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# CHAPTER 10

# Woodland Polyphony

by

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with synopses of contributions from

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Some Swedish contributions to a research exchange between Sweden and Canada concerning human perspectives on woodland are described. The project sought historical and cross-cultural insights into different perceptions, uses and behaviour with respect to woodland among *Academia* (scientists and humanists), *Officialdom* (managerial authorities), and *Folk* (ordinary users of woodland, e.g., foresters and forest farmers, natives and lumbermen, tourists and participants in popular movements). Contrasts and tensions among these three worlds of discourse are highlighted and a case is made for research and reflection on the perennial interests of identity, order, niche and horizon, as catalysts for dialogue on sustainable use of woodland globally.

## 1. INTRODUCTION

The world's 4.3 billion hectares of forest land have sometimes been regarded as the heart and lungs of Planet Earth. Forested watersheds of the world's largest river systems regulate the volume and flow of water, influence climate and air, check soil erosion, and play a vital role in carbon, oxygen and nitrogen cycles (Maini in LLLL,

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1991, pp. 21–31).[1] The Amazonian basin has provided a habitat for an astounding complexity of ecosystems in which plants, animals, birds, fish and insects live in mutual interdependence. The forest is also home for many of the world's indigenous peoples, who have learned to adapt their lifestyle and values to the resources within reach.

Ever since Neolithic times the art of sustainability – harmonizing economy and environment – has been the challenge of all resource-based livelihoods. Formulae in different geographical contexts were fundamental in shaping the world's diverse cultures. For instance, for Gitskan and Wet'suwet'en people in Western North America the red cedar tree is the staff of life, its broad planks ideal for houses and utensils, poles and masks, its roots useful for ropes and snares (Sterritt in LLLL, 1991, pp. 94–112). The Sioux ceremonially reaffirm the cottonwood tree as symbol of creation and form of social life (Black Elk, 1961). The epics of Gilgamesh and Mahabharat are woven around the tree as image of the universe, its roots in the heavens and branches extending downwards through various echelons of society (Cook, 1974). From Noah's Ark to the Christian Cross, wood has symbolized salvation and redemption, e.g., Yggdrasil, Scandinavian symbol of the universal story of life, death and regeneration (Eliade, 1958).

Technological advance in agriculture, demographic growth, and ever increasing scales of economic production in recent times have led to a radically different set of attitudes toward natural resources. Far from adaptation to the environment, modern livelihoods demonstrate attitudes of aggressive exploitation. Literature abounds on the perennial salience of woodlands as a source of artistic inspiration and patriotic sentiment, its symbolic significance in Western political life at least as influential as its material value (Deffontainnes, 1933; Daniels, 1988). The symbiosis of farming and forestry in traditional Nordic ways of life was transplanted to North America by thousands of families in the nineteenth century. On the 'pioneer fringes' of New England and New France, the forest was seen as refuge or escape from the rigours of the past and as an opportunity for adventure in new social forms. In both settings clergy and political leaders – and later academics – all promoted forest clearance as an essential prelude to 'civilized', i.e., agrarian, ways of life (Blais in LLLL, 1991, pp. 77–93; Bowden in HTG, 1992, pp. 187–194).[2] In 250 years, since the burgeoning of the Industrial Revolution in the Western world, one-fifth of the world's temperate forests has disappeared, and today the tropical rainforests are being cleared at a rate of seventeen million hectares each year.

## 2. PERCEPTIONS OF FOREST

During the twentieth century most nations, states and governments have appointed a caste of policymakers to negotiate the diverse human interests involved in woodland use and management. Varying widely in rationale, strategy and effectiveness, policies are usually couched in terms of scientific theory or empirical evidence and, almost invariably, managerial strategies have been comformable to national economic priorities (Sörlin, 1988; in LLLL, 1991, pp. 55–63). Under the gaze of

modern science, however, wood has become a measurable commodity – as expanse of forest classifiable in terms of locational extent, genera and species, as raw material for pulp, fuel or potential export tonnage of lumber, or as recreational ground for the jaded urbanite. The relationships between science and policy have been persistent foci of attention for philosophers and intellectual historians, and the present condition of the global environment brings a poignant urgency to this issue (Clark, 1989; Williams, 1989; Engel, 1990). Many of the assumptions underlying present practices need to be critically re-assessed (Maini, 1987; in LLLL, 1991, pp. 21–31; Phipps in LLLL, 1991, pp. 152–162; Rowe 1989; McLaren in LLLL, 1991, pp. 145–151).

A wide range of human associations with woodland can be found. Andersson and Hultman (1980) have identified eight distinct roles which woodland plays in human life:

- existence for its own sake;
- ecological stabilizer;
- producer of wood;
- producer of food;
- source of knowledge, e.g., indicator of human relationships to nature;
- carrier of cultural values;
- environment for outdoor life;
- potential resource for the future.

It is conventionally assumed that specialized research on such diverse aspects of woodland experience could together lead towards better understanding on the one hand, and provide adequate grounds for policy measures on the other. Except for very limited realms of bio-ecological and physical systems, science has yet to solve the problem of 'parts and wholes', and in the study of human interactions with the environment, scientific approaches yield only partial insight. It is also assumed that policy measures might eventually lead to changes of human behaviour and that by correcting or eliminating behaviours which today appear destructive, one might promote more ecologically harmonious modes of life in the future.

