

## Reimagining Political Ecology: Culture/Power/History/Nature

*Aletta Biersack*

The term *political ecology* was first used in its neo-Marxist sense by the anthropologist Eric R. Wolf (1972) to signify the study of how power relations mediate human-environment relations.<sup>1</sup> In this it marked a departure from the canonical texts of Marx and Engels, which, for all their investment in economic analysis, nonetheless ignored nature and the environment.<sup>2</sup> Placing power at the center of analysis, political ecology also differed from an apolitical "cultural" ecology that focused on the problematics of adaptation to the environment without attending to the structures of inequality that mediated human-nature articulations (Friedman 1974). In combining political economy with ecology, political ecology strove to rectify the deficiencies in both frameworks, a merger that geographers would announce in the 1980s (see Blaikie and Brookfield 1987:17).

Political ecology's political economy is not the political economy of Marx and Engels. Rather, it grew out of "dependency theory," associated by anglophones with the writings of Andre Gunder Frank (1969a), and the "world system theory" of Immanuel Wallerstein (1974). The latter in particular envisioned class in global terms. The workers of the world lived for the most part in "third world" nations on the "periphery" of the world system while the capitalist "owners of the means of production" resided primarily in "first world" nations in the "core" of the world system. The world system was thus as much a geography as it was a structure, a stratified geography of developed and undeveloped nations.

Beginning in the 1980s, social science would grapple with "postmodernist" critiques of the simplifications of "modernist" theories, theories that, for

starters, were heavily invested in the dualistic view that nature existed outside the human realm, as a distinct, independent order (see Pálsson, this volume). Postmodernism also attacked theories that read the trajectory of history in terms of an idea of progress and that emphasized overarching, coherent, rationalized wholes (system, structures, totalities) on the grounds that such theories failed to acknowledge difference, the partiality and bias of any one perspective, fragmentation, and incoherence. Structural Marxism, of which world system theory was one exemplification—as totalizing, as grand-theoretical, as Eurocentric, as teleological, and as progress-oriented a framework as one is likely to find—together with political ecology, structural Marxism's most recent offspring, was vulnerable to the postmodernist critique.

Political ecology has engaged with these and other aspects of late twentieth-century theory, transforming itself from the neo-Marxism of world system theory to discernibly *post-Marxist* frameworks.<sup>3</sup> Key to today's political ecology are five provocative theoretical reorientations:

1. Earlier ecologies, including political ecology in its first generation, differentiated symbolic from material factors (in the Marxist lexicon, superstructure from base) and tended to reduce the one to the other.<sup>4</sup> Today's political ecology resists such reductions and focuses upon the nexus of symbolic and material factors, how each conditions the other. Moreover, and more radically, whereas reality had been defined as extrasymbolic, a matter of simple fact, political ecologists today recognize that reality, insofar as it is invested with meaning, is produced "discursively," through signifying practices of various sorts, an argument that postmodernism shares with strands of post-structuralism.<sup>5</sup>
2. Relatedly, today's political ecologists critique the nature/culture dualism and focus upon the reciprocal impacts of nature and culture, using such terms as *second, social, or humanized* nature to signify a nature that is the by-product of human conceptualizations, activities, and regulations—a nature, as it were, that is *after* nature (Escobar 1999).<sup>6</sup>
3. As noted, political ecology in its first generation wedded ecology to world system theory, a theory that envisioned the world as organized into a single class system, first-world nations owning the means of production and third-world nations supplying the labor and producing the surplus value. Ecology, meanwhile, tended to focus on the local, overlooking the global. Neither framework considered the dynamics of local-global articulations, the emphasis of political ecology today.

4. Political ecology in its first generation and the cultural ecology that preceded it tended to think in terms of structures, systems, and interlocking variables and had little to say about actors and their agency. Today's political ecology inevitably engages to some degree with "practice theory" (Bourdieu 1977; Ortner 1984), a theory that attends to the constraints of structure but also to the indeterminacies of agency and events.
5. The range of differences and social inequalities that are relevant to today's political ecology is broad. In thinking beyond the class inequalities of classical Marxism (which is notoriously gender blind), political ecology has been inspired by feminism, but differences of "race" and ethnicity, among others, are also crucial in theorizing human-nature articulations.

The turn of any century is a time for taking stock. This volume looks at where political ecology has been and where it is headed, at least in the near term. *Reimagining Political Ecology* is by design vaguely oxymoronic. Political ecology is certifiably materialistic, but *imagining* and *imagination* are code words for meaning-centered approaches, and the title strives to place the tensions between neo- and post-Marxist perspectives at the center of our understanding of what political ecology is and what it might be. Responding to several crosscurrents in social theory, today's political ecology is "grounded less in a coherent theory" (Peet and Watts 1996:6) than in a fluid and ambivalent space that lies among political economy, culture theory, history, and biology. The volume's title gestures toward this terrain, inviting its readers to enter the space of culture/power/history/nature. Within this space "diverse networks of scholars and other concerned groups may communicate" (Blaikie 1999:131).

The introduction begins with a discussion of one particular legacy, in equal measure fertile and problematic: the work of Roy A. Rappaport (1926–97). Rappaport was a complex "linking" figure (Brosius 1999c:278, n. 4). His *Pigs for the Ancestors* was overtly and self-consciously "ecosystemic," informed by the notion that cultural processes must be understood as adaptive devices. Yet he is remembered as much for his claim that in the human realm constraint is symbolic and not just material, a matter of meaning as much as of need. Rappaport's work helps steer us between idealism and materialism, toward subtle and nuanced approaches to human-nature relations in all their complexity. Four of the contributors (Brosius, Greenberg, Lansing, and myself) were Rappaport's students, and we trust he would have reveled in our various engagements with, and departures from, his teachings and writings, as well as in the choice of venue for this volume: Escobar's and Rocheleau's interdisciplinary series

"New Ecologies for the Twenty-First Century." The introduction's second section chronicles the onset of political ecology in the 1970s and 1980s. Although Wolf (1972) was the first to use the term *political ecology* in a neo-Marxist sense, neo-Marxist political ecology was developed more by geographers than by anthropologists, a story that is told, however synoptically, in the second section of this introduction. The third, fourth, fifth, and sixth sections expand upon the five shifts in premise summarized above. The penultimate section proposes a research agenda for today, and the final section briefly introduces the contributions to this volume.

### Rappaport's Bridging Work

Published in 1968, Rappaport's *Pigs for the Ancestors* is a classic of modernist ecology. In its vision of nature as independent from, and prior to, culture, *Pigs for the Ancestors* pronounced science to be the epistemology of choice (see Dove, this volume). Written before the critique of anthropological writing (Clifford and Marcus, eds., 1986; Marcus and Fischer 1986), *Pigs for the Ancestors* paid considerable attention to the local worldview but favored the "operational" (or, in the language of Marvin Harris, "etic") models of science to indigenous, "cognized" (or etic) perspectives. Moreover, *Pigs' nature* is extrahuman, an "environment." It was not itself a construct of the human imagination or, indeed, an artifact of human activity—a nature that is social, human, historical, the by-product rather than the condition of human occupation.

