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GREEN ARGUMENTS

AND

LOCAL SUBSISTENCE

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Introduction

There is a common biblical quotation, to strain at a gnat and to swallow a camel, that is, to be meticulously concerned about correcting minor faults and yet to accept flagrant errors. It is akin to being penny-wise but pound-foolish, and sums up one of the more curious examples of the interplay between Saami ethno-politics and environmentalists in Sweden. My contention is that, even if in part justified, the opposition to motorcycles is far out of proportion to the environmental damage they cause, when set in relation to other massive devastation which is perpetrated without comment. Nothing over the past few years, except perhaps the perpetual debate over the protection of reindeer predators, has inflamed Saami-environmentalist relations so much as has the issue of the use of motorized vehicles by herders in the mountainous regions, especially in the national parks. This controversy over the use of motorized vehicles by Saami herders must be analyzed from within a broader minority-majority context and is indeed highly revealing of many of the general principles and strategems involved in the politics of Natives and the dominant population. Material for this presentation has been culled from my years of continuous fieldwork among the Swedish Saami, 1973-77, and my ongoing engagement in the field, although this has been for periods of shorter duration. I believe that due to a number of important characteristics regarding its employment, the motorcycle, in particular, has been used as a symbolic vehicle for discourse about Saami Native rights. Although unstated, the full debate relates to the level of minority-majority politics, and it is only through an understanding of this larger context that we can...
grasp the wider import of the motorcycle issue.

What might be termed the 'corrective-measures eco-morality argument' is frequently invoked by representatives of developed nations to justify a programme of major projects in the Third World. In this context, a development project is seen as a corrective for the environmental damage, for example deforestation, over-grazing, and land erosion, caused by the local population. Within the Fourth World context, however, the roles are reversed: in their struggle for Native resource empowerment, Native ethno-politicians invoke the eco-morality argument against the governments of industrialized nation-states. Briefly stated, the 'Native eco-morality argument' asserts that whereas industrialized nation-states have ravaged the global environment to the extent of exterminating many species and threatening the survival of mankind, indigenous man has lived in harmony with nature and therefore should be entrusted with the care — at least — of Native lands, for the sake of all. It is an argument predicated not on rights, but for rights, based on morality; he who has demonstrated greatest respect for the ecosystem should be empowered with rights for its utilization and protection. Obviously, the argument is compelling, for no matter how just the principles of rights devised by man within the human social and cultural sphere, if they do not support the primary principle of global survival, all regulations may be deadly just the same.

Those who for various reasons are opposed to Native resource empowerment generally counter the Native eco-morality argument on the grounds that its conclusion is improperly drawn. If Native peoples have adhered to a way of life less damaging to the environment than that of industrial man, it is not because of any moral superiority on the part of the Native, but rather because of his primitive traditional technology. Natives, they argue, have simply lacked the power to exert much damage. Now that they are in possession of modern technology, they are as prone to be 'eco-criminals' as the next person.

While some might argue that the cultural ideologies of Native man are really not in the least more ecologically enlightened than those of
Western industrialized man, a more sophisticated approach does not lump all Native cultures together, but recognizes that some hunter-gathering cultures do indeed possess a conscious component of eco-morality, while others do not. Rappaport points out that, in evaluating beliefs from an ecological perspective, elements such as consciousness and empirical accuracy are not crucial. Instead, the significant factor is the behaviour a belief elicits and the extent to which this behaviour furthers the maintenance of the system (1971:261). Now, should one measure the ecological impact of a belief rather than its scientific rigour, following Rappaport, one must conclude that there is no one-to-one relationship between conscious conservation design and ecological stability or between lack of such design and ecological havoc. Granted that a conscious sense of eco-morality is more likely to be holistically beneficial rather than harmful, professed good intentions can sometimes lead to bad results (whether or not the cause of the result can be attributed to the intentions), just as lack of any eco-morality at all might still result in environmental stability. All depends on the interrelated flexibilities of many different variables within the holistic system.

Should one add to the analysis an awareness of long-term versus short-term effects, it soon becomes apparent that we are on shaky ground whenever we speak of a steady state or a natural environment. For example, long-term analysis might demonstrate that a 'low-tech' society which at first appears to be living in harmony with nature is in fact following a slow route to ecological destruction. In contrast, one might find that other so-called 'primitive ecologists' (see Einarsson in this volume) were not necessarily harming nature, but were exploiting it too inefficiently for their own long-term survival (Ellen 1986). This is hardly in keeping with the environmentalists' view of nature and the harmonious place of the primitive ecologist in it.

