



bulletin

International Association for Landscape Ecology

IALE GOES TOWARDS INDIVIDUAL MEMBERSHIP AND MORE REGIONAL ACTIVITY.

In the future all members of IALE has to be registered as direct members of the international Association. and only regions that has been formalized and has a board elected among the members within the region will have the right to elect regional representatives to the IALE Council. The fee for the next period will be 10 US\$ and a possibility of a free corresponding membership in nation states where availability of internationally exchangeable currency is critically restricted. Membership in regional organizations will be in addition to this IALE membership fee.

This was among the most important decisions taken by the General Assembly of IALE in Ottawa in July.

The General Assembly imposed the new executive committee to ensure, that all measures to formalize a council according to the existing statutes should be taken, so that an ordinary council can be in function 6 month after the General Assembly at latest. This was done through the two following motions:

- ∞ That the list of regional contacts be divided into
 - a. regional representatives who represent formalized regions where a Regional organization has been formed, has an elected board including a member elected to be the Regional representative on the IALE Council, and where the current list of names and addresses of members has been filed with the IALE Secretary-General, and
 - b contact persons who will have roles only in communications.

- ∞ That Chairmen of Working Groups will be eligible to be members of the IALE Council only if the Working Group was approved by the Council and if the Chairman was elected by the Working Group.

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DEADLINES:

- Vol. 9 No. 4 : December 15, 1991
- Vol 10. No. 1 : February 1, 1992

As a consequence of the wish to change to direct individual membership as the normal way of membership, and to ensure a financial foundation for the association the following two motions was approved:

- ∞ *The IALE Bulletin will be distributed directly to all individual members by the IALE Secretariat except where formalized regions request and are granted permission by the IALE Executive Committee to have the Bulletin distributed to their members through their Regional Representative.*
- ∞ *That the fee for annual membership in IALE will be US\$ 10 (net amount delivered to IALE Secretariat). For those wishing membership in nation states where availability of internationally exchangeable currency is critically restricted, IALE may provide free Corresponding*

Membership with full voting rights to all applicants. Memberships in regional organizations will be in addition to this IALE membership fee.

The General Assembly expressed the wish to change the statutes according to the principles set up by the former motions and expressed through the proposal for revised IALE Statutes, presented in Bulletin 9, no. 2. This was done through the following motion:

- ∞ *Before the next General Assembly, revised IALE Statutes, following the principles of the new statutes suggested in the most recent Bulletin, will be improved in text and detail by the Statutes Committee and will be enacted and put into force by the Executive Committee and the Council.*

The International Association for Landscape Ecology (IALE) exists to promote interdisciplinary scientific research and communication between scientists and planners

IALE EXECUTIVE COMMITTEE

President: Henri Decamps (France)
 Past President: Gray Merriam (Canada)
 Vice President: Joan Iverson Nassauer (USA)
 Vice President: E.R. Fuentes (Chile)
 Vice President: Paul F.M. Opdam (Netherlands)
 Vice President: Vaclav Mejstrik (Czecho-Slovakia)
 Secretary-General: Almo Farina (Italy)
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The IALE BULLETIN is published 4 times yearly. News items, articles comments and suggestions are welcomed.

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NEW EXECUTIVE COMMITTEE ELECTED

At the IALE Congress a new executive committee was elected by the preliminary Council:
President: Henri Decamps, Toulouse, France

Past-president: Grey Merriam, Ottawa, Canada

Vice-presidents: Vaclav Mejstrik, Ceske Budejovice, Czecho-Slovakia

Joan Iverson Nassauer, St. Paul, Minnesota, USA
Paul Opdam, Leersum, the Netherlands
Eduardo Fuentes, Santiago, Chile

Secretary-General: Almo Farina, Aulla, Italy

Deputy Secretary-General and Bulletin Editor:

Jesper Brandt, Roskilde, Denmark
Treasurer: James Thorne, Philadelphia, USA

Henri Decamps, our new president directs a research group at the ecological centre for renewable resources (CNRS) of the National Centre of scientific research in Toulouse, France. The research group has 40 members, and focus on the dynamics of fluvial systems. He has taken training at the University of Toulouse, at the University of Waterloo in Canada, at Windermere in the U.K. and at Karlsruhe in Germany. In addition to his research, which has produced over 40 principal publications recently. His studies have gone beyond the routine limnological analysis of rivers, by focusing upon the behaviour of rivers in their watersheds. He has been especially concerned with the interaction of the river and the adjoining landarea, forming the riverine landscape. Henri Decamps also has several national responsibilities. These include: President of a group on interdisciplinary research on the environment for CNRS, the national CNRS committee on biology of populations and of the rivers group, both for the Ministry of the Environment. He is also President of the MAB Scientific Advisory Committee on the role of water-land ecotones in the management and restoration of landscapes.

Almo Farina, our new Secretary-General, is Director of the Lunigiana Museum of Natural History, its botanical garden and laboratory of Landscape Ecology, in Aulla, Italy. Almo Farina has been concerned with the distribution and abundance of vertebrate animals at a regional scale. Among his contributions are analysis of the relation of bird distribution to landscape change in the Appenine Mountain regions of Italy.