Viewed historically and cross-culturally, these assumptions are shaky. The gap between official policy and actual behaviour in many settings is, to say the least, dramatic. Ways of life (dwelling) need to be understood as wholes, products of experience, memory, beliefs and habits: an orchestration of energies premised upon particular ways of dealing with environments. Externally imposed changes in any of its 'environmental' components may demand a reorchestration of energies, and perhaps fundamental changes in the understanding of one's place in the world.

## 2.1 Economic and Ecological Accounts

In the virtual cacophony of policy-relevant scientific research today there are two distinct and scarcely reconcilable stories – inventories and prospects – about the world's forest cover:

- *economic* accounts of woodland resources as livelihood base for 'development' in different settings; and

– *ecological* accounts of the fragile forest as the earth's 'pulmonary system' and its most precious habitat for diverse life forms.

The clash of economic and ecological rationality permeates most contemporary debates on sustainable development. What renders our present situation problematic is the separation of economy and place, the vastly increased scale of market-driven systems of production and exchange, and the dominance of a small minority of energy-demanding and technologically sophisticated interests within the global *ecumene* (the humanly inhabited world).

## 2.2 Academic, Official and Folk Perspectives on Woodland

A pilot research exchange between Sweden and Canada, initiated in 1989, sought historical and cross-cultural insight into different perceptions, uses, and behaviour with respect to nature and woodland.[3] Empirically speaking major actors have been those 'systems' involved in appropriation, entrepreneurial exploitation and eventual commercial negotiation of forest products. Acknowledging that, the focus of the Swedish-Canadian project was on other categories of actors, who implicitly or explicitly contributed toward shaping ideas, theories, and eventually action with respect to environment:

– *Academia* (scientists and humanists);
– *Officialdom* (managerial authorities); and
– *Folk* (ordinary people in their everyday situations, e.g., lumbermen and foresters, as well as various folk 'movements' that have appealed to nature symbolism in their programmes of social reform).

A dominant approach among scientists concerned about environmental issues is the analysis of 'global systems'. The human component is frequently regarded as an unwelcome disturbance, even as 'Gaia's cancer' (Dobell, 1990). The dynamics of geosphere and biosphere, as well as major crises induced by human activities, might well be analysed in systems-analytical terms, but the same conceptual frame is inadequate for an understanding of the anthroposphere. Functional models serve well in elucidating the dynamics of ecological and even macro-economic systems, as well as the causes and consequences of disharmonies between them, but such knowledge *per se* does not offer adequate grounds on which normative guidelines for future action can be based.

Understanding of the *ecumene* demands frameworks of enquiry which could capture a wider range of evidence on the relationships between humans (persons and groups) and their environments than that afforded by conventional scientific procedures. One of the greatest scientific challenges is to discover modes of enquiry which might embrace both biophysical and human dimensions of environmental experience.

In global terms, the human envelope (the anthroposphere) could best be conceptualized as an arena of diverse cultural worlds, each attuned to sets of tradition, values, aesthetic and moral preferences – pockets of order sustained by livelihoods which are themselves dependent on some combination of local and global resources.

Superimposed upon, and at times quite insensitive to, the values and traditions of diverse cultural worlds are systems of economic and technological order, which increasingly assume direction over human livelihoods. Such systems currently support gross inequities in human access to resources and also give rise to serious and possibly irreparable damage to the biosphere itself.

Among the overriding challenges facing researchers today, therefore, is the need to discover ways whereby international and cross-cultural dialogue could be facilitated on issues of human co-responsibility about the global interactions of humanity and its terrestrial home.

## 3. FOREST MANAGEMENT AND ATTITUDES

### 3.1 Ideological Controversies in Swedish Forestry Over the Centuries[4]

Intellectual historian Sverker Sörlin[5] has extended enquiry into the record of ideological influences on Swedish policy, the main point being that the attitude to nature in general and forests inparticular reflects technological and economic conditions in the country in question (Sörlin, 1989).

The forest has always been a key resource in Sweden – not surprisingly in a country of which two thirds are covered by forests. Evidence of its value is already found in the Middle Ages. The meadow was a cultural landscape, whereas the actual forest was taken for granted. Popular notions of the forest stressed its darkness, its dangers and its mythical figures. Sixteenth- and seventeenth-century poetry generally describes the forest as ugly and useless. But that anti-aesthetic attitude – however common among ordinary people up to the twentieth century – was soon to give way to an interesting conflict. In the sixteenth century large groups of Finnish slash-and-burn farmers arrived in Sweden. They were initially regarded as useful colonizers in remote woodland areas in central and northern Sweden, but with increasing iron manufacture requiring enormous quantities of wood, the Finns were soon considered merely as beasts of burden.

In the ensuing conflict, the Swedish king – i.e., the state – took a position that we can follow as a pattern ever since. The state favoured that interest which seemed economically most progressive and beneficial for the nation, i.e., the interests of the manufacturers. Consequently, the first Swedish legislation on forests was already passed in the 1640s. The apparent élite – folk dimension of the controversy should be noted. The Swedish forest has always carried with it some sort of spontaneous folk appeal in the sense that the forest has been considered common property. Enclosures have been regarded with suspicion.