It becomes apparent that terms and concepts such as 'nature' in common parlance are hopelessly ethnocentric as well as 'species-centric'. Any discussion which places man in relation to nature but does not also
recognize him, his environmentally destructive effects, and even his own eventual extinction as a part of nature is doomed either to contradiction or to tautology. No resource is in the long run unlimited. If, for instance, we maintain an open time perspective, it is plain that any point of perfect need/greed balance in the relationship between a society and its natural environment is so hairline as to be non-existent. Even if environmental flexibility might sustain a culture for thousands of years, if it destroys limited resources even just slightly more than the regenerative capacity of other resources, it is embarked on a 'greed' trend towards environmental depletion and self-destruction. If, on the other hand, a society is taking less than it needs from the environment for long-term survival, this too will result in self-destruction. Now, if we conceive of a hairline-balanced Man/Nature relationship, it is also plain that change and imbalance to the system can be initiated from the side of Nature as well as from the side of Man. If, for example, one of the millions of other variables in the total ecosystem were to shift slightly, the same human behaviour or ideology which might once have been preserving a steady state of balance might well in the long term be embarked upon a dead-end trend. In fact, what might be termed a maladaptively greedy social trait today can be transformed into a maladaptive trait of insufficient need satisfaction tomorrow, or maybe even switch from minute to minute. The society in question and the anthropologist studying it might not even be aware of the change. We are forced to admit that the Nature we speak of cannot be conceptualized as a simple status quo. Nature must refer to a higher hierarchical level, to the survival of the Whole (the system rather than its sub-units, a culture or Mankind), with all the ever-changing realms of flexibility of its constituents locked in dynamic interplay. Nonetheless, the debate continues, for it is in deadly earnest, despite its often inadequate conceptual tools.

We are rapidly, of course, destroying all the natural systems in the world, the balanced natural systems. We simply make them unbalanced — but still natural (Bateson 1972:430).
In fact, the problem of how to transmit our ecological reasoning to those whom we wish to influence in what seems to us to be an ecologically 'good' direction is itself an ecological problem. We are not outside the ecology for which we plan — we are always and inevitably a part of it. Herein lies the charm and the terror of ecology — that the ideas of this science are irreversibly becoming a part of our own ecosocial system (ibid:504).

This paper is not primarily concerned with establishing the scientific rigour of the terms of debate nor the veracity of the claims they might be used to support. Instead, it seeks to illustrate just how such concepts are used in a Fourth World context: the ongoing discourse concerning Saami resource empowerment in Sweden. By examining the context of debate behind the various supposed facts thrown into the discourse, the unstated implications, we uncover the rhetoric in the arena of current Saami ethno-politics. Essential questions are: What factors stimulate the eco-morality discourse? How is empirical reality tailored to fit the strategies of argument? What configurations of alliances between interest groups are at stake? Why has the motorcycle been given such a symbolic importance in the debate?

Background

Only approximately 10 percent of the 17,000 Saami in Sweden are engaged in reindeer-herding (Beach 1988). Yet all special Saami resource rights are tied to the practice of this livelihood alone. The right to graze reindeer and to hunt and fish on designated Sameby territories is enjoyed only by Sameby members. Should a herding Saami come to derive the major part of his income from a source other than reindeer herding, he is no longer to be classed as an active herder. According to the Swedish Reindeer Act of 1971 (RNL), such a person is to be deprived of Sameby membership unless he or she is a child under age or a pensioner.

This form of legislation, adhering to what I have previously termed an 'occupational paradigm' (Beach 1985), divides the Saami population
into distinct legal categories, herders and non-herders, those with access, albeit limited, to certain resources, and those without. This division has the effect of substantially reducing Saami ethnic unity. Moreover, this same construction places enormous weight upon reindeer herding as the standard-bearer of Saami ethnic rights, while focusing the burden of ethnic minority-majority resource conflict upon the reindeer-herding group.

The Swedish government's rationale for the above-mentioned creation of a somewhat privileged occupational herding group of Saami, a minority within a minority, is based on the proposition that the Saami should be granted special resource access in order for them to preserve their unique Saami culture. In a crudely simplistic but convenient manner, Saami culture is then equated with reindeer herding alone. As a logical consequence of this, RNL moulds Saami ethnic rights into rights for a single occupation, reindeer herding.

Of course, reindeer herding is more than just a cultural expression. It is an important occupation which provides many people in the north with a livelihood. It has an existential status beyond its culture-bearing aspect. Government policy, with only an occupational perspective on Saami ethnic concerns, is devastating for the Saami, just as a policy whereby reindeer herding is tolerated solely for its function as a culture preservative is devastating for the herding industry (Beach 1991).