AMENDMENT TO THE STATUTES APPROVED

An amendment to the existing statutes, that automatically makes the past-president a member of a new-elected executive committee has been approved by a voting procedure among all IALE-members. The members also voted for an amendment on a procedure for election of honorary members.

The text of the amendments was as follows:

F1. The Executive Committee shall consist of the president with a four year term or a term lasting until the next International Congress, and not re-electable for the following term; the past-president with a four-year term: not more than four vice-presidents with four year terms and subject to re-election: the treasurer with a four year term and subject to re-election: the secretary-general with a four year term and subject to re-election: the bulletin editor with a four year term and subject to re-election. The deputy secretary-general may concurrently serve as bulletin editor if necessary.

C1. (c) Honorary members. The Association may confer Honorary Membership upon distinguished Landscape Ecologists. Nominations shall be signed by two members of The Council and shall be presented in writing to all members of The Executive Committee at least three months before the next scheduled General Assembly. Honorary membership will be conferred if a simple majority of The Council approves the nomination..

WORKING GROUPS

INTRODUCTION TO WORKSHOP ON
"INTERACTIONS OF LANDSCAPES AND
CULTURES",
IALE WORLD CONGRESS, OTTAWA, JULY
1991

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In a recent lecture at the 1990 meeting of the USA/IALE, Caldwell (1990) stated that: "The landscape ecologist is an agent of culture - hopefully of a more satisfactory and enduring culture than the one we know today". He argued that the American culture (and this is true also for most other Western cultures of the industrialized

societies) has not helped to perceive nature whole, or to identify emotionally with their landscapes around them, although he may be awed by spectacular landscapes far from home. Landscape ecologists and planners (as well as managers) need not only a critical understanding of both the social and natural ecology of their environments, but they must help to elevate public comprehension of the significance of landscapes for the quality of life."

I am very pleased that the chief editor of "Landscape Ecology", Frank Golley, who is one of our platform speakers, found this lecture important enough to publish it as an "editorial comment". It might help in changing the attitudes of those regarding landscape ecology merely as a spatial ramification of ecosystem ecology or another branch of bio-geography but not as a unique transdisciplinary "synthesis of science and art" - in the words of Caldwell (1990). Bridging thereby the gaps between bio-ecology and human ecology, it could carry an important message (Naveh (1990)). This message is of special urgency in view of the rapid degradation of our open landscapes on global scales and the loss of their biological, scenic and cultural assets. We have therefore to ask ourselves what could landscape ecology as a transdisciplinary science, contribute to the prevention of further landscape degradation and to the provision of realistic alternatives for their conservation and restoration by better planning and management strategies?

This requires a better understanding of the interactions between landscapes and the cultural and social forces which have shaped them in the past and are driving them presently. Their recognition may help in mobilizing some of these forces for public education and for the decision making process in land use, which will determine their future fate.

The object of this workshop is to discuss these problems by landscape ecologists with different academic, professional and cultural background and to find out whether we can arrive at some unifying principles, which may offer some practical solutions to these crucial problems.

We can regard our workshop as a follow-up of the International Conference on "Cultural Aspects of Landscape", organized by the IALE Working Group "Cultural Aspects of Landscape", organized by the IALE Working Group "Culture and Landscape" in June 1989, in Barn, Netherlands. I highly recommend the proceeding, edited by Hana Svobodova and published by Pudoc, Wageningen 1990. The lucid introductory paper by Jan Zonneveld (1990), the brother of our former president Izaak Zonneveld, could have also easily served as an introduction to this workshop. He

energy/matter and/or information, in different ways and degrees, even in the arctics and antarctics. As documented in a most comprehensive way in the - now classical - volume on "Man's Role in Changing the Face of the Earth" (Thomas et al. 1956), our present global ecosphere landscapes reflect not only the physical and biological features of the geosphere and biosphere, but also the intangible noospheric-cultural features of those who shaped them throughout history and their spiritual, ethical and aesthetical values and aspirations.

CULTURAL LANDSCAPES AS SELF-TRANSCENDENT GESTALT SYSTEM

If we accept these cultural definitions of our open landscapes as the tangible meeting point between mind and nature, then we have to realize that they contain more than the measurable parameters of the Newtonian space-time dimensions and their Cartesian mechanistic and deterministic causality. From a systems-theoretical point of view they can be conceived as ordered wholes and natural Gestalt systems, which represent a higher level of bio-geo-anthropological complexity above the bio-ecosystem level in the global ecological hierarchy. Following Egler (1964), we proposed to call this the level of the Total Human Ecosystem, and to consider it as the highest co-evolutionary level of life on earth, with landscapes as its concrete, total natural and human living space Naveh 1982; Naveh and Lieberman 194, 1990). This conception of landscapes as natural Gestalt systems has far-reaching epistemological and methodological implications which I can indicate here only briefly:

As natural Gestalt systems, landscapes have not only the "formal openness" to energy/matter and information flow and the formal structural configurations, which can be measured and described only by formal languages, such as mathematical equations, models or graphical symbols and maps. These cannot represent themselves, but only other objects and are related to each other by analogy. Landscapes have also self-transcendent openness. This means the capability to represent themselves or be described adequately by homology with the help of another natural Gestalt system, namely our natural language as the organ of consciousness and therefore as our major cultural exchange of personal experience (Pankow 1976).

