

# Nature and Society

## Anthropological Perspectives

*Edited by*  
**Philippe Descola, and Gisli Palsson**



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# Nature and Society

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*Nature and Society* looks critically at the nature/society dichotomy—one of the central dogmas of western scholarship—and its place in human ecology and social theory. Rethinking the dualism means rethinking ecological anthropology and its notion of the relation between person and environment. The deeply entrenched biological and anthropological traditions which insist upon separating the two are challenged on both empirical and theoretical grounds.

By focusing on a variety of perspectives, the contributors draw upon developments in social theory, biology, ethnobiology and sociology of science. They present an array of ethnographic case studies—from Amazonia, the Solomon Islands, Malaysia, the Moluccan Islands, rural communities in Japan and north-west Europe, urban Greece and laboratories of molecular biology and high-energy physics.

The key focus of *Nature and Society* is the issue of the environment and its relations to humans. By inviting concern for sustainability, ethics, indigenous knowledge and the social context of science, this book will appeal to students of anthropology, human ecology and sociology.

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## Editors' preface

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This book focuses on the nature-society interface in anthropology and several ethnographic contexts. The articles are revised versions of papers that were presented at the Third Conference of the European Association of Social Anthropologists in Oslo in June 1994. In her opening address to the Oslo conference, Signe Howell remarked that the organisers had been taken by surprise and that the abstracts submitted, as well as suggestions for themes for workshop discussion, indicated rather unexpected developments; not only had some of the 'established' themes offered by the organisers received little or no response from prospective participants, but some themes generally considered either emptied or outmoded in recent years—including those of ecology and kinship—turned out to be embraced with renewed enthusiasm. Thus, no less than three full sessions focused on nature and the environment. This book gathers together a selection of the papers that were presented in these sessions. The renewed interest in ecological issues which the Oslo conference and this volume reflect is somewhat unanticipated, given the hegemony of textualist theorising in recent years. Apparently, however, nature and the environment refuse to leave the agenda for good, re-emerging this time with more vigour than before. This suggests that the time is ripe for revisiting ecological anthropology on new theoretical terms. After all, a new millennium is almost here, a millennium which no doubt will pose massive environmental problems for humans.

We would like to thank the participants in the sessions we organised at the Oslo conference for their contributions to the lively discussions that took place, in particular the authors of the papers that were presented. Thanks are also due to Stephen Gudeman, who acted as a discussant in one of the sessions, and Agnar Helgason, who helped to prepare the final manuscript. Finally, we are grateful to Roger Goodman for his valuable editorial advice.

## Chapter 1

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# Introduction

*Philippe Descola and Gísli Pálsson*

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The overall theme of this volume—the place of nature and the environment in anthropological theory and social discourse—is not a novel one. From early on, nature was one of the central concerns of anthropology, whether in the field of folk-sciences and cultural ecology or in the study of myths and rituals linked to the environment and subsistence techniques. Nevertheless, in recent years the issue of ecology, in the broadest sense of the term, has tended to be relegated to the margin of anthropological discussions, as post-modernism and culturalist perspectives have dominated the centre stage of theoretical developments in the social sciences generally. This is reflected in the declining supply of (and, presumably, reduced demand for) ecology courses in the curricula of many anthropology departments. However, the situation is changing again, as anthropologists are increasingly returning to the study of environmental issues (see, for instance, McCay and Acheson 1987, Croll and Parkin 1992). Similar developments seem to be taking place in other disciplines, including philosophy, history, and sociology (see, for example, Dickens 1992, Simmons 1993, Attfield and Belsey 1994).

The contributors to this book focus on the nature-society interface from a variety of theoretical and ethnographic perspectives, drawing upon recent developments in social theory, biology, ethnobiology, epistemology, sociology of science, and a wide array of ethnographic case studies—from Amazonia, the Solomon Islands, Malaysia, the Moluccan Islands, rural communities from Japan and north-west Europe, urban Greece, and laboratories of molecular biology and high-energy physics. Among the questions posed by the authors are the following: Are the different cultural models of nature conditioned by the same set of cognitive devices? Are we to replace the historically relative nature-culture dualist category with the more general

distinction between the wild and the socialised? Do non-western cultures offer alternative models for rethinking universality and the issue of moral attitudes towards non-humans? Will the blurring of the nature-culture opposition in certain sectors of contemporary science imply a redefinition of traditional western cosmological and ontological categories? And, finally, would the theoretical rejection of the nature-culture dualism merely signify a return to the 'ecological' concepts of the early medieval European world or would it, perhaps, set the stage for a new kind of ecological anthropology? This introduction briefly outlines the themes of the volume, reviews the theoretical frameworks and arguments of the contributors, and defines fields of consensus and areas of disagreement. The discussion is divided into three parts, emphasising the problems posed by the nature-culture dualism, some misguided attempts to respond to these problems, and potential avenues out of the current dilemmas of ecological discourse.