The book concerned the Tsembaga Maring of New Guinea and how a ritual sacrifice, the *kaiko*, functioned to regulate human-nature, human-human, and even local-regional relations. The *kaiko* was a massive pig slaughter to honor and feed ancestral guardians and to compensate allies in time of war. As long as the ancestors were not reciprocated for their support with this prestation of pork, warfare could not continue, and so the *kaiko* and the extensive preparations for it marked a lull in Maring warfare. The *kaiko* could not occur until there was a critical mass of fattened pigs to appease the ancestors and to compensate the allies for their losses, protracting this lull. But there was a downside to this martial intermission. Maring women were responsible for feeding the pigs, and as the pigs fattened, the women's labor intensified. The pigs, meanwhile, became more and more unruly, raiding gardens for food. In this way, pressures on women and gardens mounted to a breaking point, when the

pigs were finally sacrificed. Among other things, the *kaiko* functioned to disperse pork and protein widely throughout a regional population. Thus, the *kaiko* served multiple purposes: social, political, economic, nutritional, and environmental.

While Rappaport explicitly undertook to demonstrate human adaptations to a nature that stood outside the human realm, it is clear in retrospect that what he actually offered in *Pigs for the Ancestors* was an ethnography of nature, as it were: a study of the intersection of culture and nature, rooted as this intersection is in human activity, conceptualization, values, and social relations. Everything depends on how we understand the *kaiko*. The *kaiko* may indeed have resolved a number of difficulties, but it is also true that the *kaiko*—and the entire logic of warfare, compensation, sacrifice, and gender relations that was foundational to it—was the cause of these problems. Explaining the *kaiko* functionally ignores the maladies that flow from it. What is needed is not a functionalist explanation of the *kaiko*—which, in any case, will always be contradicted by the fact that the *kaiko* causes the very conditions it is said to relieve—but an ethnography of the entire range of human-nature interchanges of which the *kaiko* is but one moment—in short, an *ethnography of nature*.<sup>7</sup>

Rappaport borrowed from systems theory, cybernetics, and nutritional science in a way that was compelling for the time (see Dove, this volume; Dove 2001) but that drew sharp criticism in the 1970s from culturalists (Sahlins 1976) and from those influenced by the critique of positivism at the heart of the "interpretive turn" (Geertz 1973). As political economy gained ground—spurred on by such landmark texts as Wolf's *Europe and the People Without History*—the failure of *Pigs for the Ancestors* to attend to history also came under attack. It was argued that the work presumed, without demonstrating, equilibrium, self-regulation, or homeostasis; that it overlooked social actors and their choices; that it "vulgarily" ignored the social relations of production, which organized human-nature articulations; that it reduced culture to nature; that it was ahistorical and localistic, ignoring global factors.<sup>8</sup>

Rappaport responded to such criticism with a signature move, one that helped shift ecology away from the dichotomization of symbolic and material approaches that was endemic to the social theory of the day. He argued that humanity lives "in terms of meanings in a physical world devoid of intrinsic meaning but subject to causal law" (back cover of the paperback edition of *Ecology, Meaning, and Religion*) and that any ecology "must take account of meaning as well as cause, and of the complex dynamic of their relationship."

(*ibid.*; see Messer and Lambek, eds., 2001).<sup>9</sup> Recognizing that meaning might not lead to adaptive behavior, Rappaport also countenanced, in violation of functionalism's tenets, the possibility of maladaptation. Such observations led Rappaport to elaborate a general model of adaptive systems and their "disorders" (1979, 1994a, 1994b), and in these ruminations can be found an explicit critique of "the maladies of civilization" (Hvalkof and Escobar 1998:430) as well as an implicit, albeit incipient, political ecology.

In fact, Rappaport's intellectual trajectory drew him slowly, tacitly toward political ecology (see Greenberg, this volume). His "engaged" and "repatriated" anthropology—announced in "The Anthropology of Trouble," the Distinguished Lecture in General Anthropology delivered at the annual meeting of the American Anthropological Association in 1992 (Rappaport 1993)—focused specifically on what his earlier analysis of a New Guinea society had neglected: matters of political economy. Although Rappaport's analysis is couched in terms of "the disordering of adaptive structures" (Rappaport 1994a:273), it could also be understood as a "green" indictment of the indifference of capitalism *per se* to ecological values and an exposure of the conflict or contradiction between two kinds of material factors, the one economic and the other biological, stemming from this indifference. Rappaport's policy-related theoretical contributions are implicitly political ecological, but with the stylish twist of an "interpretive turn," a turn to meaning. It is toward a kind of political ecology that Rappaport gestured in his discussion of a "general conception of adaptation and maladaptation" (1994b:301) in his contribution to Robert Borofsky's *Assessing Cultural Anthropology*. "The 'macroanthropological' formulation represented here seems to bear closer resemblance to political economy, to some forms of ecological anthropology, and to a good deal of theorizing in archeology" (*ibid.*). Indeed, in the last years of his life, Rappaport served on the editorial board of the *Journal of Political Ecology* (Greenberg, personal communication).

### Enter Political Ecology

The adaptationist paradigm of cultural ecology explained culture through its adjustments to an extrahuman order, reducing culture to nature. This argument precludes a focus on human-nature relations in other than adaptationist and reductionist terms. Moreover, to the extent that nature is considered the sole causal force, all power resides therein, and power ceases to be sociohistorical and structural.

Marxism provides a tonic to these suppositions in insisting on the socio-historical character of power and the centrality of the political to any analysis. Political ecology is rooted in the twentieth-century variants of traditional Marxism dependency theory and world system theory. As noted, world system theory envisions a global class system, the owners of the means of production residing in a systemic, but also spatialized (first world), center or core, while many workers are located in an equally systemic and spatialized (third world) periphery. This system is a system of domination and exploitation, workers selling their labor at a discount on the periphery but buying core-generated commodities at a premium within a structure of dependency and underdevelopment (Frank 1969a). Whereas earlier ecologies typically concentrated upon a local population, community, society, or culture, political ecology targets the complex hierarchies and cross-cutting linkages through which communities are embedded in larger political, economic, and social structures (Wolf 1982). The implication for ecology is that the local is subordinated to a global system of power relations and must be understood entirely with respect to that subjection, in terms of what is commonly referred to as capitalist penetration and its effects. Dependency theory and world system theory recast capitalism on a global scale, locating exploitation in underdeveloped or third world countries (Ragin and Chiroi 1984; Wolf 1982).

The first Marxist use of the term *political ecology* appears to have been that of Eric Wolf. At the time Rappaport's colleague at the University of Michigan, Wolf published an afterword to "Dynamics of Ownership in the Alpine Context" (1972:201–05), a panel of papers presented at the annual meeting of the American Anthropological Association in 1971, and in this afterword Wolf iterated again and again what would become the mantra of political ecology in its first generation: that local-level analysis was inadequate to the task, that village ecology could be understood only if the village were set within a wider framework (see Goodman and Leatherman 1998:13; Greenberg and Park 1994; Peet and Watts 1996:4–5). This is the theme of all of Wolf's writings. Most notably, it is the theme of his magnum opus, *Europe and the People Without History*, which argued that the "insights of anthropology" must be "rethought in the light of a new, historically oriented political economy" (1982:ix), the political economy of Frank and Wallerstein (*ibid.*:21–23).