However, the forest gradually assumed an increasing economic interest, and the forests were seen as a national resource. In scientific and official circles during the eighteenth century there was a search for better knowledge and utilization of natural resources. The Royal Academy of Sciences was instrumental in this respect. Its first president was the famous naturalist Carl von Linnaeus. The Academy worked under Royal auspices for a more scientific and rational use of the forest in the national

interest. Again, then, there is a conflict between élite and folk. Popular customs were supposed to alter as soon as they did not promote the national interest. This pattern of folk on one side and scientists and officials on the other prevailed into the nineteenth century, but there was a new somewhat disturbing element: large-scale commerce in the forests.

After fruitless attempts to colonize the northern parts of Sweden (Norrland) in the seventeenth and eighteenth century, a liberal laissez-faire policy gained ground in the early 1800s. Vast areas in state-owned Norrland were handed out as grazing lands to settlers in perpetuity. Towards the 1850s demands for wooden products grew rapidly in Europe, following industrialization, mining and railway construction. Forest resources were first exhausted in Norway, and then a 'timber frontier' literally started rolling into the north of Sweden, Finland and the northernmost tip of western Russia around the turn of the century.

Forest companies were established and the landholding peasants were expropriated. This massive transfer of peasant property to anonymous, often foreign, forest companies was regarded with great suspicion and fear. At the same time this commercialization of the Swedish forests admittedly accelerated Swedish industrialization tremendously. Wooden products became the leading economic sector by far and accounted for about half of Swedish export revenues in the early 1900s. Currently that figure is around 20–25 per cent.

Norrland underwent a remarkable economic expansion, and the lumber industry initiated a major exploitation of natural resources, carried further by extensive mining interests and completed by the rapid expansion of hydropower. Indeed, to employ the rhetorical style of the day, the forests and iron ore mines of Norrland were the backbone of an export industry whose fundamental traits still characterize Swedish economy and relationships to the outside world. Norrland, the most isolated part of Sweden, became almost international. Everyone there was suddenly dependent on the state of the European market. Forestry and mining were also combined with farming.

Towards the end of the nineteenth century, Swedish patriotism was tremendously boosted by the economic profitability of Norrland, and the forest often served as a national symbol. While the forest sector contributed to the emerging image of Sweden as a future industrial Great Power, it also created controversies. The growing proletarianization of smallholders caused concern among social conservatives and radicals, both socialists and radical liberals. A whole range of attitudes was brought forward: fear of the cities, criticism of manufacturers, praise of rustic values and of life in the countryside. Opposed were the laissez-faire liberals, strong among industrialists, advocating quick and uncompromising industrialization and economic growth as keys to national pride and increasing welfare among the population. In that sense, the Swedish forest debate reflected a far larger international dispute over the vices and virtues of modernization.

The state continuously supported the progressive part, (i.e., industry), by imposing new laws on sustained-yield forestry. The big forest companies were generally not considered the problem, but folk (country dwellers and smallholders) were. There was also enhanced scientization of Swedish forestry at the time: research increased, as did the number of chairs and institutions, education was strengthened,

and legislation was informed by scientific arguments.

An important aspect was that ideological and economic interests were clad in scientific pretensions and arguments on an unprecedented scale. This phenomenon – special interests looking for scientific justification – has grown during the twentieth century to such an extent that many conflicts of interest between groups in society are, in practice, fought out by the scientific community on behalf of other interests. This connection between special interests and science was first established within the élite: companies and the state sought scientific support, researchers were dependent on funds, and both the state and the forest companies supported forest science in the era of industrialization.

This clash of opinions was also found within the scientific community itself, where a majority advocated corporate and/or official interests and gladly put their knowledge in their service. Only later in the twentieth century did the unorthodox group of scientists grow larger in the Swedish forestry sector. The situation is somewhat changing in the wake of the environmental crisis, but as late as in the 1980s scientists with the 'wrong' ideas still had their funding frozen and careers halted due to unconventional lines of research.

The ecologization of the debate on natural resources has been made possible through a kind of scientifically informed environmentalism. Forestry in Sweden has not remained unaffected. There has been an outburst of criticism against logging methods, clear-cutting, use of pesticides and heavy machinery, threatened biological diversity and the health of forest workers. Capital, the state, and all too often scientists, have been accused of forming an unholy alliance. Commercial forestry has survived these attacks, and forestry legislation is still primarily directed towards timber production. But at the same time environmental legislation is catching up with commercial forestry.

The new average Swede is a city dweller with no immediate interest in further exploitation of peripheral resources. He rather prefers nature as a recreational area. Certain forest zones in Sweden already show greater revenue from tourism than from logging. In the future we will probably witness growing environmental, aesthetical and civil constraints on forestry. Conservationists are currently equipped with first-rate scientists, and more scientists are likely to change over and start advocating environmental principles rather than those of profit and economic growth – the tendency is already in full swing. Legislation might well turn environmental and conservationist, too. The alliance of industrialism would then be broken, and a new alliance of scientists, officials and folk would be established in its place.

### 3.2 Official Policy and Actual Woodland Management in Sweden[6]

In his scrutiny of changes in official policy regarding woodland in Sweden, Stefan Anderberg[7] has pointed toward the contextual circumstances surrounding those dramatic changes from situations permitting multiple and organically integrated uses of woodland (as both economic base and arena for dwelling of the early twentieth century) to those which have prescribed single-purpose and specialized practices geared to the use of woodland as resource for the production of timber and pulp

(Anderberg, 1989).