When we are using this formal language in our scientific landscape studies, we should be aware of the fact that we are projecting their uniqueness into a lower dimension, as if we would draw these landscapes only with a pencil, and thereby losing the unique qualities of the interplay of its different colours.

THE CULTURAL DIMENSIONS OF LANDSCAPE PERCEPTIONS

In discussing the interaction of culture with landscapes we have to realize that this is a reciprocal, and even cybernetic relation: Cultural impacts not only shaped our landscapes but our view of landscapes is also a product of culture and this, in turn is affecting our relation to these landscapes.

Although it is outside the scope of this introduction to discuss these problems in depth, I would like to review briefly some relevant studies and approaches, dealing with the cultural dimensions of nature and landscape perceptions from different points of view. I could have, of course, mentioned many others if time would have allowed this.

In his fine study "Topophilia" the American cultural geographer, Yi-Fu Tuan (1974) distinguishes between perception, as a response of the senses to external stimuli and purposeful activity, attitude, as a cultural stance, implying experience and value, and world view, as the conceptualized experience - being partly personal and largely social, and an attitude or belief system. The interaction of all three together with the environmental setting determine what he called "Topophilia" - the affective bond between people and place or setting, to which I referred above and which Frank Golley (1990) meant in his editorial remark. Tuan's many illuminating examples were drawn both from illiterate, traditional, and from present-day urban cultures. They show the enormous complexity and diversity and - amongst others - the ambivalence and changing attitudes towards wilderness, the countryside and the city in the American Cultures. He summarized his original insights with a general remark:

"Human beings have persistently searched for the ideal environment. How it looks varies from one culture to another but in essence it seems to draw on two antipodal images: the garden of innocence and the cosmos. The fruits of the earth provide security as does the harmony of the stars which offers, in addition, grandeur. So we move from one to the other: from the shade of the baobab to the magic circle under heaven; from home to public square, from suburb to city; from a seaside holiday to the enjoyment of the sophisticated arts, seeking for a point of equilibrium that is not of this world Tuan 1974: 248).

Another very perceptive but also more down-to-earth analysis has been provided by the great Canadian ecologist Pierre Dansereau 1974; 1980). We have referred to him in our book Naveh and Lieberman 1984; 1989) as one of the first North American ecologists who suggested to study landscapes as the highest integrative ecological level. Dansereau conceived man-landscape relations as cyclic or even cybernetic "inscape-landscape" interactions in which here is a filtering inward from

stressed, rightly, that in discussing interactions between mankind and landscapes in the cultural context, we should not talk only about cultural landscapes, but also concentrate on the information functions of landscapes as a matrix of human curiosity, aesthetic perception and scientific activities. For all those interested, I have brought with me a copy of this lecture, as well as of my lecture at this conference on landscape ecology as a bridge between bioecology and human ecology (Naveh 1990).

To elicit response and give some directions for the discussion, the workshop will be opened by several platform speakers with brief contributions. Before introducing these speakers, I will attempt to review some of the more basic epistemological and conceptual aspects of culture and its interactions with landscape. I believe that such a metatheoretical clarification could serve as a useful background for our discussion and I have therefore allowed myself to devote more time to this introduction.

CULTURE AND LANDSCAPE

By introducing the notion of culture into landscape ecology we are broadening its scope from the strictly physical, biological, and ecological realms of natural sciences to the sociological, anthropological, psychological, philosophical and historical realms of the humanities. These cultural landscape dimensions cannot be viewed only through those positivistic and mechanistic approaches which treat them merely as external disturbance factors, causing measurable, and mostly undesirable changes in natural physical and biological ecosystem features. As Zube (1987) pointed out in his lecture on perceived patterns and landscape values, in the conceptualization of such a mechanistic approach to humans as agents of negative environmental impacts, they are not considered as thinking, feeling - and therefore also nature loving (Golley 1990) - organisms who not only perceive landscapes but also interact with them in dynamic "transactional processes".

For this reason we should also not be content with attempts to reduce human culture to narrow socio-biological views. These are mostly based on neo-Darwinistic interpretations of a generically transmitted and selectionistic capacity for culture, (Dawkins 1976; Linden and Wilson 1981; Rindos 1985), or on materialistic, marxistic, energetic and other monistic cultural interpretations, such as provided by Drechsel (1985) and many others.

Culture refers to the total way of life of any society, it is therefore such a complex concept that no single definition can give it full justice. In 1949, the Californian anthropologists Kroeber and

Clyde Kluckholm (1949) collected more than 150 definitions from English and American literature, but many more could have been added now. These definitions and approaches to culture, applied by anthropologists, sociologists, human geographers, and philosophers have been very well summarized in the 1981 edition of the American Heritage Dictionary as follows:

Culture means the totality of socially transmitted behavior patterns, arts, religion, beliefs, institutions and all other products of human work and thought, characteristic of a community or population".