## THE NATURE-CULTURE DUALISM

For over forty years the nature-culture dichotomy has been a central dogma in anthropology, providing a series of analytical tools for apparently antithetical research programmes as well as an identity marker for the discipline as a whole. Materialists considered nature as a basic determinant of social action and would import from the natural sciences models of causal explanation which, they hoped, would give sounder foundations and a wider scope to the social sciences. For cultural ecology, sociobiology, and some brands of Marxist anthropology, human behaviour, social institutions and specific cultural features were seen as adaptive responses to, or mere expressions of, basic environmental or genetic constraints. Internal or external nature—defined in the ethnocentric terms of modern scientific language—was the great driving force behind social life. As a result, little attention was paid to how non-western cultures conceptualised their environment and their relation to it, except to evaluate possible convergences or discrepancies between bizarre emic ideas and the etic orthodoxy embodied in the laws of nature.

Structuralist or symbolic anthropology, on the other hand, has used the nature-culture opposition as an analytical device in order to make sense of myths, rituals, systems of classification, food and body symbolism, and many other aspects of social life that imply a conceptual discrimination between sensible qualities, tangible

properties and defining attributes. Although the cultural configurations submitted to this type of analysis differed widely from one another, the actual *content* of the concepts of nature and culture used as classificatory indexes always referred implicitly to the ontological domains covered by these notions in western culture. In other words, while each of the two approaches emphasised a particular aspect of the polar opposition—nature shaping culture versus culture imposing meaning on nature—they nevertheless took the dichotomy for granted and shared an identical, universalistic conception of nature.

The epistemological implications entailed by the dualist paradigm are addressed by several contributors to the present volume. A recurring criticism is that the nature-society dichotomy hinders true ecological understanding. Analysing the figure of the ‘optimal forager’ in human ecology and its relation to ‘economic man’, Ingold (Chapter 2) shows that whereas economic man is credited with the design of his own strategies of maximisation, foragers are construed as the mere executors of strategies assigned to them by natural selection. The natural domain is characterised by rational choice, while society is reduced to an external normative structure that causes behaviour to deviate from the optimum. Evolutionary ecology has thus created the anti-ecological fiction of a natural being endowed with a set of capacities and dispositions prior to its relation with the environment. Following a similar line of argument, Hornborg (Chapter 3) shows that the present-day opposition between ‘dualist’ and ‘monist’ approaches in human ecology echoes the former polarity between formalists and substantivists in economic anthropology. While advocates of dualism stress objectification, conscious choices and decontextualisation, a monist epistemology would emphasise embeddedness, self-regulation and local autonomy. Drawing upon the pioneering work of Roy Rappaport, Hornborg argues that the monist approach is also the only solid premise for a ‘contextualist’ stance, i.e. one that considers traditional, pre-industrial societies as having something to tell us about how to live sustainably. The dualist paradigm thus prevents a genuine ecological approach to human-environmental relatedness. In Chapter 4, Pálsson suggests that once the ontological separation between nature and society has been posited there is no way out, no escape from the dual ‘prison houses’ of language and naturalism, whatever the dose of dialectics and interactive language injected into theoretical discourse.

As Descola points out, in Chapter 5, this ontological disjuncture also induces a strange epistemological confusion in the theoretical

premises of both materialist and culturalist approaches. Leaving aside the initial comparative ambition of Julian Steward, cultural ecology tends to treat each society as a specific homeostatic device tightly adapted to a specific environment. On the other hand, culturalist perspectives see each society as an original and incommensurate system of imposing meanings on a natural order, the definition and boundaries of which are nevertheless derived from western conceptions of nature. Paradoxically, the purported universality of geographical determinism thus leads to an extreme form of ecological relativism, while self-claimed cultural relativism leaves unquestioned its assumption of a universalistic conception of nature.

The dualist paradigm also prevents an adequate understanding of local forms of ecological knowledge and technical know-how, as these tend to be objectified according to western standards. Making this point, Hviding (Chapter 9) criticises conventional ethnoecology for its incapacity to accommodate alternative ‘ethnoepistemologies’ and its correlative tendency to reify certain domains of indigenous knowledge so as to make them compatible with western science. These trends, he argues, impede any serious understanding of the role played by certain beliefs and practices—such as ‘magic’ or ritual—in people’s daily engagement with their environment. In a similar vein, Ellen (Chapter 6) questions the close correspondence implied by mainstream contemporary ethnobiology between the Linnaean taxonomic scheme and the structure of folk classifications of plants and animals, noting that the hierarchic conception of nature typified by scientific taxonomy is not one which is readily yielded from his own ethnographic data. Nature as an abstract inventory of things, distinguished by a small number of features, he notes, is more obvious in museums of natural history than in the lived culture of indigenous peoples. As Hviding and Descola also point out, the search for domain-specific universals in the recognition of ‘nature’s basic plan’ (Berlin 1992:8) impedes taking into serious consideration those entities and phenomena which do not fall within the sphere of the western notion of nature, however important they may be in local conceptions of the environment.