Until the nineteenth century there was regulated multiple use of the forests. During the eighteenth century a number of laws and regulations were introduced to prevent abuse of forests, the occurrence of forest fires and to secure the needs of the export industry and the military. However, there was little control over the actual observance of these laws. When pressure on the forests increased with the acceleration in iron mining and other industries, numerous measures were introduced to secure the wood supply for the iron works. Peasants were obliged to produce and deliver charcoal, slash-and-burn practices were suppressed and metal works were permitted to exploit Crown forests. The most radical transformation of woodlands in Sweden at the time took place in the southwest, where large areas of oak and beech woods were cleared and converted into heather-clad moors. Both the state and local farmers must have contributed to that development. The nineteenth century was an era of industrialization and deregulation in forest management. Landowners were again allowed to use their forests freely, with one exception: oaks and pines suitable for making masts were still reserved for the Admiralty until 1830.

When Great Britain lowered its import duties in the 1840s, Swedish sawmill industry expanded radically, particularly in the north (Norrland). New areas were open to exploitation, forest companies extended their influence first by buying felling rights from farmers, and then, after new legislation limited such felling rights in 1889, by accelerating their purchase of woodland. Concern was voiced about the need of improved care and replantation of the forests, but these early warnings did not change the dominating attitude. However, improved care of state-owned forests, intended as an instructive instrument, was introduced. A central Board of State Forests was founded in 1859, and the State, after previously having sold off much woodland, again began to extend its domains.

By the turn of the century, the Swedish forests were in a very poor condition. The insight that natural renewal was not sufficient to maintain the resource had been widely established in wide circles of society. In 1930 a law was enforced, marking the beginning of the era of systematic sylviculture and forestry. Everyone cutting timber was obliged by law to secure afforestation. Regional Forestry Boards were to survey this reconstruction of forest capital on private land. The Boards were quite successful, since their officers acted as friendly advisors more than as representatives of State authorities, using long-term profit for the landowner as their main argument. Gradually, the influence of the Forestry Boards increased. A kind of 'negotiated order', with close cooperation between State, forest owners and industry, has now been established.

In 1906 forest companies in Norrland, and later in the whole country, were prohibited by law from buying more woodland. This act, introduced by farming interests, froze the structure of forest ownership to 25 per cent state-owned, 25 per cent company-owned and 50 per cent farmer-owned. That is still the case today. In the early decades of the 1900s, peaking around 1920, a popular movement was created around afforestation. Statistically reliable assessments of the national forest resource were introduced in 1923, and although harvests had doubled since 1850, it was found that growth exceeded cuttings and a fairly stable yield of 40–50 million $m^3$ annually was recorded.

Since the regeneration time of forests in southern Sweden is only 75 years, instead of 150 years in the north, an increasing share of new investments in the pulp industry took place in the south. Farmer-owned forests dominated greatly; very few owners are economically dependent on forests and thus insensitive to economic incentives. Since the 1970s, cuttings have exceeded growth and the pulp industry now imports raw material from other countries and has increased its efforts to get higher yields from its own woodland.

The traditional and internationally unique right for Scandinavians (Swedes, Finns and Norwegians) to move freely in nature – Allemansrätten (Public Right to Access to the Countryside) – has strongly influenced the attitudes of Swedes to nature. In Sweden, people have affluent opportunities to enjoy the forests, and most Swedes connect the concept of nature primarily with forests. The development of leisure time and private transportation raises new demands on the forests and has made urban people more aware of the handling of the forests. The sylvicultural law of 1943 denoted the first concessions to short-term profit from forestry. The law had two major goals – profitability and stable yields – but no attention was paid to whether these goals were compatible. A demand for maximum profitability was introduced in 1968 in the instructions for State forestry.

In 1972 the report of the Committee on Forest Policy proposed that normal economic policy should guide forestry. Activity should be intensified, felling increased rapidly and the persistence goal abandoned. The report was so heavily criticized, though, that a new committee was set up with new directives, including one that the goal of forest policy should be high productivity in a long-term perspective.

In the ensuing Sylvicultural Law of 1980, Swedish Parliament decided that forest policy should consider public interests and the interests of nature conservation, but in the short run the needs of the forest industry were not to be disregarded. The central and regional Forestry Boards are primarily responsible for balancing these sometimes conflicting instructions.

Swedish Parliament seldom directly outlines methods and uses, only intentions in the form of guidelines and frame legislation. One of the more noticeable results in the late 1970s was that the scope of forestry research and education was widened, and that alternative methods of forestry (including biological control measures) were explored on a larger scale. In the Research Bill in 1982 two areas were particularly emphasized for agricultural and sylvicultural research (connected with long-term sustainability and indicating a growing awareness of the problems of modern forestry and agriculture):

– the possibilities in forestry and agriculture to lower the use of fertilizers and chemical control measures without compromising high yields;
– basic ecological research in forestry and agriculture for increased fertility of the land.

The methods of modern forestry, and the growing demands of the forest industry, have been increasingly questioned by environmental, conservational and recreational interests in Sweden. Present-day generations of urbanized Swedes do not view the forests exclusively as sources of industrial raw material, but value the forest

more as an essential environment for recreation. Uniform conifer stands with poor ground vegetation are far from the landscape ideal of the Swedes. The disappearance of the varied landscape of the preindustrial economy is strongly felt. So, multiple-use forestry is once again on the political agenda, and some new legislation reflects this tendency. But how to attain a co-existence without conflicts of modern forestry with the maintainance of biological diversity of flora and fauna, and room for people seeking recreation, watching birds or picking berries, is still an unresolved issue.

