CULTURAL PERSPECTIVES AND SUSTAINABILITY

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Summary

The article examines increasing attention in the study of living systems to issues of *fit;* that is to say, the way in which all human practices and institutions, especially those of traditional societies, match their cultural practices to biophysical domains and bring both of them into a co-evolving relationship with one another. Culture and environment are characterized as adapting to each other, their adaptation defined as a process of "learning" rather than being driven by materialist forces. The importance of the triangular relationship between culture, economics and environment and its implication for sustainable adaptations is usually hidden. One major obstacle has been the prevalence of materialist quantitative approaches to economics and environment. Until economics became more amenable to qualitative studies of how preferences and lifestyle affected global distribution of environmental resources, and until ecology began to include an interactive human dimension into its studies of ecosystems, the triadic relationships between culture, nature and economics was difficult to engage.

There are also difficulties of scale. Cultures, despite migration of members, are inherently local. The economics of sustainability is a global issue, while "environmental capital" is both local and global in respect of climate change. The article examines examples of *fit* through several different cases: that of hunter-gatherers, that of people belonging to a Buddhist tradition; that of inshore fishermen along the coast of Newfoundland; and that of the people of the miombo woodland in Central Africa. Hunter-gathers have a monistic worldview. Their traditional ecological knowledge (TEK) and cultural practices continually express mutual reciprocities and spiritual balance between environment and cultural activity. The same pattern appears in a more limited sense among villagers adhering to Buddhist tradition. The hunter-gatherer example is contrasted with the collapse of the cod fishery in Newfoundland. Here scientists and other experts rejected the validity of TEK out of hand but their own physical determinist approach to pelagic ecosystems and sustainable fishery proved to be disastrous. Thanks to newer ecological concepts, especially those of resilience, the peoples of the miombo woodland who currently practice slash and burn cultivation are beginning to take back control of their own environmental resources. These have been severely depleted since the start of structural adjustment programs. By concentrating on economic "efficiencies," the structural adjustment programs imposed by international financial institutions ignore the triangular relationship between culture, economics and environment and its implication for sustainable adaptation. The current attention to forest degradation and participatory learning in the miombo woodland is aided by NGOs. Finally the article looks at the Association of Small Island States whose Environmental Vulnerability Index is perhaps the first planning instrument to use the notion of joint adaptation, the co-evolving relationship of culture and environment. EVI combines ecological notions of resilience, and cultural notions of TEK, with an economic perspective which takes a broader account of environment than the domain of economic efficiencies. The EVI notions of *fit* propose a new transdisciplinary study in the field of living systems, that of socio-ecology.

1. Conceptual Framework for Analysis

During the colonial era of the twentieth century, and in the immediate post-colonial development era, "sustainable" connoted a set of conditions permissive to growth of Gross National Product. Development agencies in the countries of the South, even as recently as the "development years" of the 1950s to 1980s considered cultural traditions to be a block to these ends. Traditional cultures were in the way of development, the western nations believed, for traditional practices were neither in accord with economic efficiencies nor scientific practices; the eastern bloc development agencies overturned traditional practices through an imposed pattern of collectivization. Prompted by the Earth Summit in Rio and increasing evidence of global climate warming, the notion of sustainability underwent a profound change of context. From the 1990s onwards sustainability began to refer to the urgent need for amelioration of bad industrial practices. Some of the most pernicious of these practices are widespread chemical pollution from organo-chlorines and pesticides, release of dioxin, of nuclear radiation, of substantial amounts of carbon dioxide and nitrous oxide from refined oil production and use, the latter a contributor to global climate warming. Yet many national governments in both the western industrial world and even in the South, continue to portray the practices of indigenous peoples, peasant farming and fishing cultures as not

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sustainable, both in the sense of being "underdeveloped" and the post-Rio senses of contributing to non-sustainable practices. As examples of the latter, governments cite slash and burn cultivation as destructive of woodland, native fishing exceeding quota limits, overstocking or overgrazing by herders and pastoralists, and other opportunistic practices of peasant farming that exhaust soils.

