of other game", was based on a notion that human intervention to eradicate predators would increase both the production of beneficial game and enhance the landscape so that the production from the farmers' and reindeer owners' domestic animals could be maximized. This is in line with the "social construction of nature" at the peak of modernization optimism towards the end of the last century. But it was not the peak of the logical extension if this idea of a rationalized nature, the long era of **ecological simplification** as the fundamental principle of rationality in relation to management of nature. That era, which gave us monocultures, genetic uniformity, pesticides and insecticides together with increased vulnerability to fungus, bacteria and insects, peaked in the period from 1960-1990.

More than 250 years of successful predator eradication created a vacant niche in Northern Norway for modern sheep ranching. The old ways of mixed summer pastures in a system of transhumance were abandoned. Instead a less labor intensive system of ranching of large numbers of untended sheep on mountain pastures was developed and supported by the agricultural subsidy system. Although the process was made possible by the rationality of a simplified ecosystem, it was driven by modern economic rationality: In order to obtain state subsidies, the sheep farmers had to change into the most profitable ways of operating. This meant minimizing labor use, maximizing the number of "summer sheep" relative to the number of "winter sheep" the farm could feed, maximizing meat production pr. animal. The state supported agricultural research and breeding programs were tailored to support this demand for economic rationality, by providing a meaty sheep that annually gave birth to 2-3 lambs and had a low flock affinity to help it graze more efficiently and reach maximum slaughter-weight in the cause of a short northern summer. It is then only logical that the creation of large predator free areas helped to produce a rationalized form of sheep-ranching which was very vulnerable to the return of predators in the pasture ecosystem. And it can also be explained why 6 generations with state

support for an ideology of predator eradication was sufficient to establish a "local tradition" of belief in "ecological simplification" as the basis for progress in most rural communities.

In reindeer herding, the enforcement of national boundaries from 1750 onwards, imposed serious restrictions on the large migrations that sami herders undertook in order to provide fresh pastures and efficient "refuges" from predator attacks. The state was therefore obliged to help the reindeer herders with the predator problem it had partly created itself. A profitable bounty system, together with advances in rifle technology in the 19th century, gradually established large areas with efficient predator control in the sami "core areas". As also the reindeer industry was subsidized, with annual negotiations concerning the profile of the subsidy,the demands from the state for economic rationality could now produce an extensification,ranchification and rationalization of reindeer herding which would have been unfeasible with previous levels of predation. What appears like northern wilderness,is inreality a sami cultural landscape, created by early state predator policies, state subsidy policies and individual sami strategies in the light of these incentive systems. Recently, these incentives resulted in serious overgrazing of the rich pastures of the northernmost province, Finnmark, and new subsidies for urgent destocking had to be provided. State supported research institutions alsoworks towards further rationalization of the industry, with modern slaughtering strategies, herd restructuring and less labor consuming herding strategies. Together with the ranchification andextensification, these rationalization efforts contribute to increased vulnerability of reindeer herdingto the return of predators to the reindeerpastures.

To complete the picture of state involvement in "ecosystem Simplification", we shall return to the early ideas from 1730 of "eradication of harmful game and protection of beneficial game". As late as 1920, there wasstill a strong belief in a theory of predator-free areas as a necessity for the increased production of popular game like ptarmigan, hare, moose and deer. Despite alarming research findings of overgrazing and epidemic diseasesamong unchecked populations of wild game, there was still astrong belief in human reason and intervention as adequate means of improved ecologies. Withinthe hunters' associations, however, we even today find widespread belief in predator control asan efficient management tool in game management, and we can therefore conclude that there are corresponding cognitive patterns, orways of understanding nature, between many sheep ranchers, reindeer herders and hunters in the north.