The most important trait in the long-term development is perhaps the evolution of a specialized, intensive production landscape. Today there is in many parts of Sweden a 'two-scape', with sharp boundaries between dense spruce forests and intensively cultivated crop production areas. Wetlands and meadows have to a large extent been destroyed. The outcome of modern forestry is controversial to many, who consider it a high price to pay for the benefits of development.

Policies of environmental protection and nature conservation have so far been poorly integrated into the industrial policy programs. Physical planning programs have established a division of space, in areas for farming, forestry, industry, habitation, nature conservation, tourism and recreation. The most probable future scenario is a further development towards a landscape of separate areas of intensive specialized production or consumption of various goods like wood, grain, recreation and values of culture and natural beauty. Alternatives to this development require fundamental rethinking, where the goal must be a varied landscape for multiple purposes.

### 3.3 Forest, Leisure and Environmentalism in Sweden[8]

Beginning with a study on the Scouts movement and its views on nature and practical outdoor life, Klas Sandell[9] has studied a wide range of recreational and environmental movements and associations which have played important roles in shaping perspectives on woodland among Swedish youths (Sandell, 1988, 1990a, 1990b, 1991). Often a linkage is claimed between a close contact with nature and a sense of respect, care and environmental engagement. This idea has been a common theme in the history of outdoor life and, for example, the Scout programme has included this approach from the beginning. 'By continually watching animals in their natural state, one gets to like them too well to shoot them' (Baden-Powell, founder of the Scout movement, 1910).

However, a more careful look indicates a much more complicated pattern. One needs to scrutinize the type of activity, the depth of the environmental engagement and other, perhaps contradictory, sources of inspiration and information. There is no clear link between contact with nature and environmental engagement. For instance, there has been a '...simultaneous explosion of public interest in environmental regulation throughout the industrial world during the latter part of the 1960s', and 'Why have some nations such as Sweden, the Netherlands and the United States become extremely preoccupied with improving the quality of the environment, while the citizens of other nations such as France and Italy appear more indifferent?' (Vogel and Kun, 1987).

Indications of at least a covariation between on the one hand quantity and quality of outdoor life and on the other hand environmental perspectives are:
– the type of outdoor activities is important for how nature (wilderness) is perceived (Lucas, 1972);
– a closer relation to the local landscape could be used as a tool for an increased understanding of conservation (Lewan *et al.*, 1987);
– the linkage claimed between on the one hand outdoor life and membership of, for example, scout organizations, and on the other hand environmental engagement (Jewell and Humphrey, 1978);
– '...participants in appreciative (outdoor) activities (e.g., cross-country skiing, hiking) hold stronger pro-environmental views than do participants in consumptive activities (hunting, fishing) or mechanized activities (snowmobiling, trail biking)' (Jackson, 1986);
– that 'several studies have examined childhood influences on outdoor recreation behaviour in later life, all finding siginificant effects' (Manning, 1990).

Nevertheless, a causality is often claimed between outdoor life and environmental engagement, for example with regard to environmental education both within organizations and as a part of school activities, etc. But very little seems to be known about if and how it is working, especially with regard to the radical demands for changes involved in the endeavour to achieve a sustainable development.

The study of the Scouts movement indicates, among other things, that this movement, despite a well-documented interest in outdoor life, has been rather lagging behind the general debate on nature conservation and environmental protection. The Scouts movement has primarily regarded outdoor life as a method for other purposes than those related to nature, e.g., national mobilization, character building, physical training, etc.

Outdoor life has been used by several organizations over the years for these other purposes, but the Scandinavian tradition of outdoor life must be seen in a much broader perspective. There is every reason to refer to a Nordic outdoor life tradition characterized by simplicity and popularity, partly in contrast to corresponding outdoor life traditions in Great Britain and North America. 'Allemansrätten', the Public Right to Access to the Countryside (within certain limits), internationally unique for Sweden, Norway and Finland, is of central importance in this context.

Environmental engagement in Sweden and similar industrial countries during the twentieth century can be divided into four phases:
– the interest in nature conservation around the turn of the century. There were scientific, local, cultural and national reasons for the conservation of interesting, often exotic objects. The concept of national parks was established, as was the nature conservation movement;
– the more active perspective of nature protection emerged during the 1920s and 1930s. That aim was to preserve representative areas, not only for the above-mentioned reasons but also for social and recreational reasons;
– the more systems-ecological perspective of environmental protection was established after World War II and particularly during the 1960s, when indirect environmental problems like pollution and diffuse discharges of toxic substances were included. Environmental issues became a responsibility for authorities;

– the perspective of alternative thinking emerged during the 1970s. Alternative ways of living, conducting agriculture, forestry and trade were attempted. New environmental movements were born, and environmental issues became a large area of interest and action for mass media and politicians.

Outdoor life, then, could be regarded as either a consequence of industrialism or as a reaction against industrialism – outdoor life as recreation of an unstable society or creation, a source of inspiration, for a more sustainable development.

An important aspect of the interaction between contact with nature and development of environmental engagement is the fact that current environmental issues have global features, at a time when physical and psychological ties to practical use of nature are weakening in urbanized generations. This, in turn, raises interesting questions about the relation between a local contact with nature and possible engagement in global environmental and natural resources issues. So far there has been little research elucidating the connection between local experiences and potential global engagement, and vice versa.

