

# Reviews

## **Reconstructing Nature: Alienation, Emancipation and the Division of Labor, by Peter Dickens, London and New York: Routledge, 1996. ix, 224 pp.**

**Reviewed by Eliza Darling, The City University of New York, Graduate School and University Center**

Peter Dickens' new contribution to environmental sociology, *Reconstructing Nature* belongs to a category of innovative analysis that transcends the old ideological battles between the proponents of Marx's humanism and those of his historicism, looking instead to reconcile these aspects of Marx's work in his naturalism. Dickens situates his analysis at a particular juncture within this literature--the intersection of epistemology and ontology--by posing the following question: how does the fragmentation of knowledge about nature that characterizes modern capitalist societies mediate our material relationship to nature? The answer, he argues, lies in understanding the alienation of humans from the natural world, the source of which can be found in the ubiquitous productive and social divisions of labor that characterize modernity.

Dickens begins his analysis with the simple but profoundly significant observation that the majority of the denizens of modern capitalist societies have scant knowledge of the productive processes that transform the elements of nature into the commodities we consume. How many people, he asks, can accurately describe the geographical origin of their morning coffee, the process that produced the cup that holds it, the manner of transport of the energy that warms it, or the system of distribution that brings it to their local market? In fact, Dickens argues, the people, technologies and labor processes that produce the goods and services that sustain us are obscure, part of a vaguely conceptualized, nebulous system of global production that somehow gets meat to the butcher and gasoline to the pump. Consumers, he notes, are not the only victims of such alienation. The producers of commodities are equally mystified, isolated for the most part as they are from the totality of the production process even within their own work sites, and all the more so from the production of other commodities or parts of commodities. Our knowledge about the production process constitutes a central aspect of our knowledge about nature, for as Marx notes in the "Economic and Philosophical Manuscripts" (1975), labor is the fundamental mediating force between human beings and the rest of the natural world, making nature our inorganic body and dictating that the transformation of nature results in the transformation of ourselves. Alienation from production, therefore, necessarily entails alienation from nature--for how can we hope to understand the natural world without a clear concept of the capacity for our own activities to transform it?

The transformation of nature by human technologies, Dickens notes, is made possible with the help of science. In the modern capitalist system, humans modify nature with the aid of a scientific establishment that has in large part been co-opted by industry to render nature more profitable. Alienation from nature ensues not merely from the fragmentation of manual labor in the realm of commodity production, but from the fragmentation of

intellectual labor in the realm of knowledge production. This alienation results in the speciation of the social, natural, and humanistic disciplines and a concomitant obfuscation of the dialectical interrelation of the physical, biological, and social phenomena that comprise the totality of human existence. The alienation of science in an intellectual sense has increased as technologies developed by science have fragmented nature in a physical sense. Bioengineers and other professional mediators of nature increasingly conceptualize organisms as mere genetic segments to be disaggregated and recombined to produce more profitable creatures: fatter cows, hardier tomatoes, and (chillingly) more fertile humans. At a more basic level, Dickens notes, advances in nanotechnology now threaten to develop the ability to reduce organisms to their most basic parts-atoms-and reconstitute them as profitable commodities. The end result of such fragmenting processes is not only the inability to conceive of organisms as total entities in their own right--and with purposes and identities other than the utilitarian ones assigned by science--but the danger of unintended consequences that occur when artificially induced changes in a particular characteristic of a population render it vulnerable to new selective pressures by reducing overall genetic diversity.

In posing this scenario of increasing fragmentation in modern society, Dickens draws upon a long and distinguished tradition of alienation theory in Marxist thought. From Marx himself (1975), who predicted the increasing speciation of human philosophy and natural science, to Lukács (1994), who described the reifying consequences of productive rationalization for workers, to Braverman (1974), who noted the progressive deskilling of the American working class under Taylorism, to Harvey (1989), who pioneered the theory of fragmentation in the era of postmodern flexibility, the division of labor that has characterized capitalist production from the time of Adam Smith's pin factory has been condemned for its debilitating effects on both mind and body, blamed for the disaffection of both intellectual and manual laborers, and attributed the cause of our conceptual inability to recognize the connections between a host of reified dichotomies. Similarly, following Marxist scholars from Engels to the Frankfurt School, Dickens seeks the resolution of such alienated thought patterns in dialectics, as both an epistemological and an ontological remedy to the ills of Cartesian dualism. Following the critical realist epistemology of Roy Bhaskar (1978, 1994), Dickens argues that a truly dialectical conceptualization of the human/nature relationship draws upon Marx's notion of the "humanization of nature" and the "naturalization of humans" by recognizing the emergent relationship between physical, biological, and social phenomena. Biological processes, in other words, are based upon physical properties, but are irreducible to them, just as social processes are rooted in biological processes, but irreducible to them. A critical realist perspective thus moves between levels of abstraction and concretion, examining underlying causal mechanisms as well as overdetermining, localized contingencies. A realist dialectics of nature, then, cannot exclude any single sphere of knowledge, and necessarily transcends the spurious disciplinary dichotomies that characterize modern academe.

Dickens takes a step beyond traditional dialectical investigations, however, by examining not only the fragmentation of knowledge within the institution of science, broadly conceived, but the alienation of abstract, scientific knowledge about nature from the experiential "lay" knowledge of ordinary people. Dickens argues that lay conceptions of nature (and of science itself) have been underemphasized in analyses of human/nature relationships. The accumulated knowledge of farmers, pastoralists, fishermen--people who by virtue of their daily productive activities enjoy an intimate relationship with nature and

an extensive knowledge of its mechanisms--is systematically delegitimated by science with help from the state, which relies upon communities of technical professionals for advice on environmental policy which it then imposes upon local producers. The result, Dickens argues, is a valorization of abstract scientific knowledge to the exclusion of localized lay knowledge about environmental processes--an alienation that is further exacerbated by increasing scientific intervention in the production of food and the management of resources. Dickens attempts to remedy the dearth of information on lay conceptualizations of nature by incorporating data from Sussex University's Mass-Observation Archive project, which in 1992 gathered information via an open-ended, written questionnaire asking the British public to describe its opinions about issues of environmental degradation and economic development. Dickens concludes that the responses demonstrate an alienation of ordinary people from knowledge about the environment, exhibited by their general confusion about causal relationships in the natural world and mixed opinions about the efficacy of science as a way of understanding nature. Lay conceptions of the natural world, Dickens argues, lack the structured theoretical framework employed by scientists, and instead rely upon the familiar metaphors of social relationships to interpret natural events.

Although it is the shortest chapter in the book, this section devoted to the Mass-Observation Archive Directive is of central importance because it constitutes the book's only systematic attempt at primary research. It is also the place where the weaknesses in Dickens' argument begin to manifest, and it is here that a critique of the book must begin. Dickens' description of the Mass-Observation Archive survey demonstrates the methodological difficulties faced by social scientists who venture into the conceptually murky arena of belief systems. Remote questionnaires, despite attempts to make them open-ended and interactive, remain a limited technique for assessing informants' complex interpretations of the natural world and their relationship to it. As part of a broader methodological approach, questionnaires of this type can contribute limited information on human conceptions of the environment. In this case, Dickens' account would have benefited enormously from the addition of ethnographic research based on extensive, open-ended, conversational interviews that allowed informants to take issue with the Archive's framing of the questions themselves, inviting respondents to redefine and restate the issues according to their own conceptual worldviews, and providing an opportunity for the researcher to pose follow-up questions that would allow for considerable elaboration. Furthermore, participant-observation of the classical anthropological kind allows researchers to begin to distinguish between what people say and what they do, a distinction that can offer insight into conflicting and contradictory, yet concurrent, attitudes toward the environment. In short, the implementation of a more thorough methodological approach to data collection would have added a measure of texture and depth to Dickens' project that his anthropological readers, as well as many of his fellow sociologists, will miss. Though limited in quantitative range, ethnography is infinitely superior to the survey in depth, and though time-consuming and cumbersome, it remains the single most thorough interpretive tool at a researcher's disposal.

Dickens' incorporation of data from the Mass-Observation Archive may trouble readers not only for the limitations of its methodological approach, but for the conclusions he draws from the responses as well. Several of the respondents offer surprisingly complex and insightful observations about environmental degradation and its relationship to science. One informant went so far as to draw a diagram illustrating possible connections between human poverty, climate change, and habitat destruction to support

her assertion that problems of development and environment are interrelated. Another informant offered a personalized version of Dickens' own thesis--that modern and (significantly) middle class British people are so isolated from production that they do not have an accurate understanding of the relationship between their own consumption habits and environmental degradation, as well as (significantly) the immiseration of other human populations. Yet another informant noted a factor that Dickens himself addresses in only a cursory fashion: that science itself, far from being a homogeneous producer of a set of uniform, abstract conclusions about the environment, cannot even muster a united front on issues like ozone depletion or global warming, leaving her to conclude, "What are ordinary mortals to believe or do if we don't know what the truth is?" (p. 97). Far from displaying ignorance or confusion about environmental problems, the respondents quoted by Dickens appear to have at least as good a grasp of the fundamental questions as most ecologists. And though they may display a certain amount of uncertainty about the existence, extent, or cause of environmental degradation, they also display an awareness of their own uncertainty, as well as a cognizance of the uncertainty of science itself. And this fact alone deserves much more attention--and encourages much more hope--than Dickens is willing to concede.

Dickens concludes from his analysis of the data on lay knowledge that "metaphors and analogies borrowed from familiar social experiences are being projected onto processes and relationships which remain beyond comprehension. 'Environmental misperceptions' are the result" (p. 101). The irony of this statement is that science itself has been challenged on these very grounds. Recent research by Emily Martin (1993, 1994) and Donna Haraway (1989, 1991), among others, has pointed to the problematic tendency of biomedical researchers to describe natural processes with culture-bound, patriarchal analogies that not only belie the supposed "objectivity" of scientists, but color the very questions scientists use to frame their inquiries about the natural world. Which brings us to the most significant difficulty of Dickens' analysis: the distinction between scientific and lay knowledge about the environment is a spurious one. In light of the very division of intellectual labor Dickens describes, all scientists are "laymen" in some areas of knowledge. Anthropologists, for instance, rarely claim expertise in the realm of physics, and whereas the scientific hierarchy of the academic disciplines may allow physicists to lay some claim to knowledge about culture, it is doubtful that most would proclaim themselves experts. Nor do scientists of the same ilk succeed uniformly in (or even agree upon) the employment of abstract theoretical frameworks to understand nature. Furthermore, even within disciplinary boundaries, science can hardly be described as an egalitarian institution. The increasing division of labor in academia has created a population of intellectual laborers divided along lines of class, characterized by differential access to and control over the means of knowledge production, as well as an uneven level of consciousness with regard to the exploitative labor practices that allow universities to cut costs by relying on part-time, low-wage, no-benefit adjunct labor. And these divisions do not even begin to account for differences in industrial science, produced in nonacademic settings and subject to the stratifying forces of its own unique political economy. In the last analysis, science itself, embedded in modern capitalist relations of production, is rife with enough contradictions, uncertainties and even hostilities to call into question its capacity to stand as a homogeneous unit.

We might pose similar questions about the category of "lay" knowledge, particularly given the hierarchical power structures within and between societies that dictate very different material relationships between people and between people and nature. Although

Dickens is well aware of these hierarchical structures, as well as those that characterize science, he never manages to address power in a systematic way as a mediator of knowledge about nature. Unfortunately, he allows the distinction between “lay” and “scientific” knowledge to remain in this unproblematized, reified state, and his readers are left to wonder why he didn’t take the cue from his informants and question his own facile categorization.

While Dickens’ book contains some serious conceptual and methodological problems, it nonetheless succeeds in drawing upon the most significant concepts of Marx’s ontology -alienation, dialectics, and the division of labor-to set a research agenda for scholars of political ecology. Dickens challenges us to conduct the necessary ethnographic research on perceptions of science and nature, illuminates the need for interdisciplinary collaboration between the natural and social sciences, and effectively demonstrates the continued relevance of Marxist theory for political ecological research. Indeed, it is a testament to the veracity of dialectical ontology that whereas many areas of Marxist theory lie dormant today - victims of the disenchantment with state socialism, the rise to dominance of neoconservative governments in the United States and Britain, and the fragmentation of labor politics in the face of the increasing flexibility of capital - inquiry at the intersection of the red and the green flourishes. Dickens, like others who have pioneered green Marxist theory, is to be commended for his courage in standing against the tide of idealist constructionism to consider the dialectical relationship between the historical, material world and our ideas about it.

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**Uncommon Ground: Cultural Landscapes and Environmental Values (1997), by Veronica Strang, Oxford ; New York : Berg, 1997. xiv, 309 pp.**

**Reviewed by Shelley Greer, School of Anthropology & Archaeology, James Cook University, Townsville, Queensland Australia.**

In this work, Strang examines concepts of “landscape” and “environment”, comparing the perspectives of Aboriginal people and pastoralists living in the Mitchell River catchment of Cape York Peninsula. She does this by referring to the history of this part of Cape York, the “landscapes of the past”; by describing the contemporary cultural landscapes of both groups and the way in which they describe and organize space, and by undertaking a comparison of the values invested in land through education, representations and cosmology.

The concept of comparing the values of these two groups is extremely interesting and timely, given the current debate in Australia surrounding Native Title. Strang’s study is all the more relevant as the geographic area she has chosen for her study borders the traditional lands of the Wik people whose Native Title claim has served, after *Mabo*, as the test case for Native Title through both the legal and political systems.

Strang makes several important points. First, she convincingly makes the point that concepts such as “landscape” and “environment” are culturally constructed and that this obviously affects the “value” of these. In this regard, Strang’s findings resonate with other work in Cape York that critiques the notion of ‘heritage’ in terms of indigenous perspectives of landscape (S. Greer 1995). Perspectives such as these are particularly important in areas like Cape York which are often constructed as “untouched environments” and therefore subject to a range of legislative requirements. Strang’s work challenges contemporary management practice which tends to view the environment as an objective (scientific) reality which has “natural” and “cultural” values. As Strang points out, “value” is embedded within the cultural construction. Furthermore, there is a perception that “natural resources” (at least) can be objectively quantified and on this basis, given value. This quantification of the environment is based on scientific values that are, of course, drawn from a particular cultural construction. In addition, there has been a tendency to conflate Aboriginal values with those of environmentalists without recognition that although there may well be some common ground, they are usually drawn from different cultural constructions.

In her description and analysis of the pastoralist group in the Mitchell River catchment, Strang makes the distinction between those who have had long-term associations with the region and those that are employees of absentee landowners. The latter are characterized as highly mobile, staying in the region for relatively short periods and having a tendency to be focused on the primary economic activity, i.e. grazing cattle:

“Thus the land is a stage for human activities, rather than a medium of organisation, and the available roles could be performed interchangeably in any similar economic or social situation”(p. 280).

In Strang’s analysis, the short-term, transient pastoralists appear to outnumber those who have long-term ties to the land. Again, this is an important point in terms of the debate surrounding Native Title. For many nonindigenous Australians, the Native Title debate is about differing relations to land. Whereas some nonindigenous interests in land (e.g., mining) can be characterized as overtly economic, there is a perception that those of pastoralists are less clearly economic and tempered by their relationship with land. As one of the long-term pastoralists noted:

People that own the land, and that have been on the land a long time, they’ve got a very strong attachment to it, just the same as the Aboriginals. And you can get the other sort of people that just buy it and do a few things to it and sell it - flog a few cattle off it...just to make a quid out of it. The genuine graziers...they look after it so that they can get the benefits out of it for years to come (Colin Hughes cited in V. Strang 1997: 206).

Although I am not suggesting that the long-term pastoralists have the same attachment to land as Aboriginal people, there is clearly a difference within the pastoral group. Of particular importance in terms of the public debate surrounding Native Title is the fact that within this area, the majority of pastoralists do not have long-term ties with the land.

One of the difficulties I have with Strang’s work is that she does not make enough of these differences within the pastoralists’ group. She often cites a particular long-term pastoralist whose values express a deeper relationship with the land that goes beyond economic function. For example:

I’d like to be buried here...I’ll get up on the ridge there...When I go they can plant me there - they’ll probably push me in a breakaway and let the crows eat me, you know!...I don’t know if they need bother with a gravestone - just plant a tree on me or something...I like it here, and it’s where I’m living, so there’s a possibility I might like it here when I’m dead! (David Hughes cited in V. Strang 1997: 274).

Although she does draw a distinction between long- and short-term pastoralists, her conclusions regarding ‘values’ are more related to the latter group. I feel that the differences within the pastoralists’ group could have been drawn more finely and wonder what effect this might have had on the conclusions which, as the title suggests relate to the ‘uncommon ground’ between the two groups.

Related to this, the analysis of Aboriginal constructions of environment and landscape is developed on the basis of a considerable amount of ethnographic examination. The Aboriginal people of west coast Cape York have had, as Strang herself points out, a long history of anthropological investigation, which began in the 1920s and 1930s, and was followed by a number of doctoral studies in the 1970s and 1980s. There is a rich body of ethnographic information that backgrounds Strang’s own study and from which a detailed picture of the relationship between people, cosmology, and land can be drawn. In contrast, there has been little work of a similar nature (apart from Strang’s) undertaken amongst the pastoralists. Given this, the comparison between the two groups is somewhat problematic. For example, Strang refers to differences in the way in which Aboriginal people and pastoralists have named the country. On the one hand, there is a wealth of information related to the way in which Aboriginal people name their country, and place names

“...refer to related ancestral stories, and thus to the clans who own that country” (p. 219). In contrast, the meaning and stories behind European names (which obviously could paint a picture of European relationships to land, e.g. “Labour-in-Vain Yard, Mistake Dam and Broken Dray Creek...Dinner camp, Monday’s Yard...Revolver Dam, Whisky Lagoon” (p. 218) are lost. Strang states that the loss of this information is at least partly related to the mobility of the Europeans in this region. It seems possible however that much of the information that is deemed to be lost might resurface if the pastoralist group was subjected to a similarly long history of investigation. It may be that the apparent absence of European relationships that go beyond economic function is rather related to current access to this information.

In the section that contrasts Aboriginal cosmology with that of the pastoralists, Strang refers to overarching frameworks such as Christianity, Science, Rationalism, etc. to explain the pastoralists’ perspective. I do not deny that these underlie the perspectives of the pastoralists, however a more detailed explanation of the way in which these are located and played out amongst the pastoralist groups would have presented a more informed picture. There is a shift in the scale of the analysis which may be related to the degree to which we know and understand each group. This raises another issue, the extent to which “understanding” is assumed when there is a perception of “common ground” between researcher and those researched (i.e., Strang and the pastoralists). Strang does not appear to have been completely successful in disentangling notions of “self” and “other” in relation to the pastoralist group.

In spite of these reservations, I believe that Strang’s work is an important pioneering study. She has identified that Aboriginal and non-Aboriginal people in Cape York have different simultaneous constructions of the environment in which they live and operate. Her study addresses issues that underlie Native Title, which is one of the most significant political and social debates that has engaged Australians this century. One of the major contributions of Strang’s work is that she has reconstructed the comparative study within a frame of contemporary social issues.

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**Life and Death Matters: Human Rights and the Environment at the End of the Millennium. Barbara Rose Johnston, editor. 1997. Walnut Creek, London, New Delhi: Altamira Press. 350 pp.**

**Reviewed by Diana Pritchard, Indiana University.**

Contrary to modernity's quintessential promise of progress, it is clear from the atrocities wrought on human and ecological communities around the globe that life on this planet for the majority of people does not get better. The closure of the century provides an opportune moment for reflection on the human condition. This book sets itself the task of contributing to such a discussion by examining the distinct actions of people attempting to survive crisis-ridden circumstances. It comprises a collection of 14 case studies from around the world, focusing on the experiences of grassroots organizational efforts. These illustrate peoples' efforts to ameliorate the devastation and conflicts emerging from, amongst other things, biodiversity preservation (Derman and Hitchcock), mineral extraction (Sponsel and Gedicks), agricultural resources (Wheeler and Esainko; Phillips); violence towards indigenous peoples (Pi-Sunyer and Brooke Thomas; Stea, Elguea and Perez Bustillo), forced migration (Aragon), tourism (Swope, Byrne Swain, Fuquan Yang and Ives), post war reconstruction (McSpadden and Wisner), radiation experimentation (Barker), and nuclear contamination (Garb).

As with all such volumes of contributions originally presented in conference sessions, a strong editorial hand is required. It is especially important to generate accompanying text that can render coherent otherwise motley collections that contain a diversity of themes and regions. Unfortunately, despite these being sound papers, editor Johnston fails to provide a solid analytical framework to advance our understanding of their significance in this volume. This is particularly notable in the introduction. Although the book claims to have human environmental crises as its central analytical focus, the editor omits even a basic conceptual framework with which to associate human rights abuse and environmental destruction. She opts instead to merely tag the UN Human Rights Declaration on as an appendix, without explanatory narrative. As a consequence, the ethical and legal significance of perceiving human rights as an extended principle that "should include an ecologically sound environment, sustainable development and peace," as promoted by the corresponding commission, is lost. With it, is lost the opportunity to highlight the obviously anthropocentric assumptions that are implicit in the collection, namely that the environment is valuable because of its use to humankind. However, this is just one of many central notions glossed over in the introductory essay.

A more suitable introduction also would have provided the appropriate conceptual tools to enable readers to explore the case material and consider how the status and complexities of human and environmental rights are linked to wider phenomena. Instead there is an odd array of subsections touching a range of notions such as "Culture and Structures of Power," and "Physical Mechanisms." At one and two paragraphs long, respectively, they are too brief and inadequately developed to generate anything other than confusion about their relevance.

Though the book also states that it will explore the tension between “global processes” and human responses, there is no further elaboration of precisely what these constitute. To the contrary, in an apparent rejection of positivist theories, there is no mention of crucial structures and networks, including globalized capitalist relations, the international division of labor, resources and world communication systems. This is counter productive because it inhibits readers from making links about the underlying factors that not only generate human environmental crises but also shape the strategies developed by people to confront them. Moreover, without reference to these globalized relations, readers are unable to interpret the historical significance of our present day world. Consequently, we are offered no help in our reflections on whether it is business as usual for humanity; if there is something more pernicious at work in the world today and if there is anything new about the way people organize in the late 1990s. Nor can we appreciate how relations might have changed between countries in north and south, between citizens and the states, between citizens and international organizations.

At first glance it seems fair to conclude that the contributors have agreed to abandon the intellectual foundations of modernity. Perhaps the evidence would warrant it. After all, its scientific knowledge has not necessarily been advanced for the service of either humanity or the environment on which it depends, and its theories have not proved successful in explaining our world. Yet the book’s emphasis on the importance of stories of peoples’ experiences is incomplete. Nowhere does the book seek to advance the idea that a focus on subjective, not structural, phenomena, matters. To the contrary, instead of an elaboration of this approach, we encounter one of many contradictions in this book: that ultimately it does have a very empirical concern, namely, to identify what makes for effective action. More problematic still, and in keeping with postmodern tradition, we are subject to three painful pages of a dire form of reflexivity. If ever there was a least-appropriate place for an introduction which lingers on the editor’s own personal trip into the world of social and environmental hardship and crisis, this is it. It contrasts starkly with the “reality” of the life-and-death struggles of the subjects of the book.