A year after Wolf published his afterword, Bernard Nietschmann published *Between Land and Water*, which examined the subsistence ecology of the Miskito Indians of eastern Nicaragua in political economic terms. Nietschmann taught at the University of Michigan, where he was influenced by both Wolf

and Rappaport. In this study, Nietschmann focused not only on "the interrelationships of human subsistence needs and means and environmental stability within a local system" (1973:2), but also on "how forces generated from larger and more complex social and economic systems have changed, disrupted, and are destroying the ecological and social stability of the Miskito system" (ibid.). Tearing a page from *Pigs for the Ancestors*, which he specifically cited, Nietschmann described the Miskito subsistence system as "a complex system incorporating various mechanisms and characteristics for regulation and adaptation" (ibid.:231). Yet he also considered the impact of superordinate forces upon local equilibria: "Many of the Miskito's reactions and adaptations to outside systems have been and are increasingly maladaptive in that they tend to simplify and degrade ecosystems and decrease social control of access to, and distribution of resources" (ibid.:237). Even in this regard, Nietschmann drew sustenance from Rappaport. Such disequilibria evidenced "a trend toward hypercoherence, or too much coherence with outside systems" (ibid.:243) and an "overall tendency toward reducing the Miskito's general purpose system organized around subsistence for the community's population to a specific purpose system oriented toward differentiated access" (ibid.; see Greenberg, this volume). Nietschmann thus drew Rappaport's ecosystemic analysis—again, explicitly cited—onto political ecological terrain.

Nietschmann was a geographer, and leadership in the first generation of political ecology belonged within geography, where a "radical development geography" (Bryant 1998:80) argued "against neo-Malthusian notions of how best to deal with the world's growing population and ecological 'crisis'" (ibid.) and that "mainstream environmental research" had focused narrowly on demographic factors, neglecting questions of political economy and in particular the inequalities of capitalism (ibid.; see note 1). Thus, in his contribution to *Interpretations of Calamity*, Michael Watts insisted that "the relation between nature and society" (1983a:257) was grounded "in the labour/process and the irreducibly intersubjective quality of social life" (ibid.:257–58; see also Friedman 1974). These relations were ultimately not local but global—with respect to famines in Hausaland, for example, a matter of the impact of colonialism on the "social relations of production and hence the relation between nature and society" (ibid.:258). This argument was elaborated in Watts's monograph *Silent Violence*. Before capitalism, Watts argued, subsistence could be secured in "a type of moral economy" (1983b:xxii–xxiii), understood in Thompsonian terms, and this moral economy had enabled peasants to withstand the ordinary

risks of agricultural production (ibid.:xxii). But with market penetration and the expansion of commodity production, the moral economy was undermined and peasants became newly "vulnerable to both market crises and the climate" (ibid.:xxiii). "As a result, colonial famines were not natural, drought-induced disasters but in a real sense socially produced" (ibid.) through the commoditization of food production (ibid.) and the loss of prior safety nets.

Equally pathbreaking, *The Political Economy of Soil Erosion in Developing Countries* by Piers Blaikie (1985) powerfully and explicitly merged environmental studies with political economy. The book focused on "the ways in which the development of capitalism affects peasantries and pastoralists, and thereby the ways in which they use the environment" (ibid.:119). In particular, Blaikie argued that capitalism extracted surpluses from peasants and pastoralists, who then, in their need for money, overutilized their natural resources, "[taking] out of the soil, pastures and forests what they cannot afford to put back in" (ibid.:7). This tendency was exacerbated by land-users' "displacement and often confinement into a small land area" (ibid.) and by state taxation schemes that necessitated market participation and/or wage labor (ibid.). In this way, Blaikie attributed environmental events and environmental status to political economy, understood in terms of world system theory.

Building upon these theoretical gains, Blaikie teamed with Harold Brookfield to coedit the highly influential volume *Land Degradation and Society*, published in 1987. In their introduction, Blaikie and Brookfield argued for dialogue between the social and natural sciences. Yet the book sought "the deeper causes of land degradation" (Blaikie and Brookfield 1987a:xix) far more in the social than in the natural sciences. Soil erosion was not to be explained in terms of "characteristics of soil, geology and climate, and . . . purely physical constraints" (ibid.), for "land degradation should by definition be a social problem" (1987b:1). They called their approach a "regional political ecology" (ibid.:17, emphasis removed), the term *political ecology* referring to the combined "concerns of ecology and a broadly defined political economy. Together this encompasses the constantly shifting dialectic between society and land-based resources, and also within classes and groups within society itself" (ibid.). Acknowledging the limits of "the populist approach" (1987c:243), Blaikie and Brookfield nonetheless inserted local land managers, with their toolkit of local knowledges and practices, into this array of otherwise impersonal forces, pursuing an approach that was "highly conjunctural" (1987c:239), global but also local. These innovations—the focus on local-level decision

making but within the context of "ecological 'marginality'" within a wider system (Castrée and Braun 1998:12; Watts 2000:262), the conjunctural approach, the attention to local knowledge and practices—all continue to be productive today.

Geographers were by no means the only social scientists to contribute to the growing consensus that ecology was political economy or it was nothing. The anthology *Lands at Risk in the Third World: Local-Level Perspectives*, edited by the anthropologists Peter Little and Michael Horowitz, brought together various scholars keen to render ecology a social science (1987:5). The contribution of the anthropologist Marianne Schmink and the sociologist Charles Wood, "The 'Political Ecology' of Amazonia," was particularly indicative of the emerging neo-Marxist synthesis within ecology. Schmink and Wood argued that Amazonian indigenous groups tended to share "a production system oriented primarily to simple reproduction" (1987:42) and that such production systems exhibited a balance that is disrupted by the demands on production created by colonialism and capitalist penetration. But "capitalism is an inherently expanding system" (ibid.), and its "logic of expanded production is inherently degrading to land and other resources" (ibid.:43). "So long as governments do not impose their own regulatory mechanisms, the natural environment can (indeed, must) be exploited for maximum short-term gain" (ibid.), setting up the conditions of environmental degradation (see O'Connor 1998; see also Greenberg, this volume). Schmink and Wood were clear about the implications. As an extension of political economy, political ecology offered a "structural perspective, emphasizing the causal relationships between a society's economic base—the form of production and the associated class structure—and the legal institutions and administrative agencies of the state" (1987:46). This "structural perspective" differentiated powerful from weak actors—those associated with private accumulation, who owned the means of production and to whom the state tended "to cater" (ibid.:52), on the one hand, from the marginalized, poorer groups, which would be victimized by capitalism's self-interested, ruthless "rationality," on the other.

Mergers tend to create energized sites of theoretical production and synthesis, and political ecology, Marxism's green turn (see note 2), is no exception. James O'Connor's theory of capitalism's "second contradiction," published in bits and pieces in the 1980s in O'Connor's journal *Capitalism, Nature, Socialism* and in its entirety in *Natural Causes: Ecological Marxism* in 1998, is arguably the most noteworthy revision of Marxist theory that ecological Marxism

has inspired. According to O'Connor, capitalism's "first contradiction" arises from the fact that capitalist production is not only production of commodities but also production of surplus value" (1998:127). Workers do not realize this surplus value. The "exploitation of labor means simply that class struggle and economic crisis are inherent in capitalism" (ibid.), leading ultimately to a proletarian revolution and all the rest. But today capitalism devours the very resources upon which its profits depend, rendering "the basic contradiction of world capitalism" (ibid.:xii) the fact that "capitalist production relations . . . degrade or destroy the *conditions* of production, including and especially the environment" (ibid.:8). Environmental movements are a logical outgrowth of capitalism's second contradiction and an impediment to further capitalist accumulation (ibid.; see Greenberg, this volume; see also Escobar 1996:54–56).

#### Beyond Idealism/Materialism: From "First" to "Second" Nature

Political ecology arose at a time of sharp polarization between idealists (those who attributed cultures and institutions to human invention) and materialists (those who explained these in terms of physical need). This polarization precluded examining the relationship between symbols and physical constraints, a relationship that has become central to the concerns of political ecology in its second generation.