As far as contemporary tendencies are concerned, it could be noted that there seems to be

– an increasing interest by schools and organizations using outdoor life in environmental training;
– a continuously extensive offical need to plan for the urbanized population's contacts with nature;
– further accentuation of commercial and 'action-oriented' outdoor life, inspired by similar activities in Great Britain and North America;
– a general but probably often quite superficial acceptance of the importance of environmental perspectives (particularly global and lifestyle-oriented ones), canalized through 'remote engagement' in tropical forests or through passive membership in an environmental organization or a specific campaign;
– a continuous weakening of the physical and psychological ties between most people and the actual utilization of natural resources. This is due to the continuous growth and specialization of production and consumption systems in society.

In conclusion, there is an image of increased tension between the need for locally rooted, fundamental and lifestyle-oriented knowledge of nature on the one hand, and an increased psychological and physical alienation from this nature on the other. An overall approach for further research is therefore: the interrelationship between outdoor life and environmental perspectives, and the prerequisites for an outdoor life which could be an element in the endeavour to achieve more sustainable development.

### 3.4 Conceptions of Forest Management in Sweden and New Brunswick[10]

Tom Andersson[11] has made a comparison between conceptions of forest management in Sweden and in New Brunswick, Canada by analysis of metaphor (Andersson, 1992).

'The forest is an economic resource' is a statement that may be experienced as a

trivial one, but in reality its meaning is very complex and dependent on cultural experience. Due to radically different conceptions of management, the forest in Sweden and in New Brunswick is apprehended in different ways. His hypothesis, then, is that in Sweden the forest is maintained as a unit of production (e.g., a factory or a plantation) to a larger extent than in New Brunswick. In New Brunswick the forest is more often regarded as a unit of extraction (e.g., a mine or a supply).

In New Brunswick, 51 per cent of the forest land is owned by private owners and 49 per cent by the public. Public land, in turn, is divided between Federal (2 per cent) and provincial crown (47 per cent). The eastern parts of Canada differ from the west by having a larger portion of private owners. On average, 67 per cent of Canadian forest is owned by provinces, 27 per cent by Federal government and 6 per cent by private owners. While the provinces primarily manage the forest for the purpose of its resources, the Federal role includes responsibilities for nature reserves and research centres.

In contrast to Sweden, the supervision of forest land is apparently divided between two forms of public government which have partly different goals – the supervision of timber management and the conservation of woodland. There is no single public institution in New Brunswick that integrates both economic and environmental values of forest land, as the National Board of Forestry in Sweden does. Possibly, these two alternative forms of policy may explain different relations between the public, the politician, and the forest companies in the two countries.

Two metaphors illustrate the difference between forest management in Canada and in Sweden. Swedish government officials talk about the forest as a *cultural heritage*, whereas their colleagues in Canada prefer to refer to the forest as a *national treasure*. By emphasizing *heritage*, there is a sense of respect for tradition involved. *A treasure*, on the other hand, is a lawless thing, at least when it is found. The right to treasures is an open issue, but not so when dealing with heritages. These metaphors could well correspond to the actual forms of ownership in the two countries. Ownership relates to conceptions of individual rights, and the larger the portion of public land, the more reinforced the idea of no man's land, a lawless land. There is also another sense in which the two metaphors relate to different perspectives of forest management. When managing a treasure, there is an idea of multiplying it due to an inherent value. In contrast, a treasure is of no value in itself, but becomes useful only when transformed into something else. This contrast manifests itself in an emphasis on *cultural regeneration* in Sweden, wheareas in New Brunswick *wood processing* seems to be more central when planning the management of forest land.

The concept of *resource* is very prominent in Canadian texts concerning forest management, which could be related to an idea of the forest as a unit of extraction, instead of the Swedish emphasis on cultural production of lumber. Swedish economists depict the forest as a lumber factory. A mine, as opposed to a factory, is not subject to a definite construction. In New Brunswick the forest is managed through natural regeneration, and in Sweden through more monocultural stands.

Forests are mines in New Brunswick, and factories in Sweden. A mine is closer to nature than a factory, at least with respect to its location and character. This would seem to predict different conceptions of the relations between forest, culture and nature in the two countries. Swedish foresters sometimes depict the forest as a home

for living creatures, but such metaphors are hardly ever used in Canada. There is also in Canada the ecological notion of habitat, but in a technical sense. It has not the cultural sense expressed by the word 'home'.

However, in Sweden there has been a conflict over the use of the word 'home' in this respect. Environmentalists have complained about its implication that the forest is a cultural space, and would prefer the notion of ecosystem to be strengthened. The idea of ecosystem is devoid of social and cultural dimensions, and that could explain why the concept is well accepted among New Brunswick officials dealing with forest policy.

Forests in New Brunswick are more natural than Swedish ones, since intensive silvicultural activities are lacking and the Canadian forests have more wildlife. In contrast, the Swedish way of talking in terms of heritages, homes and factories strengthens the cultural dimension of the forest. Even if there is a tendency now in New Brunswick to replant forest after harvest, it appears to involve a minimum of human impact on the continued growth of the forest. Treasures, ecosystems and mines are not primarily cultural things. When one cultivates something there is a sense of future reward, whereas management as a concept implies control of things in the present. This contrast corresponds to the two metaphors. A heritage is something out of individual control, unlike the case with treasures.