The persistence of the nature-culture distinction in anthropological discourse is all the more surprising as this core dichotomy appears in many respects as the philosophical touchstone of a whole series of typically western binary oppositions which anthropologists have otherwise successfully criticised: mind-body, subject-object, individual-society, etc. Moreover, the nature-culture distinction is

challenged by a growing body of evidence from a variety of sources. One kind of evidence relates to studies of biological evolution, comparisons of human and non-human behaviour, and research on the process of hominisation. In the theories of Mendel and Darwin, organisms are presented as both passive and alienated from the environments in which they live, as objects dictated by genes, on the one hand, and selective pressures through a mechanical process of adaptation, on the other. Such models, the theoretical ancestors of a series of neo-Darwinian paradigms, including optimal foraging theory, seem to present substantial theoretical difficulties. For one thing, while the mechanical conception of adaptation was necessary, perhaps, to establish the modern science of biology, it closed other avenues and, thus, has prevented further developments. Indeed, the dominant evolutionary models derived from the so-called 'New Synthesis' of Mendelian and Darwinian theory increasingly contradict the facts of biology; they do not 'stand up under even the most casual survey of our knowledge of development and natural history' (Lewontin 1983:284). An alternative model emphasises that the organism is empowered to shape its own development, the *subject* of evolutionary forces (see Ho and Fox 1988). Drawing upon such a perspective, some scholars have argued that the relations between organisms and their environments are reciprocal, not one-way. In the process of engaging with the environment, organisms construct their own niches. In other words, the evolving organism is one of the selective pressures acting upon itself; each living being participates in its own making, engaging in cultural or 'proto-cultural' alterations of selective pressures (Odling-Smee 1994:168). Significantly, the interactive vocabulary of 'co-evolution' and 'niche construction' is emerging in the place of mechanical Newtonian notions of automatic responses to the 'forces' of the alienated environment.

Recent research on the ethology of primates as well as growing evidence on the enormous time-scale entailed by the process of hominisation also tend to invalidate such notions as a clear phylogenetic boundary between nature and culture. Studies of chimpanzees in the wild not only show that non-human primates use and make some of the kinds of stone tools usually believed to be a distinctive feature of *homo faber*; they also indicate that neighbouring bands of chimpanzees elaborate and transmit markedly distinct styles of tools. In the terminology of prehistorians, chimpanzees thus appear to possess different 'traditions' in terms of material culture (Joulian 1994). The complexity of social behaviour among baboons is also

well documented (Strum 1987). The fact that an individual may provoke a certain kind of response from another individual in order to influence the behaviour of a third one seems to indicate that baboons are capable of understanding and categorising behaviour in terms of underlying states, not as mere movements of the body. Such an achievement strongly suggests that they have the ability to form meta-representations, i.e. representations of representations, without the help of language. The development of language is probably nothing more than one among many stages in the process of hominisation and, in an evolutionary perspective, it may be seen as a consequence, rather than a cause, of the development of communication made possible by the ability to form meta-representations (Sperber 1994:61). Culture certainly took a long time to evolve. Did it emerge with the first hominids, some 3 million years ago, or with the first recorded tools, one million years later? Although the first modern humans, *homo sapiens sapiens*, are probably no older than 100,000 years, some form of burials are 150,000 years old and the first hearth is dated 450,000 BC. The very idea that the origin of culture could be dated or ascribed to a single stage in the hominisation process thus appears utterly unrealistic.

A related shift in perspective with respect to the nature-culture dualism has been taking place in ethnographic studies of enskilment and expertise. According to traditional theories of learning, the novice individual gradually becomes a competent person by internalising a cultural code or a superorganic script (Pálsson 1994). The person, in other words, is seen as an alienated container that progressively absorbs increasing amounts of information from the social environment. Recent studies indicate, however, that the radical opposition of person vs. environment and individual vs. society prohibits an adequate understanding of the contextual nature of the learning process. Assuming a constitutive model of the individual, introducing agency and dialogue into the process of learning, Lave (1993) and some others have shown how learning is situated in communities of practice. Such a perspective suggests a radical break with the Cartesian tradition. The proper focus of research is no longer the passive autonomous individual but the whole person acting within a particular context (Ingold and Rival, both in this volume). Anthropological fieldwork is one branch of learning which is currently being recast along those lines. While the experience of fieldwork does involve highly 'personal' moments, it is not simply a solitary enterprise, the monologic reflection of an independent observer. Ethnography

is a dialogic product involving colleagues, spouses, friends, and neighbours—the collective result of a ‘long conversation’ (Gudeman and Rivera 1995).