Culture, in essence, is what distinguishes us as humans from other animal creatures. It is a result of our unique mental ability for "symbolizing", namely, of assigning to things and events certain meanings that cannot be grasped with the senses alone. This should not be confused - as done by some of the above-mentioned socio-biologists with symbolizing.

This anthropological concept of culture, based on socially transmitted behaviour, rather than biologically determined, and as an order of phenomena distinct from the psychological, biological, and inorganic, is, in my opinion, also most relevant to landscape ecology.

However, whereas anthropologists deal with relations, interactions, and contradictions between nature and culture as manifested in all material and spiritual aspects of human populations and societies, we, as landscape ecologists, focus our attention on the territorial and chiefly terrestrial aspects of these interactions.

We can consider all human inhabited, influenced and/or modified landscapes, as the tangible space/time defined products of these interactions between nature and culture or - in more specific terms - between the biosphere/geosphere and the noosphere, the sphere of the human mind and consciousness.

All sub-natural, semi-natural, agricultural, rural and urban-industrial landscapes represent therefore different gradients of cultural landscapes, or "hybrid systems" senso Neef 1982).

As described in detail in a recent important book on cultural landscapes of Europe Birks et al. 1988), "natural" landscapes of Europe are, in reality relics of earlier types of land-use. these were maintained by extensive methods which became uneconomical and were abandoned and regenerated in response to other uses and non-uses. In the latter case the potential natural vegetation canopy took over, to which the unfortunate "climax" terms has been given, with its misleading connotations of a homeostatic stable-state equilibrium. This fiction of "virgin" natural landscapes (and therefore also of natural ecosystems) is true also for all other continents and today there remain very few larger stretches of land which have not been touched by human culture through our inputs of

nature to man, upward from the unconscious to the conscious and from perception to design and implementation in planning and management.

In his opinion, attitudes towards income, housing and transport provide the best clues to the discrepancy between the scientifically observed reality in the ecosystem, and perceptions by individuals and whole societies. Calling the present social compulsion to buy and to show, and to overconsume, and eventually to waste as the dark side of the consumer society, he claims, rightly, that "The vast conspiracy of advertising, using the great arsenal of hidden persuasion and triggering chain reactions of conditioned reflexes, has successfully topped natural needs" (Dansereau 1975:101). As many others, he regards, therefore, a slow-down of production and consumption as essential as the reduction of the rate of human population growth.

Using the St. Lawrence Valley as his example of the impacts on "landscape anatomy and physiology" of the interactions between natural ecology and human ethology, economy, ethnology and ethics, he arrived at practical conclusions for future planning and management. His writings could provide an excellent background for those visiting this region after the congress.

In his recent book "Powershift", Toffler (1990) has described in a very illuminating way how these "image makers" have become a major cultural force in our post-industrial "multi-channel" societies.

Of greatest relevance in this context are the studies and writings of the ecological anthropologist Rappaport (1979) on the discrepancy between our cultural images of nature and landscapes, as screened by our filters of beliefs, knowledge and purposes, and their actual structure and function.

This is a very crucial problem, because, in his words: "it is upon nature itself that they do act, and it is nature itself that acts upon them, nurturing or destroying them" (Rappaport 1979:97).

To cope with this problem he suggests two models:

A "cognized model", of peoples knowledge and beliefs which may well include supernatural components whose existence cannot be demonstrated by empirical procedures but whose existence moves the actors to behave in the way that they do. The second model is the "operational model" describing the same ecological systems, including people (and their action and therefore in our term "the Total Human Ecosystem") in accordance with the assumptions and methods of the objective sciences, and particular ecology.

People compare the states of this Total Human Ecosystem with their culturally determined notions of what they think they should be as their reference or ideal values.

However, these reference values may not correspond to "goal ranges" of the operational

models in which the system remains viable in the cybernetic sense - they are, therefore, maladaptive. From his many ethnographical studies he concluded that it may be "that the most appropriate cognized models, that is, those from which adaptive behaviour follows, are not those that simply represent ecosystemic relations in objectively "correct" material terms, but those that invest them with significance and value beyond themselves." ((Rappaport 1979:100).

Unfortunately, the cultural images of cognized models of our "developed" societies are regulated only in accordance with economic reference values. These are incommensurable with ecological terms, and the state of our "developed" world strongly suggests that this is likely to result in environmental destruction.

In the above-mentioned "modern" model, "postulating economic rationality, a forest ecosystem, is composed only of three things: those that qualify as "resources", those that are neutrally useless, and those that may be regarded as pests, antagonists, or competitors. A radically different evaluation is that by the so-called "primitive" cultural model of the Ituri Pygmies, taking the forest encompassing them to be the body of God. These two cultural views of the world suggest also radically different ways of living in" (Rappaport 1979:101).