Such shortcomings ensure that the conclusion, titled clumsily “Crisis, Chaos, Conflict, and Change,” is doomed. Though it goes some way to unite papers by highlighting a range of responses (from passive resistance, organized efforts to modify systems, confrontational efforts to attempts to reconstruct power), it cannot salvage the book. It is not only too short to be able to do anything satisfactorily, it is also studded with the typically undisciplined statements that characterize the editorial text. For example, in citing a “promising” scenario, Johnston points to people’s participation in the planning of projects. This is then followed by the statement: “This is community-based environmental restoration, and this is nation building.” The claim verges on the academically irresponsible as it is laden with theoretical assumptions that would have to be outlined in order to make any sense.

As interesting as each case study is, the book stands as an overly dramatic and under-analyzed series of snippets. In the apparent attempt to stir up western privileged sympathies, Johnston appears to have abandoned all serious analytical rigor. Though she might have aimed to tweak the conscience of corporate interests or shame policy makers, their engagement may be lost as a consequence.

**Insights on the Global Environment. Mending the Ozone Hole: Science, Technology, and Policy by Arjun Makhijani and Kevin R. Gurney, 1995, MIT Press, 360 pp.**

**Reviewed by Donald J. Wuebbles, Director, The Environmental Council, and Professor, Department of Atmospheric Sciences, University of Illinois, Urbana, IL 61801.**

The *Montreal Protocol on Substances that Deplete the Ozone Layer* marks the first major effort by the nations of the world to join forces to resolve a global environmental issue and protect the Earth for future generations. Developed initially in 1987, with several amendments since, the Montreal Protocol was also eventful in its successful collaborations between scientists and policy makers. At the time, significant scientific uncertainties remained about detailed aspects of the processes affecting the observed ozone depletion. There also was no clear evidence of impacts from the existing ozone decrease on ecosystems or human health. However, the future risks of such impacts were substantial enough to get nations to subordinate their economic self-interests to achieve a common goal for the good of the planet.

The major concerns about ozone had first surfaced in the early 1970s with the recognition that chlorine and bromine could react catalytically with the naturally produced ozone layer in the stratosphere, in a manner such that one atom could destroy thousands of ozone molecules. The importance of the ozone layer in protecting humanity and ecosystems from potentially harmful levels of ultraviolet radiation was also becoming increasingly evident. It was soon realized that long-lived compounds called chlorofluorocarbons (CFCs, containing chlorine) and halons (containing bromine), gases at atmospheric pressures, would release their chlorine and bromine in the stratosphere and could be affecting ozone. The industrially produced CFCs and halons had become valuable chemicals for a broad range of applications throughout the world, as primary refrigerants and in many other important uses. By the mid-1980s, measurements of ozone from satellite- and ground-based instruments had shown stratospheric ozone levels were decreasing. The data also implicated CFCs and halons as the primary sources of the ozone loss. By this time, the search for replacement compounds was well underway. With the discovery of a major ozone decrease over Antarctica in the spring time of 1985, far exceeding losses over the rest of the world, the pressure increased to negotiate a global agreement to eliminate the use of CFCs and halons. The pressure also increased to search for replacements.

Several books have previously focused on the struggles of the scientific community to determine the factors affecting ozone and to evaluate the validity of the hypothesis of ozone destruction by chlorine and bromine from CFCs and halons. Other books have given more weight to the policy considerations and the resulting negotiations leading to the Montreal Protocol. Where Makhijani and Gurney's book, *Mending the Ozone Hole: Science, Technology, and Policy* distinguishes itself is in its consideration of the technological developments spurred by the search for replacements for CFCs and halons.

At the same time, it provides a generally well-written overview of the scientific findings and policy actions.

*Mending the Ozone Hole* is divided into three sections. The first (Chapters 1 and 2) focuses on the causes and consequences of stratospheric ozone depletion, the essential science underlying the environmental issue. The second section (chapters 3 through 10) primarily discusses the technological approaches being used to find replacement compounds, using defined goals for protecting the ozone layer as a basis for emphasizing the types of replacements desired (i.e., especially those compounds with no known destructive effects on ozone). The third section (Chapters 11 through 15) reports on existing policies to protect the ozone layer and the authors' recommendations for further reducing the impact of human activities on ozone.

The book gives a good overview of the scientific understanding of ozone change over recent decades and the evidence connecting ozone change with emissions and resulting atmospheric buildup of CFCs and halons. The measured trends in stratospheric ozone are discussed along with the evidence implicating chlorine and bromine in the observed ozone change. Naturally induced variations occurring in ozone are given their due. Implications of the direct radiative importance on climate from growing atmospheric concentrations of CFCs and the resulting changes in ozone are also discussed.

The discussion of the effects of decreasing amounts of stratospheric ozone on increasing the ultraviolet radiation reaching the Earth's surface and the resulting impacts on humans and other biological systems is particularly well done. The presentation of these impacts is balanced, with appropriate recognition of the extent of remaining uncertainties.

The real strength of this book lies in its discussion of the technological development involved in the search for replacements for CFCs, halons, and other major ozone-destroying substances used as refrigerants, plastic foam-blowing agents, solvents, aerosol propellants and fire-extinguishing agents. The many factors affecting the suitability of a replacement compound or, as appropriate, new technological development are discussed. The existing choices for replacements and the possible directions for the future are well covered. In some cases, however, it appears that the authors were overly optimistic about the ability to put some of the new technological developments rapidly into the marketplace. Too quickly they dismiss remaining hurdles to wide-spread implementation.

First published in 1995, the book is already somewhat outdated. For example, it does not account for findings in the last few years relating to the trends in the amount of ozone depletion, the changes occurring in the emissions and atmospheric concentrations of the chemicals affecting ozone, the changes in chemical uses affecting future projections of emissions, or ongoing discussions about further development of new replacement compounds. None of these, however, take away from the overall value of the book.

Of more concern is the discussion on policy, particularly as the authors call for major changes to existing policy. Their discussion on the pathway taken by the U.S. and other world governments in getting to the current policy is generally well stated and accurate. The existing policy, primarily based on the meeting of the world governments in Copenhagen in 1992, has greatly limited production and use of CFCs and halons, plus several other compounds affecting ozone depletion. A new meeting of the parties to the *Montreal Protocol* in 1997 has led to some further modifications to the Protocol. However, the changes to international policy from this latest meeting were minor, with the exception of further strengthening the call for elimination of methyl bromide. This book does not

stop at explaining existing policy and its impact though, and proceeds to lobby for stronger controls to eliminate fully all of the compounds containing chlorine and bromine.

The arguments made by the authors for total elimination of compounds containing chlorine and bromine are overly simplistic. They also are not realistic. Some of these compounds are unlikely ever to have a significant effect on ozone, primarily because of their naturally rapid removal from the atmosphere. The vast majority of the chlorine or bromine in these compounds never reaches the stratosphere and therefore does not affect stratospheric ozone. For example, some compounds like hydrochloric acid are water soluble and will be rapidly removed by rainout processes. Some compounds will be difficult to replace for particular uses, like HCFC-123 in large commercial chillers, and if sufficiently controlled would have insignificant effects on ozone. The current Protocol calls for elimination of all HCFCs in the next 30 years, however the authors would have this occur much sooner.

Another shortcoming of the book is the discussion in Chapter 4 on policy approaches and goals to protect the ozone layer. This chapter is not current in its consideration of the policy tools used in ozone analyses. In particular, the discussion on Ozone Depletion Potentials (ODPs) does not adequately represent the use of this concept in ozone policy. For instance, the authors primarily discuss ODPs in terms of the change in ozone at steady-state (or at equilibrium) for a mass emission of a compound, relative to the change in ozone from the same mass emission of CFC-11, one of the gases of most concern to ozone. However, one of the most important factors in the use of steady-state ODPs results from their being equivalent to the effects on ozone from the impulse response of a unit mass emission of a compound relative to a similar impulse emission of CFC-11. This negates several arguments by the authors about the limitations of steady-state ODPs. It also helps explain why this concept has gained such wide use in essentially all policy relating to effects of chlorine and bromine compounds on ozone.

As we approach the dawning of new international policy relating to concerns about climate change, it is worthwhile to examine the lessons learned from the concerns about ozone. Whereas in general, a much smaller problem in extent and in policy implications than the concerns about global warming, the ozone issue is a microcosm of this larger issue. The pathway being taken so far in public acceptance of the concerns scientists have about climate change parallels that of concerns about ozone in the late 1970s. Similarly, the steps towards policy also appear to be following the path of ozone policy considerations in the early 1980s. There is no question that the potential concerns about climate are much farther reaching than the implications of ozone change. *Mending the Ozone Hole* provides a useful historical perspective on a major environmental issue, and it also can offer many insights into the pathways being taken at achieving policy in the much more complex climate issue. The rapid rate at which new technology was and is being developed to protect atmospheric ozone can also provide some sense of optimism as humanity proceeds towards developing the technology required to control the impact of climate change on the global environment. As long as the reader recognizes the overstated agenda the authors have for eliminating chlorine and bromine, I can recommend this book for its insights into the ozone issues.

**Sustainable Global Communities in the Information Age, edited by Kaoru Yamaguchi, Westport, CT: Praeger, 1997, 218 pp.**

**Reviewed by Daniel P. Dolan, Research Fellow, Center for Global Communications, International University of Japan. Comments to: dan@glocom.ac.jp**

The thesis advanced by the editor of this collection is that because the information age is radically different from the industrial age, a new socioeconomic system is needed that is sustainable, community based, and can accommodate and use new information technology. Twenty three contributors and 20 chapters later, the reader has been informed of why the cognitive revolution in psychology is important, what future-oriented projects UNESCO has taken on recently (in what seems like a three and one-half page infomercial), how the spinning wheel and pit loom can revitalize communities in India, and where a proposed futures-focused university to be called The Network University of the Green World should be located (answer: on a small island in Japan).

The book is challenging to read. Futures studies combines research, assessment, and policy making as it pulls from a wide range of academic disciplines, including sociology, political science, and economics. This complexity places difficult organizational demands on any attempt at a multiple-author treatment of topics. Sustainable Global Communities is in places informative and provocative, but more noticeably, it is distractingly inconsistent and insufficiently focused. Synthesis could have been enhanced greatly by weeding out the relatively less pertinent essays and by adding transitions between chapters, or at least between sections. Without such integration, key points are made outside the frame of any discernible narrative, which weakens the central argument.

One source of these difficulties is revealed in the preface, in which the editor describes how the contributions were originally presented at a 1993 seminar held on the Japanese island of Awaji, which he acknowledges dates the material considerably. The book is little more than a compilation of these various presentations, some of which have been updated for publication. A light editorial hand results in duplication of background material, and a less well-developed context for absorbing these presentations in their written form than one would normally receive from the give and take of an intimate and rustic seminar setting.

The material is presented in four sections, "Environmental Issues and Futures Studies" (four chapters), "New Framework of Community Economy" (three chapters), "Building Sustainable Communities Globally" (ten chapters), and "Sustainable Community Projects in Awaji Island" (three chapters). I will mention those essays which in my judgment contribute most centrally to the theme of the project or otherwise invite recognition.

Jerome Karle's brief overview of the present health of the planet stresses the importance of "quality of life" as a critical factor in assessments and decisions made regarding the environment, technology, and sustainability. He refers to population control, sustainability, and proper human behavior as "indispensables" that must be managed responsibly and over the long term in any attempt to attain widespread improvement in living conditions.

Sustainability is the focus of Kaoru Yamaguchi's chapter, of which the first eight pages are dense with formulas and are perhaps of most interest to trained economists. His thesis is that "the capitalist market economy is a fatally distorted system in the sense that it cannot appreciate the most important values for a better life and sustainable development, such as labour value, information value and ecological value." Yamaguchi advocates instead what he calls a "MuRatopian economy" based on "information-sharing networks," "self-management and participatory democracy," and "sustainable development." His discussion is intriguing, but his claim that "the MuRatopian economy is a system superior to the capitalist market economy" is grounded in little more than conjecture.

One example of a component of the system described by Yamaguchi is the "Community Land Trust," which is the topic of the five-page essay by Matthei and LaFontaine. A "Community Land Trust" is a "democratically structured, community-based, non-profit corporation" that is both publicly and privately owned, and which the authors argue meets both immediate and future housing needs within an economic model that supports the health of communities. They also point out that although Community Land Trusts face many challenges such as over-professionalization and undue dependency on sources of financing, these communities are flourishing in the United States.

A more radical alternative perspective on alternative communities is laid out in Brian Tokar's informative and well-written treatment of what he calls the environmental justice movement, radical wilderness activism, bioregionalism, and Green politics. Tokar criticizes "leading US environmental organizations" for "compromising away the tremendous visionary potential of ecological thought" by focusing on short-term policy goals "within the limits of existing political and economic institutions." Instead, he challenges citizens to imagine possibilities for resource management outside the influence of huge organizations and international agencies and to consider decentralized, local approaches to community building and environmental policies. Tokar also proposes that new communication technologies be employed openly and cooperatively in the service of exchanging ideas and information between and within communities, in contrast to the thread of technophobia woven through many of the other essays.

Information technology also has a place in Qin Linzheng's discussion of rural community development in China. He explains how farmers in remote areas "are beginning to understand the place and role of information for decision making in production, management and administration." Developments in information technology and information management are just one part of what Linzheng sees as the need for extensive economic reforms based on the socialist market economy. He argues that citizens of rural communities should govern themselves so that they can make quick and informed decisions about which markets to enter and how to conduct activities. Additional hurdles to sustainable community development in rural China include wide disparities in income, overpopulation, rising crime rates, and environmental disasters both natural and human generated.

In his treatment of sustainability in the Philippines, Cesar Villanueva begins by distinguishing between sustainable development and sustainable communities. The latter concept, he suggests, puts focus on the local level and facilitates the analysis of specific present conditions and the generation of specific proposals for reform. Villanueva emphasizes that community development and sustainable community can be compatible only if critical issues of equity, environment and development are addressed. Huge gaps in income result in crippling disparities in access to natural resources. Strategies for dealing with environmental degradation must be engineered at the community level, which should

positively impact property rights reforms. “Sociocultural, economic, political and spiritual” development should be better rather than more.

Finally, Stevenson, Burkett and San Myint discuss how what they call “integrated communications and information technology” such as digital video applications can expedite connections between local communities on a global scale and encourage decentralization. They provide the example of the Local/Global Netweaving Program in Australia, founded on the principles of connection between local and global communities, participation in both local and global activities, communication, and practical action. Importantly, the authors stress that interactive information technology must be supported by a framework of use in line with values that recognize equality of persons “irrespective of economic background, race, gender, geography, or other characteristics.” The alternative, they insist, is a future in which machines shape and control societies.

This scattered and uneven collection of essays will be most useful for nonspecialist readers interested in examples of local approaches to sustainable community development. The importance of quality of life in notions of sustainability, the effectiveness of community-level governance, and Community Land Trusts as an alternative to wholly public or private home ownership are particularly memorable topics. Although it is not well suited for the classroom or as an academic resource, the casual reader by judiciously skipping about with an interest in the issues likely will become better informed and possibly inspired to investigate further.

**Earth’s Insights: A Multicultural Survey of Ecological Ethics from the Mediterranean Basin to the Australian Outback by J. Baird Callicott, with a Foreword by Tom Hayden (1997) Berkeley : University of California Press, 285 pp.**

**Reviewed by Dipak R. Pant, Professor of Economic Anthropology and Applied Anthropology, University of Castellanza (VA), Italy**

*Earth’s Insights* covers some challenging terrain in the field of comparative environmental ethics, a field too little explored by scholars. Callicott, professor of philosophy and religious studies at the University of North Texas, constructs for us a framework for the comparative study of ethics and environmental values, and for examining the susceptibility of both to historical change. Implicit in this tour is a notion that we might turn to non-Western sources of inspiration to chart a course for a more sustainable future.

The first question Callicott poses is: What is the equivalent of “ethics” in traditional non-Western societies? As he acknowledges, ethics do not exist in a vacuum, hermetically sealed off from larger systems of ideas (or, for that matter, from the rough-and-tumble of the real world). Ethics must be viewed, instead, like any other spheres of human thought and action (science, technology or law) in a broad frame of differences--of problems perceived and solutions attempted--by peoples of different places and times, in different

terms and under different conceptual banners. Callicott's jump-start with a philosophical discourse on ethics is quite problematic, however, as he does not first provide us with a well-enough grounded panorama of ethics-like thought in non-Western traditions. From the outset, one is left wondering about how well his conceptualization of ethics travels across time and place.

The going does not grow easier. Dealing with the historical roots of Western environmental attitudes and values (Chapter 2), Callicott repeats an oversimplification promoted by many other Western scholars. Only Judeo-Christian and Greco-Roman heritage's are taken into consideration, while overlooking the more richly textured mosaic of local "little" traditions of Celts, Iberians, Italics, Teutonics, Nordics, Slavs, and so forth. The pre-industrial Western rural traditions were expressions of some powerful and persistent undercurrents that have survived even to contemporary times in different folk forms. Yet Callicott disregards the surviving rural folklore in Europe. The Christian traditions, particularly Roman Catholicism, have absorbed and preserved many polytheistic, polycentric and nature-worshipping elements that are yet to be seriously studied to comprehend the environmental attitude and values of Western peoples. In the Alpine region and in many parts of central and southern Europe, for example, one can still find the sacred geography (e.g., "Madonna of the Snow," "St. Michael of the Mountaintop," many saints and holy figures associated with summits, lakes, rivers, boulders and so on). The European rural-popular sacred geography contains a highly articulated land ethic and a rough cosmography--most probably of pre-Christian origins, absorbed and modified by the medieval Christianity. It is a pity that the author fails to notice such a widely present and interesting aspect of the European culture.

Callicott appears to confound history and tradition. History is contingency, whereas tradition is continuity. Many elements do change forms and adapt to new circumstances to survive; and that produces history. Unforeseen changes (climate change, disasters, encounters and clashes of cultures) force the traditions to take different shape and to be articulated in different ways; all that is history. Yet Callicott does not clearly indicate which traditional attitudes and values (regarding the environment) have changed under which historical circumstances. He does not explain, for example, how the Western idea of nature as God's expression (*omnis natura Deo ignitur*, Hugo of St. Victor, *Erudito Didascalica*, 6.5, p. 176, 1805) degenerates to the idea of nature as the unlimited resource to be possessed by people. Nor does he clearly explain how the Old Testament concepts of "God's creation" and "the centrality of humans" were turned to be "man-nature fellowship under the God's patronage" in the medieval mysticism (a good example would be the teachings of St. Francis of Assisi).

Similar problems can be found in the author's oversimplified characterization of Islamic environmental ethics. The author totally ignores the Sufi tradition and the underlying nondualistic (almost pantheistic) mysticism expressed in the esoteric Islam, for example, the highly influential works of Jalaluddin Rumi and Mansur al-Hajjaj. Islamic esoterism has been somewhat different from the Judaic and Christian varieties. The influence of Sufi doctrines and practices in mainstream Islamic cultures is far more incisive than that of Jewish Kabbala or Christian esoterism in their respective sociocultural mainstreams.

The author is quite right in pointing out that the place of Islam is in the "West" rather than in the "East." But again, the role of Islamic mysticism (the variety of Sufi traditions in North Africa, the Middle East, Central Asia) in bridging the gap among the pre-Islamic,

non-Islamic, and Islamic traditions and the environmental attitudes and values generated by such intercultural dialogue are overlooked.

The author's understanding of the Dharma traditions (the so-called Hinduism, Buddhism, and Jainism, Chapter 3) is quite problematic. As with most contemporary Western observers, the author takes Vedanta of Shankara (eighth century A.D.) as the representative central idea of so called Hinduism (in reality, there is no "ism" as Hinduism), and Shunya-vada (or Madhyamika) as the governing principle of Buddhism. This may appear so to the bookish scholars who understand (or confuse) tradition to be a historical succession of schools of thought.

The reality is very different from the scholarly appearance, however. The demarcating lines among Hindu, Buddhist, Jaina and other tribal and shamanic traditions of the Indian subcontinent and the Himalayan region are terribly misleading. The doctrinal contents are always articulated through social channels such as family cults (Kula-parampara), scenic and social representations and recitals (Lila-parampara), and pilgrimage (Tirtha-parampara). The Dharma texts speak often in a cryptic and codified manner whereas the articulation in social mainstream is direct and decodified. Most Western scholars, Callicott included, fail to grasp fully the complementarity and parallelism of the textual and oral traditions of India, Nepal, Tibet, and many other parts of South and Southeast Asia. Without a careful empirical study of the living forms one is bound to add more enigma and confusion to the already complex and enigmatic reality of South Asian traditions. A more serious problem with *Earth's Insights* and its treatment of ethical frames from the Indian subcontinent, however, is the book's inattention to the Tantric traditions, which are at the core of Indian, Tibetan, Nepalese, Sri-Lankan, and other Asian systems of relating and dealing with the mind-body complex, with nature and environment.

Callicott's understanding of human-environment relations in China is overloaded by aesthetic appraisal, and lacks critical overview. After reading the book all the way through, one gets the impression that the author views Chinese environmental thinking as the "best" one (from the viewpoint of today's environmentalist). Yet among all the Asians, the Chinese have been the most determined actors on the environment (for example, great walls, grand pavilions, artificial lakes, iron shoes to keep the women's feet little and tender, castration of young males to have regiments of eunuchs). Chinese culinary art is rich and it includes nearly every little or big beast known to the Chinese (one of the most elite delicacies used to be a live monkey's warm brain by opening the skull right at the moment of dining). Callicott does not seem to take seriously these cultural traits; there is no explanation about such sophisticated and forceful attitude to other creatures and towards the environment.

In the 1960s, the Chinese officialdom undertook a huge, self-conscious venture of mass mobilization to destroy the magico-religious traditions and sacred geography of the people (the Cultural Revolution). In recent decades, the scale of environmental destruction and landscape modification in China is without any precedence in Asian history. Callicott does not appear to question why the heirs of an ancient civilization so enthusiastically carried out a self-conscious process of eradicating the "sacred" from the landscape and social life.