## 4. NATURE AND CULTURE: HARMONIZING HUMAN INTERESTS IN WOODLAND

From 1990 on the substantive concern of the project shifted in a more explicitly ecological direction, the focus resting on tensions among four clusters of interest: *land* (agrarian and dwelling interests), *life* (bio-ecological interests), *lumber* (forest production), and *leisure* (recreational interests). An in-depth regional case study in the southern part of the Swedish county of Halland was initiated by Karin Hammarlund and Kristina Blennow, under the supervision of Torsten Hägerstrand and J.O. Mattson at the University of Lund. Regional case studies were also conducted in the Upper Gatineau valley in Ontario, and ongoing results of these were presented, together with those of the thematically oriented studies at an international workshop held in Ottawa in May 1991 (LLLL).

### 4.1 Culturally Shaped Interests

Probing beneath the surface of human experiences of forests it is clear that there are fundamental differences in the culturally shaped interests of Land, Life, Lumber and Leisure. Woodland policies and practices need to be understood in their distinct historical and cultural contexts and are therefore not easily transposable from one setting to another. Yet, the central thrust of enquiry in forest policy research seems to set its goals on the definition of general principles of management and control, eventually applicable in 'global' terms.

There are power-political implications of such taken-for-granted procedures, but insights from Swedish and Canadian anthropologists and ethnologists have revealed how blatantly vacuous, from intellectual and contextual vantage points, the foundations for such procedures are. Values, reinforced through socially taken-for-granted ways of life, permeate the worlds of industrialists, lumbermen, foresters, recreationists and agro-farmers; values often defended at a great price personally and collectively. Among them, however, a fundamental distinction can be drawn between the values associated with dwelling-in-place versus those oriented toward global horizons. Elements of the debate between leisure-versus-lumber interests, for example, can be conducted in terms of global (generalizing) theoretical frameworks and national economic imperatives. When it comes to landscape-and-life, the local details of *genres de vie* assume central importance – then primary concern is expressed about the long-term eco logical sustainability of taken-for-granted rules of social tradition. There are certain values prevalent in all Western industrialized nations, relating to environmental aesthetics, conservation of cultural heritage and balancing of economic growth with social egalitarianism. All too frequently these have been negotiated in terms which ignore the other set of values associated with global ecological integrity.

### 4.2 Identity, Order, Niche and Horizon

Even though these studies were located in the two 'Western' settings of Sweden and Canada, the conceptual framework involves categories of environmental experience which are potentially universal – identity, order, niche and horizon.

*Identity* connotes the cognitive/symbolic level of human experience with the environment, *Order* the behavioural/social level, and *Niche* the biophysical level, including that of resources for economic life. *Horizon*, a category which undoubtedly overlaps somewhat with the others, is designated to capture the ways in which people relate their own worlds to those of humanity in general – i.e., the tensions between local and global concern. These were the guidelines for a selective scrutiny of changes in environmental thought-and-action evident among three sets of actors: academic, official and folk.

In the long run the most challenging aspect was to understand how these three worlds related to one another in a historical perspective. The conceptual strategy focused on those key interests of identity, order, niche and horizon within the world of each, and then to discern what the critical catalysts have been for the extension of concern within each from local to global concern

In modern societies, technological and political structures permit people to separate these life interests. In traditional, resource-based communities they remain fused. One could say that in the former one finds a virtual cacophony of demands *vis-à-vis* the social and biophysical environment, whereas in the latter there is a polyphony, whose chords are continuously monitored through traditional liturgies of apprenticeship and celebration (Dene Cultural Institute, 1989; Sterritt, *ibid*). Contrasts between resource-dependent populations in Canada, Australia and Scandinavia and technology-dependent societies have further been summarized in terms

of this interpretative framework to highlight the dilemma of communication between the two (Table 1).

This framework allowed analytic focus on fundamental values at stake in the encounter of two cultures. Conventional discussions on woodland management tend to focus exclusively on issues of order and niche. Issues of identity are not deemed amenable to analysis of negotiation.

The second major interpretative thrust involved language and modes of discourse. Academic, offical and folk worlds each use their own constellation of terms and style of presentation – the taken-for-granted models of symbolic interaction within each are apparently inscrutable, or unpalatable for the others. To transcend such barriers demands some horizon of interpretation – eventually some meta-language – within which each can find a forum within which their interests can be adequately expressed (van Buren in LLLL, 1991, pp. 262–284).

*Table 1. Overview of the contrasts between technology-dependent and appropriate technology societies (Halpin, LLLL, 1991, p. 201).*

| **Milieu Categories** | **Technology-dependent** | **Appropriate Technology** |
|---|---|---|
| IDENTITY<br>Cognitive Awareness | *Homo Sapiens* dominant | Centred in Nature<br>Responsibility to care for Nature |
| NICHE<br>Biophysical Resources | Adapt/Manage milieux. Materials and energy transportable. | Mutual interdependence. Resources available seasonally. |
| ORDER<br>Spatio-temporal orchestration of behaviour and landscape | Individualism. Accumulation of wealth and material for security. | Mutual interdependence. Wealth sharing for kin and clan security. |
| HORIZON<br>Home and Reach | Sectorially defined. Isolation within permanent structures. | Seasonal migrations. Territorial reach following cycles of resource availability. |

## 5. SUSTAINABILITY OF TERRESTRIAL LIFE WORLDS – A BASE FOR DIALOGUE

The Swedish-Canadian woodland project has combined both empirical (descriptive) and practical (normative) research aims. Insights have been sought into perceptions of natural resources, particularly woodland, among different groups, and the relationships between local and global concern with each. The terms local and global came to denote wider meanings than their conventional (geographical) ones. The term 'local' was ascribed to whatever was taken conventionally as the immediate task: discipline- or paradigm-defined for the academic, regime- or policy-defined for the official, tradition- or movement-related agenda for folk. The term 'global' also assumed extended meanings, e.g., universal theory or terrestrial relevance for the academic, regional and national versus international politics for the official. To folk, the meaning of global might be a function of those world views derived from religious, ethnic, or livelihood-based traditions.