Here, it should be added, that by imposing such "economic rationality" models on the few indigenous cultures which have kept their adaptive cognized models, such as the Indians of the Amazonas or the Massai and other Nilo-hamitic pastoralists of East Africa, we are destroying these resources, together with their cultures.

Rappaport (1979:127-129) attempted to improve the systemic relationship of cultural understanding to ecological processes by distinguishing between a lower level of meaning, namely the semantic distinction between objects, as used in information science; a higher order of meaningfulness, which incorporates also emotionally charged values and is based on similarities which can be expressed in metaphors and has not only connotative but also affective resonance, like in art and literature; and the highest order of meaning, grounded in identity and unity and in the radical identification of self with other. It is not so much intellectual as experiential and is perhaps most often grasped in ritual and other religious devotions. It is meaning becoming a state of being.

In the above-mentioned cognized model of our culture dominated by economic rationality, ultimate sacred postulates are no longer even counted as knowledge but are mere beliefs, if not superstitions, values are defined by preferences and as such become no more than matters of taste or of arithmetics of economizing. High-order meanings (such as respect, love, what Yi-Fu Tuan (1974) calls "Topophilia", are demeaned and their

influence upon human affairs minimized by "serious" and "practical" men (and "objective" scientists and professionals) who give to rationality itself an ever-narrower construction. In this evaluation process money has become the most important component. "If meaning is fragmented by fact it is dissolved by money ... The application of a common monetary metric to dissimilar things reduces their qualitative distinctiveness to the status of mere quantitative difference. The most appropriate answer to questions of the type "What is the difference between a forest and a parking lot?" becomes so many dollars per acre ... At the same time that monetization impoverishes the meaningfulness of experience, it threatens life itself. Decisions made in terms of simple-minded monetary considerations, freed from the surveillance of higher-order meanings, are in their very nature un mindful of the uniqueness and incommensurability of elements in the objective world upon which life depends, and the deployment of large amounts of mindless energy under the guidance of money is almost bound to be brutal and destructive." (Rappaport 1979:130-131).

The common root of all these approaches, and those mentioned below lies in the distinction made by Kant on "things as they are perceived" and "things as they are". This became the philosophical basis of the phenomenological approach to the sensorily apprehended world which is in complete contradistinction to the positivistic viewpoint of Comte and others after him. Phenomenology, as conceived by the German philosopher Husserl and further developed by Heidegger and by Merleau-Ponty had considerable influence on geographers such as Billinge (1977); Gregory (1978); Pickles (1985) as well as on Yi-Fu Tuan. Rappaport's above described emphasis on the importance of high order meaning and meaningfulness becoming a state of being has most probably also been influenced by phenomenology and his further existentialistic developments. These phenomenological philosophers suggested an entirely different way of looking at things and at ourselves in relation to the world and to nature, as compared with that which the natural sciences are offering. In effect, Heidegger, as cited by Steiner ((1978), has changed Descartes assertion: "I think, therefore I am" in to something like "I care, therefore I am".

As has been shown by Allesch (1990) on the above mentioned conference on cultural aspects of landscape, the phenomenological approach - and especially Merleau-Ponty's phenomenology of perception (1964), have been adopted also by environmental psychologists who were critical of the predominant tendencies in behavioral sciences of fragmentation and objectification of man's inner situation. In his very interesting lecture Allesch refers to the German-American psychiatrist Erwin

Straus who distinguished between the abstract space of geography and the sensory space of landscape, which cannot be explained by the structure of stimuli, but only by the specific way of human experience. This experience is lost in our modern leisure culture of air travelling vast distances in short vacations with on-the clock planned nature experiences. "the more life is dominated by technology, the greater is our yearning for the landscape, the more forced is the effort to regain it - oddly enough - by means of this very technology" (Straus 1964:12).

Allesch concludes in stating that behavioral sciences should study the phenomena of landscapes not in the abstracted space of geography but where it occurs: in the primary world of the senses to which Erwin Straus pointed out in his phenomenology of perception.

It is of interest to note that the phenomenological approach has been introduced recently also in a very valuable landscape ecological study of East Brabant in the Netherlands by Pedrolo ((1990). Referring to Pickles (1985) and Bockenmuehl (1985) he claims that the empirical objectivity alone will never touch the holistic nature of the landscape, which is not simply the sum of its parts. According to the phenomenological orientation, in order to solve the problem of the nature of landscape as a whole the researcher has to reconstruct the essence of the landscape in his mind, deducing from his systematic investigations of landscape phenomena by using different levels of observation.

Phenomenology and its existentialistic world views, as offered by Heidegger (1962) and Merleau-Ponty (1964) had apparently also great appeal to some concerned ecologists and environmentalists. Among these is Neil Evernden (1984) who expressed an even fiercer opposition to economic and utilitarian reasoning in our relations with nature and at the same time is also critical of the "operational model" based on an "objective" science of ecology. In a very challenging book entitled "The Natural Alien" he claims that ecology can help us manage natural resources, namely the process of changing a particular landscape into a resource but it does not challenge the concept of resourcism. This is based on the prevailing cultural tendency of "reification" - the conversion of a person, place or idea into a thing.