**Alliance and conflict**

Because of this state of affairs, Saami herders encounter criticism on two fronts. On the one hand, there is the non-Saami majority (in every Swedish municipality, even in the Saami core areas, the Saami are a minority) dependent upon the employment opportunities provided by extractive industries such as the hydro-electric power, timber, tourist and mining industries, occupations competing with herding for land use and frequently hampered by the Saami and herder lobby. As individuals, Swedes living in the north are often envious of so-called Saami (herder) resource privileges,
primarily hunting and fishing. On the other hand, there are the non-herding Saami with immemorial land rights but no practical ability to practise their rights, since they are not Sameby members. Both groups might criticize herders severely for practising forms of modern herding which employ 'high-tech' equipment, on the grounds that such herding by helicopter, snowmobile and motorcycle can hardly be seen as preserving traditional Saami culture. However, while the Swedish majority frequently wishes to dispense with herding altogether, or at least to weaken its resource rights further so that it cannot impede other industries, the criticism voiced by some non-herding Saami (what little there is of it) is generally directed towards the herders' lack of traditionalism and therefore towards promoting their own justification to enjoy Saami resource rights as true bearers of Saami traditional culture.

The above categorizations must be refined on numerous points and recognized as a dynamic process. Obviously both herding and non-herding Saami share other cultural idioms and are commonly united in a larger 'pan-Saami' ethnic struggle which will often subordinate their internal divisions (Beach 1981:400 ff.). Environmentalist concerns cut across all these groups, forming shifting patterns of alliance depending upon the specific issue at stake. For example, Swedish environmentalists, Saami herders and non-herders formed a coalition against the building of a hydroelectric power dam in Sitojaure, but were radically split along different lines over the issue of the protection of reindeer predators (Beach 1981:421).

Precisely because it strikes right at the heart both of the debate concerning cultural preservation, 'high-tech' and resource rights, as well as the increasing emphasis on environmental protection, the current discussion over the use of motorcycles by Saami reindeer herders provides a remarkable stage for viewing the dynamics of Saami ethno-politics, and environmentalist and majority interests.
Motorcycle, snowmobile and helicopter

As a general rule, Saami herders and environmentalists share common interests. Environmentalists are well aware that it is largely thanks to the Saami that much of the north has not been more heavily exploited. In contrast to the major extractive industries, reindeer herding thrives through a maintenance of the environmental status quo. If the Saami should themselves engage in environmentally questionable activities, the greater Swedish population is hardly in a position to throw stones. However, there is one type of land category over which conflict between Saami and environmentalists is most likely to erupt: the national parks.

In part to alleviate national guilt over widespread environmental devastation in some regions, national parks are created in other regions. Of course, there comes a point where the goals of maintaining a natural habitat and allowing everyone to enjoy its natural beauty are not particularly compatible. Nonetheless, each individual citizen views himself as a trackless, invisible observer with the complete right to demand similar environmental invisibility of everyone else within the park area. It just so happens that many of Sweden's largest national parks coincide with the grazing lands of many Samebys, and that what the common Swede regards as a 'last wilderness' is in reality the 'backyard' of numerous herding families. To them, the wilderness is a cultural landscape with a broad historical depth.

It is therefore first and foremost within the national parks that the general Swedish population is prone to stand up against what is perceived as Saami eco-mismanagement. Despite the historical priority of their land-use claims, the Saami whose Sameby territories converge with national parks are forced to adhere to a number of gradually increasing resource constraints. Nonetheless, many herders welcome the declaration of their grazing lands as park territory because of the constraints also thereby levelled against major extractive industries. Park ideologies, regulations and environmentally protective measures vary, however, and the trade-off...
between herding constraints and land protection does not always cause all
the herders to welcome the creation of all the parks.

The motorcycle is used by herders within the national parks, and for
that reason alone one can understand that it might arouse opposition.
Moreover, its use is confined to herders. Non-Saami and even non-herding
Saami cannot utilize motorcycles within the parks. The herders are able to
demonstrate the motorcycle's usefulness in herding work and can therefore
make the case that to deny them the right to use it would be an
infringement of their occupational rights: enforced traditionalism at the
expense of hampering the efficiency of a hard-pressed livelihood. Should
reindeer herding not be permitted to avail itself of modern technology, it
could hardly support a viable herding society, and without a viable herding
society there would be hardly any living traditions.

The debates about cultural preservation and enforced
traditionalism, and about over-protection as opposed to self-determination,
are certainly not new in the Swedish Saami context. Swedish Saami herders
have long employed technological devices and even themselves been
forced by need of cash income to seek part-time employment in many of
those same extractive industries which are injurious to their herding. What
is new, however, is environmentalist concern in opposition to the herders,
and the conception that herders have themselves chosen an
environmentally harmful path in their own traditional livelihood — freely
and spontaneously, not as unwilling martyrs in need of cash who have been
forced into an exploitative occupation imposed from outside.