A sound empirical survey of the Chinese society, institutions and history would have certainly helped Callicott to understand better that the mainstream Chinese culture is substantially this-worldly, with more focus on person-collectivity (person-to-person) relations and least concerned with the human-nature relationship. Only the Buddhist

(imported from India) and Tao (not so dominant in Chinese civilization) traditions have shown some cosmos orientedness compared to Confucianism-dominated mainstream. Even in the Buddhist and Tao traditions the Chinese have always longed for “longevity” (through medical-alchemical pursuits) and pragmatic wisdom (in relations to the world and with the others) rather than compassion or freedom. The Confucian, the communist, and the neo-Confucian (the modern social and political thinking of Chinese-born elites of Singapore and other Southeast Asian countries) ideologies are staunch supporters of the traditional Chinese view that collectivity is above the individual person and that the state is above the society (contrary to the other Asians including the Japanese and the Indians who put society above the state). What is the ramification of such ideas and practices in the attitude towards nature and fellow creatures? How is it that the Chinese come to be more rampant in their materialistic pursuits and consumptive ways of life among all other Asians today? Callicott fails to deal properly with such fundamental questions.

Similar questions about Japanese environmental ethics remain unanswered: how the forceful and highly sophisticated subduing of nature (e.g., bonsai, the art of dwarfing the tree species, and ikebana, the art of manipulating plants and flowers for decoration) came to be so widely popular in a tradition where the ecological insights are supposedly so fine and kind for the author. Callicott’s last chapter on activism does not mention a single environmental opinion and action movement of China or Japan, nor does he explain why. The understanding of the Eastern environmental ethics displayed in *Earth’s Insights* is most problematic.

Callicott gives a much better account of Polynesian (of Hawaii) and North American Indian (Lakota and Ojibwa) environmental ethics (Chapter 6). More contextual information on kinship and social organization, on resources and ecosystems management systems is presented alongside the extrapolation from mythopoetic heritage.

In South America, the author focuses exclusively on the indigenous peoples of the Amazon (Tukano and Kayapo) (Chapter 7). The accounts of agro-ecology of the pre-Hispanic Indians of the Andes region is quite well documented; yet the author is mute about these sources. The Inca land-use system (chakras) is still visible in today’s Peru; the author ignores the whole subject. Even the Incan and other well-organized pre-Columbian resource-management systems and explicit and implicit environmental values are left out of the discussion. It is surprising to find no mention of the grand highland cultural traditions of the Incas and the Uros that still display bulky fragments of pre-Columbian practices and concepts regarding the environment.

Callicott’s choice of putting African environmental thinking with that of Australian aborigines is beyond comprehension (Chapter 8). As examples of African environmental thinking and ethics, the authors picks up the agricultural Yoruba of Nigeria and the hunting-gathering !San Bushmen of the Kalahari desert of Southern Africa. This limited selection does not do justice to our understanding of African cultural reality. The great majority of the Africans are agro-pastoral people (agriculture and livestock breeding combined). The pure pastoralists constitute a significant portion of African population, mostly concentrated in East and North-East Africa. Desertification in sub-Saharan Africa is mostly related to overgrazing and massive and monotonous cash crop cultivation (problems created by the colonial powers first, and perpetuated by the international development community’s prescriptions now). A close look into this reality (pastoralism) and a careful analysis of the traditional environmental ethics of these peoples in lieu of the negative developments in the environment and landscape could constitute a significant contribution. It is unfortunate that Callicott does not address this reality.

The essay on postmodern environmental ethic (Chapter 9) is provocative. Any careful observer of the current environmental situation of the world is likely to agree with the author. But a few perplexities remain. The author affirms that the emerging global scientific worldview, happily, is not as conceptually dissonant with the world's many indigenous intellectual traditions as its predecessor, the mechanical worldview. I have doubts about this. First of all, the emerging global scientific worldview is based on the same (as in case of the late nineteenth and early twentieth century modern science) Western paradigm of the near-total knowability and programmability of the world. There is some anthropocentric arrogance (faith in the ultimate technological fix) in it, and there is a high potential of manipulative attitude. Let's not forget that the big progress in biotechnology, medicine, and pharmacy are very recent (say, postmodern) developments and I sincerely do not see any trace of the so-called good and kind "emerging global scientific worldview." Death and decay are continuously viewed as undesirable and, therefore, solutions of all sorts are pursued to avoid them, to prolong the life span. Frankly, this is far from the traditional indigenous ethics of many peoples. Even the deep concern with the environment among the so-called postmodernists seems more for the sake of better quality of life for the humans, not as a total outlook of improving the relationship amongst the creatures and the cosmos. The modern Western paranoia of death and decay is being transferred to other cultures through science, technology, and education. Science and technology are part of the problem and not the solution. The forward posture of fixing the things to improve the environmental situation may help in the short run (it is welcome) but it is not enough. What is needed is an inward posture of renouncing absolute human superiority and arbitrage. The author's affirmation that "conserving the human benefits and minimizing the environmental costs of modern technology will head the global agenda of the twenty-first century" (p.210) is too much in line with the forward posture.

Callicott has saved his best for last. Chapter 10 offers an elegant and interesting assessment of "stewardship" ethics in action. By reading the whole book an ordinary reader gets the impression that the author finds this ethical framework quite viable for the contemporary Western world, but he does not really regard it as really "fine" and "high." Callicott reports about the strong and successful (to some extent) Indian and Sri-Lankan environmental movements ("the Hindu environmental ethic in action" and "the Buddhist environmental ethics in action"). Throughout the book, one gets the impression that he considers the traditional environmental thinking of the Indian subcontinent to be quite good, better than the Western (Judeo-Christian-Moslem one) but not so "fine" and "high" as the Chinese, the Japanese, and some tribal ones. He also mentions the Buddhist forest conservation movement in Thailand. It is surprising that the author does not mention any instance of a traditional Chinese or Japanese environmental ethics (according to him, far superior to the Western and better than the Indian) in action. He also fails to say if they exist at all. If they do not exist then a serious question emerges: how the finest and the highest environmental thoughts (the Chinese and the Japanese, and some tribal ones, according to the author) do not generate any significant social and environmental action? If they exist, the reader becomes eager to know about them.

A qualified recommendation, then, would be for readers to include *Earth's Insights* among a list of works on comparative environmental ethics. The language and writing style tend to the baroque, overloaded by decorative elements. But Callicott is straightforward in delivering his oversimplified message, and is sure to prompt vigorous discussion.

**Kremlin Capitalism: Privatizing the Russian Economy, 1997, by Joseph R. Blasi, Maya Kroumova, and Douglas Kruse. foreword by Andrei Shleifer ; with the research assistance of Daria Panina. Ithaca, NY: ILR Press, xix, 249 pp.**

**Reviewed by Dr. Tatyana G. Bogomazova, Researcher, Peter the Great Museum of Anthropology and Ethnography (Kunstkamera) of the Russian Academy of Sciences, St. Petersburg, Russia (info@kunstkamera.lanck.ru)**

The authors of this excellent, clearly written and approachable volume evaluate the privatization process in Russia from 1991 to 1996. Privatization is presented in the broader context of Russian economic reforms that took place in the period after “perestroika.” Specialists and common readers will find this book particularly valuable, whether seeking a better theoretical understanding of privatization in Russia or specific details of this most recent history.

First author Joseph Blasi served on a US Agency for International Development advisory team from Harvard University’s Institute for International Development. Andrei Shleifer, author of this volume’s *Foreword*, had a unique chance to work with Deputy Prime Minister Anatoly Chubais--the cabinet minister responsible for privatization--and his deputy, Dmitry Vasilev. From this lofty vantage point, Blasi and his colleagues were allowed to observe policy making around the process of privatization. Their appointments also provided an unusual opportunity to form a research program analyzing the transition process. Maya Kroumova and Douglas Kruse helped with the analysis of the evidence. The result is a very important documentary source for economists and decision makers.

At the outset, useful background information is presented concerning the political and economic context of the postcommunist period. A “Chronology of Major Events” is presented to help render more coherent the whirlwind of history. The introductory chapter follows, and it is of particular value for its assessment of the reasons of privatization, its program, and how it worked. Here one can find interesting details lifting the veil that masked the privatization backstage. A summary of “The Russian Business Economy and Companies” presents a considerable wealth of statistical data, and serves as an excellent overview to the emerging private sector.

The discussion then moves to questions specific to the period of privatizing under conditions of a newborn market system. Special chapter-length emphasis is given to discussions of “Ownership,” “Power” and “Restructuring.” The second chapter is dedicated to the initial division of ownership, how the struggle for it unfolded, and finally, an analysis of how property has actually been distributed to private citizens. One of the main points of the chapter concerns the attitude of Russian citizens toward voucher privatization: “The Russian public became more cynical about privatization . . . , Russians increasingly questioned privatization” (p. 76). These inferences are based on the results of

series of surveys that allowed the authors to conclude: “. . . limits of citizen participation in the new economy were supplemented by a host of the other problems that complicated the public’s perception of privatization.” The authors properly point out that the share of property given to citizens must be viewed in the context of the declining living standards of many Russians.

Chapter 3 reviews the circumstances of initial transition, governance in 1996, and the status of workers as shareholders and employees. But the most interesting part of the chapter is a section entitled “The Mafia as a Corporate Power.” Evidence concerning this “grey eminence” of privatization in Russia is scarce, and for obvious reasons it is difficult to substantiate folk wisdom holding that criminal elements are linked with corrupt members of the “nomenklatura” in dividing the country into spheres of influence (p. 119). But the authors are careful not to exaggerate the criminal elements’ influence over the Russian economy. They assume there are three areas chiefly controlled by the Russian mob: (1) smaller privatized and start-up businesses, (2) smuggling and transportation of valuable commodities; wholesale and retail outlets where products can quickly be turned into cash, and (3) some portion of very profitable large enterprises that produce commodities or have some access to them (p. 119). The authors believe organized crime wants risk-adjusted return, so large, privatized, unprofitable firms are out of criminal control. Here I would argue with the authors, as an unprofitable weak company may cut employees, reduce capacity, and confront serious cash-flow problems, while its director actually might be one of the most affluent persons in a given region. It may be to his advantage to promote an unfavorable image of his company and appeal to the contemporary social mood of overall crisis. This is especially relevant in the post-Soviet economy, in which information concerning corruption is widely suppressed, leading to artificially low official rates.

A central point, to which the authors devote a separate chapter and return repeatedly, is restructuring. “What is true restructuring?” they ask. Their answer relies on an analysis of business operations, management and control, social services for employees, access to capital, and so forth. In other words, their analysis of the barriers to restructuring and the emergence of private capital markets focuses not only on the official planning discourse, but on real problems around real changes. The analysis is convincing, as it relies on relevant statistical data from a range of reliable sources.

The book’s last chapter is devoted to the future of reforms. It sounds especially interesting now, with the old Russian government having been dismissed and our society experiencing recurrent governmental crises. From this perspective, the title of the issue “The Reality From Which There Is No Escape” is particularly intriguing. “The harsh reality is that there is no alternative to far-reaching changes in most of Russia’s enterprises” - this observation seems to be the most obvious and perspicacious conclusion in the final analysis. We may just hope the current situation would be the start of a new period of reforms. That they are needed is brightly proved by *Kremlin Capitalism* and its authors.

**Indigenous Organizations and Development, edited by Peter Blunt and D. Michael Warren. Intermediate Technology Publications, London (1996), xxii, 253 pp. (IT Studies in Indigenous Knowledge and Development.)**

**Population, Economic Development, and the Environment: The Making of Our Common Future, edited by Kerstin Lindahl-Kiessling and Hans Landberg. Oxford University Press, Oxford (1994), xxii, 282 pp.**

**Reviewed by Lars T. Soeftestad, Anthropologist, World Bank.**

Increasing integration of local and traditional economies into an international capitalist system--and the resulting social and ecological problems--is paralleled by increasing efforts to understand and explain these phenomena, predict future developments, and control them. Explanatory models often amount to one-factor hypotheses: taking out a slice of reality, arguing a particular and limited point of view, or representing specific and limited aspects of the human reality, they often pronounce judgment on issues beyond the scope and confines of their argument. Although the insights provided by such efforts more often than not are interesting and illuminating, one is often left with a feeling of "So what?" or "What is the practical significance of this?" or "How to bridge this with existing conflicting paradigms?" or even "Can this be operationalized?"

The two volumes reviewed here represent two recent examples. Major attention will be given to the *Indigenous Organizations and Development* volume edited by Blunt and Warren, while Lindahl-Kiessling and Landberg's *Population, Economic Development, and the Environment* will be used for supporting arguments to place the former in a more encompassing context, and to suggest further avenues along which the arguments in the Blunt and Warren volume can be developed.

Blunt and Warren's volume contains a wealth of local-level practical information and knowledge, too much to do justice to in this review. The work on which the volume is based began two or three decades earlier, when the authors first got involved in rural development, governance, public sector management and training, primarily working in Africa. The 1980s saw the beginning of a paradigm shift, with increased emphasis on participatory approaches, capacity building, and local institutions, as well as with the long-term viability of development investments. According to the authors, "this generated interest in the nature of indigenous or local-level, community-based knowledge and how it provided the basis for both individual and community-level decision-making" (p. xiii). As this knowledge accumulated, it became clear to the authors that a major area of concern in the new development paradigm had been overlooked. They argue that indigenous knowledge systems constitute "an important bridge to mutual understanding and

communication . . . between the local communities and the development practitioners” (p. xiii). The volume has benefited from the insights of a number of researchers and practitioners, notably Norman Uphoff who, incidentally, also wrote the Preface.

The various case studies focus on local planning and management systems, local levels of technology and development, and community-based systems of evaluation and capacity building. The volume is organized by geography into three parts: Africa, the Indian sub-continent, and Asia-Pacific, with the major emphasis on Africa.

The volume describes a variety of indigenous organizations, and the authors believe that this is the first effort in this direction in the development literature. They see it as a complement to a recently published volume that focuses on the cultural dimensions of development (D.M. Warren, L.J. Slikkerveer, and D. Brokensha 1995). Based on the premise that local people should decide what is best for them, Blunt and Warren argue that indigenous organizations present a natural point of departure and focus in development assistance. Although this may be a correct assertion, a pertinent question is how to do it.

The International Symposium on Indigenous Knowledge and Sustainable Development (Silang, Philippines, 20-26 September, 1992) agreed on the following working definition of indigenous knowledge, proposed by D. Michael Warren:

The term ‘indigenous knowledge’ (IK) is used synonymously with ‘traditional’ and ‘local knowledge’ to differentiate the knowledge developed by a given community from the international knowledge system, sometimes also called ‘Western’ system, generated through universities, government research centres and private industry. IK refers to the knowledge of indigenous peoples as well as any other defined community (Indigenous Knowledge & Development Monitor, 1(2) [1993]).

Furthermore, indigenous knowledge systems relate to the way members of a given community define and classify phenomena in the physical/natural, social, and ideational environments. Examples include local classifications of soils, knowledge of which local crop varieties grow in difficult environments, and traditional ways of treating human and animal diseases. Indigenous knowledge systems provide the basis for local-level decision making, this frequently occurs through formal and informal community associations and organizations. Communities identify problems and seek solutions to them in such local forums, capitalizing and leading to experimentation and innovations. Successful new technologies are added to the indigenous knowledge system. Indigenous forms of communication are vital to the preservation, development, and spread of indigenous knowledge.

The definition of indigenous knowledge given above stands in contrast to the way the term is used in the present volume. Here indigenous knowledge is not defined, but it appears to be closely linked to the term “indigenous organization.” The latter term is understood to comprise:

those local-level institutions with an organizational base that are endogenous as opposed to exogenous within the community. Exogenous organizations are those that were established through forces external to the community (p. xiv).

As such, there appears to be an effort to link the overall argument with key elements and views in the emerging global indigenous peoples movement. Elsewhere, an institution is understood to be a complex of norms and behavior that persist over time through serving a purpose, whereas an organization is a structure of recognized and accepted roles.

Although there is some overlap between institutions and organizations understood in this way, only institutions that have an organizational basis are considered. Furthermore, indigenous organizations are understood to be a subset of the larger category of local organizations, something that appears to be very limiting and possibly even flawed.

Although I understand the rationale for the term indigenous knowledge, there are clear disadvantages to its use within specific political contexts. The term “indigenous” is not likely to score very highly with national-level stakeholders, particularly in Asia (Africa is a different case, which may explain why Blunt and Warren prefer this term). Because the proof of the validity and usefulness of the indigenous knowledge paradigm lies in its successful application within often highly contentious political realities, it would in many cases be better to use the terms “local knowledge” or “traditional knowledge.”

In terms of the applications of indigenous knowledge, it originally grew out of the perceived needs and problems of the African agricultural sector. The international indigenous knowledge agenda has grown substantially, both in terms of coverage and content, and is now firmly lodged in various research institutions and journals. Dr. D. Michael Warren, an anthropologist by training, was a key person in defining and promoting this agenda. He--among other things--founded the Center for Indigenous Knowledge for Agriculture and Rural Development (CIKARD) at Iowa State University. CIKARD (URL: [http://www.public.iastate.edu/~anthr\\_info/cikard/cikard.html](http://www.public.iastate.edu/~anthr_info/cikard/cikard.html)) was established to provide mechanisms to strengthen the capacity of development agencies to improve agricultural production and the quality of life in rural areas in cost-effective ways. Its goal is to collect indigenous knowledge and make it available to local communities, development professionals, and scientists. CIKARD concentrates on indigenous knowledge systems, decision-making systems, organizational structures and innovations. CIKARD recognized that the establishment of regional and national indigenous knowledge resource centers is the most effective way of systematically recording, documenting and using this knowledge. There are now more than 30 such global, regional and national centers, with an additional 20 centers in the process of being formalized. At the time of his unexpected death in Nigeria on 28 December, 1997, Dr. Warren was the Director of CIKARD and a member of the editorial board of the *Indigenous Knowledge and Development Monitor* (URL: <http://www.nuffic.nl/ciran/ikdm/index.html>). The present volume will stand as a lasting testimony to his crucial role in the growth of the international indigenous knowledge network.

*Population, Economic Development, and the Environment*, edited by Lindahl-Kiessling and Landberg, addresses somewhat similar issues, but it does so indirectly, and from a very different perspective. The primary position taken by Lindahl-Kiessling and Landberg is that the issue of population and its growth or decline cannot be separated from the whole set of questions of economic and social development, and from the environmental concerns related to the issues of production and consumption throughout the world. Analysis must be made at the global as well as at regional levels. More specifically, the Malthusian conflict constitutes the major argument running through the volume, with economic and social development and environmental issues as secondary and explanatory areas of concern. In addition to providing a fresh look at the work of Malthus, the volume addresses two main themes: factors underlying fertility changes, and development issues related to the population-environment nexus. Importantly, in connection with the latter issue, the volume argues that classical economics' reliance on the market as the key to solving all societal ills is flawed, and it concludes that the market mechanism cannot be permitted to operate alone. Certain patterns of environmental

deterioration are caused not by market failures but by government policies, and it follows that the causes of these failures increasingly should be sought, and addressed, in the context of institutional analyses.

The contributors to the Lindahl-Kiessling and Landberg volume are concerned about the several negative trends we today witness on a global level. They argue that the rapidly increasing stress on the world's natural resource base can, especially in the overpopulated areas of the world, create social tensions and conflicts between as well as within nations, and furthermore that such conflicts likely will occur before there is an ecological breakdown. Towards understanding this, they examine a wide array of issues, ranging from the connections between population size and growth, environmental degradation, and poverty. They take into account the increasing competition for natural resources by social structures on several levels, including on the household level.

Compared with the Blunt and Warren volume, the overall argument is much broader, and more complex. It is, perhaps, less intuitive, but it reflects a situation that is more difficult to model and where outcomes are equally difficult to predict, and it is thus more true to reality. While operating mainly on a macro-level, variables and issues on lower levels--all the way down to the household--are considered important.

The articles in *Population, Economic Development, and the Environment* are realistic in pointing out the possible futures, for all of us, if changes are not made, and some readers will accordingly see it as partly pessimistic in outlook. (In contrast, pieces in the *Indigenous Organizations and Development* volume do not address future scenarios, and the book as a whole comes across as overly optimistic in crediting the human race with the capacity to learn, adapt, and change for the benefit of the common good.)

The Lindahl-Kiessling and Landberg volume is one of several recent treatises that address similar issues on a global level. In this sense *Population, Economic Development and the Environment* does not contribute a great deal of new data and analyses. Its major contribution lies in an effort to place a number of disparate elements into a coherent analytical and explanatory framework. In aiming at tracing out a theoretical model for the interrelation between population, environment, and development, there is, however, little emphasis on giving concrete advice on local-level, regional, and national level action and practice.

Both volumes read well and present convincing stories, scenarios and arguments. This is to a large extent because they each have a clear mission that drives the arguments and compels the reader to follow. For the rest they are largely different, as witnessed by the following set of dichotomies, several of which are closely related:

*Population, Economic Development, and the Environment* is grounded in development and environmental economics, whereas *Indigenous Organizations and Development* is situated, to a large extent, in the social sciences;

*Population, Economic Development, and the Environment*, seeing social systems from the outside, talks about their "resilience," whereas *Indigenous Organizations and Development* talks about the sustainability of communities, seeing them from the inside, and subsequently presents this emic view to the outside;

*Population, Economic Development, and the Environment* focuses primarily on theory and analysis, whereas *Indigenous Organizations and Development* gives prior emphasis to action and practice; and,

*Population, Economic Development, and the Environment* is directed at the international policy and scientific levels, and aims at creating and supporting an international agenda, whereas *Indigenous Organizations and Development* focuses on grassroots practitioners, civil society, and the Non-Governmental Organization (NGO)-community, and aims at creating a grassroots agenda around these issues. In doing so, it largely presents a moral argument whereas the population volume presents a pragmatic and rational argument.

Having pointed out the differences in point of departure, focus, and aims, this juxtaposition of intellectual and scientific pursuits complements one another in many respects. *Indigenous Organizations and Development* is important because it supports and underlines other work currently going on in the development community, ranging from local NGOs to global financial institutions. Social sustainability is as important as environmental sustainability. Participation, consultation, transparency, stakeholder identification, cultural aspects of development, involving project affected people as well as the public sector, the private sector and the civil society, and institutional capacity building at the local level; these are all crucial issues that only recently have begun to be addressed in a comprehensive and structured manner, and they are enriched and complemented by the indigenous knowledge agenda.

*Population, Economic Development, and the Environment* is important because it presents the other side of the coin, as it were, namely the macro level. In doing so, it presents the overall political-economic framework within which the indigenous knowledge agenda must make its case. Although this framework certainly is both limiting and constraining, it is also facilitating, while at the same time providing opportunities.

According to advocates of indigenous knowledge, it is important for several reasons: (i) it represents the successful ways in which people have dealt with their environments; (ii) familiarity with local cultures can help extension workers and researchers communicate better with local people; and, (iii) it can help find the best solution to a development problem. Some comments on these pronouncement are in order: (i) indigenous knowledge clearly points toward successful adaptations, otherwise these cultural traits would disappear, but the implication that all indigenous knowledge therefore is useful at the present time is not necessarily correct; (ii) this is clearly true in the best of worlds and in a very limited and narrow context, but this usually does not at all mean that the solution to a problem is institutionalized and "solved," as external factors often will determine the long-term viability of the solution; and, (iii) indigenous knowledge may contribute to finding the best solution to a development problem, but a solution to a problem according to this is only theoretically interesting.