Ecology can help us argue that a bog should be preserved because it serves us by detoxification of water. "But the act of justifying the bog as a glorified septic tank entails acceptance of the very scale of evaluation which is the environmentalist's most formidable adversary ... Resourcism is a kind of modern religion which casts all of creation into categories of utility ... In claiming victory through the spread of resourcism they have rejected their own moral position and given support to a cultural

imperative that neutralizes and debases life itself". Once adopted, resourcism transforms all relationship to nature into a simple subject or user-used one and, in the terms of Martin Buber, whom he cites extensively, from a reciprocal I-Thou relation to an estranged I-It relation. This is true also for something as apparently idiosyncratic as landscape beauty, transformed into a resource and described quantitatively. "And since we accept only the physical world as real, we ask ourselves only which sites are beautiful, never "on what way is each site beautiful? As things, landscapes can be measured and managed, created and destroyed, traded off against other objects and uses. Resourcism, in reducing all values to one, may be the Trojan horse of the industrial state" (Evernden 1985:23-25). These views come very close to those of the "deep ecology" movement who reject the anthropocentric and "reformistic" attempts of piecemeal environmental improvement and of wildland conservation in the USA, and demand a much more far reaching cultural evolution, based on "a new metaphysics, epistemology, cosmology and biocentric environmental ethics" (Devall 1980).

The intellectual leader of this movement is the Norwegian existentialistic philosopher Arne Naess. He has recently presented in a very impressive way his ideas on the importance of intrinsic values in nature conservation in an important book on Conservation Biology (Naess 1986). He outlined the platform of this movement and the ways of involvement in actual environmental and conservation policies. He called for a greater active involvement of the specialists and the biologists on the basis of a normative total cultural view of "ecosophy" - or wisdom of household, in which philosophical, including ethical, fundamental positions should be combined with practical arguments. Before concluding this review, I would like to mention the very thoughtful, critical comments made by the Canadian environmentalist, or better, landscape ecologist, Hendler (1988) on Zube's above-mentioned paper in "Landscape Ecology". In a similar vein to Naess, he pointed out that landscape ecologists and planners should realize that landscapes have not only instrumental values, used in our attempts to achieve our goals and objectives, be they aesthetic, economic or recreational, but also intrinsic values - "definable in a way that is distinct from whatever instrumental value human beings may place on them".

He expressed the hope to bring the recognition of the possibilities of intrinsic values to the field of landscape ecology and to consider the conceptual aspects of human beings in landscapes rather apart of it. However if we are only interested in the spatial and physical aspects of the relationship then we can disregard this, but this is not his perception of what landscape ecology is, nor of what it should

be. This leads me directly to my conclusions, which can be, of course, disputed by you in the discussion.

CONCLUSIONS

One of the major conclusions of this review is, that we, as landscape ecologists are confronted with a major challenge when dealing with culture-landscape interactions from a holistic and integralistic point of view, namely the need to broaden the scope of our studies from the strictly natural sciences to the humanistic sciences and arts, dealing with culture as a whole, in a transdisciplinary way. This does not mean that each of us has to become a specialist in anthropology, environmental psychology and sociology. But as claimed, rightly by Allesch (1990:171) in his final statement in the above-mentioned conference on cultural aspects of landscapes.

"We need specialists that know how special their knowledge is. We need the biologist and the anthropologists, but the biologist who knows that man's nature is more than biology, and the anthropologist who knows that man is part of the ecological and anthropological circuits". But, at the same time - as Nassauer ((1990:173) added:

"We must be courageous in innovating around the conventions of our own disciplines. We must dare to borrow from what is useful in the approaches and knowledge of our colleagues in the arts, social sciences, and physical and biological sciences. We cannot afford to be sidetracked into critiques of old, traditional paradigms. Rather, we should move on to invent what works now".

As I mentioned above, if we continue to follow exclusively the paradigms of the so-called "objective" scientific reasoning with the help of formal and numerical languages, we have no choice and must reduce the study of landscapes to their formal functional openness only. But if landscape ecology means to become a truly transdisciplinary bioecology and human ecology science, it has to deal also with this self-transcendent openness of our Total Human Ecosystem landscape Gestalt systems.

Pankow 1976:17) maintained, rightly, that this selftranscendent openness is "the common interdisciplinary beginning and end for humanistic as well as natural sciences. Interdisciplinarity through self-transcendence does not require the formalization of disciplines, but unifies the disciplines while preserving the variety of their ways for thinking and speaking (Points or angles of view)".

Recent developments in artificial intelligence and knowledge engineering, applying the mathematical theory of Fuzzy Sets for the development of advanced computer programs of expert system, are greatly enhancing the prospects for such a unification. They open the way for efficient

integration of the complex ecological, cultural and socio-economical quantitative as well as qualitative landscape-ecological information. Such programs, as developed by Negotia (1984) and others, may enable us to capture "soft" qualitative landscape values mathematically as fuzzy sets and to deal with them in algorithmic fashion as regular numbers. The recognition of this selftranscendent openness has also far-reaching implications for landscape ecology as a tool for environmental education. It shows the need for broadening its educational basis from the purely cognitive to the affective realm - from perception and intellectual comprehension to the perception of perception, namely consciousness, and from knowing and understanding to loving and caring for our natural and cultural landscapes.