Modernist critics may argue that the current dissatisfaction with the theoretical dualisms of the past is simply yet another post-modernist fad and that the deconstruction of the nature-society dichotomy has more to do with competition on the academic labour market and trendy rhetorics than with solid evidence and reliable observations of the real world. This kind of criticism is implied in Worster’s remark (1990:18) concerning the current popularity of chaos theory; there are ‘striking parallels’, he argues, between chaos theory in science and post-modern thought. Ethnographic discourse, however, invites a rather different argument. For many anthropologists—including some contributors to this volume—the shift from a dualist to a monist perspective appears to have been triggered by fieldwork among peoples for whom the nature-society dichotomy was utterly meaningless. This is the case, for instance, of the Achuar Jivaro of the Upper Amazon who, according to Descola (1994), consider most plants and animals as persons, living in societies of their own, entering into relations with humans according to strict rules of social behaviour: game animals are treated as affines by men, while cultivated plants are treated as kin by women. A similar situation prevails among the Makuna, another people of the Upper Amazon; for them humankind represents a particular form of life, participating in a wider community of living beings regulated by a single and totalising set of rules of conduct (Arhem, this volume; see also Rival, this volume).

Cosmologies such as these are not restricted to native peoples of Amazonia, for other contributions to this volume present remarkably similar pictures. Howell, for instance (Chapter 7), states that the Chewong of the Malay rainforest do not set humans apart from other beings; plants, animals, and spirits are said to be endowed with consciousness, i.e. language, reason, intellect and a moral code. Ontological distinctions between different classes of beings are all the more difficult to establish among the Chewong, as humans and many non-humans are reputedly able to change their appearance at will, so that their real identity is almost impossible to ascertain at first sight. Similarly, Hviding argues that the native inhabitants of the Marovo Lagoon in the Solomon Islands do not see organisms and non-living components of their environment as constituting a distinct realm of nature separated from human society. He shows that the

categories they use to describe their environment function as analogic codes rather than binary oppositions, and that these categories are strongly dependent upon the ways in which people see themselves to be engaging with components of their ecosystem. Drawing on his material on the Nuaulu of Seram, Ellen is cautious not to deconstruct completely the notion of nature, arguing that, among this people of Eastern Indonesia, a conceptual space can be construed which presents several dimensions commensurate with what we, in the West, recognise as nature. He strongly emphasises, however, that these dimensions are highly contextual, variable and contingent and that in many other cases the ethnographic data resist the imposition of our own nature-culture dualism.

Not only does the nature-culture dichotomy appear inadequate when trying to make sense of non-western realities, there is also a growing awareness that this type of dualism does not properly account for the actual practice of modern science. As Latour (1994) argues, the reification of nature and society as antithetical ontological domains results from a process of epistemological purification which disguises the fact that modern science has never been able in practice to meet the standards of the dualist paradigm. Since at least the beginnings of modern physics, science has constantly produced hybrid artefacts and phenomena in which material effects and social conventions have been inextricably mixed. Awareness of the artificiality of the dualist paradigm has, of course, been encouraged by alertness to the increasing artificiality of the scientific process itself. Nothnagel argues (in Chapter 14 of this volume), advocating a 'symmetric anthropology' (using data obtained during ethnographic fieldwork at the CERN conglomerate of laboratories in Geneva), that high-tech science reproduces nature; science does not deal with 'naturally occurring' phenomena, but produces its own facts and evidence through the mediation of highly complex technical apparatus and mathematical models.

This point, which was already clear in the physics of elementary particles (see Bachelard 1965), has now reached a wider public as the development of biotechnologies triggers a growing concern with the environmental, philosophical, and ethical consequences of mass-produced new forms of life in 'non-natural' ways. While technology and social science, Richards and Ruivenkamp argue (Chapter 15 of this volume), are often drawn up in an oppositional relationship, such conceptual polarisation is hard to sustain when attention is paid to the generation of technology as a social process. Also, the new

techniques of human reproduction (Strathern 1992), transgenic manipulations on animals, and research on xenotransplantation (Papagaroufali, Chapter 13, this volume) tend to obfuscate long-established boundaries between humans and non-humans and alter social representations of kinship ties and of the construction and the deconstruction of the person. Such techniques also further dispel anthropocentric prejudice, as the units of reference are no longer whole individuals but genetic codes and fragmented body parts. Similarly, the research on transgenic crop types and modified organic molecules has led to the fear that the release of genetically-transformed organisms in the environment may greatly increase the risks of biohazards (Richards and Ruivenkamp, this volume). Although biotechnologies, in their crudest forms, predate the domestication of plants and animals, the possibilities opened by the new techniques of genetic engineering have highlighted the fact that nature is not only increasingly becoming an artefact produced by society (Rabinow 1992, Descola, Chapter 5, this volume) but an artefact submitted to the laws of the market. Social scientists are now exploring the ‘uneasy case’ (Munzer 1994) against recognising property rights in human organs, tissues, fluids, cells, and genetic material. For some, such commoditisation is inhuman and degrading, an offence against personhood and dignity, whereas for others it represents a humanitarian effort, increasing the supply of body parts (Zelizer 1992).