This article will take the view that culture is a type of "resource" in respect of the environment, a resource as important as economic activity itself. It is supported by recent research - presented in more detail below - which indicates, for example, that the relation between traditional practices of slash and burn cultivation and deforestation and non-sustainable practices is complex and involves government action and international finance as much as the cultural practices of shifting cultivators (IDI 21, 2002). This article will argue that the importance of the triangular relationship between culture, economics and environment not only has been hidden (Birkes and Folke, 1993) but has undergone a double concealment. Only after discourse on sustainability clearly indicated multiple interrelationships of economy to environment through lifestyle and behavior, was it possible to take cultural aspects of sustainability into account. Some of the discourse on sustainability began to propose that economics concern itself with qualitative conditions, preferences and lifestyle as they pertain to distribution of natural resources, rather than continue with the standard physical assumptions relating human benefit and welfare to economic growth (Daly, 1996:4). As a second step, both postmodernists and critics within the philosophy of science argued that the premises of economics, and western science in general assumed a radical disconnection of culture from nature. Such *dualism* was itself a driving force behind ever-increasing problems of global ecological degradation (Merchant, 1992:10ff.).

These two steps made possible an investigation into the triangular relation between "cultural capital," environmental capital and economic capital, though residual problems made systematic studies few and far between. One issue is the problem of scale, always the most difficult problem to resolve in any field of biology or ecology or social science (Allen and Hoekstra, 1992:50). Cultures, despite migration of members, are inherently local. The economics of sustainability, on the other hand, is a global issue, while "environmental capital" is both local and global in respect of climate change. There is non-integration in temporal dimensions as well. Another problem is that approaches to "adaptation" often reflect the historical circumstances of European cultural history written large to the rest of human societies. Social evolution is usually depicted as that of a movement from hunters and gatherers, to horticulturalists and pastoralists, to agriculturalists and thence to an industrial- urban society of the west. This infers a ladder of civilization in which the cultural activities of western nations emerge as a culmination of human achievement (Fabian, 1991:191-206). The ladder metaphor, denoting a passage of many thousand years, denies evidence of the variety and speed of global cultural transition, much of which has occurred in the last three or four generations, precisely at the time that the first evidence about the problems of ecological degradation and sustainability began to emerge. Even today, cultural anthropologists continue to conceptualize adaptation to the environment as part of cultural relations of people x or of people y rather than conceiving environment as a total field of interrelations among living things. This is a misrepresentation of the holistic interconnection of culture- environment. It fails to take into account the reciprocal ways

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in which environment responds to cultural adaptation and the way cultures learn to adapt to environmental change, and ignores methods which establish mutual relations between whole and part (Harries-Jones, 1992, 1995).

The study of ecology also retains an overwhelming concern with material aspects of life support systems, biomass and energy transfers in isolation from the study of humans and their cultural practices. In brief, there is a double separation of culture from environment that lingers on, both in cultural anthropology and in ecology. Just as simplistic notions of ladders of civilization have to be discarded, so too must attention turn to the very broad issues of ecological *fit* between culture, environment and economic organization, that is to say the way that all human practices and institutions, including those of traditional societies, match cultural practices to biophysical domains and bring them into a co-existent and co-evolving relationship with the temporal cycles of ecology (Folke, et.al.,1998). Note that this conception of *fit* is far removed from *fitness*, and the neo-Darwinian concept of natural selection as the adaptive mechanism driving evolution. The conception of *fit* arises from a co-evolutionary perspective, that is to say, culture and environment adapt to each other, with adaptation seen to be a joint response, a process derived from "learning" about feedback, rather than a process of mechanical response to material constraints (Bateson, 1980). The notion of *fit* proposes a new transdisciplinary study, that of socio-ecology. It is the purpose of this article to mark this trend, to illustrate triadic relationships between culture, nature and economics in brief case studies and finally to show how notions of *fit* are beginning to become focused in institutional practices.

2. Cultural Monism and Spiritual Balance

There is a strong contrast between western science in general, which places cultural activity outside its sphere of contemplation, and traditional cosmology. Traditional cosmology always places the person at the center of concern and personhood embeds meaningful relations with the environment, usually in the form of spiritual balance between human action on the world and relations between persons and the living world. Traditional cosmology has generally given way to science and economics in the twentieth century, as in the western world some three centuries before. Yet the issue of how spiritual perspectives may motivate conservation of natural resources remains pertinent. As mentioned above, its pertinence closely mirrors a debate within the philosophy of science as to western science's aims and methods, and to policy makers as to the importance of traditional worldviews for sustainability.