However, as my review showed, there seems to be a great discrepancy between the prevailing cultural perceptions and cognitive models of landscapes as exploitable economic resources only, and the desirable operational model as the total natural and cultural existential space, integrating both "hard" and "soft" values and functions.

After our platform speakers present brief case studies from different countries and societies, I suggest that in our discussion, we should try to deal with these problems by answering the following questions:

What are the cultural values which our landscape present and why should we be at all concerned with their fate?

Why should we bother about their visual, biological and cultural degradation and their turning into man-made deserts and monotonous agricultural steppes or monospecies forests? Is it only because we are losing their biological productivity and stability or their utilitarian and economic "hard values", or their environmental protection functions, or because of their "soft", intangible and intrinsic values, or both?

If yes, how can we, as landscape ecologists, succeed in persuading the public and the decision makers of the affluent western consumer society or of the poor developing societies, if we are not ready to use their own anthropocentric and shortsighted cultural cognitive image of economic rationality for this purpose? And how from the practical point of view, is it possible to preserve landscape patterns and processes which have evolved and are maintained by vanishing traditional land-use practices and if at all, how can we utilize the cultural forces which shaped them?

I am rather convinced that the answer to these questions cannot be given within the narrow framework of the prevailing cultural and scientific paradigms of economic efficiency, objective reasoning, and mechanistic causality of the formal openness of landscapes. We will have to provide a new conception of cultural landscape ecology and

methodology, integrating scientific ecological knowledge with ecological wisdom and ecological ethics, based on a reconciliation with nature and a new I-Thou relationship. In our scientific information, input values as- usefulness should be combined with values-as intrinsic worth and we should not only try to answer what is good for the landscapes of our societies, but also what is good for life on earth, for the ecosphere as a whole? Cultural landscape ecology should, therefore, represent, in my opinion, neither an anthropocentric nor a biocentric, but an eco-centric cultural view.

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WORKING GROUPS IN FUNCTION:

At the meeting of the preliminary council of IALE in Ottawa, July 23, 91 it was decided to continue or set up the following working groups:

1. Landscape ecology of agro-ecosystems
2. Urban ecology
3. Geographical Information Systems
4. Landscape ecology of alluvial rivers
5. Cultural aspects of landscape ecology
6. Landscape ecological planning

All members of IALE can join the working groups, and are invited to take part in the planning of future activities. Among the members of the single working groups an election of chair and co-chair, as well as a representative to the IALE-council will be accomplished in February. A two days conference for the IALE working groups, including will be organized April 30, May 1, 1992 in Montecatini, Italy. Further information on the working groups are available by the following chairmen:

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IALE MEETINGS

SUCCESS IN OTTAWA

The 1991 Congress of Landscape Ecology was held in Ottawa, Ontario, Canada at Carleton University. This meeting which attracted approximately 350 scientists from about 30 countries, was organized by Professor of Biology, Grey Merriam, President of the International Association of Landscape Ecology (IALE). Professor Merriam was assisted by numerous Canadian landscape ecologists associated with Federal, Provincial and University organizations. The Congress was prepared over several years and abstracts of the symposia reports and papers were reviewed by Kethy Freemark, Canadian Wildlife Services, and an international committee. This careful planning led to development of an interesting programme which featured the major areas of landscape ecology and represented different international perspectives. The program of the congress included several receptions in important Canadian cultural landmarks, including the new Canadian Museum of Civilization and the National Gallery.

A variety of contributions were made in the plenary, symposia, workshops and contributed papers. In the area of basic, theoretical landscape ecology a notable keynote paper was presented by Paul Opdam who reviewed recent progress in metapopulation research and landscape fragmentation. Opdam's thorough review considered demographic and genetic factors and the consequence of population studies for biological conservation. Zev Naveh organized a workshop on cultural aspects of landscape ecology which also attracted participants. Interest in the human activity in landscapes is increasing and a variety of studies of how human cause alteration of landscape pattern and process were reported in the workshops and in contributed paper sessions. Landscape ecology depends upon computer modelling and geographical information systems or remote sensing methods. Applications of these methods continue to dominate methodological sessions.

Finally, the meeting was enhanced by displays of

several agencies and businesses, including the Canadian Wildlife Service, SPB Academic Publishers, who publish Landscape Ecology, and Springer Verlag, who has published numerous important books in landscape ecology. In the General Assembly of IALE Henri Decamps from Centre d'Ecologie des Ressources Renouvelables in Toulouse was elected President. The next Congress will be held in Toulouse, France.

Frank Golley

EUROPEAN IALE MEETING IN RENNES IN 1993

The french section of IALE has offered to arrange a European IALE meeting in Rennes in 1993 as a European preparation of the Congress of IALE in 1995.