Radical post-modernists are likely to object to some of the arguments presented above on the grounds that the notions of ‘fact’, ‘evidence’, and ‘empirical verification’ are modernist constructs, relics of the Enlightenment and European history. There is, indeed, no such thing as final truth; paradigms and *épistémès* are inevitably social constructs, the products of a particular time and place. Nevertheless, some constructs are less adequate than others for understanding the world, and when they fail to illuminate and are shown to be contrary to experience they should be revised or abandoned.

## MISGUIDED ATTEMPTS

Some may argue that the claim about the absence in many societies of any concept corresponding to the western idea of nature is merely a question of semantics and that alternate notions, such as ‘wildness’, would be more universal and less ethnocentric. It is true that many cultures attribute, explicitly or implicitly, the quality of wilderness to certain portions of their environment,

thus identifying a particular space beyond the direct control of humans (Oelschlaeger 1991). Ellen suggests that a cognitive dimension of all emic models of nature could be the spatial definition of the realm outside the immediate living area of humans. He also points out, however, that, for the Nuaulu, the distinction between wild and socialised is highly dependent on context: sometimes *wesie* (uncut primary forest) is non-human, sometimes it is the people; sometimes it is male, sometimes female; sometimes it is portrayed as antagonistic, sometimes as life-nurturing. Hviding makes a similar point when he argues that although some concepts in Marovo may conform to a 'wild-tame' dimension, they do not operate within a binary framework.

Even in cultures which have an explicit concept of wilderness, the distinction between wild and non-wild is not necessarily clear-cut. Analysing the effects wrought by the post-war transformation of Japanese mountain forests into timber plantations, Knight shows that it mixed up an already ambiguous separation between 'wild' and 'domesticated'. While the old forest was considered by mountain villagers as an embodiment of natural order, beautiful and sacred because of its wilderness, the new forest has become a space of radical disorder. Though technically a space of domestication, this forsaken industrial forest retains the wild attributes of the natural forest it replaced, although these attributes have now become wholly negative as the forest has been stripped of its moral values and desocialised. Such a shift, Knight argues (Chapter 12), reflects the fact that, in certain cases, 'wild' environments may be more satisfactorily controlled, socially, technologically and ideologically, than domesticated ones. In a similar way, Hell (Chapter 11) stresses the fundamental ambivalence of the category of the wild as expressed in the values attached to forest hunting in contemporary north-west Europe. In this region, the nature-culture opposition is mediated by an ambivalent attitude oscillating between, on the one hand, an initially positive hunting compulsion defining gender status and male hierarchy and, on the other hand, the ever-present danger of the hunter becoming wild, notably through excessive contact with the 'black blood' of game. As wilderness is both in the forest and within oneself, positively-valued hunting involves the ability to control this ambiguous coexistence of nature and culture. In all these cases, then, it appears that the notion of wilderness fluctuates according to context; it can hardly qualify as a substitute for the ontological concept of nature as it is used in the dualist paradigm.

One response to the criticism of the modernist project and the current division of labour between the natural and the social sciences is to exchange concepts and perspectives across the nature-society divide, emphasising the fundamental similarities of the natural and the social domain. Thus, some of the natural sciences have borrowed the concepts of community and society from social scientists. Likewise, some branches of anthropology have adopted the biological concepts of natural selection and genetic fitness. Richerson, for example, has suggested that 'a theory of human ecology can be readily developed from existing similarities between the theoretical constructs of social and biological sciences and that this approach is very promising' (1977:2). Much of such conceptual exchange, however, merely underlines the pitfalls of the dualist project. Each camp continues to practise its own form of reductionism, one part of the nature-culture pair colonising the other. Thus, sociobiology insists upon subsuming culture under the 'natural laws' of Darwinian selection.

In the extreme constructivist perspective, which subsumes the environment under the symbolism of tradition and culture, the environment has no active role at all. In anthropology, the frequent reference to culture—the supposedly unique human capacity to store memories, to learn, and to communicate—seems only to reinforce the dualist structures one would like to transcend. To some extent, the constructivist position echoes that of medieval European scholars who saw their task primarily as one of reading the 'book' of nature. For modern textualists, however, the environment is not simply a script in a metaphoric sense: beyond cultural interpretation there is only triviality, if not empty space (see Pálsson 1995). Some of the chief architects of the textualist school converted rather suddenly from environmental determinism and cultural ecology, moving from one extreme to another. Thus, the year before he published his influential textualist treatise *The Interpretation of Cultures* (1973), Geertz wrote an article on irrigation systems that indicates a deterministic environmental outlook. Comparing Bali and Morocco, he suggests that the 'radically different ways in which water is handled in the two settings leads to some general insights into the again strikingly different cultures situated in them' (Geertz 1972:74). To be fair, Geertz objects, here as in later works, to simple forms of geographical determinism, arguing that 'the familiar split between nature and culture which renders the former a stage upon which the latter performs' is only 'an illusion'. Nevertheless, he argues that the environment is an active and central factor in shaping social life and

that 'an established society is the end point of such a long history of adaptation to its environment that it has, as it were, made of that environment a dimension of itself' (Geertz 1972:87–88). While textualism and sociobiology are sensitive to the growing disillusion with the theoretical dualism of nature and society, neither of them provides a feasible theoretical alternative to the modernist project.