Thus far, the motorcycle deserves the same attention as a number of
other 'high-tech' devices, such as the helicopter and the snowmobile. Yet I
believe there are differences which distinguish the motorcycle as the most
fitting symbol of debate. These differences relate to variable legislation
governing the mode of use, the categories of people granted such use and
the kinds of environmental impacts these vehicles have.

Consider the snowmobile, which first appeared among herders in
the 1960s and revolutionized herding in a remarkably rapid blaze of
technological conquest (Pelto 1973). As usual with technological innovations, what began as a freely-chosen aid soon became a necessity. Collective work operations became geared to the schedules and mobility of a fully snowmobile-mounted herder labour force, and he who was not so mounted became useless as a herder. Note, however, that the snowmobile was as new to the Swede as to the Saami, to the non-herder as to the herder. Legislation constraining the use of snowmobiles has proceeded on an *ad hoc* basis. Its technological conquest was equally rapid among sportsmen, tourists, and other northern inhabitants for whom it opened up a new world of activities. Not only could great distances be covered quickly and relatively effortlessly, but one now had the ability to transport supplies and passengers over the winter landscape without draught animals. Within a short time Swedish snowmobile traffic flooded the mountain regions, and snowmobiling became a major form of recreation. When it became plain that the traffic was bothering wildlife and also disturbing the work of the herders, regulations against snowmobile traffic in the national parks were imposed. Of course, herders were still permitted to use snowmobiles within parks for their herding work.

Since snowmobile tracks disappear on the whole with the snow, their permanent impact on bare ground is light. (It is during the bareground period that most Swedes are in the mountains to witness such effects.) On the snow landscape, to be sure, an abundance of snowmobile tracks can be highly disruptive for reindeer herding. The reindeer are prone to follow tracks. The tracks, noise and human presence are highly disruptive to wildlife. Inconsiderate people on snowmobiles often occasion much litter and vandalism. Nonetheless, most of the environmental damage inflicted by snowmobiles (noise and human presence) and the melting snow (tracks) disappears. An important point here is that, whatever the damages are, the burden of blame is shared by both Saami and Swedes; in fact, the Swedes probably have to shoulder a greater blame not only because of their greater numbers but also because their use of the snowmobile is largely recreational and frequently inconsiderate of the
environment. While it is true that herders, who are the only people allowed to use snowmobiles in the parks, are indeed subject to environmentalist criticism, this criticism is usually aimed at a particularly objectionable activity (for example, claims that the Saami have been illegally hunting protected species — predators — by snowmobile). While criticism might be justified for an occasional offensive act, it is not a valid argument for depriving the herders of their park snowmobile rights \textit{per se}. The herders are simply not numerous enough for their work-oriented use of snowmobiles to be so objectionable.

The helicopter and even the seaplane (both of which, like the snowmobile, do little visible damage to land) are other 'high-tech' vehicles which have been used increasingly by herders. The use of helicopters for the transportation of herders themselves, their families and supplies followed upon the similar use of seaplanes and considerably pre-dates helicopter use in the actual driving of reindeer. The seaplane might be employed in dispersing herders to various lakes from which they might start a gathering operation, and it might well be used to survey the whereabouts of major reindeer flocks, but it is not possible to drive reindeer by seaplane. The helicopter can perform all the above tasks and more. It is especially effective in driving animals over land. However, the greater expense of helicopter operation usually means that the seaplane will be preferred for those tasks it can do just as well. With a herder sitting beside the pilot to direct movements (there are very few individuals who combine herder and pilot skills), the helicopter has acquired a niche in the herding cycle of the mountain Samebys for rounding-up bucks in the autumn for pre-rut slaughter.

This is a very time-critical slaughter, for if the bucks are not corralled and slaughtered before mid-September, rapidly rising hormone concentrations will ruin the taste of the meat. On the other hand, the longer one can wait to slaughter, the more the bucks will weigh and thus the greater the profits. The helicopter has the speed, agility and 'bird's-eye' spotting ability from the air to stop and turn a herd of stampeding bucks.
Once small scattered flocks have been assembled into a larger herd — a job still often performed by men and dogs on foot or with motorcycle support — the helicopter can take over and ensure that the slaughter will proceed according to schedule.