For further information Françoise Burel, Muséum national d'histoire naturelle Laboratoire d'évolution des systèmes naturels et modifiés. Avenue du Général Leclerc. 35042 Rennes Cédex France

NEWS

IMPORTANT MESSAGE FOR OTTAWA-PARTICIPANTS!

At the World Congress in Ottawa a list with name and addresses of participants wanting to receive the proceedings from the European IALE-seminar on practical landscape ecology held in Roskilde, Denmark in May 1991, unfortunately disappeared during the Congress.

If you have signed up on one of these lists and not yet received the proceedings, we have to ask you to order them once again, by contacting:

Geo-RUC
Roskilde University, Huse 21.1
P.Box 260, DK-4000 Roskilde
Denmark
Fax +45 46 75 74 01 (nb: nyt fax-nummer til hus 21).

The 4 Volumes of proceedings are available for a membership price of 100 DKK (Single volumes: 40 DKK) + postage. Postage costs are for the time being. 100 DKK (125 DKK if you want it by air mail). (100 DKK is app. 14 US \$).

REGIONS

ADVANCE OF LANDSCAPE ECOLOGY IN CHINA

China, which has a land area of 9.6 million square kilometers, is proved to be a good stage for landscape ecology, emphasizing researchers on large

scale. During late decades, Land(scape) science has been carried out by geographers, which was called "comprehensive physical geography" in China, such as natural regionalization, landform subdivision, landtype-classification etc.. All those researches was carried out on traditional methods, like integrated investigation, qualitative analysis and description. Now, landscape ecology, with its new methodology, brings land(scape) science to a new exciting era. In early 80's, concepts, principles of landscape ecology and its progress was introduced to China by several scholars. such as Lin Chao (1983,84), Chen Changdu (1985,86) and Xiao Duning (1988). From late 80's, landscape ecology studies have progressed rapidly in China.

At the beginning of 1988, the department of landscape ecology was founded in Shenyang at the institute of applied ecology of the chinese academy of sciences (IAE). It consists of more than 30 researchers, engaging in geography information systems (GIS), land(scape) structure and function study, Remote sensing, urban ecology, landscape ecological planning, landscape geochemistry, natural protection and management, eco-botany. Landscape ecology becomes one of the focuses of the institute. Also a teaching and research section for landscape ecology was established recently in the department of urban and environmental science of Peking university.

During October 6-11 1989, as IALEs contact person of China, Prof. Xiao Duning, with his colleagues of IAE sponsored the first symposium of landscape ecology, which was participated by 70 scientist and more than 70 papers and research reports discussed, and will be published as the proceedings, named "Landscape ecology: Theory, Method and application.". During the symposium the chinese Association for Landscape ecology (CALE) was established and chaired by Prof. Lin Chao, hosted at IAE, which already has put out two issues of "Cale newsletter". Hereafter "Landscape ecology" (Forman & Godron) and "Landscape ecology: Theory and application" (Naveh & Lieberman) have been translated into chinese and will be published soon. Since 1988 the National Foundation for Science has sponsored 3 projects on landscape ecology. They are "Landscape ecological construction of ecotones between farm and forest in the west of Jilin Province" (Jing Guihe), "Landscape ecological structure and potential study in lower part of Liaohe river plain" (Xiao Duning) and "Landscape ecology and development research in the south Taihang mountainous region".

Besides nationally subsidized projects, locally financed landscape ecology studies such as "Economic-social development planning for Lushunkou district and Dalian city" (IAE) has drawn attention too.

IAE, Shenyang.

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- 2) Ordinary regional contacts

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REGIONAL INFORMATION

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DAIRY

Delhi, India
6-9 Dec., 1991

Monitoring Geosystems: Perspectives for the 21st Century, IGU Seminar
Contact: Dr. R.B. Singh, Department of Geography, University of Delhi, Delhi-110007, India

Pasadena, USA
10-13 Feb. 1992

International Space Year Conference on Earth and Space Science Information Systems,
Contact: A.Zygielbaum, Jet propulsion laboratory, 4800 Oak Grove Dr., MS 180-701, Pasadena CA 91109 USA

Münich, Germany
23-26 Mar. 1992

European Conference and Exhibition on EGIS:92
Contact: EGIS Conference Bureau, Faculty of Geographic Sciences, PO-Box 80-115, 3508 TC-Utrecht, The Netherlands, Tel. *3130534261, Fax: +3130523699

Montecatini, Italy
27 Apr.-1 May 1992

Landscape approach to regional planning.
Subthemes: The future of Mediterranean landscapes, IALE working group planning conference, IALE task force on Red-books. Contact: A.Farina, Museum of Natural History and Laboratory for landscape ecology. 54001 Aulla, Italy. Tel. +187-420374, Fax. +187-420727

Waterloo, Canada
9-14 Aug. 1992

4th Annual Conference: Society for Ecological Restoration.
Contact: Society for Ecological Restoration, 1207 Seminole Highway, Madison, Wisconsin, 53711 USA. Tel. +2629547

Marseille, France
7-11 Sept., 1992

6th European Ecological Congress. Organiser by European Ecological Federation and Sociét'France d'Ecologie.
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