While game birds have fluctuated dramatically during most of this century, probably in tune with fluctuations in small rodents, the herbivorous game has been steadily increasing, in tune with the decrease in predators. One hypothesis is of course the predator > prey hypothesis : that the growth in herbivores is due to the absence of predation. Another hypothesis is that it is due to the scientific management of wild grass-eaters,where the hunting quotas are specified on sex and age so that human hunters canmaintain healthyand productive populations of deer and moose without the help of predators. A third hypothesis is that rural depopulation and rationalization of animal husbandry has:led to decreased grazing at lower altitudes;thusgenerating a massive reforestation process whichhas been profitablefor wild grass-eaters. To determine which hypothesishasthegreatest explanatory poweris a major undertaking andshall not be attempted here. But we shouldnote that if boththereforestati onhypothesis and the prey>predator hypothesis are right,this would mean anunintentional endto the rationality of "ecological simplification": The vacant niche of fodderintheregrownforests alsomeansa growth in prey that in turn spursthe growth of predators, regardless of state policies and agricultural incentive

systems. When nature's own mechanisms thus take over through a trick of history, this is seen by many, especially urban environmentalists, as a re-spiritualization of nature and as the approach of a post-modern nature where rationalization has come to an end (Bauman 1992). If on the other hand the scientific management hypothesis is right, the possible incompatibilities between the predation strategies of the returning predators and the model-based human predation can result in unintended catastrophe for populations of grass-eaters. Thus the most advanced expressions of rational management of nature can also be threatened by unintended consequences.

While early modernity was characterized by ecological simplification, late modernity is characterized by **"ecological complexification".** Irrespective of whether the reason for the return of predators are "endangered species" or "need for greater biodiversity", they demand more complex forms of rationality, which so far are not found in the administrative echelons of agriculture, reindeer herding or game management. Therefore it is not surprising that Norwegian sheep ranchers and reindeer herders find themselves trapped in a "modernity trap". Due to its modernized sheep ranching, Norway is no. 1 in Europe in loss of sheep to predators relative to the number of predators. And some of the reindeer herders have a larger part of their income from compensations than from the sale of meat. Apart from continued financial compensations for documented predator-killed sheep and reindeer, there seems to be no rational solution - when illegal killing of protected predators or return to old fashioned and even more uneconomical forms of animal husbandry are excluded.

State withdrawal and the limits to local democracy

As we have shown above, a large number of devolution processes relating to natural resource governance takes place at the same time as the state, as part of heavy globalization processes, replaces a crucial doctrine of modernization as "ecological simplification" with a non-operationalized doctrine of modernization as "ecological complexification". The biodiversity principle is meant to achieve increased resilience through ensuring the working of a myriad of eco-cycles. The complex rationale for a top-predator like the wolf-pack is then as a co-manager of biodiversity: By keeping a check on wild herbivores, both their reproduction and grazing behavior - and on other predators checking herbivores, the wolf-pack can then continuously help us to manage biodiversity in an efficient way - provided we keep a check on the wolves. How can this new and more complex modern rationale be linked to the problems state or commons property rights and to the demands for devolution of authority to communities to govern their own natural resources?

If it was just a matter of redefining property rights and designing the right institutions suited to ensure a local and legitimate governing of biodiversity resources, the state would in the face of unanimous local pressure gladly withdraw and leave these painfully complex problems of weighing conflicting interests to local democratic bodies. Modern theories of institutionalism would prescribe how legitimate and transaction-cost-efficient institutions with low monitoring and control costs could then be set up. But it is not so simple, it is also a question of who believes in what, what different groups have learned from the last 250 years of the great modern project and how different groups reflect on what we have learned. This is therefore not just an institutional choice, but also an epistemic choice where the understanding that people in local

communities have to different interpretations of modernity in resource relations are taken into consideration. Thus, in weaving together the two threads of thought mentioned at the outset, we shall address two points that show the complexity of establishing apolitical ecology based on the biodiversity principle rather than the simple antagonism between use and protection.