It is precisely here that the indigenous knowledge agenda interfaces with the macro level population argument, as portrayed in the Lindahl-Kiessling and Landberg volume. And it is to this interaction that the argument now will turn.

If everybody understands each other, all problems will disappear and the rational use of indigenous knowledge will proceed according to the plan. This is clearly naïve. This is not to say that the indigenous knowledge agenda has not had success. It certainly has. The point here is that this success to a large extent is defined in relation to the limited scope of the agenda, namely giving primary attention to technologies and techniques, and constructing an argument within an instrumental, objective agenda. Likewise, the success stories are small scale, and it is in the institutionalization and scaling up of such interesting experiences that the indigenous knowledge agenda up comes short.

In the spirit of democracy, openness, and transparency, the best thing we can do is to define an open playing field and invite any persons or category of persons to get involved. At the same time we clearly face a problem in that all stakeholders are not equal in terms of access to resources, including information and funding. Stakeholders will accordingly enter the contested playing field on unequal terms. In this situation an institution like the World Bank can do a couple of things. On the macro level it can work with governments on reforming regulatory and legal frameworks to create equal conditions and opportunities for all stakeholders. On the micro level, the World Bank can support local-level initiatives that aim at, for example, awareness raising, capacity building and support of local initiatives. While opting for an open-ended approach that excludes none, focused efforts are made to aid marginal groups in entering the playing field on more equal terms. The latter is achieved partly through direct support, partly through arguing on the macro level that it pays to include marginal groups, and partly through long-term arguments of environmental and economic sustainability.

It is not easy to pinpoint what is missing in the indigenous knowledge approach, and it is with a certain uneasiness that one criticizes something as worthwhile and inherently good as this. However that may be, I think it boils down to an approach that implicitly, if not explicitly, sees the local community, with its constituent institutions, organizations, and knowledge systems as both the beginning and end of analysis and focus. Limited in its ability to characterize local-global articulations, this approach is limited accordingly in its ability to evaluate successes and failures. Most importantly, there appears to be no emerging framework dealing with political and strategic alliances with other parties, either on the same level as the community or at higher levels of integration. Outside actors, issues, and levels certainly exist and are acknowledged, but are never really brought into the analysis. Each case of indigenous knowledge is somehow seen as unique, and there appears to be little emphasis on doing comparisons across sectors and cultures. The history and rationale of the overall indigenous knowledge paradigm becomes an obstacle to seeing across the divide represented by the various dichotomies discussed above, and this leads to the present fundamental problems in reaching out and mainstreaming its ideas. As a result, it unfortunately remains a somewhat exotic agenda that exists at the margin of the overall development enterprise.

Those who focus their efforts on the preservation and promotion of indigenous knowledge also need to be aware of this encompassing economic-political reality. They must be willing to reach out to stakeholders that have partly conflicting agendas, to strategize and create alliances, and to recognize the implications of the fact that indigenous knowledge exists in an institutional and organizational context that goes much beyond the individual community. As part of this reorientation, it would be necessary to address the implicit argument that indigenous peoples, through their knowledge systems, somehow hold the key to a sustainable management of natural resources. This is too simple. Traditional institutions and organizations change, just like institutions and organizations everywhere else. They change for a variety of reasons, forced to try and adapt to changing external conditions. Some become obsolete and disappear, and most of the rest are more or less gradually transformed in the process.

Towards this, I offer to the indigenous knowledge community the practice and theory of comanagement as a potential avenue to explore. Comanagement (also referred to as “collaborative management” or “joint management”) describes a partnership among different stakeholders for the purpose of managing specific resources. Key members in such a partnership will be the government agency with jurisdiction over the resource in

question and local residents and resource users. They will have reached an agreement specifying roles, responsibilities, and rights. Comanagement is characterized by a conscious and official distribution of responsibility that involves all legitimate and relevant stakeholders. It is recognized that not all responsibility can or should be devolved to the community, and the state will always retain some responsibility (G. Borrini-Feyerabend, ed., 1997; cf. also G. Borrini-Feyerabend 1996; E. Pinkerton and M. Weinstein 1995). Comanagement is becoming increasingly attractive to NGOs.

The comparative advantage of international development banks like the World Bank lies more on the macro level, in collaborating with governments in setting up stakeholder consultation processes and in reforming regulatory frameworks. A recent experience with formulating a sector strategy for the coastal zone in Ghana that I was involved in, relied heavily on organizing large-scale and exhaustive stakeholder consultations that spanned the whole coastline and involved hundreds of people representing all relevant stakeholders. Among them were local and regional traditional chiefs that represented the traditional chieftaincy system and thus brought traditional values and knowledge to bear on the issues at hand. This was an extremely rewarding experience for everybody who participated, and it set in motion processes in the coastal zone that are still unfolding (World Bank et al. 1997). This work benefited from earlier conceptual and policy-oriented work focusing on the interrelation between modern and traditional institutions in Africa (M. Dia 1996).

*Indigenous Organizations and Development* asserts that it makes good sense to combine development assistance and indigenous organizations. In this it is important that the various stakeholders, both on the national and the local level, both domestic and international, cooperate to create a smooth relation between various macro- and micro-level factors that are crucial to creating an enabling atmosphere on the local level. In this process, a better understanding between such diverse phenomena as indigenous knowledge, population growth, and environmental sustainability is emerging as crucial, and the two volumes will hopefully contribute to building this understanding. Hirschman (1994) has argued persuasively that we need to understand development as a process--as well as a growing capacity of--problem solving. This speaks to the importance of nurturing and crafting an integration of indigenous knowledge, institutions, local organizations, and political processes.

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## **Third World in the First: Development and Indigenous Peoples, by Elspeth Young, 1995. London and New York: Routledge. 304 pp.**

**Reviewed by James Waldram, Department of Native Studies, University of Saskatchewan**

This book compares Aboriginal peoples' experiences with processes of development in Canada and Australia. The emphasis is on remote areas of these two countries, and the comparison is striking. Particular attention is paid to government policies and selected industries, such as mining and tourism. Young also looks at the traditional, land-based economies of Aboriginal peoples in the two countries, and concludes her study with an examination of Aboriginal development initiatives. In the latter case, particular emphasis is placed on sustainable development as a strategy.

This is a lushly produced book, complete with many photographs, figures and tables. It demonstrates the value of international comparisons of Indigenous issues, and transcends academic disciplines. A geographer by training, Young focuses on the land and the relationship of Aboriginal peoples to it. Her extensive research, however, includes accessing historical and anthropological studies in addition to those of geography. The use of excerpts from her own field notes, recorded while undertaking research with Aboriginal peoples in the two countries, adds a humanistic, anthropological feel to her work.

The volume demonstrates some theoretical problems. Of particular note is Young's failure to adequately explain her adoption of the Third World paradigm as a framework for understanding Indigenous minorities within liberal, democratic states. She notes only in passing the existence of a Fourth World paradigm, which other authors have suggested more adequately describes the situation of these Indigenous peoples. We are left wondering why she rejects the Fourth World paradigm. The use of the Third World as a framework obfuscates the very real political and economic differences between

Indigenous peoples in Canada/Australia with those in, say, African nations where they are the majority and even in control of the state. Although it is emotionally appealing to refer to Aboriginal peoples as living in Third World conditions, the comparison is debatable. Young fails to comprehend the impact of state-supported programs such as medicare, education allowances, and housing. Few Aboriginal people in Canada, at least, die of protein/calorie malnutrition, in contrast to many areas of Africa. These are not petty differences, and they require considerably more thought than has been applied here. So, whereas the comparison works on one level, theoretically the volume is lacking. This should not deter those interested in international development issues, however, for the author has done a credible job researching and collating a large amount of information on the two countries. Comparisons such as we have here serve to advance our understanding of the effects of globalization on the world's Indigenous peoples.

**Folk Management in the World's Fisheries: Lessons for Modern Fisheries Management, Christopher L. Dyer and James R. McGoodwin, editors. 1994. Niwot, CO: University Press of Colorado. xiv, 339 pp.**

**Reviewed by Patricia M. Clay, National Marine Fisheries Service, Woods Hole, MA**

This is a well-written book that addresses two questions currently debated hotly in fishery management circles: How do we address the worldwide decline in fishery resources? and To what extent can and should fisherfolk have a significant voice in the management process?

Offered as one possible response to both is the concept of "folk management." Folk management, as defined by this volume's editors, is related to such terms as "indigenous management," "community-based management," and "bottom-up management." Whereas these other terms are often primarily based on the management of space (that is, systems of tenure), Dyer and McGoodwin regard folk management as more broadly encompassing, also including effort limitation and stock productivity enhancement. Folk management is part of a people's fishing "technology," broadly construed, and includes an ideational component.

This volume seeks to document cases of folk management worldwide, to analyze the components of their success or failure, and to offer these insights to modern fishery managers in hopes of contributing to a more collaborative form of fisheries management--what has been described in much recent literature and some of the case studies in this volume as "co-management." Case studies are presented primarily from the Americas, but touching on several continents and including diverse fishing regimes. Pomeroy writes about institutional arrangements across multiple jurisdictions in the highland Lake Chapala district of Mexico, whereas McGoodwin presents another Mexican case from the rural Pacific coast. Cases presented by Palmer and Felt are from the North Atlantic,

whereas Gill examines Alaskan salmon fisheries in the wake of the Exxon Valdez oil spill. Fisheries on the U.S. Gulf Coast are the subject of discussions by Dyer and Leard and by Ward and Weeks. Stoffle et al. examine artisanal fishing in the Dominican Republic. Jentoft and Mikalsen describe fjord fishing in coastal Norway, whereas cases presented by Ruddle and Anderson are from Southeast Asia and China, respectively. Though an additional Asian or European case study would have improved the volume's geographic coverage, the examples cover a broad range of system types and theoretical perspectives, drawing on references as varied as Elinor Ostrom, Roy Rappaport, and Mary Douglas.

One especially useful feature is the "Lessons for Modern Fisheries Management" section at the end of each chapter. This section summarizes the key points as numbered bullets--a sort of "Executive Summary." My only quibble with these "Lessons" is that they include little contextual or ethnographic data. If the idea is to give managers the option of reading only these portions, then the proposed goal of "knowing more about folk management" is only partially achieved. This caveat is tempered, however, by acknowledging the need for generalizations and overarching theory to be making sense of the recent profusion of case studies. Both the "Lessons" and Pinkerton's "Summary and Conclusions" chapter address that need.

In that vein, Pinkerton asks two questions: "What are the minimum conditions under which one could expect folk management or co-management to arise?" and "What are the main vulnerabilities of a co-management or folk management system to be undermined?" Using the ethnographic case studies in the volume and recent theory on institution building and resource management, she then formulates 20 testable hypotheses, and summarizes the policy lessons and implications overall. This poses a challenge to other social science fisheries researchers. By seeking to test her hypotheses, we can advance the current state of theory. This is an area where anthropologists in particular must make improvements: if anthropological insights are to be accepted in management and policy-making, they must include clearly testable predictions of behavior.

In fact, anthropologists and related social scientists have only recently begun to be included in many nations' fishery management institutions, and their potential contributions are often little understood. Although one case study (Ward and Weeks) specifically addresses the interactions of managers (primarily field biologists) and fisherfolk, it would have been useful to also see more discussion of how better to articulate the interdependent roles of biologists and social scientists. In the "Introduction," the editors state that fisheries management must address both resource conservation and allocation. They further add: "Obviously, the first problem is mainly one for marine biologists." Given that the conservation and allocation dimensions are inextricably linked in most of the volume's case studies, this statement seems to be as much an attempt to calm biologists' fears as a statement of appropriate division of labor and collaborative effort. Perhaps "collaboration" is the subject for another volume.

Minor caveats aside, overall the book is a welcome addition to the literature on co-management and common property resources. Aimed at both social scientists and fisheries managers with marine biology backgrounds, it manages to combine sound fisheries and social science without being so technical that it excludes the nonspecialist.

## **Weaving Identities: Construction of Dress and Self in a Highland Guatemalan Town, by Carol**

**Hendrickson (1995). University of Texas Press. xiv, 245 p.**

**Reviewed by Tracy Bachrach Ehlers, Department of Anthropology, University of Denver.**

Over the last few years, Carol Hendrickson has shown herself to be one of the more compelling analysts of Guatemalan textiles. She has been in Guatemala during many of its most troubling times, and her longevity as a researcher, volunteer, and visitor means she appreciates the daily routine as well. Luckily, her field site of Tecpán, a well-known entrepreneurial textile town, perfectly complements her own background in home economics. Over the years she has brought her facility for making and explaining handicrafts to her work on what she calls “the geography of clothing.” In *Weaving Identities*, she purposefully stitches together the meaning of traje and the cultural construction of weaving, interweaving it with the life-cycle and with the historical roots of clothing in the highlands. As well, she convincingly demonstrates just how the clothes worn among the highland Maya are transformed by culture change.

There is little the author does not tell us in *Weaving Identities* about Tecpán’s traje, and scholars will be pleased with the materials she has accumulated on the weaving process and its integration into the quotidian routine. Chapter One, “Introduction,” traces the author’s history in Guatemala, and sets the stage for the analysis of Tecpán, “el municipio vanguardista.” Perhaps in this early part Hendrickson spends too much time rehashing familiar literature, particularly old debates on ethnicity. One suspects some holdover material from her dissertation, which, interestingly enough, she later disavows. Chapter Two, “The Geography of Clothing,” begins with a careful description of threads and fibers, but it is most interested in connecting choice of indigenous clothing (or traje) with awareness of the world within and outside of Tecpán. In Chapter Three, Hendrickson extends her discussion of presentation of self through clothing, this time examining the contrasting images of Indianness in the broader context of Guatemala.

Chapter Four is an ambitious section devoted to life span. In this chapter, Hendrickson steps away from the weaving theme to the tangential cultural questions of cultural appearance and conceptions of beauty. She includes an important lesson on traditional Mayan values of traje and community, both of which are being tested by the imposition of ladino beliefs on Tecpán. At the same time, in this chapter the author’s emphatic concern with traje becomes somewhat troublesome, and indeed, some of the problems in these pages may be generalized to the book as a whole. Specifically, in “Between Birth and Death,” Hendrickson successfully links life-cycle with the production, wearing, and meaning of traje, but she largely ignores the context into which all this is embedded. For example, discussion of old women naively offers them up as honored ancianos without considering the immense powerlessness and poverty of old highland women, particularly when they enter the decidedly difficult status of “widow.”

Some parts of the book are especially strong. In Chapter Five on “The Cultural Biography of Traje,” for instance, she devotes many pages to establishing just how women learn to weave, the precise conceptualization of the design motif, and the recognized symbolism of color choices. She does not turn away from the tiniest detail. Every part of the weaving process is attended to from start to finish. Even laundry methods receive

considerable attention. Some of this exhaustive material on producing and wearing indigenous clothing is available in other texts. Yet, Hendrickson's book fairly bulges with thoroughly researched information that pulls the whole cultural package together in one source. I for one, read and reread the section devoted to clothing and the body as I had long wondered about modesty, bedtime, and "pajamas" in the highlands.

In sum, I was fascinated by *Weaving Identities* in the sense that it may serve as a primer of Mayan weaving and traje. Along the way, Hendrickson does a fine job of demonstrating just how intricately wedded the meaning of clothing is to the Mayan life cycle and to personal and ethnic identity. It may be, however, that the exquisite detail the author provides will be a handicap in terms of the wider dissemination of the book. Although *Weaving Identities* will appeal both to textile specialists and to Mayanist ethnographers, it is decidedly not for classroom use, and indeed, I doubt that this was its purpose. Although the book has been discussed as an ethnography, my sense is that its emphasis on material culture sets it apart. Its orientation is not the Tecpanecos, but the textiles they weave and the clothes they wear. The author's interests do not lie in telling stories or providing case studies. Her passion is the cloth itself. In spite of the intimate tone with which the book is written, its rationale was not to search out ethnographic drama in the usual places. Readers in search of linkages between traje and gender, or analysis of the aching impoverishment of weavers and wearers should seek out other sources.

*Weaving Identities* sets out to describe carefully the production of clothing as an essential part of the identity of the people of Tecpán. As such, it establishes itself as a marvelously fertile resource and should be in a prominent place on one's shelf of books on textiles. Some readers may be frustrated by Hendrickson's narrow focus on traje, but those who are seeking an encyclopedic examination of this topic will be richly rewarded.

## **A Place in the Rain Forest: Settling the Costa Rican Frontier. Darryl Cole-Christensen. Austin: University of Texas Press. 1997. 243 pp.**

**Reviewed by Philip D. Young, Department of Anthropology, University of Oregon, Eugene**

In 1954, Darryl Cole-Christensen and his family moved from California to the Valley of Coto Brus, the "South Frontier" of Costa Rica. At the time this area was in the earliest stages of settlement, completely undeveloped. There was a small, struggling group of Italian settlers at San Vito, and a few Costa Ricans. More were to come later. The area was covered in primary humid tropical rain forest. The Cole-Christensens and the other settlers all came with the same dream--to turn the rain forest into successful, profitable farms. Today the rain forest is gone from the Coto Brus, replaced mostly by coffee farms and pasture.

Cole-Christensen and his family developed their farm over a period of 25 years before returning to the United States. The farm, Finca Loma Linda, remains theirs and is still a working farm. For more than a decade now, however, it has served as a research site for

studies in tropical ecology, biology, and agronomy conducted by faculty, students, and researchers from several universities in the U. S. and Costa Rica.

Costa Rica's rate of deforestation of primary forest, estimated at between four and five percent annually during the 1980s, was for many years among the highest in Latin America. Geographer Valery Terwilliger of the University of Kansas estimates that between 70 and 80 percent of Costa Rica's forests have been cut since the 1960s. The Pacific side of Costa Rica is now virtually devoid of primary forest except in the highest elevations of the Talamanca Range. Much of the cleared land has been converted to coffee farms and pastures, a small part to crop land. The rate of deforestation has slowed during the past two decades, in no small measure due to the efforts of the Costa Rican government and conservation organizations. Costa Rica now has about 11 percent of its territory under strict protection and roughly another 10 percent in forest reserves and protected zones that permit limited exploitation.

The book under review does not provide any of this information nor does it place the settlement of the Coto Brus within this broader context, yet it is an account of this process of deforestation. And a passionate, account it is. The author's literary talents move the reader to feel the pain, the weariness, the desperation and frustration, the joy in small successes, of those who settled this last Costa Rican frontier on the Pacific slopes of the Talamanca Range near the Panamanian border. Some readers will also feel the pain of the rain forest and the earth itself as this natural ecosystem, a long time evolving, is stripped away in a few short years, as yet another segment of western humanity makes yet another attempt to tame and control nature.

This chronicle of the settlement and transformation of the South Frontier is told with hindsight and considerable philosophical introspection concerning the process. The author makes no claim that this is a scientific book, and it is not. There are no references cited in the text and there is no bibliography of sources consulted. This does not mean it is a bad book. It is a fascinating personal account of the author's 25 years in the area. With elegant literary style (Nigel Smith compares the book to the works of Aldo Leopold and Thoreau), Cole-Christensen examines the multifaceted interplay of relationships between settler-farmers and the humid tropical rain forest environment, and reflects upon the environmental consequences of what the settlers, in their ignorance, wrought. Many passages have a lyrical quality about them; metaphor is used to good advantage in helping the reader relate both to the trials and tribulations of the settlers, and the environmental issues raised by trying to turn rain forest into farms.

We may agree with much of what the author says about the humid tropics as an ecosystem (*sensu laxu*) and about the difficulties and the consequences of radical alteration of this ecosystem to meet perceived human needs; but none of what Cole-Christensen says about human-environment relationships is likely to be new information for the readers of the *Journal of Political Ecology*. For the literate public, however, this very personal account of one family's prolonged effort to learn from early mistakes and come to terms with tropical ecosystems in a harmonious way, may very well convey the message more effectively than a shelf full of scientific treatises on tropical rain forest ecology. But if this premise is true, then it would seem that we need to attend very carefully to the content of the messages being conveyed here.

Cole-Christensen alleges that in the 1950s almost nothing was known about rain forest ecosystems and perhaps even less was known about farming in the humid tropics. In both instances, it is certainly true that we know more now than we did then, in the sense of formal scientifically arrived at knowledge. Indigenous peoples had successfully farmed

the humid tropics of the Americas long before the European invasion, however, and some groups continue to do so. So, in an informal sense, the knowledge was already available, but as many of us know, the white man has a real penchant for re-inventing the wheel--and often not doing a good job of getting it round. In fairness, there was no talk even in scientific circles of the value of indigenous knowledge systems back in the 1950s. Even anthropologists, the consummate documenters of these bodies of accumulated experiential knowledge, were not yet examining this knowledge for the range of potential alternatives that it might provide to the less sustainable practices of modern society.

The author spends much time on his own experiences, but he does speak also of the other settlers, especially the Costa Ricans and the Italians. Freely admitting early errors of judgement (attributed to ignorance) that had devastating impacts on the land and the ecosystem of which the land was only a part, Cole-Christensen sets about a relatively systematic process of experimentation in order to learn how to farm in this seemingly unforgiving environment. But, curiously, this is an age-old lesson, one learned many times by indigenous peoples throughout the tropical world. Even more curious is that in the 1950s, at the same time that Costa Ricans, Italians, and a handful of expatriates like Cole-Christensen were trying to learn how to successfully farm in the Coto Brus, Ng'be (GuaymR) families from Chiriqui Province in Panama were colonizing this same area, yet there is no mention of them anywhere in the book. Interestingly, the Ng'be form of slash-and-burn agriculture is well suited to productive subsistence farming in the rain forest.

But the non-Ng'be settlers of the Coto Brus wanted more than mere subsistence from the land, as Cole-Christensen explicitly acknowledges: "After basic food necessities were met by some production from the land--subsistence provided--it remained to produce a cash income, for subsistence, by its very nature, is not a satisfactory way of life" (p. 21). This is undoubtedly an accurate representation of the perspective of the majority of the settlers. It is also a particularly Western capitalist point of view. Subsistence has been a satisfactory--and satisfying--way of life for countless indigenous cultures over the centuries. And although it would be an exaggeration to attribute a conservation ethic to all native cultures, it is certainly the case that the subsistence-based societies of the world have done considerably less damage to environment than have modern capital-based societies. But the market is now a global market, the economy a global economy, and all those formerly subsistence-based societies show the scars of past encounters and the open wounds of fresh encounters with this global system.