Dichotomizing the symbolic and the material presupposes distinguishing them in the first place, but the line between the two today blurs in light of the revolutionary claim of postmodernism and its close ally in this regard, poststructuralism, that signification or discourse constructs rather than reflects reality (see note 5). By implication, reality is no objective fact, existing independently of human beings, as the positivists would have it, but a language effect.<sup>10</sup> Reality is thus in some measure a human artifact, a claim that carries great weight in the social and human sciences today. It first gained leverage with feminism's distinction between sexual or anatomical differences, on the one hand, and gender, the conventional interpretation of those differences, on the other. At least in theory, anatomical differences were a given, a datum of nature, but gender differences were discursively constructed sociohistorical products.<sup>11</sup>

Constructionism challenges any sharp division between symbolic and material-political approaches. Constructing "woman" as less rational, less intelligent, and less strong than men, for example, has had, and continues to have,

serious material and political consequences, consequences that are rooted in the symbolic. Moreover, if signification constructs rather than reflects reality, it is itself powerful. The question is no longer the positivist question of whether representation is accurate, copying a reality that is extrasymbolic—whether, for example, “cognized” models parallel “operationalized” models, a key problematic of older ecologies (Rappaport 1979: 97–144; see also Wolf 1999b)—but what reality is being constructed, by whom, for whom, for what political purpose, and to what political effect. The constructionist argument enlarges the political sphere to include the discursive practices through which objects are invested with meaning—the way, for example, that anatomical differences are made to signify gender differences—and discourse itself.

Terms such as *second nature*, *social nature*, and *humanized nature* (see note 6) refer to that nature that is, in a sense, “after nature” (Escobar 1999a), the by-product of discourse and also activity. *Second nature* is Marx’s and Engels’s term, and it is the one that will be used here. First nature is original, primal, extrahuman, nature as it exists externally, independently of human activity. But second nature is nature as it has been transformed through human activity: “Nature, the nature that preceded human history, . . . is nature which today no longer exists anywhere (except perhaps on a few Australian coral islands of recent origin)” (Marx and Engels 2000: 175). Second nature, in short, bears the imprint of humanity. Here I use the term *second nature* to mean something broader than Marx and Engels meant: a nature that is *humanly* produced (through conceptualization as well as activity) and that therefore partakes, but without being entirely, of the human.

If first nature belongs to the sciences, second nature is the by-product of humanity in its relation to nature and belongs as much to the study of politics, society, religion, art, and to the “soft” sciences that study them as it does to the “hard” sciences. Consequently it is possible to produce histories and ethnographies of (second) nature—accounts, that is, of the history of these articulations and the worldviews and lifeways that the environment, no longer external or prior to culture, materializes. Indeed, it could be argued that much of the cultural and new ecology of the 1950s and 1960s was directed at second rather than first nature. Carrying capacity measures the demographic capability of a particular environment given certain social arrangements and practices, for example, and is thus a datum of *second*, not *first*, nature (Kelly 1968; see also Friedman 1974). To the extent that this is true, modernist ecological writings of this era (see Dove and Pálsson, this volume), ostensibly scientific treatises, were all ethnographies of (second) nature.

## Development, Transnational Studies, and the Concept of Place

Political ecology today more generally abandons the dualisms of the past and the reductions that binaristic thinking encouraged and focuses instead on the interchanges between nature and culture, the symbolic and the material, and (the topic of this section) the local and the global. This section uses a particular concept of place to join post-Marxist political ecology with transnational studies, and it singles out development as the topic of choice for this alliance.

### *The Concept of Place*

Even in the heyday of neo-Marxist political ecology, the vision of capitalism as a juggernaut that transformed everything in its path and was itself impervious to noncapitalistic forces was troubling to some. The sociologist Stephen Bunker, in his *Undeveloping the Amazon*, for example, observed that “locally dominant groups enter into world market exchanges according to their own perceived opportunities” and that “they themselves may reorganize local modes of production and extraction” (1985: 54), thus functioning as a constitutive force within a larger field of intersecting regional, national, and global constraints. What necessarily attracted the analyst’s eye was “the *interaction* of regional and global constraints, pressures, and opportunities” (ibid.: 238; emphasis added). Similarly, in *Silent Violence*, Michael Watts questioned the “monolithic” character of “metropolitan capital” as it penetrated “Third World” formations (1983b: 182), and he focused not on the alleged monolith but on its engagement with the local—that is, upon “a complex and contradictory articulation of a capitalist system with persisting noncapitalist forms of production” (ibid.). He would conclude that the “conjunction of metropolitan capital and noncapitalist social relations in northern Nigeria produced a truncated capitalism characterized by complex, varied, and hybrid forms of economic activity. European capital did not unashamedly call the shots, and what emerged was . . . a syncretic combination of the old and the new” (ibid.).

The dawn of the twenty-first century finds the Wallersteinian vision of a single, unified “world system,” however still salient for some, under fire by others. Some denounce as fantastical the Wallersteinian specter of capitalism as an omnipotent totality (see Escobar 2001: 153–59). In a recent critique of David Harvey’s (among others’) work, for example, Michael Smith argues that “Harvey invests capitalism with too much systemic coherence and capitalist class actors with too much . . . hegemonic power” (2001: 46). Similarly Gibson-

Graham dismisses "Capitalism" (the discursive construction) as "a fantasy of wholeness, one that operates to obscure diversity and disunity" (1995:193; see also Gibson-Graham 1996/97). Shorn of its omnipotence, capitalism no longer supervenes but *intervenes*, engaging with the local, accommodating and negotiating with it as a condition of its own "penetration." As Stuart Hall has observed, "Globalization cannot proceed without [capitalism] learning to live with and through specificity" (1997:29); "in order to maintain its global position, capital has had to negotiate and by negotiate I mean it had to incorporate and partly reflect the differences it was trying to overcome" (ibid.:32). Mike Featherstone makes a similar point. Multinational enterprises, he says, "take into account the particularities of local cultures and adopt organizational cultural practices and modes of orientation which are flexible enough to facilitate this" (Featherstone 1993:174).<sup>12</sup> These arguments in effect locate the so-called global and globalizing processes within the interconnections and exchanges between the North or the West and its Other, a point to which I will soon return.

In this effort to reconceptualize globalizing processes in nonvertical terms, the word that gathers momentum is *place*.<sup>13</sup> While for some *place* refers to the local and all it would seem to entail,<sup>14</sup> for others place is *not* the local, *not* globality's Other but, rather, *the grounded site of local-global articulation and interaction*: "Places are nodes within relational fields — sites of local-global articulation" (Birsack 1999b:81). If now we ask, Where is place?, the answer is clearly both local and relational. Place is "never simply local, sealed off from an outside beyond" (Moore 1998:347), and to study place is to "move from hermetically sealed sites of autonomy to relational spaces of connection and articulation" (ibid.). In fact, articulations are as crucial to defining the particularities of any place as are its "native" features. Place is defined, or rendered distinct, "precisely through the particularity of linkage to that 'outside' which is therefore itself part of what constitutes the place" (Massey 1993:67). "Individual 'places' are precisely located differentially in the global network of such relations. Further, the specificity of place also derives from the fact that each place is the focus of a distinct mixture of wider and more local social relations. . . . And, finally, all these relations interact with and take a further element of specificity from the accumulated history of a place, with that history itself conceptualized as the product of layer upon layer of different sets of linkages both local and to the wider world" (ibid.:68). Places, in short, are constructed historically in processes that spatially exceed the local and in which the extralocal is as constitutive as the local.