In operating within a biodiversity rationale for integrated ecosystem management, there is a high probability that the expertise of conservation-ecologists preoccupied with a single specie, will be less in demand and loose their power. This will mean a weakening of the power of state agencies with a mandate to work for protection of nature, and increased political pressure for a devolution of protection issues to professionals at the level of local government. Atthe same time the expertise connected to culturing will notbe as strong atthe local level as itisin specialized state agencies for agriculture, forestry, fisheries etc.Professionalsthat work close to elected, representative bodies, must be able to handle a number of conflicting interests and concerns within the same epistemological framework. To the extent that the protection expertise and the culturing expertise are incompatible, the restoration ecologists, with a more comprehensive ecosystemexpertisewill most probably be the professional most in demand tofill a variety of functions in a small administration. •• They will alsobe well suited to administer thetransfer to the "multifunctional agriculture" of WTO with a channeling of agricultural subsidies to maintenance of cultural and natural landscapes. The strong epistemologiesare therefore those which are connected to the "tending" activities in Fig. 1., and a devolution from the Stateto local government will most probably produce a movement of natural resource governance towards "integrated ecosystem management". Whether this will be based on a form of ecological complexification similar to the biodiversity principle, is amatterfor the local political body to decide. But in deciding what kind of ecology they want, they will be practicing what we have termed political ecology, withall that this involves in lobbying,horsetrading and compromising.

Natural resources often have an extension beyond the smalllocalgovernmentareas, notably the municipality. This was one of the difficulties for the king's officers during the medieval times, the northern commonswere larger than they were used to from theSouthern valleys and they had difficulties in identifying the "circle of authorized usersof thecommons". Although coastal dwellers today nolongerhave mast-logging rights inthe pine forests of the fjords, the modern stakeholders to natural resources *are* widely spread in "regions", that can contain as much as 7 - 10 municipalities. The legitimacy of thegoverning of natural resources is therefore depending not only on how the members of aparticularmunicipalitycan voicetheir interests through political and corporate channels, but also on how members of neighboring municipalities can influence across municipal boundaries. Examples of such modern non-local stakeholders are large groups of leisure-users of mountain and forest areas, lakes and coastal shorelines. These are mostly recently urbanizedmigrants orfrom communities surrounding medium-sized northern towns. In addition we find as stakeholders regional daily and weekly commuters who reside in rural municipalities andworkintownor as "road warriors", as well as week-end commuting cabin owners whoare "associate: members" of local communitiesatmoreorless regular intervals. An increasing number of land properties in rural areas are ownedbytowndwellers, because of family ties, romantic notions of a future return or the complexity of inheritance cases. The large numberof "absentee landlords"in ruralcommunities inthe north creates difficulties for agricultural development in these peripheral areas, thus hampering the merging of farms and the advantages of large scale farming operations. But it also maintain familytiesand a particular identity among large groups of semi-urban dwellers. This sense of belonging can also be

analyzed in terms of cultural capital which is important also in the development of sound social relations in an urban context. For many absentee owners, also the more tangible rights that are connected to land property rights are significant, most typically these are rights to cloudberries, salmon, fresh water fish, sea-birds' eggs and moose meat. Judging from such a perspective, this group of stakeholders might therefore have a view on what a desirable landscape looks like which is different from that of the active, full time farmer.

The regional assembly of Nordland, when arguing for a reintroduction of the Commons Law in the State-Commons of the north, was aware of this difficulty and advocated a solution based on "regional commons", where stakeholders were acknowledged legitimate rights in neighboring municipalities, and through institutions under the Law would be given a right to influence on decisions in another municipality. But the state still holds a different view, that when almost all commons rights (except pasture rights) are lost, there is no point in reintroducing Commons Law at all, and that the rights of urban dwellers to use natural resources in neighboring municipalities are better served by "public user rights" guaranteed and managed by specialized state agencies.

In the preceding analysis, we have seen how the mechanisms of devolution, the demands from the increased complexity of detailed ecosystem management of a wide variety of natural resources and the epistemic choices connected to a tending attitude rather than the traditional conflict between use and protection has led to a gradual withdrawal of the state. In the course of institutional development, this also means that the state must relax its property rights pretensions in the north and participate in processes that increases democratic participation by relevant stakeholders. But in doing so, it is also important to be aware that local democracy has serious limitations when the issues are over-local.

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