It seems that from the very beginning, the author, and presumably his family as well, were of two minds about what was to become an endeavor of decades: the attempt to turn the rain forest into a productive and profitable farming operation. On the one hand, it is clear that the author recognized the magnificence of the rain forest and sensed its enormous ecological complexity and systematicity, and he speaks of this in terms most eloquent. On the other hand, in equally eloquent terms he speaks of the struggle of the would-be farmer to control nature. Here the specter of Frederick Jackson Turner's spirit of the American frontier rises up, and it is unsettling.

We know we cannot turn the clock back--and most of us would not want to were it to mean, as it most assuredly would, that we would have to forego many of the amenities of modern life--but surely we do need to learn how to live more lightly on this earth, how to live more in harmony with those natural aspects of the ecosystems of which we are an integral part. This is one of the strongest messages of this book, one that is conveyed in a variety of ways by Cole-Christensen in this emotionally moving and reflective account of carving farms out of the Costa Rican rain forest.

Yet there are also some rather disturbing statements in this book that, sadly, betray a Western set of values that foregrounds control over nature, in contrast to the prevailing values of the majority (if not all) Native American groups in the American tropics that foreground living in harmony and balance with nature.

This book contains no maps, a serious omission for those unfamiliar with Costa Rica. However, with a little searching, I found that Finca Loma Linda has a web site— <[http://www.squaw.com/summer\\_site/summer/index.htm](http://www.squaw.com/summer_site/summer/index.htm)>—which does contain both the location of the farm on a map of Costa Rica, and a map of the farm layout (as well as other information).

In the final analysis, this book conveyed mixed messages. The author speaks of both harmony with nature and control over nature. Finca Loma Linda has been converted to meet the needs of scientific research on farming in the tropics and on systemic relations in successional and primary forest (about a third of the farm's land deliberately was left from the beginning in primary forest). This is laudable, but it still represents an effort at control over nature. It does not appear that any efforts are being made to incorporate the lessons that indigenous knowledge systems have to offer.

This book is well worth reading, but to me its message is still very Western in the values that are espoused. Would that it were otherwise.

**Performing Dreams: Discourses of Immortality  
Among the Xavante of Central Brazil. By Laura R.  
Graham. 1995. University of Texas Press. xiv, 290  
pp.**

**Reviewed By Debra Picchi, Department Of Anthropology, Franklin  
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Graham's engagingly written book recounts in epic terms the ritual performance of a dream-myth by a Brazilian Indian community. Organized so as to lead the reader through an initial description of a Xavante Indian leader's dream peopled by mythic beings, then on to a description and analysis of the various expressive forms used by these people, and finally to the preparation and performance in the village plaza of the dream, this tour de force builds to a climax that cannot fail to affect even those whose area is not Brazilian Indians or mythology.

The book is based on research done between 1981 and 1991 with the Xavante Indians of the Pimentel Barbosa Reservation in Mato Grosso, Brazil. It is made up of seven chapters, each of which includes discussions about what life is like for these Indians. These highly readable sections alleviate the sometimes dense theoretical sections, which although well written, can sometimes pose a challenge for those unacquainted with the study of discourse practices.

Chapter 1 introduces Warodi, the Xavante elder whose dream is at the heart of the book. It also explains the idea of polyvocal discourse, is the way in which these Indians recount myths and dream. This type of discourse involves a number of people who repeat,

affirm, question, and comment about what is being said by the narrator. Graham describes the effect it can have, “Punctuated with clicks and emphatic glottal sounds, their simultaneous utterances, their staggered and overlapping phrases produced a soft but acoustically spectacular murmur in the forest clearing.” (p. 2)

How myths and dreams are expressed, rather than their content, is central to such discourse studies as Graham’s. Chapter 1 goes on to describe her theoretical model (pp. 4-9). It uses the framework of Peircian semiotics, which was adapted by Michael Silverstein and Greg Urban, for the study of other cultural phenomena and which assumes that people build up over the course of their lives a set of references that allows them to interpret signs. Although each individual has a unique personal history and thus a unique way of interpreting experiences, people from the same culture, and in the case of the Pimentel Barbosa Xavantes, from the same reservation, share similar interpretive frameworks. The job of the anthropologist in this case is to define and describe for others the interpretive framework, with all its signs and meanings, that performers draw upon when they narrate a myth. As Graham notes at the end of the book, “I began to understand that tellings provided the key to unraveling the meanings embedded in the performance.” (p 221). It is this structure, replicated each time the myth is performed, that gives people a sense of continuity.

Chapter 2 provides a general overview of Xavante history and culture, while Chapter 3 describes the “Xavante soundscape” (p. 64), which consists of expressive practices commonly used, for example, during the day, at night, with kinsmen, when lamenting, and in the age-grade system. Chapter 4 goes on to analyze in some detail the form of dreamed songs, or da-Zo?re. When a man (and this is a male prerogative) wants to share a song he has been given in a dream, then he must do so in a culturally appropriate form and context. Generally, the form that the song takes tends to minimize the voice of the individual and highlight the blending of community voices that result from polyvocal discourse. Through the repetition of song elements and the manipulation of range, pitch, melodic contour, and rhythm, any one voice recedes into the background (p. 119).

In Chapter 5 Graham discusses the ways in which Warodi’s dream song does not conform to the typical pattern, and she wonders if there is a political component to his narrative. She goes on to investigate characteristics of Xavante political discourse, emphasizing once again the importance of multiple speaking. In this arena, it facilitates consensus formation and the process of depersonalization that is apparently important to Xavante politics. Chapter 6 presents data that show how Warodi manipulates the formal devices in his speech to blur distinctions between the past and present, and the living and the mythic. As he narrates his dream, he aligns himself with Xavante ancestors and creators. The linguistic sections in this chapter are challenging, but comprehensible to the nonexpert with a close read.

In chapter 7 the dream myth is actually performed in the plaza of the village. Graham notes that the day-long preparations for the event is important for the psychological transformation of the Xavante performers into immortals. The ritual itself is short, three songs are sung through only once. However, during the event the Pimentel Barbosa Xavante effectively demonstrate several points. They signal to other Xavante that they have a privileged connection to the creators, and thus superiority over other Xavante communities, because only Warodi has been told the songs by the immortals. They maximize their village’s benefit from the anthropologist’s presence by taking advantage of her camera, tape recorder, and writing ability (pp. 219) And they reaffirm to themselves and to the world their determination “to continue as Xavante forever.” (p.224)

For those who wonder whether the study of a single dream experienced by one man in a obscure Indian village in central Brazil could possibly be of any interest or significance for us, Graham manages to connect successfully the case study with general concerns about the role of myth in social change. Simultaneously she weaves a great deal of cultural information into each of the chapters so that the study has broader appeal than it might appear at first glance.

Graham's book is a worthy addition to the literature on both indigenous peoples and expressive performances. As an ethnography about a Brazilian Indian society that is managing to survive contact with the Western world, it provides us with a case study that shows "creative adaptation" at work (p. 9). And it adds to the growing number of studies of GJ societies which include Urban's work on the Xokleng, Seeger's study of Suy< music, and Aytai's research on Xavante music. As we begin to accumulate rich collections of high-quality research on such cultures as the GJ, comparative work and theory building will be increasingly enhanced. Finally, the work makes a valuable contribution to the literature on the study of discourse practice. Shifting totally away from the study of the contents of myths and dreams, it successfully focuses our attention on the form of expression and on its connection to cultural transmission.

This book is appropriate for those interested in indigenous peoples, discourse-centered studies, rituals and myths, and culture change. It can be assigned to upper-level undergraduate studies, as well as graduate students.

**A Rage for Justice: The Passion and Politics of Phillip Burton, by John Jacobs; Berkeley and Los Angeles: University of California Press, 1995. xxvii, 578 pp. Photographs, index.**

**Reviewed by Richard E. DeLeon, Professor and Chair, Political Science Department, San Francisco State University.**

This political biography of the late Rep. Phillip Burton is a masterful study of how one man's political genius and passionate liberalism shaped history by producing landmark legislation in the areas of labor law, civil rights, welfare reform, and environmental protection. Phillip Burton was arguably this country's most important and influential liberal politician during the 1970s. Yet outside his home base in the San Francisco Bay Area his political career and legislative triumphs have gone unheralded. In this welcome book, Jacobs vividly reconstructs Burton's political life and illuminates it for all to see.

Over the course of his eight years in the California legislature (1957-1964) and nineteen years in the U.S. House of Representatives (1965-1983), Burton played a pivotal role in passing laws that increased welfare benefits for needy families, raised the minimum wage, protected the health and safety of coal miners, and preserved more of America's wilderness "than every Congress and president before him combined" (p. xx). In his effort to "explain the man in his full political dimension and make as explicit as possible how he did what he did," (p. xiv) Jacobs conducted an exhaustive review of Burton's personal

papers and nearly 400 interviews with people who knew him, including 47 members or former members of Congress and four Democratic House Speakers. This tremendous investigative effort gave Jacobs access to many different memories of what transpired behind the scenes in the cloakrooms of Congress and in the war rooms of Burton's various political campaigns. It also allowed Jacobs to capture and bottle in his book some of the sound and fury of Burton's volatile personality and muscular vocabulary. This was a man who, at the height of his powers, claimed that he could "round up 110 votes to have dog shit declared the national food" (p.449). By the time readers have made their way to that quote near the end of the book, the language will seem vintage Burton and the boast entirely credible.

Jacobs views Burton as a "quintessentially political animal" (p. xxiv) who loved power and hyperactively devoted almost all of his waking hours to grabbing it, keeping it, and using it in the cause of social justice. Burton, writes Jacobs, "had no other interests outside of politics--no children, no recreation, no downtime. He never cared about money. He had no interest in friends, other than as allies or a means to his political ends. And he certainly did not care whether people liked him" (p. 100). Jacobs's unsentimental portrait of Burton's rather truncated private life reveals that he was often abrasive, personally obnoxious, and sometimes abusive even to his friends. Those same unpleasant character traits became formidable weapons, however, when Burton unleashed them on his political enemies to "terrorize the bastards" (p. 500) and produce legislative results. The tools Burton used so skillfully in his approach to policy making and political persuasion were "terror, intimidation, the brute exercise of power, and total mastery of technical detail, all on behalf of labor, minorities, the poor, and the environment" (p. xxi).

Jacobs's chapters on the politics behind Burton's environmental legislation will be of particular interest to JPE readers. Chapter 10 shows how Burton leveraged his seat on the House Committee on Interior and Insular Affairs into a position of national leadership over this policy domain, starting with his bill creating the Bay Area's Golden Gate National Recreation Area in 1972. Chapter 15 describes how Burton expanded Redwoods National Park in 1978 by crafting legislation that won the support of both timber industry workers and environmentalists. At a time when the practice of politics as the art of the possible was still possible, bedfellows like these did not seem so strange. Indeed, throughout his book, Jacobs provides many examples of Burton's success in building "improbable coalitions" (p. xxii) (tree-huggers and lumberjacks, Asians and African Americans, cops and gays) to keep himself in power and to back his legislation. In Chapter 16, Jacobs's documents detail how Burton put together the omnibus bill that became the National Parks and Recreation Act of 1978. As Jacobs notes admiringly, Burton's cumulative impact on the environment was truly extraordinary. "His legislation," Jacobs writes, "preserved nearly 5 percent of California's landmass" and, if the Alaska Lands bill is included--in which he played a significant, though not decisive, role "nearly 10 percent of the entire landmass of the United States" (p. 352).

Writing about an era in which globalization was just beginning to accelerate, Jacobs offers no evidence that Burton was trying to send a message to the world through his aggressive environmentalism. It was victory enough for him to persuade his fellow citizens to preserve what was left of America's rapidly dwindling wilderness and to protect it from wholesale exploitation and unregulated private development. Absent Burton's political leadership and legislative achievements years earlier, however, it is doubtful the US could now claim any moral authority or credibility in demanding that other nations follow its example. If Burton had failed, simply put, there would be no example to follow.

One reason Burton succeeded, Jacobs points out, is that his left-liberal constituency in San Francisco backed his legislative agenda and repeatedly voted for his re-election, typically by very wide margins. Burton's district "liberated him," Jacobs writes, because it did not constrain his votes and was "so supportive that it permitted Burton to devote his full attention to national and internal House politics" (p. 256). All politics is local, it is said, but San Francisco's politics were magnified and writ large on the national scene through Philip Burton's leadership, lust for power, and passion for social justice. "Never before," Jacobs contends, "had anyone of the left combined Burton's ideological commitment, love of combat, and operational ability to get things done" (p. 323). Over time, however, Burton became estranged from his local constituency. The year before his death he had to wage the political battle of his life just to get re-elected.

Another key to Burton's phenomenal success as a legislator was his appetite for information and his memory for details. In what Jacobs describes as a lifelong pattern, Burton "mastered a subject and then dominated any situation he could anticipate by knowing more about the politics--and the policy--than anyone else in the room" (p. 102). He knew his own bills by heart and studied his colleagues' bills until he knew more about their legislation than they did. Burton's superior knowledge and command of details gave him enormous power. In a chapter entitled "Park Barrel," for example, Jacobs describes how Burton assembled the many pieces of his omnibus parks bill of 1978 by drawing upon his encyclopedic knowledge of America's parks, forests, lakes, rivers, trails, and wilderness areas--information computed not only in units of acres and miles but critically in terms of location and impacts on his colleagues' congressional districts. Jacobs also shows how Burton used his detailed knowledge of voting patterns and demographic trends to gerrymander legislative district lines to achieve maximum partisan advantage. Quipping that his odd-shaped boundary maps were his "contribution to modern art" (p. 435), he used them as a tool to choose the constituencies that would later choose him and his liberal allies for seats of power.

In his epilogue, Jacobs writes that at the time of Phillip Burton's death in 1983 "history was unalterably moving away from him" (p.496) under the leadership of Ronald Reagan and conservative Republicans. Had he lived, Jacobs argues, Burton "would have had to play defense constantly" (p.496) to beat back slashing attacks on the welfare state and to protect the constituencies he had devoted his life to serving. Clinton's election in 1992 did little to reverse the course of that history, according to Jacobs. He imagines that Burton would have felt estranged from a Democratic President "who governed as a moderate and who sometimes seemed not to know what he really believed" (p.496). Phillip Burton's death, Jacobs concludes, "marked the end of an epoch, the exhaustion of a major strain of American liberalism" (p.497).

For those who have forgotten what effective political leadership looks like and what it really means to be a liberal, Phillip Burton's life offers many lessons. And for those who care about the needs of society's have-nots and the preservation of America's wilderness, it is a life worth remembering.

**Militant Labor in the Philippines, by Lois A. West.  
Philadelphia: Temple University Press, 1997. 244  
pp+.**

**Reviewed by Patricio N. Abinales, Department of Political Science,  
Ohio University**

The Kilusang Mayo Uno (May First Movement, or KMU) was a federation of various labor unions that united on May 1, 1980 to pursue what it called a “genuine, militant and nationalist” labor movement. It also signified that the Communist Party of the Philippines (CPP) was ready for major changes in Philippine politics. Faced with unrelenting opposition and a declining international credibility, the Marcos dictatorship made its first major political concession by “lifting” martial law and allowing limited elections. The CPP, which had shown an extraordinary ability to survive the dictatorship in the countryside, was now in a position to make its presence known in the urban areas. The one urban “sector” that showed that remarkable ability to recover and then cope with martial law was the urban working class. Despite efforts by the regime and its trade union allies to frustrate radical organizing among the working classes, CPP activists had successfully established a foothold in factories and slum communities in the major cities. By the end of the 1970s, party expansion had been rapid, prompting the CPP leadership to push for the formation of larger umbrella and legal organizations. The KMU was one such organization. It was an “alliance structure” (p. 46) that was the product of painstaking activist work within different unions and in collaboration with non-CPP but leftwing labor federations.

How all this happened and what role the KMU played during the Marcos dictatorship and the post-Marcos regime of Corazon Aquino is the subject of Lois West’s book, *Militant Labor in the Philippines*. Her goal is quite ambitious. The book, as she puts it, seeks to look at the KMU in the 1980s “in terms of its continuing struggle over a reformist versus a revolutionary agenda.” She notes: “Because there has been so little written on the Philippine labor movement in the West, there is a need for more work to be done on the nature, character, and form of Philippine labor militancy. Because of its continuing militancy, analysis needs to place it comparatively in the global context.” West is not content with global comparison. She also adds to the broader perspective a “micro-level recording [of] individual voices, and recounting [of] events and histories of militant labor in the Philippines...as well as placing these events into a broader theoretical context” (p. 14).

One can follow the book’s story along the lines laid down by these multiple approaches. The first two chapters are mainly theoretical and comparative. Chapter One examines Philippine “social movement unionism” in comparison to other working class movements in Asia and the former Eastern European states. Chapter Two argues against culturalist explanations of Philippine backwardness, noting that the economic development programs of strategic elites were determinant in the degeneration of the Philippines into the “economic basket case of Asia.” The succeeding five chapters are Philippine- and labor-specific: the look at the social organization of the KMU; the role of women within the federation; the tensions between being militant, strike oriented and

revolutionary, and the political power of reformism especially in the Aquino period; and, the intricate relationship between the KMU and the CPP. The book closes with West's reflection on the splits within the KMU and the CPP. She also reminds readers that the United States, as the former colonial master, was as much responsible for perpetuating an inequitable social system having "left a legacy in the Philippines of the veneer of political democracy without the foundations of economic democracy" (p. 17). This legacy and the resistance to it "are most fundamentally affected by the globalization of economics and the effects of capital restructuring on militant labor movements" (p. 17).

West is one of the few scholars who witnessed the development of the KMU during a crucial juncture in Philippine political history. This alone would make the book singular and path breaking. But there is more. The importance of her book is doubled because the KMU was not just an open radical federation. It was also a prominent "legal" organization of the CPP. In a sense, this is one of the first books that allows us a glimpse of a working-class movement that had a dual personae: one that fought for workers' rights and joined the anti-dictatorship struggle *above-ground*, and another that was intimately connected to an underground, armed, struggle-oriented, and highly secretive communist party. The second persona had become more complicated of late when, in 1986, the CPP was plunged into its first major internal crisis after it was marginalized by the "people power" revolution that overthrew Marcos and installed Aquino to the presidency. Four years later, the party split into various factions, with the faction identified with party founder Jose Ma. Sison seizing the leadership and "reaffirming" the party's Maoist orthodoxy. This rupture reverberated throughout the CPP's allied and "legal" organizations. Unions that were identified with the party's powerful Manila regional committee broke away from the KMU and set up their own federation. Others followed suit, not so much because they chose sides but because they refused to be caught in the crossfire.

And here we encounter some of the book's internal tensions. Although her prolabor sympathies are quite clear, West also agonizes over the contradictory tensions within the KMU. On the one hand you have a labor federation whose commitment to the working class is paralleled by its exemplary antidictatorship politics. On the other hand, both class and political aspirations contained internal contradictions as indicated by the following practices: lapses into political instrumentalism as the CPP appears to direct the KMU to pathways that fitted its revolutionary goals rather than the interests of the Filipino proletariat; pervasive sectarianism towards non-CPP unions and other militant but moderate labor federations; a dominating patriarchy within the KMU where women's participation in the leadership have been limited; and, the breakup of the KMU into factions and ouster of anti-Sison leaders without the benefit of democratic debate.

*Militant Labor in the Philippines* tries to deal with these incongruities even as it attempts to situate the KMU and its politics on the progressive side of the Philippine political spectrum. It is successful to a certain extent. The KMU is one of the remaining resilient left-wing labor federations in the Third World. It still maintains a presence in present-day politics, especially when it comes to bread-and-butter issues. But the federation is also a badly splintered organization, with the faction-in-power becoming the most dogmatic and inflexible. West points out that these attributes bring back the "old questions about internal democracy in social movements and the role of a conceived 'vanguard'" (p. 16). Her discussion of these issues are quite sensible and I would only add the following thoughts as marginal supplement.

I would like to focus here on an aspect of the CPP's nature. The party was essentially the creature of a political setting that was extremely polarized between the dictatorship and its kleptocratic cabal, and the rest of a militarized civil society. This was, according to the CPP's founders, an "objective condition" that was "ripe for revolution" because the options were very limited. It was under this context that the CPP took root and flourished. The Left's growth--within less than a decade--was a remarkable feat given the repressive circumstances it confronted. Despite the constant loss of its top leaders to imprisonment or death, the CPP was able to successfully extend its presence throughout the Philippine archipelago (the first ever by any left-wing organization) and set up alliances and organizations among the urban working classes, the peasantry, and the student sector. When the KMU was formally established, its foundations were thus strong enough to weather state repression, for underneath its legal edifice was a potent and tenacious underground communist substructure.

But the very same condition that allowed it to grow, was also one that shaped its character. Martial law made the CPP accustomed to polarized politics. It came to believe that there was very little between the dictatorship and revolution. One was therefore either for the revolution or for the dictatorship, and woe to those who opted for a middle ground or proposed an alternative to Marcos not in consonance with the CPP's national democratic revolution. The CPP, in fact, accorded the same contemptuous treatment to its anti-Marcos rivals as it did the dictatorship, and in many instances it openly declared that unless a group totally adhered to its program, it would consider it as "reactionary" as Marcos.

Moreover, within the Left, the instrumentalism of vanguardist politics (as noted by West) was not the only problem. Using the repressiveness of martial law and the "demands" of hastening the revolutionary process as its justification, the CPP exercised tight control and demanded total conformity from its cadre corps. Although the CPP declared its adherence to the "democratic struggle," there was little democracy within it. Like many Leninist parties, the CPP demanded more centralism than democracy. Disagreements were resolved via organizational fiat (cadres and activists were reassigned or forced to resign) and not through debate and discussion. Deviations from the "general line," or autonomous actions were discouraged within the party and likewise the organizations it controlled or influenced. Internal democracy therefore never had a chance to take root within Filipino communism. Democracy was as alien to the CPP and its allies, as it was to the larger civil society under martial law.

By the 1980s, however, the political context changed and this had a major repercussion on CPP. Marcos was getting sicker and the dictatorship's power declining. While the Left continued to dominate the political opposition, new forces had emerged outside of its orbit. Moderate, urban-based and very middle class, this new opposition drew inspiration from the disenfranchised anti-Marcos elites and their new martyr, the assassinated anti-Marcos politician Benigno Aquino, Jr. (Mrs. Aquino's husband). By 1985, this "third way" (with Corazon Aquino as titular head) had challenged not only Marcos but also the CPP's political influence. In fact, it had successfully expropriated from the latter the "democratic discourse" and rechanneled a widespread anti-Marcos sentiment away from the CPP's revolutionary agenda to "bourgeois elections" as the principal way of challenging the dictatorship. The CPP still had the organized numbers and the firepower (the party's New People's Army had reached a record force of 24,000 fighters), but the initiative had shifted to its moderate rivals. After 1986, even these two assets were lost.