Turning upon the relationship between the local and the global and the dynamics of that relationship, place (as Bunker [1985] and Watts [1983a, 1983b] knew some twenty years ago) is fundamentally intermediary.<sup>15</sup> The concept of place is thus suitable for a political ecology that breaks with the "overdeterminations of a distinct 'global'" (Raffles 1999:350), such as is imagined in world system theory, and focuses instead on "the *transversal*, the *transactional*" (Ong 1999:4), the "*horizontal and relational*" (ibid.). The following pages use the expression "place-based approach" to signify this rotation from a vertical and binaristic to a horizontal and dialectical perspective on local-global relations.

### *Transnational Spaces and Place-Making*

With its interest in the flow of finance capital, technology, and people and their labor across national borders, transnational studies are necessarily informed by political economy. But transnational studies also theorize the movement of images, values, and meanings within transnational circuits, and in this they depart from political economy. Political ecology today also explores the nexus of the symbolic and the material, but its relationship with transnational studies has yet to be determined. Are political ecology and transnational studies allies or overlapping domains of inquiry?

Some of the rhetoric of transnational studies would seem to preclude an alliance between the two. While we undoubtedly live under "a condition of transnationality" (Herzfeld 2001:166), imagining this condition in terms of transnational "flows" but not also their catchments, travel but not also dwelling, deterritorialization but not also transplantation, or, with respect to James Clifford's famous dichotomy, routes but not also roots (1992, 1997a) seemingly deprives ecology of any purchase within transnational studies. Ecology requires all that the root metaphor implies: concrete locations, a piece of dirt. But if we reimagine the transnational in place-based terms, transnational studies and a place-based political ecology become not only compatible but *coincident*; for the concept of place installs the local within transnational spaces even as it centers those spaces on local-global articulations and the dynamics thereof. What transnational studies and a place-based political ecology would have in common are those dynamics, as well as the related questions of how transnational spaces are created and how places are made.

Anthropologists and geographers today shift from an objectivist to a constructionist view of space. Instead of space being the container of activity, constructionists view space as the by-product of activity.<sup>16</sup> A garden, for example, does not so much occupy as constitute a space, through the gardening ac-

tivity of its own creation. Whereas world system theory imagined geography in structural terms, as the spatialization of a mode of production that turned on the axis of first/third world nations, the constructionist perspective brings geography within the fold of practice theory and renders space historical.<sup>17</sup> Key questions for both place-based political ecology and transnational studies are, How are transnational spaces created, modified, or annihilated? What linkages are forged or undone, by whom, and for what purposes? What enables and disables these articulations? Are these spatializations compatible with or disruptive of other spatialization projects (see Kottak 1999; Kottak and Colson 1994)?

Neo-Marxist political ecology assumed that transnational linkages were forged from above by hegemonic Euro-American powers. But grassroots activity is equally important in understanding how the transnational spaces of capitalism and colonialism, globalization so-called, are created, reinforced, contested, or rebuffed. Several of the contributors to this volume chronicle instances of the forging *from below* of transnational ties in the context of globalization or antiglobalization projects. Hvalkof, for example, tells us that the Ashéninka gained leverage against the spatialization practices of the colonists by mobilizing World Bank support (Hvalkof, this volume). The Penan, meanwhile, have long exploited media, NGOs, and high-profile celebrities such as Sting and Al Gore to negotiate the terms of logging or ban it altogether (Brosius 1999a, 2003, this volume; see also Turner 1993b). In Robbins's account, the condition of capitalist penetration and the commodification of local resources is ironically the Maussian gift of these resources that the Urapmin of New Guinea make to foreign developers. Since the specificity of place is the specificity of linkage and since transnational spaces center on linkages, the question of how transnational spaces are created and formed is inseparable from the question of place-making whenever the linkages that give a place its specificity are transnational.<sup>18</sup> For Harvey (1993), space and place are not only not dichotomous, to the extent that the defining linkages of place are international, but transnational space and place *co-arise*.<sup>19</sup> A number of the contributions to this volume investigate the *coproduction* of place and transnational space through grassroots activity.

It has been more than a decade since Gupta and Ferguson first challenged the notion that "a culture" is naturally the property of a spatially localized people and that the way to study such a culture is to go 'there' ('among the so-and-so') (1997a:3; see also Gupta and Ferguson 1997b). They would locate the

so-called local within transnational spaces, as I have done here, thus challenging the premise of a now-obsolete ethnography that "peoples and cultures" (ibid.) are geographically bounded or territorialized. To the extent that political ecology focuses on the creation of transnational space and its inevitable corollary place-making, political ecology opens up new ethnographic vistas. These new vistas erupt on the scale of the transnational, not the local, providing us with opportunities to respond to the critique of localistic ethnographic practices but without throwing the baby (ethnography) out with the bathwater.

Such vistas also provide occasion for a historical anthropology that refuses synchronic approaches and that takes practice and other contingencies seriously. To argue that space is constructed through the activities of agents is to argue for the historicization of both anthropological and geographical inquiry. We may expect that historians and geographers, no less than anthropologists, would be attracted to the new ethnographic terrain that the alliance of a place-based political ecology with transnational studies would open up, providing occasion for interdisciplinary collaboration.

#### *Development, Agency, and Meaning*

Development frequently, if not always, involves resources, their cultivation, and their commodification. Historically it has had a special relevance for political ecology, and it continues to have a special relevance for a place-based post-Marxist political ecology that is in league with transnational studies.

Earlier development studies assumed a high degree of structural determinism. The rich were rich and the poor were poor because of the global structure of inequality (the capitalist mode of production) in which they both participated. These development studies underestimated the importance of grassroots agency and grassroots leaders as a result. Focusing on the local-global nexus and its dynamics, a place-based approach necessarily considers how the grass roots responds to the engines of globalization. As Gupta has observed, any account of development must consider "its shaping by peasant resistance and activism" (1998:13) if development's "specific trajectory" (ibid.) at equally specific sites of local-global articulation is to be understood.

There is already a considerable literature that approaches development from a place-based perspective, although not in so many words. Most notably, James Scott's "resistance" names a domain of subtle "rural political agency" (Starn 1992:91): "the prosaic but constant struggle between the peasantry" [mani-

fested in] 'foot dragging, dissimulation, desertion, false compliance, pilfering, feigned ignorance, slander, arson, sabotage, and so on' [(Scott 1985: xvi)] and those who seek to extract labor, food, taxes, rents, and interests from them" (ibid.). As important as Scott's writings have been to a "broadening of academic appreciation for rural political agency" (Starn 1992: 91), they arguably paint a "picture of rural people" that is unduly "quiescent," albeit "never passive" (ibid.), and fail to address "open peasant movements" (ibid.: 92), "social movements" and oppositional "campaigns," and other forms of activism.<sup>20</sup> Such activism reasserts alterior, vernacular perspectives and lifeways in an effort to "survive the overwhelming impact of the global and transnational" (Wilson 2000: 247) in "neolocal or reindigenous" (ibid.) orders.