Traditional knowledge of hunter-gatherers flows from their conception of spiritual balance. The *traditional ecological knowledge* of hunter-gatherers (TEK) is sometimes respected by western conservationists, even the public at large, because of western perception - following the ladder of civilization metaphor - that hunter-gatherers represent the original condition of all mankind, and are therefore, archetypical guardians of the environment. Yet the actual rights of hunter-gatherers to pursue their traditional subsistence strategies are everywhere threatened. They have been forced to make accommodation to industrial society, and to pastoralists, cultivators around their lands and to nature conservancy in the form of national parks. Historically, governments have overridden treaty rights where they existed, while in the modern era, international

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development agencies have almost entirely ignored them precisely because the hunter-gatherer ways of life is so much at odds with nearly all development agency strategies. Their major success in securing both land rights and political recognition has been in Canada where Inuit of the Canadian Arctic now have their own land, Nunavut, a self-governing territory proclaimed in 1999.

Hunter-gatherer societies constitute two of the three examples of people with a highly developed sense of mutuality with their environment discussed in this section; the other example of spiritual balance is of villagers in Thailand, who have a cosmology of part-whole relations flowing from Buddhist tradition. All of these groups tend towards a *monistic interpretation* of the world. For example, the physical and the spiritual interpenetrate in the Australian Aborigines' hunter-gatherer worldview. Spiritually this is expressed in the continual array of "Dreaming," a whole spiritual repertoire about what is possible between persons and in maintaining or transforming reciprocities between humanity and its surround. In everyday practice there is of course an understanding that boundaries of mutual reciprocity require limitation, nevertheless many aspects of life are directly associated with these mutual reciprocities (Rose, 2000:42-57). Clearly such a view has no division between an internal world of beliefs and an external world, for there is no "external world" to inhabit. Instead, Australian Aborigines stress mutual connectivity of living things between their physical and their spiritual attributes, the only evident distinctions lying in that mutual connectivity.

2.1. North American Hunter-Gatherers

Among North American hunter-gatherers mutuality with their environment is well documented; their leaders frequently report in the media upon the differences between their cosmological beliefs and interpretation of natural sciences. North American hunter-gatherers argue that humans, like other creatures, are immersed in an active, practical and perceptual engagement with the environment. This one world is saturated with personal powers, embracing humans, animals and the plants on which they all depend. Traditional narratives of the Ojibwa feel no necessity to distinguish events in which animals figure as persons from events that actually took place in the histories of "real" persons. Both are treated in the same way in these narratives, just as any ordinary experience in the course of their lives may be recounted. As with other Native North American peoples, there is no clear division of animals and humans in their narratives such that humans have an added dimension of being "souls" in the Christian sense of that term. Though four hundred years of missionary activity has obviously challenged this conception, traditional conceptions of personhood still remain among hunters (Feit, 1973). A Cree hunter on encountering a bear that he believes to be a person might act towards it as if the bear could both understand what is being said and also respond according to its own volition. Among Ojibwa (Saulteaux) persons may appear in animal form, but not all animals are persons. Hunters say one can usually tell if an animal is a person, because the behavior of the animal is out of the ordinary.

Since personhood is open equally to human, non-human animals, and even non-animal kinds, hunter-gatherers have to account for taking animal life in terms consistent with these beliefs of personhood. A proposition fundamental to their perception of their world is that they are not takers of life, but "givers"(Feit,1973, 1994). In their view the

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act of killing should never be taken as an end in itself. The hunt may result in the death of an animal, or may even result in the death of the hunter, but both are rites of regeneration. In the case of the hunted, consumption follows the killing, but hunters regard the act of consumption as integral to the reproductive cycles, respectively, of animals and humans. The hunter consumes the meat, but the soul of the animal is released to be re-clothed with flesh. Hunters aim to keep up a co-existence with their environment through a sort of dialogue with its manifold powers. A successful kill is taken as proof of amicable relations between the hunter and any animal that has willingly allowed itself to be taken. The Cree of Northern Quebec say that animals control the hunt. The hunter is successful if the animal decides to present itself to the hunter to be killed for it is part of the spiritual dialogue that the animal signals its willingness to be implicated in its own death, while the hunter shows respect for this act (Berkes, 1999:80-87).