Proven success at driving reindeer by helicopter for the autumn slaughter of bucks has resulted in increased use of the helicopter for driving reindeer at other times of the year. Two other factors have been important for the expansion of helicopter herding: 1) The Reindeer Act of 1971 restructured the Sameby as a collective business enterprise with a common fund for collective herding expenses, providing the Sameby with a sizeable source of funding that can be used for helicopter expenses. (These collective funds are significantly enlarged by compensation payments for lost grazing land because of extractive industries.) 2) The herding routines of almost all Samebys were affected by the Chernobyl nuclear disaster in April 1986, especially during the first year, although the amount of contamination in the grazing lands and thus in reindeer meat has varied greatly from region to region. The Swedish Government imposed a contamination limit for the marketability of reindeer meat set at only 300 becquerels cesium 137 per kg. (At the same time, the marketability limit in Norway was set at 6,000 Bq/kg.) In the attempt to reduce contamination in the reindeer, the Samebys moved forward the date of the autumn buck slaughter, so that the reindeer would not have fully made the transition from green grazing to moss grazing. It is the reindeer moss (lichen) which contains the extremely high doses of cesium. Earlier slaughter, however, means not only that the animals' slaughter weight will be reduced, but also that the deer will be further west and more dispersed. This, in turn, has demanded an increased use of the helicopter, both because the slaughter became more time-critical than ever with the new cesium variable, but also because gathering the deer at this time was much more difficult than if the normal schedule had been followed.

Moreover, the Swedish Government has compensated herdsmen both for the weight loss and for the extra helicopter costs brought about by these
earlier slaughters. Helicopter use increased dramatically. However, in mid-1987 the Swedish marketability limit for reindeer meat was raised to 1,500 Bq/kg, eliminating at a stroke the need for earlier slaughters for the majority of Samebys; in the regions of worst contamination, earlier slaughters continue (Beach 1990a and 1990b).

Once one has begun to employ the helicopter for whatever reason, its use gains a kind of momentum of its own even after the original reason has disappeared. Finances, routines, (human and animal) knowledge and lack of knowledge become geared to life with the helicopter.

The motorcycle, however, presents a different case. Although use of the motorcycle in herding has shallow roots in the Swedish mountains (on the Finnmark Vidda it has been used by herders for a longer time), it is not a new piece of equipment, even if technical improvements have adapted the motorcycle to open terrain. Traffic regulations concerning motorcycles were well in place before they ever reached the mountains. Certain of these regulations have outlawed the use of motorcycles in open terrain. It is because of these laws that non-Saami as well as non-herding Saami are prevented from using motorcycles in the open landscape. It is only because of other regulations (admittedly inconsistent with the previous set) which explicitly permit the herders the special right to use the vehicles required by their herding that they have been able to persist. During an initial period of confusion (and this confusion is far from fully settled), some herders have had to hide their cycles, lest they be impounded, and make long detours in driving back to summer mountain camp, lest they be identified by the police or the park authorities. Now, however, without a clear prohibition against it, the motorcycle as herding vehicle seems to be tolerated by the authorities. The herders use them openly. But it is a shaky truce.

Since the tundra landscape is quite wet and the covering of soil is thin over rocky surfaces, the motorcycle can either gouge deep tracks, destroying the vegetation and creating muddy holes in which the water gathers and later freezes, or else scrape surfaces bare. Environmentalists
press for restrictions, especially within the parks.

**Arguments opposing and defending modern vehicles**

Environmentalist concerns over the herders' use of the snowmobile, motorcycle and helicopter are based on a number of factors. These concerns generally fall under two headings: stress and hardship for the reindeer and damage to the land. Some environmentalists argue that the high speed and mechanized stamina of motorized vehicles harass reindeer to a point which is inhumane and detrimental to their health. While herding dogs have traditionally been used to scare deer and to chase strays back into the main fold, the dog has not the combination of stamina and speed over the tundra landscape to cause the deer more than temporary discomfort. In other words, the deer has a so-called natural pattern of flight with respect to predators, man and dog. The deer runs to a 'secure' distance, turns, looks back and begins to graze again until the distance is reduced to a point which inspires further flight. Motorized vehicles, however, are fast and they keep coming. The deer gets no chance to relax or graze. Studies frequently cited by environmentalists have shown that, for instance, deer driven to slaughter by helicopter have an inordinately high frequency of stomach ulcers. Veterinarians with whom I have discussed this issue point out that helicopter driving can also exhaust deer and damage the meat quality by depriving the deer of grazing for long periods, especially for deer in the middle of a large herd who encounter only the grazing which is left by those ahead and which has been trampled by them. In effect, it is claimed that this form of driving the deer is too effective. A more relaxed pace with looser guarding would permit deer to break away temporarily or to dawdle long enough to graze. Environmentalists argue that since new high-tech vehicles are freely chosen, and since the Saami herders were able to do without them in the past, they should be able to make do without them now.

As for damage to land, it is the motorcycle which arouses most
environmentalist indignation. The cycles are used primarily in the summer for the round-up of reindeer for calf markings or in the early autumn for gathering in the deer for the first herd separations. Environmentalists point out that the motorcycles scar the sensitive bare ground tundra, and if the laws barring motorcycles in open terrain are based on valid ecological reasons, they should apply without respect for ethnicity.