Deconstructing the dualist paradigm may appear as just one more example of the healthy self-criticism which now permeates anthropological theory. After all, burning conceptual fetishes has long been a favourite pastime of anthropologists and very few domains have escaped this iconoclastic trend. If such analytical categories as economics, totemism, kinship, politics, individualism, or even society, have been characterised as ethnocentric constructs, why should it be any different with the disjuncture between nature and society? The answer is that this dichotomy is not just another analytical category belonging to the intellectual tool-kit of the social sciences; it is the key foundation of modernist epistemology. Going beyond dualism opens up an entirely different intellectual landscape, one in which states and substances are replaced by processes and relations; the main question is not any more how to objectify closed systems, but how to account for the very diversity of the processes of objectification.

One may wonder, then, why some anthropologists bother with studies of human-environmental relations at all if they are so disillusioned with conventional ecological anthropology? If nature has become a meaningless category and environmental determinism a thing of the past, how can the understanding of the interactions between humans and other living and non-living components of their surroundings still be a worthwhile pursuit? A first answer is that this topic is now in the forefront of the public agenda, as the place of the environment in human affairs has become a major political and ethical concern of peoples and governments throughout most of the industrialised world. Anthropologists are able to fulfil their roles as citizens and scholars by using their competence to address a series of debated environmental issues: the mechanisms of a sustainable mode of livelihood in non-industrial societies, the scope and status of traditional knowledge and techniques of resource management, the shifting taxonomic boundaries entailed by new reproductive technologies, the ideological foundations of conservationist movements, and the commoditisation of many components of the biosphere. Indeed, some of the reasons why anthropologists are revisiting environmental issues have to do with ongoing changes in

the nature-society relationship. Not only does modern biotechnology present humans with a 'nature' very different from that experienced by earlier generations (Richards and Ruivenkamp, this volume), but the ongoing process of globalisation, the exponential intensification of worldwide social relations, also has profound effects (Lash and Urry 1994:294). As the degradation of the environment has escalated with technological advances and expanding economic production, concern for the natural environment has drifted outside the scope of the nation-state. The issue of environmental responsibility, the ethics and politics of nature, refuses to respect any cultural boundaries; witness the recent growth in environmentalist movements on the international scene and the recurring tension between western science and local epistemologies. Nature is no longer a local affair; the village green is nothing less than the entire globe.

In spite of (perhaps *because of*) globalisation, the privatisation and pricing of environmental 'goods' has accelerated; with the expanding rhetoric of consumerism, nature becomes a market-place. A fundamental transformation has been taking place in many societies as a result of the rapid extension of market approaches to natural resources (fishing stocks, forests, etc.) and organic products (including genetic material and body parts)—in response to ideological commitments, technological developments as well as economic and ecological problems. Given the significance of the market and the fascination with economic man in western political economy and environmental discourse (Kopytoff 1986, Friedland and Robertson 1990, Dilley 1992), anthropological studies of the concepts and practices of environmental economics and the commoditisation of the natural environment present an important field of research. Anthropological knowledge and expertise are crucial for spelling out the metaphysics, ethnocentrism, and drawbacks of some of the key concepts frequently applied to the 'economy', including those of the 'market', 'efficiency', and 'production'. Also, the similarities and differences in moral evaluation of commoditisation pose an intriguing theoretical and comparative problem.

Another reason for this continued interest in ecological issues has to do with epistemology. Exploring new avenues does not mean being oblivious of past achievements. The attention paid to the relationship between humans and their environment by such diverse currents of social theory as Marxism, structuralism, phenomenology, cultural ecology and cognitive anthropology points to a basic premise: human history is the continuous product of diverse modes of

human-environmental relations. Admitting such a premise does not mean returning to the pitfalls of dualism and geographical or technical determinism. On the contrary, it implies taking seriously the evidence offered by many societies where the realm of social relations encompasses a wider domain than the mere society of humans. Huaorani hunters know that the animals they hunt communicate, learn, and modify their ways of life in response to humans; humans and animals are social beings mutually engaged in each other's world, and that explains, Rival suggests (Chapter 8, this volume), the correspondence between the ways in which people treat each other and how they treat animals. In such 'societies of nature' (Descola 1992), plants, animals and other entities belong to a sociocosmic community, subjected to the same rules as humans; any account of their social life must perforce include these components of the environment which are perceived as forming part of the social domain. Anthropology can no longer restrict itself to the conventional social analysis of its beginnings; it must rethink its domains and its tools to embrace not only the world of *anthropos*, but also that part of the world with which humans interact.