In short, the CPP's, and by extension, the KMU's upbringings were shaped by an authoritarian context. Both were born out of and became accustomed to the simplism of polarized politics. When that politics experienced a shift towards a more nuanced setting that was dominated by the ballot and not the bullet, the old habit became a fetter. The Party and the KMU found itself in an unfamiliar situation. When Aquino replaced Marcos, constitutional democracy also displaced the armed struggle. Like Marcos, the party was pushed into an unfamiliar terrain, and like him, it found itself in the political margins.

West devotes one chapter to the role of women in the KMU and confirms what many feminists criticize about working class movements -- the gender bias of their structures and practices. One question West has not addressed, however, was whether patriarchy is inherent in the KMU as a labor movement, or was a replication of gender relations inside the party, given the KMU's close links to the CPP. There is evidence that the two are interrelated. Since its formation in 1968, for example, the CPP leadership has always been dominated by men, with women mainly assigned to the less rigorous "finance work." This, however, is one side of the coin. At the other side, one sees male party leaders having their partners as unofficial advisers as is the case of Sison, the chairman-in-exile, and Benito Tiamson, the acting chairman based in the Philippines. Their respective spouses are said to wield powerful influence inside the CPP. Likewise, the CPP appears to take what it calls "the relations of sexes" more seriously than adversary institutions like the Church or the army. "Sexual opportunism" a crime which involved mainly men, has been made synonymous with selling out to the bourgeoisie and the imperialist. A 1983 internal party bearing the same title is explicit about protecting the rights of women to take the initiative in establishing relations, in allowing divorce within the party, and in imposing stiff penalties (including death) on crimes against women, especially rape. This is an area that demands more study.

The book also shows us very little of how a national labor movement like the KMU has responded to the globalization process. There is very little apparent discussion within the ranks of this radical movement on issues like ease with which global capitalist enterprises could readily shift their production processes from one country to the other when economics dictate or when the political environment becomes hostile to capital. Is it perhaps because KMU leaders, who are strongly influenced by the CPP's Leninism, may be content simply with reading Lenin. His ma, the Middle East, and East Asia, supplying cheap labor for a variety of services, from domestic work to accountants, from engineers to middle-level managers of various firms. In 1995, this labor force has funneled back to the local economy over \$3.6 billion in remittances, and is responsible for the Philippines being able to survive one economic crisis after the other since the last days of Marcos. The exclusion of this significant labor force in the KMU's economic and political calculations is quite surprising. Is it because the workers' altered economic standing (higher paid, when compared to local labor) diluted class contradictions, or is it because their transnational character (working abroad) created more puzzles than resolutions to the KMU's nationalist project? These are issues that one wishes the book could have covered.

West herself appears uncomfortable trying to keep an academic objective in a highly politicized circumstance. Her political sympathies, however, have not clouded her analyses. The book is not only a good addition to the rich literature on social movements dealing with transitions from authoritarian rule, it is also singular for being able to tell at least parts of the story of a labor federation whose substantial segment of its political life is lived in the underground.

**Historical Ecology in the Pacific Islands: Prehistoric Environmental and Landscape Change. Edited by Patrick V. Kirch and Terry L. Hunt, New Haven: Yale University Press (1997). 331 pp.**

**Reviewed by Charles J. Stevens, Program in Population Research, University of California - Berkeley**

Twelve papers presented at the day-long Seventeenth Pacific Science Congress in Honolulu in June, 1991 comprise this interdisciplinary volume. Expanding on Fosberg's 1961 symposia, and re-presenting the oft-heard exaltation—that islands are the ideal natural-historical “laboratories” and exemplars of fragile environments, the editors present the islands of Australia, New Guinea, and the Pacific as consummate locales on which to “advance the young but rapidly growing field of historical ecology” (p. 1). The papers document the impact of Pleistocene hunter-gatherers, oceanic colonialists, and bush fallow horticulturalists, on the topography and biota of largely insular and bounded island environments, relying on the vast region's archaeological, palynological, and paleontological record.

Kirch's “Introduction” presents an overview of archaeological and ecological research in the Pacific and outlines the symposium's goal of charting changes in Pacific Island landscapes through time. Although the ecological attenuation of islands and their relative isolation renders island ecosystems stable over the long haul prior to human occupation, Kirch notes that these same features make island ecosystems vulnerable to rapid environmental alterations after people arrive, and especially after the arrival of Europeans. Human colonization of the Pacific left concrete and archaeologically detectable evidence.

The papers present the results of ongoing research in the ecological prehistory of Hawai'i, New Zealand, New Guinea, Australia, and sites in Central and Western Polynesia (Ofu, Samoa, Mangaia, Aitutaki, Atiu, Mo'orea, and Tahiti). Reports are lacking for Micronesia, Tonga, Fiji, and Melanesia (other than New Guinea and the briefly mentioned Bismarck Archipelago). The volume is concerned only with Pacific Islands, and no explicit comparison is made to the islands of the Caribbean, Indian Ocean, or the Indonesian archipelago. All of the papers are concerned with a desire not only to document the consequences of human occupation of small and bounded ecosystems, but also to note the variations in disruptions caused by the colonization of ecologically distinct islands or island regions. It is no mean task to sort out the effects of direct human action, perdition, and foraging by the pigs and rats brought by humans from the effects of natural fluctuations in sea level and climate. Accordingly, an important contribution of the volume lies in its chronology of landscape alterations in a number of islands. The research documents the arrival to various islands of humans, the sweet potato, coconuts, and pigs, and further notes the existing gaps in the archaeological record of plant and animal (especially human) colonization of Pacific islands. The volume's papers clearly document the environmental disruptions brought by Melanesians and Polynesians forging anthropocentric ecosystems on previously thoroughly natural environments.

Following the Introduction, the papers are nicely organized, both temporally and geographically. We are presented first with the earliest evidence of human impacts on

island ecosystems, Pleistocene hunter-gatherers in Greater Australia at 40,000 BP, and the volume concludes with papers by Anderson and Athens evaluating the environmental consequences of the most recent Polynesian colonizations of Hawai'i and New Zealand. Not surprisingly, there is frequent criticism in the text of Nunn's (1988, 1991) assertion that human impact on island ecosystems has been exaggerated, and that the role of humans as sole actors in environmental change has been overly dramatized. This argument is also presented by O'Neill (1994), whose synoptic review of Pacific Island history is not cited in the volume's papers, but whose punctuated equilibrium model of ecological change is generally in concert with the volume's viewpoint. Only one paper, that of Orliac on the Papeno'o Valley in Tahiti, attributes greater cause on landscape change to natural events than to human action.

Although there is no clear chronology for the progressive colonization of Greater Australia (the single landmass of Australia and New Guinea existing during the Pleistocene), Allen notes in the first report that archaeologically visible populations appear nearly simultaneously across all of the Australian Pleistocene continent by about 40,000 BP. In Allen's scenario, small numbers of Pleistocene hunter-gatherers systematically colonized the landmass, had frequent interisland crossing to the then--visible islands of near Melanesia, colonized Tasmania by 35,000 BP, and affected the environment in archaeologically perceivable ways. The considerable contemporaneity of humans and now-extinct megafauna on the Pleistocene continent, and the successful predation by hunters on Bennett's Wallaby (*Macropus rufogriseus*) for 20,000 years, suggest a deliberate hunting strategy not indicative of the blitzkrieg approach offered as explanation for North American megafauna extinction. The connection between megafauna extinction and human occupation of the Sahul is unclear, notes Allen (p. 27-28), and its clarification requires a resurrection of paleodemographic research and continued environmental archaeology of Pleistocene colonizers. With a probable date of 9,000-10,000 BP for the development of horticulture in New Guinea, the increasing pace of environmental disruption in the early Holocene in Greater Australia is likely attributable to the more deliberate alterations in the landscape associated with and required for agriculture.

Climatic change at the end of the Pleistocene permitted the introduction of horticulture into the highlands of the New Guinea cordillera and initiated a series of environmental changes. In Golson's model, climate change induced slow postdisturbance forest regeneration, slowed the accumulation of soil fertility, and, particularly with the high soil fertility requirements of introduced sweet potatoes (*Ipomoea batatas*), frequent forest clearing was required and primary forests were ultimately replaced with "increasingly degraded secondary growth" (p. 41). The faunal record reveals a period of forest degradation around 4000 BP and again in 1200 BP with a concomitant reduction in montane species diversity. Pollen diagrams, although unevenly distributed spatially in New Guinea and seldom dated to earlier than the mid-Holocene, still disclose the apparent expansion of an agrosilviculture of root crops and *Casuarina* tree species. The consequences of this agroforestry were ecosystem simplification, reduction in forests, increasing grasslands, and reduced vertebral species diversity. Golson's task, to present a general ecological history of a sizable landmass that has substantial geographical and cultural diversity, is ambitious. His linear model may hold less well as more is learned about local variation in environmental change and, as Golson himself observes, more archaeological data are needed to better understand changes in pig husbandry and its effects in the precontact period.

Interdisciplinary work involving archaeologists, ethnobotanists, and agroecologists may be able to better answer a number of questions raised by Golson's article: Does "secondary growth" necessarily return a diminished soil fertility? Evidence from research in agroecology and soil sciences suggest that secondary forests with high floral species diversity may produce more fertile soils than those found in primary tropical forests where localized tree species diversity may be small (Van Wambeke 1992). The most significant issues remain: What is the extent of geographical variation from Golson's linear model of change in the new Guinea highlands? and What ecological and cultural characteristics may be complicit in this variation?

The devastation of avian species that accompanied the Polynesian colonization of Oceanic Pacific islands is now well recognized, substantially from the work of David Steadman. In his contribution to this volume, Steadman describes the reciprocal relationships between humans and birds in Polynesia and Melanesia, first noting the extinction and extirpation of bird species due to direct human predation and other anthropogenic factors (habitat loss, forests destruction, and predation by pigs, rats and dogs). Secondly, Steadman notes the utility of birds to the Polynesians as food, navigation aides, and sources of feathers and bones for tools. Drawing on the ethnographic record to document the relationship between birds and Polynesians, Steadman describes the increasing pace of avian and habitat extinction in Polynesia since European contact when market production and population pressure required expansion of agriculture and exacerbated deforestation. He calls for expanded research into the ecology of Polynesian bird species and for interdisciplinary and applied research oriented toward the possible repatriation of bird species to islands from which they were extirpated.

The Polynesian colonizers of the Oceanic islands of the South Pacific introduced roughly 24 species of cultivars, since few edible plants were endemic to the islands prior to their colonization (see, for example, J. Barrau 196, 1974). Agriculture on the tropical islands required forest clearing with fire and stone and shell tools. This increased soil erosion and led to decreasing genetic diversity of flora and fauna, as has been increasingly well documented in the archaeological record of the region. The soil erosion resulted in silting of lagoons, alterations of the near-shore marine environment, and silting of stream beds. Some of the landscapes resulting from this erosional process were particularly well suited to the growing of taro, as Spriggs has noted in this volume. The question becomes whether some of these landscape alterations were intentional, and not accidentally anthropocentrically beneficial. Other papers in the volume present case studies of specific ecological histories on particular islands or in particular time periods. Spriggs' and Steadman's papers, however, may be of most interest to political ecologists and ecological archaeologists not working in the Pacific, as they present discussions of general patterns of topographical change and species extinction. Of particular interest is Spriggs' review of the inherent difficulties of archaeological research in prehistoric agriculture, and his paper offers a perceptive discussion of the benefits and the limitations of archaeology in the study of agricultural development and environmental change.

The historical ecology of Ofu Island in Samoa is presented by Hunt and Kirch, whose field research focused specifically on Ofu's occupational history and affiliated environmental change. Their resulting chronology offers a colonization date of 3257 to 2879 BP based on  $^{14}\text{C}$  dating, and they present a six-stage process of habitation and technological change and associated environmental change. Their model may have relevance to other Pacific islands, but they caution that variability in environmental change among Pacific islands should be anticipated, based on differences in subsistence

composition and the unique historical and geographical characteristics of many islands. In Ofu's case, coastal terrace expansion resulted from a combination of human and natural events. Explication of this combined pattern in different islands is required to understand the variable impacts of human occupation of small islands. Explication of environmental change on specific islands characterizes the chapters by Allen and Kirch in the Cook Islands (Aitutaki and Mangaia respectively), Parkes' comparative sediment analysis of lakes on Atiu Island and Mo'orea, and Orliac's survey of the Papeno'o Valley of Tahiti. Each of these papers show similar patterns of environmental alteration in loss of terrestrial and marine species, but they also begin to demonstrate localized differences in the extent and the proximate causes of archaeologically detectable environmental change. In this endeavor, the authors candidly admit the limitations of current archaeological knowledge and the need for continued interdisciplinary research. In all of these papers, as well, clear evidence is presented that, with the exception of Orliac's work in Tahiti, human activity had enormous effects on the natural environment of Pacific Islands.

The archaeological portion of writing deep historical ecologies is superbly presented in Kirch's and Hunt's volume. No discussion adequately captures another part of the story of Pacific Islander colonization, however that of islanders, who, despite initial destruction, maintained long-term, sustainable agriculture, pig and chicken husbandry, and harvesting of marine resources for as long as 2,700 years. In some respects it seems that islanders were as accomplished natural historians and agroecologists as they were navigators. Investigating this aspect of the political ecology of the Pacific will benefit from a closer collaboration among geographers, cultural anthropologists, and prehistorians. In this scholarly context, theoretical differences and concerns about doing science, interpretation, or advocacy, may well impede effective interdisciplinary détente, and Kirch implicitly draws attention to this in his article on the changing landscape of Mangaia (p. 165).

One example of collaboration between an archaeologist and a cultural anthropologists is Kirch's own work, a joint ethnohistorical work with Marshall Sahlins (1992) that deals with changes in both political and environmental landscapes. In this volume, Kirch (p.164) again approaches cultural anthropological themes in his presentation of a "mytho-praxis of nineteenth-century Manganian society in terms of the *Longue durée*." Here Manganian relations of production are diagrammatically depicted as flows of information and resources where the god *Rongo* receives ceremonial taro and human sacrifices through the chiefly class and bestows, in return, fertility to the soil and *mana* to the chiefs. But there is something missing from Kirch's diagram. Although the chiefs (*Te Mangaia*), gods, cultivars, and the structure of reciprocal relations are shown, there are no producers--no commoners who were actually engaged in agriculture or fishing. Further archaeological investigations into the actual production of material life and the associated documentation from centralized villages during World War II would be useful. Some homesteads were maintained in the bush for long periods. In both instances, in re-establishing homesteads in the bush, farmer families reconstructed the settlement patterning and a circumhousehold landscape more common in the pre-European era. Contemporary smallholder agriculturalists have a deep historical recollection of their-land management patterns and, in investigating these historical house mounds, a tentative link between the past uses of island environments and the contemporary exploitation of resources could be created through joint historical archaeological research and historical ethnography. An archaeology of the material life, as evident in the archaeological and ethnohistorical record of agricultural production, may help explain the variation in environmental disruption and clarify aspects of the long-term sustainability of farinaceous agriculture.

Such a collaboration may also allow for an archaeology of smallholder agriculturalists. This is much needed because the producers of agriculture, those who directly interacted with the environment, are usually absent from archaeological research concerned with explication of more general political processes. In this endeavor, the collaboration of cultural anthropologists and archaeologists may help prove as beneficial as the interdisciplinary collaboration of archaeologist, palynologists, and paleoenvironmentalists in this important volume.

The importance of interdisciplinary research in political ecology is clearly and cohesively demonstrated in this volume, which represents both the current status and the future direction of research in ecological archaeology in the Pacific. As such, it is an invaluable resource for anyone with interests in deep ecological history and in the methodology of historical ecological research. Cultural anthropologists may quibble about the strictness of linear modeling in archaeology, and some may question the utility and salience of optimal foraging models for understanding contemporary islanders subsistence activities. But these models, like the one offered by Anderson in this volume, are efficacious in explaining the prehistoric human/environment interaction as evidenced in the archaeological record.

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**In the Society of Nature: A Native Ecology in Amazonia by Philippe Descola. 1994 (paperback 1996). Cambridge: University of Cambridge Press, pp. xviii+354 pages, subject and plant and animal indices.**

**Reviewed by William H. Fisher, College of William and Mary, Williamsburg, VA**

Reading Descola's book brought to mind a conversation I'd long forgotten. Once when canoe fishing during my thesis fieldwork in Brazil I overheard a Juruna man, whose people have long dwelled along a major Amazonian waterway, grill a forest-dwelling Kayapo about his tribe's dietary restrictions. Systematically, the two exchanged information about what fish, fowl and game animals each consumed or avoided, cheerfully noting areas of agreement and disagreement. At that moment I imagined a ghostly anthropological twin seated at the far end of the canoe furiously taking notes. Reflecting the unyieldingly different approaches within our discipline, if I was concerned with deciphering the meaning of food taboos, my twin would certainly be pondering their adaptive implications given the respective environments of the Juruna and Kayapo. The conversation would serve as very different grist for our analytical mills. Descola's work echoes this remembered/imagined scene, as it also concerns itself with the opposition between the different subsistence potential of the Amazonian varzea and terra firme (he defines these as riverine and interfluvial biotopes) and the void between ecological and symbolic approaches in anthropology.

Dr. Descola's research represented in this volume is as challenging as one might conceive. Originally published in France in 1986 and completed as a doctoral dissertation two years before, the work continues to be timely and relevant. Descola seeks to bridge the gap between ecological and symbolic paradigms that have separated scholars of Amazon into opposing camps. These opposing camps rarely have much of interest to say to one another and their exchanges lack the open willingness to agree to disagree evinced by my Amazonian hosts' cross-cultural conversation on food taboos. Along with his mentors, Lévi-Strauss and Godelier, Descola takes any separation between the technical and the symbolic to be misguided. Rather than fortify the opposition between materialism and idealism he seeks to demonstrate the irreducibility of praxis in understanding human ecology.

The people chosen to demonstrate this proposition are a sector of the Ecuadorian Achuar people whose dispersed settlements appear to reflect a centuries-old pattern. More recently, large number of Achuar have begun to cluster in nucleated settlements to facilitate access to western trade goods and are excluded from the general analysis. The Achuar (along with the Shuar, Aguaruna, and Huambisa) are one of the four dialect groups of the Jivaroan linguistic family that includes some 80,000 people scattered throughout southern Ecuador and Northern Peru. They live in imposing houses constructed at a great enough distance apart to make daily cooperation impractical. Each household is made up of a married group, usually polygynous, and attached kin. Each household regulates its

own activities independently of one another except in cases of war, house construction, and other sporadic occasions. While each household is potentially at war with every other, intermarriage and military alliance usually form the basis of ties between ten to fifteen households within a contiguous territory strung out along a watercourse. Independent households, however, are not tied together by descent, united under chiefs, or grouped into any sort of named community organization.

While each household thus appears isolated from other similar units, an understanding of Achuar society requires a comprehension of the continual transactions between the Achuar and the sentient natural beings from whom they wrest life's necessities--through cajoling, threats, force and seduction.

all of nature's beings have some features in common with mankind, and the laws they go by are more or less the same as those governing civil society. Humans and most plants, animals, and meteors are persons (agents) with a soul (wakan) and an individual life (p. 93).

Herein lies the paradox of the Achuar: while their isolated households would appear to reflect an absence of social ties, in fact, men and women can do nothing without the correct social etiquette, knowledge, and skill needed to successfully interact with humans and non-humans. Achuar society encompasses nature (at least "nature" as constituted in western thought).

Achuar conceptions regarding sociality regulate hunting and gardening, which therefore can never be reduced to a checklist of technical specifications. Activities conjoin the supernatural, technical and social, as when men direct their musical incantations at species leaders, invoking their personal relationship with coquettish game. Descola shows how relations between hunter and his game are like those between a man and his affines, involving an identical combination of charm, guile, observation of social niceties, and force. Likewise, women's garden work lacks none of the perils of the hunt as women cope with bloodthirsty manioc plants and spells of rivals aimed at undermining their efforts. As with hunters, gardeners' success also depends on a set of practices in which invocations to supernatural and mythological beings are part and parcel of the required mastery over technical and social knowledge.

The book takes us through the background necessary to understand the complex social transactions of what Descola calls "the society of nature." After a detailed description of the environment and the geomorphological, pedological, vegetational, and faunal characteristics of riverine and interfluvial biotopes, Descola introduces the reader to the animated natural world. The next four chapters describe activities in the house, the gardens, the forest, and the river, respectively. While the information is extremely detailed and of high quality, much of the quantitative information is presented in a narrative style that makes it more rather than less difficult to grasp the essentials. However, the narrative of these chapters, in which myths, incantations, symbolic exegesis, species names, and measurements of labor time and productivity are all interspersed, is meant to bolster Descola's central contention: these diverse types of data are all essential to understand Achuar ecology, and the possibility of their analytical integration lies in an analytical focus on Achuar practical activity.

The energy and determination with which he carried out his fieldwork should itself be cause for admiration among anthropologists. The distances between settlements, the need to constantly move between settlements in the absence of easy transportation, the monolingualism, the small number of Achuar in each settlement, and the ambitious

agenda of data collection made the realization of the research project daunting. The resulting data are rich as Descola develops a magnificent interpretation of Achuar natural symbolism and performs many quantitative measurements.

What remains open to question, however, is the extent to which Descola succeeds in integrating within a single analytical framework both the material effects of human-environment interactions and cultural ideas about nature. The reactions of both “ecological” and “symbolic” anthropologists make an evaluation of Descola’s method particularly important. On the one hand, cultural ecologists, such as Betty Meggers (personal communication), feel that, whatever Descola may conclude, his measurements bear out the cultural ecologists’ ideas regarding the different potentials of riverine and interfluvial environments in the Amazon. Symbolic anthropologists, on the other hand, greet the work as a refutation of environmental determinism and a promising new methodology. As trumpeted in a review of the first 1986 French edition: “It is to be hoped that the ecological determinists are not so entrenched in their own dogma as to ignore what he has to say. Certainly there should be enough statistical information on the size of gardens and harvests, hunting and fishing returns, and time expended on various activities to satisfy them” (Riviere 1987, 754). Thus, on the one hand, the ecologically minded seem to see nothing new here, while symbolic anthropologists seem to accept Descola’s conclusions rather uncritically (cf. Viveiro de Castro 1996). That an innovative combination of ecological and symbolic methodologies merely succeeds in reaffirming the received wisdom of symbolic anthropologists while evincing practically no reaction from ecological anthropologists is disturbing.

In my view reactions from both camps can be explained by their implicit convergence regarding two basic and interrelated understandings of the relationship between environment and society: 1) Despite initial nods in the direction of practice in Descola’s book, in common with cultural ecology, the environment is conceived to be external to society and human activity; 2) Being external, the environment primarily shapes human activity by constraining or allowing the expression of all its possibilities. These two propositions combine to produce an either / or impasse that impoverishes the study of the relationship between human meanings and material transactions within an environment. The research agenda is reduced to establishing whether the primary determinants of the patterns of human activity are either ecological or cultural. The “non-reaction” from symbolic and ecological anthropologists may be due to this comfortable fit between Descola’s argument and both camps’ current assumptions.