The Saami are by no means insensitive to humanitarian and ecological issues raised by the use of high-tech equipment. The ways in which the snowmobile, for example, will be employed by different Samebys, and even different groups within a single Sameby, vary greatly and are common topics of conversation. Some herders still prefer to drive the migrating herd by men on skis aided by dogs. The accompanying snowmobiles are used to haul supplies and to provide rest for a tired skier. The snowmobile driver will at times 'spell' the tired skier, the two swapping places. Should any reindeer manage to break away from the control of man and dogs, it will dash out in reserve to bring them back, but it generally stays well behind and does not actively drive the herd. Other herders use only the snowmobile, no skiers and no dogs. Almost every herder has his own ideas about what is best with respect to animal health and control.

The manner of use appropriate for the motorcycle and the bare-ground season of its use leave room for far less variation. Basically it is used, or it is not used. Clearly, however, the spread of its utilization within a Sameby follows much the same pattern of transition from convenient aid to necessity demonstrated by the snowmobile. Once its use is more than just experimental, once it has come to make an impact in speed and scheduling of labour, herding families in Samebys where it is used can ill afford to be without any motorcycle-mounted representative. I have encountered many young herders who point out that, regardless of the environmental debate and the physical beating motorcycling over mountainous terrain inflicts upon the herder, they simply must have one if they are to have any effect as herders today.

Unlike the snowmobile and the motorcycle, the helicopter is not a
piece of equipment within the financial grasp of every private herder. Its employer is the Sameby as a whole, and its manner and frequency of employment depend upon such things as the consensus of herder opinion, the strength of the Sameby exchequer and the special seasonal characteristics of the Sameby's terrain.

When criticized by environmentalists, Saami frequently try to demonstrate that their critics do not know what they are talking about and are romantics rather than real nature people with knowledge of the facts of life in nature. Among their most common arguments are the following: All herding is somewhat stressful for the deer, and while helicopter driving might be extremely stressful for the deer who first encounter it, they soon get used to it and, unfortunately for the herder, may pay little heed to it. I have seen how reindeer have stubbornly turned to face low-flying helicopters trying to blast them forward with the wind from their propellers. In an odd kind of 'arms race', some herders have even equipped helicopters with noise machines on their bellies in order to move the deer more effectively.

As for the argument that herders today should be able to make do with the technology of the past, herders point out that there is as much stick as carrot in the employment of high-tech equipment. Exploitation of the grazing lands by modern industries (which epitomize the use of high-tech equipment — for example, one timber machine doing the work of 50 loggers) has resulted in enforced extensification of herding, characterized by a looser control over the animals. Not only is there less grazing land, but it has been cut up into a patchwork with such major impact on the herders' temporal and spatial patterns of labour that they are obliged to take advantage of the new vehicles if they are to survive as herders at all.

Developments in the modern slaughterhouses and the reindeer-meat marketing business also push herders towards greater so-called herding extensivity. New standards of slaughterhouse hygiene prioritize the slaughtering of animals at the plant, and this, in turn, can require the freighting of reindeer in double-decker trucks over long distances. Once
the habit has been established of transporting deer by truck to the slaughterhouses, it is natural to hire these same trucks for the transport of deer to different grazing areas as well. Yet, the more the deer are freighted in trucks along the roads, the less their own natural orientation to the region, the greater the likelihood of irregular patterns of movement when left on their own, and the greater the need for further mechanized herding aids. There are many interrelated factors pushing the modern herder into what I have termed 'the extensive spiral' (Beach 1981), and such a spiral is both a cause for and a result of increased dependence on high-tech herding. If, the herders ask, other industries, and especially those exploitative industries which destroy reindeer grazing lands, are encouraged to mechanize for the sake of efficiency, is it fair for the Saami to be denied similar possibilities? Should they be forcibly smothered by their old and often inappropriate traditions? Must they face economic ruin in order to live up to the environmentalists' sentimental image of the 'primitive ecologist'?

Note that this is not to abdicate the eco-morality principle; herders stress the point that their use of the motorized vehicles so criticized by environmentalists is not particularly harmful to either the animals or the land. Similarly, herders point out that the muddy ruts in the tundra caused by motorcycles frequently regenerate into green stripes in an otherwise brown mat the following spring. Yet, should a herder admit of any deleterious effects, he can immediately, and not without justification, cast the blame on the extensive spiral forced upon him by others and attack environmentalist solutions as enforced traditionalism leading to suffocation.