## POTENTIAL AVENUES

It is realistic to assume that the environment matters and that to understand both humanity and the rest of the natural world anthropology, ecology and biology need new kinds of models, perspectives, and metaphors. Such a realisation may necessitate a fundamentally revised division of academic labour; in particular, the removal of the disciplinary boundaries between the natural and the social sciences. We may well have to abandon the current separation of physical and biological anthropology, on the one hand, and, on the other, cultural and social anthropology, giving new life to the old philosophical, anthropological project which focused on the unity of the human being (Ingold 1990, and this volume). The different fields of academic scholarship, it seems, have more in common than disciplinary sectarians normally like to admit. Significantly, similar moralities and metaphors are applied to rather different theoretical contexts (Nothnagel and Pálsson, both in this volume); discourses on nature, ethnography, and cultural translation, for instance, employ similar kinds of imagery, notably the metaphors of hunting and personal relatedness and the theatrical language of irony, tragedy, comedy, and romance.

A reshuffling of the academic cards seems already under way. One of the relevant signs is represented by the widespread current interest in the human body, beyond the narrow confines of physical anthropology. Despite its suppression in modernist social scientific discourse, the body has emerged as a major theoretical theme in social anthropology. This need not be that surprising since the body is a popular topic in many ethnographic contexts (Lock 1993). Clearly, the body does not easily allow for a fixed division of academic labour, nor does it admit a firm boundary between nature and culture. Rival shows (this volume) how, in the process of hunting and gathering, the Huaorani cease to be extraneous bodies, alien to the forest world; they learn to perceive the environment as other animals do, becoming 'dwellers' deeply involved in a conversation with plants and animals (see also Howell, this volume). Another sign of the fragility of the boundary between the natural and the social sciences is the growing interest in landscape in a variety of studies, including anthropology. While previously place and space (classic concerns in geography and the natural sciences) were relegated to a 'black box' in the social sciences (see Hirsch 1995:1), now they are the focus of extensive comparative research. Again, theoretical developments resonate with much ethnography. A strong attachment to place, 'topophilia' (see Thompson 1990:113), seems to be quite a common feature of human societies—frequently coloured, in state societies, by ethnicity, nationalism, and related sensibilities. Globalisation does not erase such 'local' concerns, it redefines them.

The recognition that nature is a social construct and that conceptualisations of the environment are the products of ever-changing historical contexts and cultural specificities, presents a difficult challenge to anthropological inquiry. Are we to restrict ourselves to endless ethnographic accounts of local 'cosmologies' or must we look for general trends or patterns that would enable us to replace different emic conceptions of nature within a unified analytical framework? And, in the latter option, on what theoretical foundations would a unified framework rest? To these crucial questions, the contributors to the present volume provide conflicting answers. Some take a decidedly relativist position, emphasising the situatedness of knowledge and doubting that implicit and inextricable local systems of meanings can ever be couched adequately into a meta-discourse. Hornborg thus sees the task of ecological anthropology as understanding the socio-cultural contexts which allow ecologically sensitive knowledge systems to persist and evolve. Such local

calibrations, he argues, are at their most efficient when they are not subjected to attempts at encompassment by totalising frameworks. A relativist stance also appears in several papers influenced by textualist approaches. Hell, for example, draws upon Geertz's work to define the culture of hunting in Europe as a 'text', while Papagaroufali characterises representations of reality produced in the West by both scientists and laymen as 'stories', thus stressing the narrative and morality-based nature of these truth claims.

A few contributors advocate an intermediary position: while challenging universalistic models, they are also careful not to close the door on the possibility of meaningful comparisons. Howell thus maintains that her position is not an extreme version of cultural relativism in that she accepts that sociality and intersubjectivity are innate predispositions of humankind. The task of anthropologists, she argues, is first to interpret local cultural systems and then to address the basis for the differentiation of modes of socialities. Similarly, Hviding criticises the privilege awarded to western rationalist presuppositions in the process of translating cultures, advocating instead a meta-language that would be based on the comparison of different 'ethnoepistemologies', including our own. The last step is taken by some authors who, feeling uneasy with the conceptual fragmentation induced by relativist perspectives, venture to formulate alternate analytical models as substitutes for the current dualist paradigm. Employing the oppositions of continuity and discontinuity, on the one hand, and, on the other, of domination and protection, Pálsson thus distinguishes between three kinds of human-environmental relations—orientalism, paternalism, and communalism—each of which would represent a particular stance with respect to 'environmental' issues. In the case of both environmental orientalism and paternalism, humans are masters of nature, he argues, but whereas the former 'exploits' the latter 'protects'. Communalism differs from both in that it involves the rejection of any radical distinction between nature and society and between science and practical knowledge. To reject the notion of mastery and to allow for chaos and contingency in human-environmental relations does not mean that human efforts at 'managing' their lives are insignificant or beside the point; rather it suggests less arrogant policies and greater sensitivity to practical knowledge and ethnography, trying to flow with the current rather than establish complete control.