Descola reserves his harshest criticisms for adherents of ecological approaches, whom he labels “distant heirs of Buffon [pressing the indigenous Amazonian] into service as [an] unwitting illustration of the implacable determinism of ecosystems” (p.2). His criticisms of symbolic approaches are considerably more muted, although he allows that “symbolic morphology...fail[s] to take into account the effect of material determination on the concrete processes involved in the socialization of nature” (p. 332, fn.1).

While he suggests that practice is irreducible to either environment or culture Descola does not theorize any key aspects of social practice that would articulate belief with activity and would be subject to variation or change. Instead, praxis remains subordinate to and derivative of a total symbolic structure. In the end, Descola’s viewpoint is static and his method is additive; that is, symbolic interpretation is supplemented with time allocation and productivity measurements.

His most essential measurements aim to show that resources would be available for all Achuar to inhabit the riverine zone and maintain current settlement and subsistence

patterns (implying that those who remain in the interfluvial environment do so because of cultural choice). He also aims to show that in both the riverine and interfluvial habitats Achuar, irrespective of gender, do not work as much as they could and still, they do not eat all the food they produce, i.e., they overproduce. Descola also shows that productivity is a function of skill and labor intensity rather than time because all Achuar workers, both male and female, riverine and interfluvial inhabitants limit their work to between 4 hours and 6.25 hours/day. While female gardening effort varies between averages of 1 hour 25 minutes and 2 hours 52 minutes per day, this variation is not correlated with the ratio of productive to dependent members in a household.

One of the problems with the measurements is that both Descola and ecological anthropologists appear to assume that an environment's productive potential exists in the absence of any human activity. If one takes a deterministic view, different productive potentials should give rise to or at least permit the appearance of different social and cultural forms. However, the crux of Descola's argument is that while biotopes and their productive potentials are different, this has not produced differences in Achuar social forms or culture. The problem is that while Descola documents some differences in productivity between the riverine and the interfluvial habitats, in the symbolic realm he asks us to assume what must be documented, i.e., that culturally and socially the two areas are indistinguishable.

We learn that 1,250 Achuar inhabit 2,800 km<sup>2</sup> of riverine habitat while 750 inhabit the 8,500 km<sup>2</sup> of interfluvial forest and that riverine men spend almost as much time fishing as they do hunting, while their interfluvial counterparts spend more than twice as many hours per day in the hunt. The claim that these differences are unimportant rests on an acceptance of facts that Descola does not document at all, namely that there exists no significant cultural or social differences among Achuar inhabiting the two habitats. At a point where we ought to be able to look at the relationship between practical activity, the environment, and culture, we are asked to accept without question the view that a uniform symbolic ordering of the world exists among people interacting with different environments, performing different activities (e.g., different fishing techniques and proportion of fish in the diets in both areas), and subject to no common political or social organization above the level of what Descola calls the "endogamous nexus," the neighboring houses from whom spouses and allies are sought. One might reasonably ask why such a situation, apparently existing for centuries, has not given rise to a great deal of cultural variation.

By not distinguishing between different sorts of practice, Descola implies that all meanings and activities and socialization experiences are equally important in their overall contribution to the "total social fact" of Achuar ecology. The structured improvisations of practice seemed to be derived from but not to contribute to the total social fact of ecology. Thus when Descola contrasts the riverine and interfluvial Achuar, the notion of practice disappears from his account and he relies on standard measurements of subsistence effort set against a presumably uniform cultural backdrop shared by all Achuar. The main theoretical problem, of course, has less to do with documenting productivity or environmental variation and more to do with perceiving and documenting variation in the symbolic structuration of the world and the dialectic between cultural understanding and practical activity. Formulation of any concept of social or cultural variation is dogged by inattention to the difference between the cognitive or structuralist model of the world and the organized movements of calories and nutrients within an ecosystem and the inability to theorize the meaning of variation in either sphere.

The inability to place the variation of measured quantities within a conceptual framework leads to a serious problem in evaluating what is meant when Descola speaks of “uniformity” in practices, since all measurements in fact reveal a range of productivity and time expended. In the end, as attention to Descola’s discussion shows, what are important for him are limits rather than variation. In other words, variations in protein capture or horticultural productivity are seen to be unimportant if they do not fall below a hypothetical minimum. Likewise, variations in time expended are not regarded as significant unless they exceed an even more arbitrary maximum. Practice, of course, is implicitly offered as an escape from this impasse, but, as we will see, does not figure in Descola’s conclusions.

There is one curious exception in which Descola claims that a quantitative measurement hints at a cultural principle. This occurs when Descola discovers through time allocation studies that both men and women work only a few hours a day, regardless of their competency and efficiency, and regardless of their riverine or interfluvial location. In the absence of any native testimony on the subject, he infers the existence of a shared “representation of a limit on labor that should be expended” (p. 295). While the range of average hours worked varies less than 2.5 hours, it is unclear if the argument would hold if, for example, variation was found to be in the 3 hr. range or some other quantity. Descola apparently rejects any number of hypotheses in which the amount of labor expended may be an epiphenomenon of other aspects of the labor process, including the division of labor and the meshing of one person’s effort with other social activities. If the time quantity in question shows similarities across riverine and interfluvial environments, Descola assumes the similarity must be eminently cultural in origin. This logic by which quantity of labor time measured by the investigator is reified into a cultural representation of the Achuar must be carefully examined because on it rests Descola’s argument that production is ultimately constrained by cultural rather than ecological factors. He suggests that the limiting of work that one may legitimately perform may “constitute a determining factor for explaining what is customarily called the homeostasis of productive forces in archaic societies” (p. 295). The danger of tautology seems great: a quantitative result (hours worked) becomes construed as a cultural principle, and, assuming the form of a principle, it becomes a cultural mechanism whereby production (i.e., hours worked) is limited and homeostasis created.

Descola’s assessment of the relative contribution of culture and the environment, as previously stated, rests on a notion of the environment as something external to society. The interpretation of his quantitative data thus seem to contradict his careful examination of the way natural processes form a part of society and the interpretation offered by the Achuar themselves. That is, there is a tension in Descola’s analysis between his naturalistic observations and symbolic analysis and his use of measurements and notion of environmental constraints. In his use of “ecological limits” the environment becomes transformed into an abstract constraint or potential, little more than a substrate upon which social regularities may take hold and flourish.

To strike a blow against environmental determinism Descola resurrects the environment/culture opposition and merely reverses the arrow of causality. Thus in his discussion of manioc “overproduction” in both riverine and interfluvial biotopes, Descola concludes that there is no advantage to be gained by cultivating the fertile alluvial plain. “So whether in the area of labor or in the domain of resources management, under-exploitation of productive capacities is determined by social and cultural specifications, not by ecological limits” (p.313). Now presumably any kind of human activity is

determined by cultural specification rather than ecological limits - even “overexploitation,” environmental destruction and activities whose environmental outcomes are hard to discern. Such an assertion as Descola’s, if made at the beginning of a study, would only suggest that all human activity is meaningful activity. As a conclusion Descola’s statement is more properly interpreted as an assertion of the superordinate role of human meaning over environmental factors within human ecology, rather than as an assessment of the interplay of meaning and environment.

However, in common with environmental approaches that Descola criticizes he shares an adherence to “limiting factors” approach in which limits can be defined in the absence of concrete human activity. Thus he only needs to prove that nutrition within the riverine and interfluvial biotopes is above some postulated minimum to assert the unimportance of environment as opposed to biology. For instance, the “average daily protein intake is 76 g/person in the interfluvial houses, compared to 119 g in the riverine houses. It is true that 43 grams seems an enormous difference, but only if such a deficit causes the interfluvial Achuar to fall below the fatal threshold of 27.45 g, which is not the case” (317).

Descola parts company with determinists in his consistent (and apparently literal) use of “choice” throughout his work. He seems to be suggesting that when absolute impoverishment or starvation does not loom humans have choices in how to apportion their activities and, when possible, they will try to realize their values in accordance with cultural understandings. Thus we can see Achuar ecology as a result of a persuasive and pervasive symbolic ordering of the world which Achuar choose to follow. Limits are important because in their absence the preexisting symbolic model may be given free reign and is apparently stable as well.

It might be sufficient to recall Godelier’s response to the idea that every society chooses its culture, “Indeed! Societies and cultural systems are not individuals; they are not invented by any one person” (Godelier 1994, 103). That is not to say, however, that choices are never made. Individual households (or their head or groups of brothers, etc.) chose to live in riverine or interfluvial districts. Why they do so may be an interesting question (it is the one Descola chooses to highlight on p. 62) and yet it is clear that this question need not be answerable with reference to environmental variables. Warfare, attachment to place, proximity to familiar trading partners, in short, more or less historical factors, all spring immediately to mind as reasons why a particular Achuar may want to live in a particular spot. In fact, Descola seems to me to use a sleight of hand to argue with cultural ecologists, namely, environmental variables must explain everything (i.e., they must constrict human choice so that cultural models become irrelevant), or they explain nothing as cultural imperatives are formed “largely independent of material constraints” (p. 285)!

As expressed in the final chapters, Descola’s conclusions are not predicated on a consideration of practice but on the lack of material constraint on the expression of Achuar symbolism. Rather than adding to our understanding of symbolism, the plethora of ecological data seem to be meant to bludgeon environmental determinists into submission - or to hoist them on their own petard of measurements as it were - by demonstrating that ecological limits do not exist. In the process, though, the materiality of culture, the ability of practical activity to change the world, and the human propensity to reflect on our own activity and its results are muted. The exegesis of Achuar cosmology and the ecological measures remain unreconciled. In the end, the result of a work that begins with a desire to overcome the opposition between ecological and symbolic approaches seems to be precisely to strengthen the opposition between them.

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## **Water Resource Management: A Comparative Perspective. Edited by Dhirendra I. Vajpeyi. Westport, CT: Praeger Press, 1998. xii, 177 pp.**

**Reviewed by David Guillet, Department of Anthropology, Catholic University of America, Washington, DC.**

Irrigation is at a "watershed divide" in the US and elsewhere in the world. Looking back lies a recent past of growing populations and increasing water pollution, decreasing water availability, costly dams and waterworks, expanding tourism and industrialization, and changing values of domestic consumption (e.g., turfgrass, standards of hygiene, and bottled drinking water). Ahead lies a new policy "consensus" resting on neoliberal principles applied to water management. At the heart of the consensus is demand management, the recognition of the value of water in relation to its provision cost and the introduction of policies to require consumers to adjust their usage more closely to those costs. These policies include water markets, measurement of consumption and the levying of tariffs on the basis of the amount consumed, and punitive costs for wastage. Water-use planners and policy makers in countries of the South (and not-so-far-South) await the next planeload of lending agency officials and consultants carrying briefcases with their patent medicines. Aside from their economic assumptions, the political dimensions of these policies warrant close attention by political ecologists.

The book under review, a collection of cases of national-level water management authored by political scientists and a few practitioners, is another in a series of recent treatments of the topic. Chapters are included on World Bank policy, Chinese water management policy, the Three Gorges Project, Brazil, India's Narmada River Basin Project, Nigeria, the Rhine and the Danube, and the Federal Republic of Germany. Some

of the topics will be recognized as highly controversial (Three Gorges, Narmada); others though less well-known are equally deserving of scrutiny.

A good place to start a book of this sort is with the World Bank, a major disseminator of the new policy “consensus.” In their introductory chapter, Caroline Thomas and Peter Clegg offer one of the relatively few critiques of World Bank orthodoxy. Theirs focuses on the distributional effects of these reforms. Although granting the efficiencies of the market orthodoxy, they see unintended effects of widening gaps between the rich and the poor. Without special consideration for the poor, neoliberal reforms may well end up benefiting only the already well-off or well-placed. Common property arrangements, they suggest, offset these distributional inequities and should receive equal consideration with the market and the state in determining entitlements.

This critique is refreshing and will resonate with readers of this journal, particularly those who have witnessed over the years other “unintended” consequences of poorly thought reforms. If meant to set up a review in succeeding chapters of how countries around the world are implementing the new orthodoxy, it doesn’t quite hit the mark, as many countries seem not to have gotten the message. Judging from the next two chapters on Chinese water management policy and the Three Gorges Project, China for one, remains fully committed to meeting demand by “above all investing more money and efforts in exploring new water resources.” China is attempting to fund the Three Gorges Project out of domestic sources, given the refusals to extend loans by the World Bank and the American Export and Import Bank. Expanding supply by financially and environmentally costly dams and by interbasin transfers withholds even minimal lip service of alternative or complementary solutions.

Brazil, the subject of the next chapter, also doesn’t seem to have read the script. This enormous country, Peter Calvert and Melvyn Reader tell us, is hell-bent on pursuing 31 hydroelectric dams in the environmentally sensitive Amazon. Once again, one finds an explicit policy of supply augmentation carried out by a centrally directed development bureaucracy that is supported quite generously by the World Bank and the Inter-American Development Bank.

Completing this triumvirate is India, the subject of a chapter on the Narmada Project. One would have thought we had heard the last of this controversial dam—but no, it “will be completed, despite all the opposition and controversy.” Although India withdrew its loan request from the World Bank in 1993 after the Bank imposed new conditions, it has since decided to finance the project with domestic funds.

Despite the “orthodoxy” of demand management, decentralization, and stakeholder participation, clearly many major players in the South continue to follow centralized, often self-financed, capital-intensive, and large-scale projects to increase supply. Are they the last hurrahs of an older era? Probably not. As long as someone is willing to put up the money, or domestic financing can cope with the costs, we probably haven’t seen the last of enormous projects such as these. Only a world economic crisis, certainly a possibility as of this writing, could choke off the internal and external capital flow necessary to keep them alive. On the other hand, smaller-scale projects with strong stakeholder participation and provisions for watershed and demand management are beginning to crop up more and more often, coexisting in many cases with large-scale project planning. Even within the World Bank there are advocates of common property resource management who continually challenge neoliberal assumptions and the new “orthodoxy”.

The Chinas, Brazils and Indias are exceptions, one may say, in their size, capacity for internal financing, and lure for private investors. The smaller, poorer, countries, on the

other hand, have more at stake. They lack alternatives to multinational lending agencies for development capital and are much more susceptible to accepting their patent medicines as the price to pay for obtaining loans. The next chapter deals with one such country-Nigeria. The author examines the possibility of introducing the new water-management policies there but finds a host of rather nebulous "cultural obstacles" in the way.

Here the volume would have profited from empirical analyses of the new orthodoxy at work. Most of the hoopla has been about Chile's enactment in 1981 of a National Water Code establishing a system of transferable water-use rights. Of the several policy directions it could take, Chile chose a strong form of separating water rights from land and allowing them to be transferred. Water remains a public good, yet concessions allowed under the law convey permanent and transferable rights to water. In effect, private property has been created out of heretofore inalienable use rights. Bauer's recent evaluation of the impact of the Water Code finds claims of its success exaggerated or incomplete, and often politically or theoretically motivated (Bauer 1997). The recognition of existing rights to water restricted the expansion of new concessions, as by 1981 the water of most of the rivers in the north and central valleys had already been allocated. Exchanges of water-use rights are also most frequent in these water-scarce valleys; elsewhere, transactions are limited. Since Chile's water law imposes no financial obligations such as taxes or fees, nor legal duties requiring water rights to be put to "beneficial use," owners of surplus water rights are able to keep them off the market until an external event drives up water prices.

The notion that demand management policies would encourage water-rights holders to think about and manage water as an economic good, rather than a free attribute of land ownership, thereby increasing efficiency, seems to have failed in Chile. Bauer explains that in Chile, like other Andean countries, most land is incapable of agricultural crop production without irrigation water. Consequently, the only time that farmers are willing to sell their water rights separately from land is when they are getting out of agriculture for good. Bauer's questioning of the utility of freely tradable water rights and water markets in Chile as a model is highly relevant to the issues in the volume under review.

Lastly, the editors state that about 47 percent of the land area of the world, not including Antarctica, falls within international water basins shared by two or more countries. Rivers that originate in one and flow through several countries require different solutions to their problems. This isn't anything new. As Irene Lyons Murphy argues in her chapter, countries in the basins of the Rhine and the Danube rivers have jointly solved their problems for centuries. But post-1950 pollution of the Rhine was of several orders of magnitude greater than in previous decades, leading to a crisis and an international commission. Such international agreements offer very real solutions to the unique water-management problems of shared basins. Perhaps their experience in negotiation as a solution to water-management problems could be brought to bear in the new policy consensus.

In sum, the volume will be useful for students needing a set of case studies of older forms of water-management policy against which to compare the "new orthodoxy." It is also pertinent to understanding the importance of international agreements as a solution to rivers crossing national boundaries. Other, more empirical, cases, however, of the application of demand management would provide better examples of the "new orthodoxy" at work.

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## **Earth's Insights: A Multicultural Survey of Ecological Ethics from the Mediterranean Basin to the Australian Outback by J. Baird Callicott, with a Foreword by Tom Hayden (1997) Berkeley : University of California Press, 285 pp.**

**Reviewed by Dipak R. Pant, Professor of Economic Anthropology and Applied Anthropology, University of Castellanza (VA), Italy**

*Earth's Insights* covers some challenging terrain in the field of comparative environmental ethics, a field too little explored by scholars. Callicott, professor of philosophy and religious studies at the University of North Texas, constructs for us a framework for the comparative study of ethics and environmental values, and for examining the susceptibility of both to historical change. Implicit in this tour is a notion that we might turn to non-Western sources of inspiration to chart a course for a more sustainable future.

The first question Callicott poses is: What is the equivalent of "ethics" in traditional non-Western societies? As he acknowledges, ethics do not exist in a vacuum, hermetically sealed off from larger systems of ideas (or, for that matter, from the rough-and-tumble of the real world). Ethics must be viewed, instead, like any other sphere of human thought and action (science, technology, or law) in a broad frame of differences--of problems perceived and solutions attempted--by peoples of different places and times, in different terms, and under different conceptual banners. Callicott's jump-start with a philosophical discourse on ethics is quite problematic, however, as he does not first ground us well enough with a panorama of ethics-like thought in non-Western traditions. From the outset, one is left wondering about how well his conceptualization of ethics travels across time and place.

The going does not grow easier. Dealing with the historical roots of Western environmental attitudes and values (Chapter 2), Callicott repeats an oversimplification promoted by many other Western scholars. Only Judeo-Christian and Greco-Roman heritages are taken into consideration, while overlooking the more richly textured mosaic of local "little" traditions of Celts, Iberians, Italics, Teutonics, Nordics, Slavs, and so forth. The preindustrial Western rural traditions were expressions of some powerful and persistent undercurrents that have survived even to contemporary times in different folk forms. Yet Callicott disregards the surviving rural folklore in Europe. The Christian traditions, particularly Roman Catholicism, have absorbed and preserved many polytheistic, polycentric, and nature-worshipping elements that are yet to be seriously

studied in order to comprehend the environmental attitude and values of Western peoples. In the Alpine region and in many parts of central and southern Europe, for example, one can still find the sacred geography (e.g., “Madonna of the Snow,” “St. Michael of the mountaintop,” many saints and holy figures associated with summits, lakes, rivers, boulders, and so on). The European rural popular sacred geography contains a highly articulated land ethic and a rough cosmography--most probably of pre-Christian origins, absorbed and modified by medieval Christianity. It is a pity that the author fails to notice such a widely present and interesting aspect of the European culture.

Callicott appears to confound history and tradition. History is contingency, whereas tradition is continuity. Many elements do change forms and adapt to new circumstances in order to survive; and that produces history. Unforeseen changes (climate change, disasters, encounters and clashes of cultures) force the traditions to take different shape and to be articulated in different ways; all that is history. Yet Callicott does not clearly indicate which traditional attitudes and values (regarding the environment) have changed under which historical circumstances. He does not explain, for example, how the Western idea of nature as God’s expression (*omnis natura Deo loquitur*, Hugo of St. Victor, *Erudito Didascalica*, 6.5, p. 176, 1805) degenerates to the idea of nature as the unlimited resource to be possessed by people. Nor does he clearly explain how the Old Testament concepts of “God’s creation” and “the centrality of humans” were turned to be “man-nature fellowship under the God’s patronage” in the medieval mysticism (a good example would be the teachings of St. Francis of Assisi).

Similar problems can be found in the author’s oversimplified characterization of Islamic environmental ethics. The author totally ignores the Sufi tradition and the underlying nondualistic (almost pantheistic) mysticism expressed in the esoteric Islam, for example, of the highly influential works of Jalaluddin Rumi and Mansur al-Hajjaj. Islamic esoterism has been somewhat different from the Judaic and Christian varieties. The influence of Sufi doctrines and practices in mainstream Islamic cultures is far more incisive than that of Jewish Kabbala or Christian esoterism in their respective sociocultural mainstreams.

The author is quite right in pointing out that the place of Islam is in the “West” rather than in the “East.” But again, the role of Islamic mysticism (the variety of Sufi traditions in North Africa, Middle East, Central Asia) in bridging the gap among the pre-Islamic, non-Islamic, and Islamic traditions and the environmental attitudes and values generated by such intercultural dialogue are overlooked.

The author’s understanding of the Dharma traditions (the so-called Hinduism, Buddhism, and Jainism, Chapter 3) is quite problematic. As with most contemporary Western observers, the author takes Vedanta of Shankara (eighth century A.D.) as the representative central idea of so called Hinduism (in reality, there is no such “ism” as Hinduism), and *Shunya-vada* (or *Madhyamika*) as the governing principle of Buddhism. This may appear so to the bookish scholars who understand (or confuse) tradition to be a historical succession of schools of thought.

The reality is very different from the scholarly appearance, however. The demarcating lines among Hindu, Buddhist, Jaina, and other tribal and shamanic traditions of the Indian subcontinent and the Himalayan region are terribly misleading. The doctrinal contents are always articulated through social channels such as family cults (*Kula-parampara*), scenic and social representations and recitals (*Lila-parampara*), and pilgrimage (*Tirtha-parampara*). The Dharma texts speak often in a cryptic and codified manner while the articulation in social mainstream is direct and decodified. Most Western scholars,

Callicott included, fail to grasp fully the complementarity and parallelism of the textual and oral traditions of India, Nepal, Tibet, and many other parts of South and Southeast Asia. Without a careful empirical study of the living forms one is bound to add more enigma and confusion to the already complex and enigmatic reality of South Asian traditions. A more serious problem with *Earth's Insights* and its treatment of ethical frames from the Indian subcontinent, however, is the book's inattention to the Tantric traditions, which are at the core of Indian, Tibetan, Nepalese, Sri-Lankan, and other Asian systems of relating and dealing with the mind-body complex, with nature and environment.