Opposing arguments are equally uncompromising: while admitting to the original superiority of the eco-consciousness of some Native peoples, it is often argued that Native eco-consciousness easily degenerates as their cultures embrace Western technology. Whatever their past superior attributes, it could be argued that Native cultures are inevitably guided by techno-determinism in so far as ecological impact is concerned. In other
words, while critics are perfectly willing to acknowledge the profound differences in world view and admit to the greater eco-morality of (some) traditional Native peoples when compared with industrialized man, they view this distinction as eradicated in step with increased technological capability. According to what might be termed the 'equifinality argument', all peoples, given the same technology, will succumb to the same hubris. Eco-morality will soon be dispensed with.

Many environmentalists therefore argue that Native cultures today are not what they once were. Once indigenous peoples have encountered Western technology and been entrapped by its determinism, there is no independent eco-morality which remains as a viable, free ideological variable within the culture, at least to no greater extent than might still exist in the cultures of industrialized man. Arguably, there is a significant distinction between traditional and technologically primitive Native peoples who could not inflict major environmental damage upon the world, and present-day Native peoples who operate within a modern technological sphere, and possess no noteworthy eco-morality, but who claim to possess one on the basis of their old historical record. However, a certain amount of scepticism is in order with respect to arguments suggesting that the Saami are indifferent to the conditions of their natural environment. If anyone is to demonstrate concern for a particular environment, it can be expected primarily from those who live in it and are dependent upon it.

Both sides in this debate have worthy points to make. Just as it would be wrong to characterize all Saami as either ecological 'fallen angels' or devout eco-moralists, so would it be wrong for the Saami to disregard all the concerns of non-Saami environmentalists.

**The larger minority-majority context**

It seems that a new era is in the making with regard to relations between the Saami and the nation-states. With the Norwegian Altevatn court case
of 1968, the grazing rights of Swedish Saami have been upheld in Norway. In 1981 the Swedish Skattefjäll Case (Taxed Mountain Case) confirmed Saami immemorial rights. Even more recently, largely as a result of the damming of the Alta River in Norway and the enormous controversy this inspired about Saami rights and needs as a threatened culture, Saami Rights Commissions were appointed in both Norway and Sweden, and a Saami Parliament ('Sameting') was established in Norway, with a similar 'Sameting' in all likelihood soon to be established in Sweden. Saami gains on the national front have also been bolstered by international law (SOU 1986:36). Despite stubborn opposition, Swedish Saami legislation is taking the first hesitant steps away from a policy recognizing Saami rights only as a privileged form of livelihood (reindeer herding) to a new paradigm, confirming rights (not privileges) for the Saami as an ethnic group rather than as practitioners of a specific livelihood (Beach 1990c).

For many individuals and exploitative industries, Saami gains pose a threat. The massive new court case in the Härjedalen region between Saami herders, on the one hand, and Swedish landowners and timber companies, on the other, reflects the great uneasiness caused by change (even just hints of future increased Saami resource empowerment) in Saami land rights (Beach and Nobel 1990). Environmentalist arguments are not only invoked by environmentalists. Those opposed to Saami resource empowerment, be they environmentalists or not, attempt to discredit Saami eco-morality. For them, the motorcycle controversy is a very useful tool indeed. Frequently, the Saami are portrayed as the motorcycling eco-gangsters of the national parks.

Of course, the motorcycle is not the only tool used to discredit Saami eco-morality. The total herd sizes of many Samebys are today above their so-called 'rational herd limits' prescribed by the government herding authorities. Naturally the deer can cause real problems for landowners and hunters, even if not necessarily to the extent claimed. Typically the herders are accused of keeping too many head because of out-moded traditional ideals of prestige.
While some of this criticism may well be justified, a number of important factors are often overlooked. Not only is it prestigious to own many reindeer and a security factor in case of hard times, but the Swedish Reindeer Herding Act (RNL) grants herders voting power within their Samebys on the basis of herd size. A further source of herd expansion stems from the constraints on private ownership of reindeer but collective access to grazing lands. This puts the herders in a commons dilemma, whereby the environmentally proper reduction of herd size by one herder will only play into the hands of another herder who can increase his herd at the other's expense. Most importantly, the Swedish taxation system appropriates almost all the profits from reindeer slaughters beyond the amount which the herder, defined by law as a business enterprise, can reinvest in his business. This latter problem has a simple solution. A so-called reindeer account (renkonto) would enable herders to bank the money for a slaughtered deer and be taxed on it only when the funds are taken from the account. In this way meat stored on the hoof could be stored in the form of money in the bank, avoiding grazing depletion and without depriving the state of any taxes. Simply put, the deer could be slaughtered according to ecological factors but utilized according to herder need. Owners of forest land enjoy a forest account constructed in this fashion. Yet herders have time after time been denied the establishment of a reindeer account. Until this and similar problems are solved, social and economic forces will continue to put pressure on herders in the direction of always striving to increase their herd size.