Ellen also puts forward the hypothesis that the issue of the status of nature can be approached by identifying a minimum number of underlying assumptions upon which pragmatic schemata and symbolic representations are built. Behind all cultural models of nature, he argues, is a combination of three cognitive imperatives: the inductive construction of nature, in terms of the 'things' which people include within it and the characteristics assigned to these 'things'; the spatial recognition of a realm outside the human domain; and the metaphoric compulsion to understand phenomena by their essence. Depending on the contexts of 'prehension' which give rise to particular classifications, designations and representations, the relative weight of each of these axes and their internal asymmetries varies in each conceptualisation of nature and accounts for their specificities. Descola likewise advocates a transformational model to account for the largely implicit schemes of praxis through which each society objectifies specific types of relations with its environment. Each local variation, he argues, results from a particular combination of three basic dimensions of social life: modes of identification or the process by which ontological boundaries are created and objectified in cosmological systems such as animism, totemism or naturalism; modes of interaction which organise the relations between and within the spheres of humans and non-humans according to such principles as reciprocity, predation or protection; and modes of classification (basically the metaphoric scheme and the metonymic scheme) through which the elementary components of the world are represented as socially recognised categories.

While acknowledging the difficulty of translating into general propositions the complexity and intricacy of their own experience of a particular society, most of the contributors to this volume nevertheless show a willingness to go beyond the mere description of local systems of human-environmental relations. Paradoxically, a renewed faith in the comparative project may have emerged from the very richness of the ethnographic experience itself, i.e. from the shared recognition that certain patterns, styles of practice, and sets of values described by fellow anthropologists in different parts of the world are compatible with one's ethnographic knowledge of a particular society. Such a recognition was probably fuelled by far-reaching changes in the style of ethnographic narrative. Forsaking the universalistic categories which structured former monographies, anthropologists now tend to be both more personal and more imaginative in choosing the devices they use to convey their

interpretation of a society. Previously unsuspected convergences and affinities thus emerge from what may have seemed at first sight like a chaos of unconnected ethnographic accounts. In other words, ethnography makes one focus on the particular while a lot of ethnographic particulars kindle anew the interest in comparison.

While the contributors to the present volume adopt a variety of perspectives, approaches, and theoretical positions, there is an overall emerging consensus on many important issues. Most importantly, the authors share a concern with the nature-society interface and the theoretical problems it necessarily invites. Anthropology is broad in scope, drawing upon both the natural and the social sciences, but, as we have seen, it is continually troubled with a fundamental contradiction; 'the first part of the story of the human species is couched in evolutionary and environmental terms, the second denies environment a meaningful role in human history' (Crumley 1994:2). Rethinking the nature-society interface means rethinking ecological anthropology, in particular its notion of the relation between person and environment. The deeply entrenched biological and anthropological traditions which insist upon separating the two are increasingly being challenged on both empirical and theoretical grounds. Bateson identified some of the problems using the example of a blind person with a stick: 'Where do *I* start? Is my mental system bounded at the handle of the stick? Is it bounded by my skin? Does it start halfway up the stick? But these are nonsense questions' (Bateson 1972:459). Indeed, they are. The point is not simply to determine the exact location of the boundaries of person, technology, and environment, but rather to draw attention to fields of significance, 'mental systems' in Bateson's terminology. Etymologically, the concept of the 'environment' refers to that which surrounds and, therefore, strictly speaking, an environment incorporates just about everything, except that which is surrounded (Cooper 1992). Given the ecological perspective developed by James Gibson, however, it is important to assume some phenomenological notion of *intentional* environment; the 'affordances' of the environment vary from case to case but depending upon its 'meaning' or the way in which it is perceived (see Ingold 1992, Carello 1993). This is not to suggest *multiple* environments in the interpretivist sense; nature is not a series of 'books' nor is its perception (or 'reading') necessarily informed by intermediate cultural 'texts'. Rather, person and environment embrace an irreducible system; the person is part of the environment and, likewise, the environment is part of the person.

Many of the contributors to the present volume argue for an ecological anthropology along these lines. A similar perspective was developed by Bakhtin with reference to language. It was important, he argued, to go beyond the positivist notions of linguistics which depicted the speaker as a passive partner in speech communication. Bakhtin suggested the approach of ‘translinguistics’, an approach that not only offered a powerful critique of the abstract objectivism of autonomous linguistics but also sought to readdress the embedded nature of language. For him, language was ‘social throughout its entire range and in each and every of its factors, from the sound image to the furthest reaches of abstract meaning’ (Bakhtin 1981:259). Rejecting the radical separation of the individual and social, Bakhtin argued that every word in language is the cumulative result of the prior experiences of the speakers and their interactions with the speech community. Perhaps we should draw upon Bakhtin’s perspective and speak of ‘transecology’, to underline the notions of dwelling and embeddedness with respect to the human household, the social nature of the human *oikos*.

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