Callicott's understanding of human-environment relations in China is overloaded by aesthetic appraisal, and lacks critical overview. After reading the book all the way through, one gets the impression that the author views Chinese environmental thinking as the "best" one (from the viewpoint of today's environmentalist). Yet among all the Asians, the Chinese have been the most determined actors on the environment (for example, great walls, grand pavilions, artificial lakes, iron shoes to keep the women's feet little and tender, castration of young males to have regiments of eunuchs). Chinese culinary art is rich and it includes nearly every little or big beast known to the Chinese (one of the most elite delicacies used to be a live monkey's warm brain, served by opening the skull right at the moment of dining). Callicott does not seem to take seriously these cultural traits; there is no explanation about such sophisticated and forceful attitudes toward other creatures and towards the environment.

In the 1960s, the Chinese officialdom undertook a huge, self-conscious venture of mass mobilization to destroy the magico-religious traditions and sacred geography of the people (the Cultural Revolution). In recent decades, the scale of environmental destruction and landscape modification in China is without any precedent in Asian history. Callicott does not appear to question why the heirs of an ancient civilization so enthusiastically carried out a self-conscious process of destroying the "sacred" from the landscape and social life.

A sound empirical survey of Chinese society, institutions, and history would have certainly helped Callicott to understand better that mainstream Chinese culture is substantially this-worldly, with more focus on person-collectivity (person-to-person) relations and less concerned with the human-nature relationship. Only the Buddhist (imported from India) and Tao (not so dominant in Chinese civilization) traditions have shown some cosmos-orientedness compared to the Confucianism-dominated mainstream. Even in the Buddhist and Tao traditions the Chinese have always longed for "longevity" (through medical-alchemical pursuits) and pragmatic wisdom (in relations to the world and to others) rather than compassion or freedom. The Confucian, the communist, and the neo-Confucian (the modern social and political thinking of Chinese-born elites of Singapore and other Southeast Asian countries) ideologies are staunch supporters of the traditional Chinese view that collectivity is above the individual person and that the state is above society (contrary to the other Asians including the Japanese and the Indians who put society above the state). What is the ramification of such ideas and practices in attitudes towards nature and fellow creatures? How is that the Chinese come to be more rampant in their materialistic pursuits and consumptive ways of life among all other Asians today? Callicott fails to deal properly with such fundamental questions.

Similar questions about Japanese environmental ethics remain unanswered: how the forceful and highly sophisticated subduing of nature (e.g., bonsai, the art of dwarfing the tree species, and ikebana, the art of manipulating plants and flowers for decoration) came

to be so widely popular in a tradition where ecological insights are seen as so fine and kind by the author. Callicott's last chapter on activism does not mention a single environmental opinion and action movement from China or Japan, nor does he explain this lack. The understanding of the Eastern environmental ethics displayed in *Earth's Insights* is most problematic.

Callicott gives a much better account of Polynesian (Hawaiian) and North American Indian (Lakota and Ojibwa) environmental ethics (Chapter 6). More contextual information on kinship and social organization, on resources and ecosystems management systems, is presented alongside the extrapolation from mytho-poetic heritage.

In Chapter 7 on South America, the author focuses exclusively on the indigenous peoples of the Amazon (Tukano and Kayapo). The accounts of agroecology of the pre-Hispanic Indians of the Andes region is quite well documented; yet the author is mute about these sources. The Inca land-use system (chakras) is still visible in today's Peru; the author ignores the whole subject. Even the Incan and other well-organized pre-Columbian resource-management systems and explicit and implicit environmental values are left out of the discussion. It is surprising to find no mention of the grand highland cultural traditions of the Incas and the Uros that still display bulky fragments of pre-Columbian practices and concepts regarding the environment.

Callicott's choice of putting African environmental thinking with that of Australian aborigines is beyond comprehension (Chapter 8). As examples of African environmental thinking and ethics the authors picks up the agricultural Yoruba of Nigeria and the hunting-gathering San or Bushmen of the Kalahari desert of Southern Africa. This limited selection does not do justice to our understanding of African cultural reality. The great majority of the Africans are agropastoral people (agriculture and livestock-breeding combined). The pure pastoralists constitute a significant portion of African population, mostly concentrated in East and North-East Africa. Desertification in sub-Saharan Africa is mostly related to overgrazing and massive monocropping of cash crops (problems created by the colonial powers first, and perpetuated by the international development community's prescriptions now). A close look into this reality (pastoralism) and a careful analysis of the traditional environmental ethics of these peoples in lieu of the negative developments in the environment and landscape could constitute a significant contribution. It is unfortunate that Callicott does not address this reality.

The essay on postmodern environmental ethics (Chapter 9) is provocative. Any careful observer of the current environmental situation of the world is likely to agree with the author. But a few perplexities remain. The author affirms that the emerging global scientific worldview, happily, is not as conceptually dissonant with the world's many indigenous intellectual traditions as its predecessor, the mechanical worldview. I have doubts about this. First of all, the emerging global scientific worldview is based on the same (as in case of the late nineteenth- and early-twentieth century modern science) Western paradigm of the near-total knowability and programmability of the world. There is some anthropocentric arrogance (faith in the ultimate technological fix) in it, and there is a high potential of manipulative attitude. Let's not forget that significant progress in biotechnology, medicine, and pharmacy is very recent (say, postmodern) and I sincerely do not see any trace of the so-called good and kind "emerging global scientific worldview." Death and decay are continuously viewed as undesirable and, therefore, solutions of all sorts are pursued to avoid them, to prolong the life-span. Frankly, this is far from the traditional indigenous ethics of many peoples. Even the deep concern with the environment among the so-called postmodernists seems more for the sake of better quality

of life for the humans, not as a total outlook of improving the relationship amongst the creatures and the cosmos. The modern Western paranoia of death and decay is being transferred to other cultures through science, technology, and education. Science and technology are part of the problem and not the solution. The forward posture of fixing things to improve the environmental situation may help in the short run (it is welcome) but it is not enough. What is needed is an inward posture of renouncing absolute human superiority and arbitrage. The author's affirmation that "conserving the human benefits and minimizing the environmental costs of modern technology will head the global agenda of the twenty-first century"(p.210) is too much in line with the forward posture.

Callicott has saved his best for last. Chapter 10 offers an elegant and interesting assessment of "stewardship" ethics in action. By reading the whole book an ordinary reader gets the impression that the author finds this ethical framework quite viable for the contemporary Western world, but he does not really regard it as really "fine" and "high." Callicott reports about the strong and successful (to some extent) Indian and Sri-Lankan environmental movements ("the Hindu environmental ethics in action" and "the Buddhist environmental ethics in action"). Throughout the book, one gets the impression that he considers the traditional environmental thinking of the Indian subcontinent to be quite good, better than the Western (Judeo-Christian-Moslem one) but not so "fine" and "high" as the Chinese, the Japanese, and some tribal ones. He also mentions the Buddhist forest conservation movement in Thailand. It is surprising that the author does not mention any instance of a traditional Chinese or Japanese environmental ethics (according to him, far superior to the Western and better than the Indian) in action. He also fails to say if they exist at all. If they do not exist then a serious question emerges: how these finest and the highest environmental thinkers do not generate any significant social and environmental action? If they exist, the reader becomes eager to know about them (after all they are the finest ones, as per the enthusiasm and praise of the author).

A qualified recommendation, then, would be for readers to include *Earth's Insights* among a list of works on comparative environmental ethics. The language and writing style tend to the baroque, overloaded by decorative elements. But Callicott is straightforward in delivering his oversimplified message, and is sure to prompt vigorous discussion.

## **Envisioning Ecotopia: The U.S. Green Movement and the Politics of Radical Social Change, by Kenn Kassman, Westport, CT: Praeger, 1998, x, 160 pp.**

**Reviewed by Bron Taylor, Oshkosh Foundation Professor of Social Ethics and Director, Environmental Studies, University of Wisconsin-Oshkosh**

Radical environmentalists envision and strive for three types of ecologically utopian or eutopian societies, says Ken Kassman, who earned his Ph.D. in sociology from the University of Hawaii with a Future Studies emphasis. These green visions (which of course are also ideologies) are embedded in different worldviews, or cosmological perspectives, that shape the various ideologies.

Kassman labels his first type Neo-Primitivism, taking Dave Foreman, Earth First!'s most charismatic leader, as its foremost representative. Neoprimitivists desire a return to small-scale, tribal, foraging societies. Such societies are believed by neoprimitivists to recognize the intrinsic value of all life and to be more ecologically sustainable than modern ones.

The second group of eutopians Kassman calls the Mystical Deep Ecologists. He focuses especially on certain ecofeminists, taking as exemplary Charlene Spretnak (a green feminist promoter of goddess spirituality) and Starhawk (the most prominent architect of contemporary witchcraft). Such mystical deep ecologists blame patriarchal domination and legitimating, masculine, sky-gods for the assaults on women and nature. They seek a return to matriarchal, goddess-worshipping societies that are, putatively, benign.

The third movement Kassman analyzed is Social Ecology, represented by Murray Bookchin and his colleague Janet Biehl. These analysts view both primitivism and deep ecology as regressive, failing to recognize hierarchy and social injustice, in all its forms, as the root of environmental decline. Social ecologists insist that humans must assume responsibility as rational moral agents for the well being of their own societies and the ecosystems upon which they depend.

Kassman asserts that the tensions and disagreements among the different movements and their intellectual leaders may obscure patterns that underlie these movements, the way they challenge power and promote in a salutary way a rethinking of current, environmentally destructive lifeways. Yet he also warns of dystopian tendencies in all three approaches, hoping thereby to ensure that the negative logic embedded in these visions can be avoided.

The most innovative part of this book is where Kassman, in a method popularized by Future Studies scholars, shifts to a fictional genre. He first projects what an ordinary day would look like if each of the three eutopian visions were realized. He then speculates about what such a society would look like if the negative, shadow-side tendencies of these visions were realized instead.

Unfortunately, much of this book, both the typologies established and the projections about their presumed, most-likely unfolding, are based on inaccurate, oversimplified, or out-dated information about the individuals or subcultures supposedly supporting the different visions. Consequently, the volume devolves into straw-man analysis.

The portrait of the neo-primitivists, for example, is drawn on insufficient and out-dated sources. Unmentioned is the schism in Earth First! that culminated in 1990, precipitating Dave Foreman's resignation from the group. Foreman subsequently founded the conservation-biology oriented journal *Wild Earth*, while simultaneously returning to more conventional environmental activism with his Wildlands Project. This is hardly a primitivist approach. The Wildlands Project is utterly dependent on cutting-edge biological science, striving to convince governments to set aside large, biological preserves. Foreman's neo-primitive fantasies were far-fetched and he knew it from the start but the reader would not on Kassman's account. The Wildlands Project does not promote a foraging ideal, at least in the foreseeable future. Instead it urges dramatic reductions or depopulating of natural areas by humans, but this is unacknowledged by Kassman. In the light of Foreman's recent endeavors, portraying him as a neo-primitivist is strained, despite Foreman's sometimes idealization of the primitive.

Kassman's arbitrary choice to focus on the most essentialist of the ecofeminist writers as the representatives of mystical deep ecology, then turning to express fear that the logic

that inheres to such a vision could produce an oppressive matriarchal regime, is another example of Kassman's straw-man alarmism. This choice of focus provides him with more to worry about in his dystopian scenario than stronger forms of deep ecological thought, but it is hardly fair to take as deep ecology's representative form an essentialist, overtly goddess-oriented deep ecology. It is also out-dated to do so, as essentialist ecofeminism is decreasingly influential within radical green groups. It is a bad analytical choice to begin with the assertion that Mystical ecofeminism can be used as a distilled representative of the Mystical Deep Ecology worldview (p. 25). It may serve Kassman's purpose, which is to criticize ecofeminist essentialism, but it is an empirical mistake.

My greatest quarrel is with Kassman's oversimplified and rigid typology that paints a portrait of three, distinct (and largely separate) subcultures promoting their own distinct utopian ideals. Such an analysis can only be sustained in the absence of fieldwork that would have revealed that his typology was untenable. On one occasion Kassman acknowledged that many members of the Greens exhibit tendencies toward more than one subculture affiliation (p. 96). Unfortunately, this recognition does not nuance his analysis. Indeed, even in his own sources, we can see that he has forced his data to fit his typology. In different places bioregionalist pioneer and Planet Drum founder Peter Berg, for example, is called a social ecologist, as well as a primitivist, even though Berg also clearly identifies himself as a deep ecologist and animist (and thus a mystic). Fritof Capra (misspelled Fritov on two occasions by Kassman) is called a social ecologist (p. 44). Capra today, however, clearly considers himself a deep ecologist (see chapter one of *The Web of Life*, 1996). The mystical deep ecologists are portrayed as those who promote reenchantment of human attitudes toward nature, but there is no mention that such resacralization was viewed as a central objective by Dave Foreman during the 1980s and into the 1990s. These few examples reinforce what I have repeatedly found during my own fieldwork, that radical environmentalism is a dynamic mix of cross-fertilizing ideas and people. Radical environmentalism is a far more difficult phenomenon to subdivide and typify than one would assume when reading Kassman's volume.

A neophyte to green thought might well find this volume interesting. Although there is some unclear writing, in general it is accessible. Teachers might find helpful the charts characterizing differences in worldviews which Kassman has painstakingly assembled, drawing partially on previous scholarly analyses of green worldviews. There are, however, better trailheads leading the neophyte into green thought and the subcultures giving rise to it. Indeed, by the late 1990s, a substantial critical literature has emerged focusing on radical green thought and spirituality. Much of it is lucid and provides a better picture of the pluralism, tensions, and mutual influences among such groups. Despite their earlier publication dates, to grapple with the issues posed by Kassman, it would be better to start with Andrew Dobson's *Green Political Thought* (1990), Robin Eckersey's *Environmentalism and Political Theory* (1990), Michael Zimmerman's collection in *Environmental Philosophy* (1993), and Roger Gottlieb's edited volume *This Sacred Earth* (1996).

## **Review of *The Yacyreta High Dam: Transnational Capitalism and Hydropolitics in Argentina*, by Gustavo Lins Ribeiro 1994, Gainesville: University Press of Florida.**

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Rarely do revised dissertations come with accolades equal to the praise with which Eric Wolf anoints this work of his student, Gustavo Lins Ribeiro. *The Yacyreta High Dam*, according to Wolf, marks “a turning point” in “the growth and maturation of a system of knowledge” (xiii). It represents, in Wolf’s opinion, something of an anthropological milestone.

If Ribeiro’s work marks a turning point, it is because it helps highlight the analytical limits of Wolf’s approach to political economy. And it is here, in transcending the limits of Wolf’s political economy without abandoning its very real strengths, that we must look for Ribeiro’s contribution in the future.

Given the readership of this journal, it must be acknowledged that *The Yacyreta High Dam* is not a work of political ecology. By this I mean that very little analysis is presented of the ecological dynamics involved in this massive restructuring of a river, nor does Ribeiro present much in the way of a historical vision of the ecology of the Parana watershed. Anyone hoping for analyses analogous to those of Donald Worster (e.g., Worster 1985) will be disappointed. Of course, it must be recognized that Ribeiro had other aims, and that this research in political economy is still of great interest.

To appraise Ribeiro’s work fairly we must begin from his stated aims. As with most dissertation researchers, the sheer scale and scope of Ribeiro’s ambitions were somewhat unrealistic, and the resulting insights are sometimes only tenuously coordinated. In getting to the core of the book, a number of these can be set aside. Most notably, this includes his intention to rethink the meaning of development, the final discussion of which (pages 156-164) is somewhat anticlimactic. Did anyone ever genuinely doubt that “development” was and is about economic expansion, and that the benefits of that expansion are asymmetrically distributed?

More to the point is Ribeiro’s focus on the Yacyreta project as a particular form of large-scale production. It has long been part of Wolf’s agenda to make large-scale forms of production, like plantations and mines, anthropologically thinkable. It is here that Ribeiro excels. Developing the analytical tools that make large-scale construction projects like the building of high dams intelligible as social entities is no mean feat, and for this alone Ribeiro deserves our respect.

The structure of the book largely follows from this focus, and it is in this context that the reason for Wolf’s enthusiasm for Ribeiro’s work becomes clear. The analysis itself begins with Chapter Two, which briefly characterizes the dam’s structural features and then offers a detailed analysis of the “institutional triangle” of owner, consultant, and main contractor that organizes a long term, multi-decade, multi-billion dollar project like Yacyreta. This is followed by a careful, historical analysis that situates the emergence of this complex institutional framework in the context of the tumultuous domestic and

international political climate characterizing Argentina and Paraguay from the 1960s to the 1980s.

Chapter Three, aptly titled “The Power of a Dam,” amplifies this historical analysis by situating it internationally. As Ribeiro argues, “A huge dam is a world market happening that articulates national and international industrial capital with the mediation of national states” (51). To his credit, his analysis avoids vague world systems concepts like core and periphery, and focuses on a detailed analysis of the interpenetration of international financial institutions, multinational contractors, and the changing cast of national political interests in Argentina and Paraguay. Beyond an adroit rendering of a remarkably complex social reality, Ribeiro’s signal contribution here is advancing the concept of consortiation as a way of marking “this process through which a large-scale project promotes the articulation of different capitals” as a central analytical focus (81). The main vehicle for analyzing consortiation is a laborious analysis of the politics involved in the bidding of two of the main components in the dam’s construction, the main civil works and turbine contracts.

Chapter Four, “The Moon Land”, makes a smooth transition from the analysis of capitalist and state institutions to an analysis of the Yacyreta Project as a physical happening in a particular locality. Ribeiro’s central goal is to show how “[t]he internal differentiations of large-scale projects are translated into concrete features of the settlement pattern of project territories” (86). It is a goal that he succeeds at masterfully. The bulk of the chapter is concerned with detailing and differentiating the construction of the various housing projects in the Argentinean sector of the project in the vicinity of the town of Ituzaingo. It is here that one of the most notable features of large-scale construction projects - namely their use of an international labor force - is scrutinized, as are the differential conditions for social reproduction allocated to laborers and managers. This is followed by Chapter Five, “Dividing the World”, which concludes the analysis by offering an insightful account of labor market segmentation in the project. Here Ribeiro introduces the only recognizably ethnographic segment of the entire book, in a discussion of the “Bicho-de-Obra” or “work-site animal” (see also Ribeiro 1989). Once again, the sociological intelligence at work here is impressive, sorting out the varying migratory rhythms and social situations of workers involved in different aspects of the project.

On either end of these four compact, well-wrought chapters are introductory and concluding chapters that are somewhat disorienting. The introduction tends to wander through topics that distract from his central accomplishment - producing a nuanced, coherent analysis of a large-scale project. The conclusion, on the other hand, both carries forward this initial disorientation with an unspectacular critique of development that seems stapled on, and fails to recognize and recapitulate his primary accomplishment. It is as though, having lifted a mighty stone over his head, Ribeiro feels compelled to wobble around discussing where the shadow might fall. None of this should detract from what he accomplishes in the main body of the analysis, and it is not surprising that his dissertation won an award in Brazil.

It is also not difficult to see why Wolf finds it appealing. *The Yacyreta High Dam* is first and foremost a solid analysis of the political contests involved in the construction of a massive dam on the Parana River through the joint efforts of Argentina and Paraguay, set against a backdrop of national and international politics, finance, and banking. A great deal of the analysis concerns the competition of national and international interest groups who hope to benefit from building the dam. But more than this, it shows the strength of the Stewardian, rather than Marxist, roots of Wolf’s thinking. Steward’s focus on levels of

integration is creatively developed in terms of analyses of the integration of capitals of various origins and scales, on the one hand, and the integration of labor markets of equally various origins and scales, on the other. For anthropologists, perhaps the most intriguing aspect is Ribeiro's transformation of the language of segmented labor markets into the analysis of a situated, spatio-cultural event. The project that Steward initiated with *The People of Puerto Rico* (Steward et al., 1956) finds a worthy heir here. Equally powerful is Ribeiro's treatment of the large-scale project as a distinct kind of sociological form, an analysis that shows the same sort of sociological imagination evident in Wolf's early work on plantations in the Americas (Wolf 1959). Situated thus, it is easy to follow Ribeiro's work expanding into a comparative study of the large-scale high dam as a social form originating in the American West early in the twentieth century and going world-wide in the decades following World War II. For readers interested in large-scale industrial enterprises as social and cultural forms, such possibilities are tantalizing. Lastly, Ribeiro carries forward and develops Wolf's analysis of segmented labor markets that was briefly initiated in Europe and the People Without History (Wolf 1982).

If Wolf's influence suffuses Ribeiro's work with much of its strength, it also contributes to several weaknesses that prevail, in the end, over Ribeiro's good intentions. For an anthropological readership, perhaps the most notable of these is the startling lack of ethnographic density and cultural analysis that characterizes the study. If Ribeiro was sincere in stating at the outset that he did not want "to reduce my study to an analysis of the cold dynamics of political and economic relations" (xix), he certainly failed. At no point in the study do we truly settle down into the immediate worlds of finite, multidimensional human beings, hear their voices, or see their gestures. The narration is not only omniscient, but distant and thin. Ribeiro's discussion of the Bichos-de-Obra is the closest thing to an exception, but even here the analysis remains aloof and summarizing, and disturbingly acultural. To his credit, Ribeiro seems genuinely concerned to transcend this limitation, which is perhaps the most characteristic and debilitating feature of Wolfian political economy. Nonetheless, his invocation of Geertzian concepts like "local knowledge" are never more than empty gestures.

Closely related to this evacuation of the ethnographic is what we might call a top-down bias. In Ribeiro's hands, the Yacyreta Project is very much the work of financiers, politicians, managers, and engineers. His claim to have conducted "research with the main segments of the population participating in this project, from its transnational elites to local gauchos" (xx) only amplifies the frustration that anyone who has participated in the gritty world of construction must feel with this study. There is no entry provided into the worlds of work of common laborers or equipment operators; beyond a brief overview, we have no entry to their life beyond the job. And aside from a brief discussion of the relative strength of organized labor in Paraguay and Argentina, Ribeiro presents no discussion of those who labor as a segment of the political reality of the project. This last absence points to one of the most curious lacunae in Wolfian political economy, namely, the deletion of close analyses of labor processes and the life-worlds of laborers in favor of the analysis of commodities and markets.

In summary, Wolf is correct to suggest that Ribeiro has accomplished something noteworthy here. But if this work marks a milestone, it is double-edged. Above all else, the considerable strengths of Ribeiro's book make visible the limits of Wolf's variety of political economy, and cannot help but provoke a blend of admiration and dissatisfaction. At the same time, it is quite evident from his stated desire to achieve a rich ethnographic

analysis of the lives of those involved with the Yacyreta Project that Ribeiro's ambitions transcend those of Wolf. And there lies the promise of the future.

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