Consider, for example, "Progress of the Victims," Hvalkof's contribution to this volume, which concerns an indigenous Peruvian group and its campaign to fend off an alien "progress" in the interest of preserving their way of life. The Ashéninka live in the Gran Pajonal (grasslands) of central Peru, and they were and still largely are dependent upon the forest for their livelihood. They compete for resources with the Andean *colonos*, a quasi-mestizo group who breed cattle and who are bent upon reclaiming the forest for cattle production. To the colonists the grasslands and cattle symbolize their "millennial dream of success, wealth, and greatness" (ibid., 203), of "civilization and progress . . . the entire modern developmental paradigm" (ibid.). But for the indigenous Ashéninka these same grasslands give "identity to the place and the people" (ibid.). The Ashéninka value the grasslands for their proximity to the rain forest, which "is still the soul of the Ashéninka livelihood and existence" (ibid.) and which has mythological and cosmological significance. In their environmental implications these perspectives are diametrically opposed. "Whereas the colonists terminate the forest, incessantly expanding cattle pasture" (ibid., 204), the Ashéninka "strive to regulate the balance between the grasslands and the forest" (ibid.), the dual and indispensable features of the Ashéninka world. In recovering lands, Ashéninka seek to stem the tide of progress *colonos*-style, perpetuating their way of life.

Pressure from below may be appropriate rather than oppositional, a matter of commandeering development for indigenous ends. So Sahlins has suggested. "Development," his rendering of the Melanesian pidgin term (Tok Pisin) for development (1992, 2000: 419–20, 490–91, 512–14), which refers to the hijacking of development for alodevelopmental, neotraditional purposes. The difference between development and development is the *man* mor-

pheme, which particularizes development by imagining it as cultural elaboration. Thus, in New Guinea, arguably the exchange/feasting/politicking capital of the world, development stipulates "the use of foreign wealth in the expansion of feasting, politicking, subsidizing kinship" (Sahlins 2000: 512) and all manner of "cultural self-realization on a material scale and in material forms never before known" (ibid.: 420). The concept of progress is here relativized, rendered cultural, an argument that resonates with Hvalkof's use of the word. Similarly, in "But the Young Men Don't Want to Farm Any More": Political Ecology and Consumer Culture in Belize," Wilk explains in *cultural* terms the fact that the Mayan Kekchi (a.k.a. Q'eqchi') farmers of Belize intensify consumption whenever market conditions enable them to do so.

The contributions to this volume suggest that any aprioristic assumption of resistance and other oppositional politics or development (the cultural appropriation of development) could obscure more than it reveals. Development is indeed a bandwagon upon which some indigenous populations have hopped. "The myth of modernization" (Ferguson 2000: 14), with its "tropes of development and progress, emergence and advance" (ibid.: 15), inspires hope and "expectations of modernity" in distant locales (see also Knauff 2002). Even Brosius, whose ethnography of the campaign of the Sarawak (Borneo) Penan against logging is arguably the best-documented case of grassroots oppositional politics in the anthropological literature (see also Turner 1993b), is ambivalent about using the word *resistance*. The most dramatic Penan antilogging demonstrations should not be viewed "exclusively as acts of resistance" (this volume, 283), he writes. Borne of "frustration" and "desperation," they are attempts "to get the government to listen" to the demonstrators and thus "simultaneously . . . efforts at *engagement*" (ibid., 283; see also 316). In essence, the Penan wish to participate in public debates, enlarging the scope of democratic processes by inserting themselves within these processes. By the same token, far from demonizing transnational corporations (cf. Taussig 1980), the Urapmin (Robbins, this volume) appear eager to enter into a Faustian pact with the transnational devil to meet what they perceive to be the condition of forming a community of mutual recognition across the color bar: the timeworn strategy of prestation.

Resistance, social movements, development—these are varying manifestations of the local-global dynamics to which places are party. Insofar as these dynamics mediate human-nature articulations, they are central to the concerns of a place-based political ecology. They also provide occasion for explor-

ing how symbolic and material factors are interwoven within irreducibly complex and broadly political realities. Resistance, campaigns, appropriations, and even cooptation and complicity are all motivated from within as well as from without and must be understood, at least in part, in terms of the vernacular perspectives and lifeways they tacitly or explicitly assert in the face of Northern incursions. As the contributions of Brosius, Hvalkof, Robbins, and myself make clear, grassroots agency of any sort operates "at the interface of culture and politics" (Alvarez, Dagnino, and Escobar 1998b:xi); "struggles for rights and economic and political-institutional power" are "deeply entangled" with "struggles . . . over meanings and representations" (ibid.). In bringing actors and agency within its framework, today's political ecology inevitably incorporates consciousness, ideology, and meaning and the relationship between these and material life into its study.

#### Difference, Feminism, and Postcolonialism

There is a final reorientation that is foundational to political ecology in its second generation, one that is enabled by the constructionist argument that reality is posterior rather than prior to discourse—in a word, constructed. Whereas political ecology emphasizes class differences, today's political ecology attends to a range of differences that includes, but is not restricted to, class (Moore, Pandian, and Kosek 2003; Moore, Kosek, and Pandian, eds., 2003). For a Marxist, class difference is objective, a fact. As has already been pointed out, gender is not an objective but a discursive fact, and the same is true of race, a word that sometimes appears within quotation marks to underscore its constructed character (Gates, Jr., ed., 1985). Ethnicity, too, so the argument goes, is "invented" or "performed" into existence and is thus a discursive product. Thomas-Slayer and Rocheleau have pointed out that "access to and control of resources are inextricably linked to the positioning of people by ethnicity, race, class, and gender" (1995:7–8; see also Rocheleau, Thomas-Slayer, and Wangari 1996).<sup>21</sup> To the extent that these divergences make a difference in terms of "access to and control of resources," a political ecology that addresses them explores the intersection of the symbolic and the material.

For the past thirty years gender has been a constant object of contemplation and criticism across the social and human sciences. As a reading of anatomical differences, gender belongs to second nature, and early, still important writings on gender opened up a pathway into ecology. Nature is not only humanity's

but *humanity's* other (Haraway 1989). Is nature to culture as female is to male, then?—a question Ortner raised in 1974 in her provocative think piece "Is Nature to Culture as Female Is to Male?"<sup>22</sup> Ortner posed this question at a time when symbolic studies distanced themselves from material studies. But gender as a symbolic construction clearly has material consequences, empowering actors differentially in terms of resource access, control, stewardship, ownership, and the division of labor. Within and without political ecology, gender is a high-profile site for exploring the nexus of the symbolic, the material, and the political. A *gendered* political ecology provides an indispensable antidote not only to the reductions of the past but to the androcentrism of earlier ecologies. It also serves to highlight the fractures and divisions within a society that is no longer conceived as "solidary" and homogeneous.<sup>23</sup>

The sociohistorical production of difference is no more potent or toxic than under colonial circumstances of unequal discursive and material power.<sup>24</sup> These cultural politics lie not outside but *within* ecology, as a historical condition of human-nature articulations. Indeed, the argument that differences are contingent, constructed, profoundly political products was most powerfully stated in *Orientalism*, Edward Said's exposé of the production of difference under the circumstances of unequal discursive and material power that lies at the heart of colonialism. A political ecology that attends to a broad spectrum of differences as well as to the production of knowledge in situations of discursive and material asymmetry is a political ecology that is drawn powerfully onto postcolonial terrain.