For these hunters and gatherers the notion of "proper balance" depends on maintaining balance in one's relationships with manifold powers, including the spirit and personhood of the animal that they kill. Killing is an aspect of the mutual implication of hunter and prey; and animals will not return to hunters who have treated them badly in the past. One treats an animal badly by failing to observe respectful procedures in the process of butchering, consumption and disposal of the bones, or by causing undue pain and suffering to the animal in killing it. Above all, animals are offended by unnecessary killing and by human greed, or if the meat is not properly shared around all those in the community who need it (Ingold 2000: 48-52).

2.2. Australian Aborigines

Australian Aborigines hold to the proposition that life in the world carries on from generation to generation because living things are connected with and amongst each other. Their definitions of sentience, or aliveness, stretch far beyond the western imagination. Not only are animals and plants sentient and so require human care and attention, but even hills and stones in sacred places must be noticed and attended to. Aborigines express life as a continual process of coming into being and stress the human task to engage in nourishing life, through constant communication with its sources. The human task is to understand the mutual interconnections, to pay attention to the multiplicity of thresholds of unfolding events, and to take some responsibilities toward their unfolding.

This lack of conceptual barriers between substance, spirit, and creative expression of self is particularly well demonstrated in relation to land. Aboriginal identity is embedded in land. Since that notion of land is at once biophysical, personal and spiritual, Aborigines have often stated that in relation to land, White Australians have no collective spiritual identity, or, as they put it "have no Dreaming" (Graham, 1999). Aborigines recognize that possession of land as private property is a prime motivation for White Australians, as it is also for themselves, yet Aborigines conception of property is highly inflected by a collective spiritual identity and the notion of sharing. Thus Aboriginal personal identity extends directly into the land itself and the collective custodial references associated with the land. Both spiritual identity and sharing have to

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be maintained through constant cultural participation and this explains to some extent why the Aboriginal community continues to assert that "the land is the law".

While there is obligation to care for all life, nevertheless, the human range is local and bounded. It would be, perhaps, too simple to state that the world of the sacred lay in collective identity, and collective identity, in turn, becomes expressed in those relations assumed by humans towards the web of life. Yet everything happens because of the care, or lack of care of others. When the link between the person and the web of life is weakened, Australian Aborigines believe that a human being risks becoming a totally individuated self, a discrete entity whirling in space, an individual who has to arm himself or herself against other individuals. The friendly landscape is transformed into a hostile place and a deep sense of loneliness envelops the individuals concerned.

2.3. Practical Effects of Hunter-Gatherer Conservation

The practical effects of hunter-gather conservation are difficult to estimate since hunter-gatherer subsistence strategies around the world are diverse, varying from Inuit, the hunters of sea mammals, to foragers in tropical forests. Recent research on the Cree suggests that a conservation ethic is reflected in various foraging strategies which Cree groups have used over time. A practice of rotating areas hunted on a yearly basis, and resting others over 5-10 years, is a typical conservation measure. Though Cree generally hunted communally, as in the case of other hunter-gatherers, the Cree also have applied hunting restrictions on themselves through a "family territory" system, in which an older male hunter was permitted by other hunters to control all access to hunting areas. This conservation measure retains a stock of beaver in each territory and was conspicuous during the historical period of intense beaver trapping and hunting organized by the Hudson Bay Company, when the indigenous conservation system broke down. There are also other indications of conservation when market pressures favored maximum take of animals (Berkes and Folke, 1998:98-128).

In the 1980s Inuit came into conflict with NGOs representing animal rights activists who were attempting, successfully, to secure a ban on all seal hunting in Canada through closing down European fashion markets for seal skin products. Seals are a major subsistence source of Inuit diet, but NGOs such as Greenpeace argued that while traditional hunting methods had a relatively minor impact on seal predation, Inuit use of high-powered rifles and modern harpoons made a far great impact on wildlife numbers. Further, Inuit had become economically motivated to kill seals for profit. What statistics are available are ambivalent in respect to this charge, but they do show that while Inuit increased the number of seals killed during the years of rising seal skin prices -- before the fashion market ban on sales of seal skins -- subsistence considerations remained the primary focus of the Inuit seal hunt (Wenzel, 1991).