In the more normative vein of the project, woodland policy in the twentieth century in Canada and Sweden, its ideological sources and practical impacts, were evaluated. While empirically biassed toward historical and cross-cultural enquiry, the approach also implied a philosophical curiosity. Viable frameworks of analysis and reflection were sought, which could yield insight into the nature of environmental experience in diverse human civilizations on the one hand. In addition, the question of what are/have been critical catalysts of change in attitudes and behaviour with respect to nature was raised. Ultimately, we were searching for some bases on which communication and mutual understanding among these different worlds might be possible, and for the events or factors which were salient in evolving larger horizons of terrestrial concern among these different categories of people.

One of the resounding lessons for scientific researchers as well as for policy-makers from these historical studies is the importance of contextual sensitivity in modes of woodland use and management. The history of European colonialism and 'pioneer' settlement is replete with examples of inappropriate transfer of managerial ideas (Heathcote, in HGT 1992, pp. 195–202). In many cases, traditional woodland *genres de vie* were far more sustainable ecologically than those generated by export- or market-oriented forest production (Boserup, 1988; Brody, 1981; Gillis and Roach, 1986). Cross-cultural variations are also apparent – the record of Acadians in New Brunswick and that of pioneer settlers in Québec contrasts sharply with that of Ontario and British Columbia (Lowern 1932; Bond, 1964; Morrisonneau, 1978). Most poignant in present-day Canada is the tension between the ideas and practices of Native Amerindian peoples and those of provincial and Federal authorities (Hopwood, 1988; Dene Cultural Institute 1989; Sterritt in LLLL 1991, *ibid.*; Halpin in LLLL, 1991, pp. 196–207). In present-day Canada, where 350 communities are still dependent on forest industry, negotiation is inevitably necessary (Canadian Council of Forest Ministries, 1987; Manning, 1990). The record of the Swedish company Stora Kopparberg in Nova Scotia offers a dramatic illustration of the practical challenges involved in such negotiation (Soyez in LLLL, 1991, pp. 113–126).

While insightful for historical and cross-cultural comparative study, however,

the triology of foci on academic, official and folk has proved to be less incisive for work on contemporary issues. Not only are there vast differences within these three groups, but individuals may assume more than one of these roles at different times. Socially speaking, however, these terms point to three distinct and increasingly separate worlds of thought and practice, of experience and expertise. Interactions among them have increasingly become a function of the political economy and division of labour of particular nation states. As with other 'worlds', e.g., those of entrepreneurs, farmers, tourists and foresters, the prospects for dialogue and mutual understanding depend on more than simply a reciprocity of cognitive style – they also demand an acknowledgement of fundamental differences of vocational skill and milieu experience. The motivation to transcend one's specialty has characteristically not come from internal circumstances or intellectually reasoned rhetoric. Rather it has more frequently stemmed from external challenges such as wars, economic depression or growth, or an opportunity deemed more valuable than the maintenance and fostering of one's own niche.

The terms academic, official and folk point toward distinct ways of life rather than simply modes of perceiving environment. We sought bases for dialogue among them in the common environmental challenge, namely sustainability of the terrestrial life world.

## NOTES

**1.** LLLL = Land–Life–Lumber–Leisure. Local and Global Concern in the Human Use of Woodland. Interim report of Swedish-Canadian research exchange initiated in 1989, the woodland project Academic, Offical and other User's Perspectives on Woodland: Interplay of Local and Global Concern.

**2.** HGT = History of Geographical Thought. Special Issue of *Geojournal*, vol. 26:2, 1992.

**3.** Given the initial focus on human perspectives the terms forest and woodland have been used interchangeably throughout.

**4.** The history of scientific ideas and their connections with official policy in Canada were explored by Blais and others (LLLL, pp. 77–93). Case studies in a similar vein from Australia, Spain, Japan and New England are included in HGT.

**5.** Sverker Sörlin, Department of the History of Ideas, University of Umeå, Sweden.

**6.** For studies on woodland management in Canada, at Federal and provincial levels, see LLLL.

**7.** Stefan Anderberg, International Institute for Applied Systems Analysis (IIASA), Laxenberg, Austria.

**8.** Studies on experiences of woodland in northern and southern parts of Sweden were conducted by Ella Johansson and Cecilia Fredriksson, under the supervision of Dr. Orvar Löfgren at the Department of Ethnology, at the University of Lund.

**9.** Klas Sandell, Department of Sociology, University of Örebro, Sweden.

**10.** This study was based on official documents regarding forest management. Contrasts between 'official' and 'folk' discourse on woodland, particularly in New Brunswick, were explored in graduate seminars at Ottawa.

**11.** Tom Andersson, Cognitive Science, University of Lund, Sweden.

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