At the same time, northern landowners and municipalities swallow with little if any protest the massive environmental damage done by the hydro-electric power industry and nowadays the timber industry in particular. Logging operations have pushed ever further up the foothills towards the mountains into virgin forest whose regeneration is known to be terribly chancy, even if possible (Hagberg 1985). Those who raise their voices against this short-sighted devastation are branded as frivolous 'outsiders' or naive folk-dancers by the local community whose jobs and
services depend upon the exploitation (Fries 1986). The herder who takes a stand against industrial exploitation, however, can hardly be cast as an outsider or someone without experience of making a living in the ‘world of hard knocks’. In the local arena, the Saami herders, armed with their resource rights, their minority status, their unquestionable local roots, their working-class profile, and their eco-morality, pose one of the strongest bulwarks against environmental exploitation, even if their voting power is negligible. Obviously the most telling attack (in fact one of the few available) that those who favour exploitation can level at the herders is to turn the tables and paint them as exploiters. Within this context, the motorcycling herder has become a symbol which immediately triggers an enormous range of ill-chosen and poorly thought-out arguments and half-truths.

Conclusion

Many Saami, while they might not view the use of the motorcycle by herders as especially damaging to the environment, nonetheless recognize it as a severe political liability. Some have expressed the desire to curtail its use so as to maintain their eco-morality position unblemished. The herders themselves, however, are hardly in a position to make such a decision today. They face a kind of commons dilemma of work methods. For an individual herder to stop using his motorcycle in a Sameby where it is required equipment would spell the end of his ability to maintain his bare-ground herder responsibilities, both with regard to his deer and with regard to the other herders. While it is true that the physical beating occasioned by motorcycling in the mountains has caused some herders to dismount, there usually is another family member to cover the family motorcycling duties.

If the use of motorcycles by herders is to cease, it will in all likelihood be because of legislation (park regulations or even broader-ranging regulations). In this case, the authorities must once again assume
the role of enforcing traditionalism and hindering Saami self-determination. Alternatively, the cessation of motorcycle utilization might come from the herders themselves, not as a political strategy, but as a cost-benefit response. If too many of the young motorcycling herders in a Sameby sustain injury, or if a particular Sameby's bare-ground grazing territory proves excessively troublesome for this mode of transportation, cycles may become just a passing fancy. In some Samebys motorcycle use is still in the experimental stage; in others, it is a fixture, and the young herders have become so skilled in its use that they claim they can drive wherever they can walk. For the herder as well as for the environmentalist, the motorcycle has been imbued with a symbolic dimension. To the Saami it represents self-determination and a living culture which uses what it wants and what it must of the modern world in order to maintain its traditional livelihood in the face of the ecological disturbances imposed by modern industrial society. Because of the opinions raised against motorcycles, their use by herders is sometimes tinged with an element of good-humoured defiance.

I do not mean to argue here that the Saami herders are always above ecological reproach in their utilization of high-tech equipment, but that it is impossible to isolate this discussion from a larger minority-majority context. Regulations protective of the environment must be formulated and assessed with an awareness of the needs of threatened ethnic groups dependent upon that environment. Regulations protective of threatened ethnic groups must in turn be formulated and assessed with an awareness of the prerequisites to maintain a balanced environment. One can only hope that those dedicated to the protection of nature and those dedicated to the protection of threatened cultures come to negotiate their differences within a broader understanding of the ecological concept.
Notes

1. It would seem that everything is in a broad sense 'maladaptive' if it seeks to maintain any given rigid structure, be it a cultural pattern of behaviour or a genetic code, in a dynamically changing system. The question of how to sustain change and yet maintain identity (survival) is ancient. In response to an initial change in any dynamic ecosystem, one must recognize two further forms of adaptive change, working in tandem, on the part of any sub-unit: the one relates to movement within the flexibility of a given structure or frame, the other relates to the renormalization of the frame itself (Wilden 1972:205). In terms of biological evolution, this is the distinction between so-called 'somatic' change and genetic change (Bateson 1972:346), the former referring to an individual body's ability to adapt within its given structure — for example, accommodating to the thin air at high altitudes — the latter referring to a codified change of the bodily structure itself through genetic mutation, becoming the norm in future generations.

2. In government proposition 1992/93:32, concerning Sweden's Saami policy and changes in the reindeer herding law, to be voted upon by the Parliament in December 1992, the suggestion is made that the use of terrain vehicles on bare ground be further constrained. While the government is willing to uphold the right of herders to use such vehicles in connection with herding, this is to be more precisely defined to mean the guarding of reindeer and the gathering and driving of the herd for the purposes of marking, slaughtering or migrating. Special care is to be taken when driving on bare mountains (Prop. 1992/93:32, p. 126).

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