2.4. Sacred Sites and Conservation

The following remarks describe some of the practical aspects of conservation that the Buddhist tradition engenders. In Thailand there are a widespread number of natural or cultural sites that have some kind of extraordinary characteristics associated with them and are regarded as sacred places. Sacred places inspire respect and reverence, a mark of belief, values, symbols, rituals and so on. A tradition of forest monasteries is

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especially strong in Thailand, beginning as long ago as the fifteenth century. Even today these forest monasteries remain centers for retreats and meditation for urbanites (Sponsel et. al. 1998:155). The Buddhist monastery or temple site itself serves as a conservation area combining some of the following: botanical garden, forest reserve, reserve for medicinal plants, wildlife sanctuary and zoological garden. In general people are prohibited from cutting trees and disturbing animals in the sacred space around the temple. At the same time, people gain merit in Buddhist teaching by planting trees in the sacred space of the monastery and its ritually protected area. Buddhist monks also have devised a number of ways in which the activities of the temple coincide with activities of conservation management. They will wrap saffron robes around a large tree in the forest and during the ceremony attach strings from the blessed tree to others, thus extending ritual protection from single tree to sacred area.

Sacred sites are not restricted to temples; mountains, groves, and forests for even individual trees may be regarded as a sacred site. Most villages have a sacred tree, with a sacred grove and /or a sacred forest attached to the village. The more animist among villagers believe sacred trees to be the residence of one or more spirits. People can appeal to such tree spirits for good health or good fortune and special favors. Material taken from a sacred place is regulated through ritual prohibitions. The same phenomenon is evident in India as well. Indian cosmology pays great attention to trees, herbs, and plants and relates them to seasons, to human characters and moods and to divinity. In the Himalayas, certain trees are considered to be the abode of the gods, for water, earth, plant and tree are believed to maintain the spiritual balance of the cosmos. As is well known, the tree of life is a dominant motif in Indian myth. One of the more usual sculptural figures depicting the tree of life is that of women standing against trees and embracing them. The depiction of the tree-women suggests the joint connection of tree and humanity. The ritual implication is that women are as much dependent on the tree for their fertility as the tree is dependent upon women's activity for its own fertility.

There is always a danger in taking myth-metaphor as reality, but many communities in India still attribute sacred characteristics to their forest environment despite participating in illegal cutting of trees and breaking conservation regulations by shifting cattle into forest areas. They may levy restrictions on export of cut trees from their community and will undertake communal boycotts of the culprit who tries to break the restrictions (Pandey, 1998). In other areas of India, the ritual significance of the *Sal*, the coconut tree and the bamboo is also very widespread. The *Sal* (*Shorea Robusta*) tree is venerated in Uttar Pradesh, Bihar and Madhya Pradesh; it was the *Sal* tree that Maya embraced as the Buddha was born in its multitudinous variety (Vatsyayan, 1992: 172)

With the onset of globalization there has been a loss of spiritual values that Buddhism conferred upon sacred places. Those who have been drawn within the orbit of modernization in Thailand are reported to regard the ritual practices surrounding sacred trees and sacred groves as being superstitions of simple people (Sponsel et al.1998:155-167). This attitude has affected conservation practices. Since conservation scientists have been slow to acknowledge the merit of ritual practices, Thailand has undertaken little systematic documentation of the interrelationship between ritual and preservation of biodiversity. Most conservation effort has been devoted to the establishment of large reserves such as national parks and wildlife sanctuaries. A few scientists have begun to realize that the smaller but more numerous sacred places associated with Buddhist

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villagers provide a different sort of conservation, one of intimate interaction between culture, natural surroundings and community activity.

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Biographical Sketch

Peter Harries-Jones was born in Oxford, England. He attended secondary school in both England and the United States and universities in the United States, South Africa, and Oxford, England, where he obtained his doctorate. He was a research officer in the Institute for Social Studies, Zambia and wrote several articles on both rural and urban issues in Zambia including a book about political independence and a study of slash and burn horticulture. He taught in the University of Wales, Swansea; University of Khartoum, Sudan; and York University, Ontario, Canada. Until the 1980s he was a specialist in the field of African Studies. Subsequently he developed an interest in communication studies, systems theory and ecology. His research culminated in two books, one a study of non-governmental organization activism from the perspective of NGO relations with the media; the second is an intellectual biography on Gregory Bateson's, one of the great thinker's of the twentieth century. His study of Bateson's 'ecological epistemology' is drawn directly from the Bateson archives. He is currently researching a second book on Bateson covering the necessity for enfolding a concept of culture into a broader concept of eco-culture.
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