The place concept itself draws us there, for, in signifying the nexus of the local and global, it averts not only the structural determinism but the evolutionism, orientalism, and Eurocentrism of the familiar and racialized binaries local/global, first/third world, developed/undeveloped and, relatedly, traditional/modern (Gupta 1998:10, 172 ff.), and civilized/uncivilized. Acknowledging the impact of capitalism's outside upon the various genealogies of modernity, the place-based approach stipulates to the limitations of capitalocentric and Eurocentric analyses and reimagines the first-third world axis of "encompassment" in more horizontal, dialectical terms, as a transnational space of nonreleological (albeit constrained) engagement. Within this space power may be distributed unevenly, but it *is* distributed, engendering variabilities and heterodoxies. The place-based approach acknowledges the presence of grassroots agents and takes as an empirical question the matter of their efficacy, contributing to a postcolonial historiography that renders "subalterns"

subjects of their own history (Thompson 1966). It also concentrates upon the production of transnational spaces and the inevitable corollary of that production, place-making, and in this renders subalterns *subjects of their own geography*. In these ways, a place-based political ecology necessarily partakes of and contributes to postcolonial studies, particularly in the area of development.

#### A Research Agenda for Today

Reviews such as this have the virtue of pointing us in what appear to be promising directions. I close this discussion with some thoughts on near-term priorities. They are tied to terms that have recurred in this introduction: second nature, agency, place and place-making, difference, postcolonial studies, and the like. Although the agenda is fundamentally interdisciplinary, anthropology does have its own purchase within it, and I begin with this purchase.

Watts has defined political ecology in terms of "the complex relations between nature and society" (2000:257), focusing on "what one might call the forms of access and control over resources and their implications for environmental health and sustainable livelihoods" (*ibid.*). Watts here directs us to the study of the social relations of production in all their variability, including (but not restricted to) those of capitalism. But political ecology must also attend to the *culture* of such access and control, the *culture* of production, distribution, and exchange, the *culture* of the social relations of production and other human-nature articulations. The extensive literature on social or gift exchange has taught us that exchange sometimes trumps consumption or production as the economically salient activity (this precept is all but explicit in Sahlins's development concept and inheres in Robbins's discussion of property and prestation in this volume) and that the "social relations of production" so central to any political economy framework may actually be marginal or secondary outside capitalism. The appropriation of nature is not only historical and social (Peluso and Watts 2001:27), but also cultural. Exchange-centered and production-centered "economies" institutionalize human-nature articulations in very different ways, as participants in the formalism v. substantivism debate of several decades ago could attest (see Wilk, this volume; see also Sahlins 1972).

Escobar (1999a) has coined the phrase "nature regime" to refer to the socio-historically variable conventions and institutionalizations of human-nature articulations, emphasizing in particular the "capitalist" and the "organic" na-

ture regime. The latter appears to be a catchall category for conventions and institutionalizations of human-nature articulations outside Euro-American influence and requires refinement in light of anthropological data and comparisons. That said, the term *nature regime* does begin to equip a political ecology that is focused more on history and regional and cross-regional interchanges than on evolution and cultural isolates with a vocabulary for describing, first of all, ecological variability and, second, the dynamics of those interchanges. In effect, Escobar's concept of nature regime directs our attention away from the comparison of evolutionary stages of "sociocultural integration" (Steward 1955) and toward the study of globalizing processes as these unfold on the ground. Anthropology is by no means the only discipline devoted to comparison that Escobar's concept of nature regime might reinvestigate, but the concept has a special value for anthropology, a field that has long focused on the cultural variability of human-nature articulations, albeit under the guise of an *economic* rather than an ecological anthropology. In the near term, political ecology could profitably focus on comparative nature regimes, their articulations and interpenetrations, and the histories and spatializations of these articulations and interpenetrations.

In reinterpreting the cultural ecology of the 1950s, 1960s, and 1970s, as well as Rappaport's "new ecology," I used the term *ethnography of nature*. The word *nature* here refers to second rather than to first nature—to nature as it is embedded within sociohistorical realities, to a nature, then, as it is poised between biology and history (Escobar 1999a). An ethnography of nature—*Pigs for the Ancestors*, for example—examines the conventionalization or institutionalization of human-nature articulations (within modes of production, exchange, reproduction, etc.) and the actual practices that both effect and affect these articulations. It focuses, in short, on nature regime and the dynamics of interlocking nature regimes.

From its inception, political ecology has rejected the localism of earlier ecologies. In its first generation political ecology tended to be capitalocentric and viewed the local as an inflection of the global. However, this capitalocentrism was sometimes tempered by a recognition of the existence of capitalism's other or others and the space of opposition, negotiation, and/or collaboration that globalization inevitably opens up. It is upon this more nuanced understanding of the dynamics of globalization that today's political ecology must build. The ethnographies of nature that are appropriate in an era of globalization are quite different from Rappaport's ethnography of nature,

which was limited to the locality and the immediate region, but they also deviate from a world system perspective in acknowledging the role that grassroots agency and the perceptions, motivations, and values that inform this agency play in human-environment relations. Human-nature articulations are today forged complexly within the transnational spaces of local-global articulations. Studying such articulations-within-articulations requires the "linkage" approach that Kottak and Colson have recommended (Kottak 1999; Kottak and Colson 1994), along with the "multi-sited" ethnography Marcus famously insisted upon (1995; see also Clifford 1997; Gupta and Ferguson 1997c). But they may also be studied by problematizing any one site in terms of these complexities, as the contributions to this volume demonstrate.

Much has been made here of the relationship between the local and the global, but very little has been said about the nation-state. The state's intervention in development programs is frequently "massive" (Bunker 1985:238), for the state's capitalizations of nature (Greenberg, this volume) and development policies set the stage for the local-global articulations that ethnographies of nature concern. World system theory is sometimes faulted for its inadequate theorization of the role of the state, and the same argument could be made of transnational studies, where the emphasis has been on flow across seemingly permeable national boundaries. But are these boundaries permeable, and, if they are not, how do we pursue a transnational, place-based political ecology that accommodates the state (Greenberg), the nation (Berglund), and the nation-state?

I have already indicated some of the ways in which a place-based political ecology contributes to postcolonial studies, particularly in the area of development. It remains for political ecology to decolonize the production of environmental and political ecological knowledge and to develop critical awareness of its own implication in the very dynamics it studies. The North has no monopoly on environmental knowledge, and political ecology ideally inquires into alterior bodies of practical and theoretical knowledge in the spirit of decolonizing environmental knowledge, a matter that Dove's, Pálsson's, and Lansing et al.'s contributions in particular address.<sup>25</sup> Also, to the extent that local decision making and environmental management are important (Blaikie and Brookfield, eds., 1987), so, too, are local knowledges and practices. Important in this regard is the issue of the gendering of environmental knowledge and practice and its history (Rocheleau, Juma, and Wamalwa-Muragori 1995). Those issues of representation, reflexivity, and positionality that have be-

deviled ethnography over the past two decades are becoming increasingly important within political ecology, the more so the greater the material stakes. How are "interpretations and representations of the environment" (Blaikie 1999:143) formed, "whose knowledge counts and why?" (ibid.); who speaks and deploys "truth" and toward what end? Moreover, where there are material stakes, political ecological *writings* have an inescapable material impact and must be approached and critiqued as such. A domain of academic representation, political ecology is implicated in the very processes the analyst seeks to study and must fall subject to reflexive, self-critical commentary, an emerging trend within political ecology that this volume helps foster.<sup>26</sup>

There is, finally, the need for fruitful collaboration across disciplinary lines, an interdisciplinarity that captures the scope of culture/power/history/nature.

A decided strength of political economy was its refusal to compartmentalize the various aspects of the phenomena it studied (Wolf 1982). As Clifford reminds us, Eric Wolf "defined anthropology as a 'discipline between disciplines'" (Clifford 1997:60), and the same could be said of geography and history. In the past fifteen years, geography has steadily increased its "symbolic capital" with its argument that all social phenomena are spatialized and must be studied as such. In the past ten to fifteen years anthropology has subtly but unmistakably oriented itself to geography by adopting an analytical vocabulary that is laden with terms borrowed from geography: space, landscape, geography, and place (see especially Low and Lawrence-Zúñiga, eds., 2003). As the Ipili speakers of the Papua New Guinea highlands know so well, however, there is no space apart from time and no time apart from space, and so all space-focused study is necessarily temporalized just as all historical study is necessarily spatialized. The questions are always geographical, historical, anthropological, political, economic, and sociological—all at once, a matter of culture/power/history/nature.

The constructionist position has fueled a debate, ontological and epistemological, about whether (first) nature actually exists (the realist position) or is only construction (the constructionist position), and, if it does exist, whether it can be known as such or whether every attempt to know it necessarily results in another subjective construction rather than in objective facts.<sup>27</sup> I dare say that the argument that there is no nature, only "nature," a construction, has little appeal for most political ecologists, for whom the stakes must be real and material if they are to be fully political. While it is undoubtedly true that "the forest" [that discursively, textually constructed reality] cannot preexist its

construction" (Braun and Wainwright 2001: 45; see Berglund, this volume), the forest remains for most political ecologists an "unmetaphorized" reality" (Milton 1996: 215) that must be known as such. Although epistemologically and practically "it is increasingly impossible to separate nature off into its own ontological space" (Castree and Braun 1998: 5), political ecology cannot afford to surrender that measure of realism that allows it to distinguish, for example, redness as symbol from redness as chemical effect with respect to Porgera's environmental issue (Biersack, this volume).

I have emphasized here the concept of second nature and even enlarged its meaning to include constructions of nature and not just the transformations of nature human activities occasion, as Marx and Engels used the term. Although second nature is "after nature," it does not supersede nature but, rather, constitutes the *interface* between (first) nature, on the one hand, and culture, power, and history, on the other. Just where the line is drawn in particular instances of second nature between, on the one hand, nature and, on the other hand, culture, power, and history will no doubt be a contentious issue, but the effort to draw this line must be made, for it is only by drawing this line that the nexus of culture/power/history/nature comes into relief and becomes an analytical object. This means that, in addition to the obvious interdisciplinarity of political ecology—the need to attend to cultural, social, historical, spatial, and political factors all at once—political ecology necessarily bridges the social/human and the natural sciences.

In a recent overview, *Anthropology: Theoretical Practice in Culture and Society*, Michael Herzfeld argues for the "militant middle ground" (2001: x). This space is established at a "skeptical distance from the solipsistic extremes . . . of modern sociocultural theory: postmodernism and positivism in their more dogmatic excesses" (*ibid.*), and it is "strongly resistant to closure and . . . truly grounded in an open-ended appreciation of the empirical" (*ibid.*). Regardless of how serious political ecology's cultural or linguistic turn and its commitment to issues of power and history, the problem of the real is necessarily on the agenda of political ecology. However new its materialism (Biersack 1999c: 11–12), it must also address the *material* stakes of a *material* world. Today's political ecology refuses to reduce culture to nature or nature to culture but operates productively in the space between the two—the relationship between signifying and other practices, on the one hand, and an extralinguistic material reality, on the other. Thus, Escobar places ecology "between history and biology" (1999), Peluso and Watts insist that any ecology "must seriously address the

causal powers inherent in Nature itself" (2001: 25), and, for all her focus on the role of culture in human–nature relations, Milton is clear about the limits of constructionism, insisting on the need to acknowledge a "role for the environment itself" (1996: 214).

Entering the space of Herzfeld's "militant middle ground" (2001: x) is political ecology's fate. For political ecology to do otherwise would be to undercut environmental social movements and oppositional campaigns (Peluso and Watts 2001; see also Demeritt 2001: 28; Castree and MacMillan 2001: 209), abdicate its responsibility to bear witness to environmental disasters and their human costs, limit the meaning of the word *political* to the power to name, an impoverishment of terrain that few would welcome, and handicap political ecology's explanatory power. And, so, for all the necessity of political ecology's anthropocentrism, it must also be ecocentric (see Vayda and Walters 1999), albeit in *reconstructed* ways, ways that approach nature *in its sociohistorical context*, that is, as an aspect of *second* nature (see discussion in Dove 2001). Only if pursued as both an environmental science *and* a complex social-cum-human "science" of nature will it be possible to achieve the utopian collaboration imagined at the outset, a collaboration of "diverse networks of scholars and other concerned groups" (Blaikie 1999: 131) on the terrain of culture/power/history/nature.

### The Contributions

Although no collection can be comprehensive, this collection aims to promote the research agenda just outlined, and then some. The first section, "Beyond Modernist Ecologies," contains the contributions of Michael Dove and Gísli Pálsson. Taken together these two essays provide a wide-ranging critique of modernist ecologies, and they explore the ways in which local knowledges and practices appear to contain a wisdom that science, in its hubris, lacks. Dove and Pálsson retrospectively review the modernist ecology of an earlier era, in several dimensions: its dichotomization of nature and culture, its faith in the scientific management of nature, and its scientism more generally, including its tendency to dismiss local knowledge as mere "emics" in need of "etic" correction.

The prestige modernism accords science is of a piece with the Eurocentrism of colonialism and other forms of Northern domination, and in "Equilibrium Theory and Interdisciplinary Borrowing," Dove implies that modernism has

now yielded to a "late modern" (see Dove 2001), postcolonial era in which the wisdom of the South may be appreciated. Toward this end, he examines in his closing segment the augury practices of the Kantu' of West Kalimantan, Indonesia, establishing, first, that Kantu' augury practices have no function and, second, that their wisdom resides therein.

Resonating with Dove's chapter, Pálsson's "Nature and Society in the Age of Postmodernity" critiques the dualism of nature and culture as well as the related assumption that nature may be rationally managed by high science. His metaphor for modernist ecology is the aquarium, which boxes nature in and culture out, creating the illusion that an objective, omniscient study of nature is possible. But "humans are simultaneously part of nature and society" (Pálsson, this volume, 74), a premise that propels ecology from modernism to postmodernism. "If disembeddedness, dualism, certainty, and human mastery are the characteristics of modernism, *post*modernism suggests the opposite—namely, embeddedness, monism [refuting the nature/culture dualism], and the absence of certainty and human mastery" (*ibid.*, 74). The preponderance of Pálsson's chapter is devoted to a critique of one particular effort to manage resources scientifically, an effort that had disastrous unintended consequences. In lieu of modernist managerial schemes, Pálsson proposes schemes rooted in pragmatism, which places the subject in his or her context or environs, natural and otherwise, and reasons from that vantage point (see Ingold 2000).

The second section, "Constructing and Appropriating Nature," examines, from varying perspectives, appropriations and constructions of nature and the political, historical, and/or cultural dimensions of these. Modernist ecologies place nature outside the human realm, but Berglund's, Greenberg's, Wilk's, and Robbins's essays begin to show how nature always exists within sociohistorical configurations, as a constructed or second nature.

The section opens with Eeva Berglund's contribution, "Ecopolitics through Ethnography," which picks up where Dove's and Pálsson's contributions leave off, on the threshold of postmodernism, in its striking case study of the construction of nation and nature in contemporary Finland. Berglund argues that Finland imagines itself as a nation of forests—indeed, as a forest-nation in which the Finnish identity becomes inextricable from the "virility and purity yet capacity for innovation in the face of a harsh but ultimately giving nature" (*ibid.*, 105) that Finland's wooded landscapes impose upon its citizens. Under the circumstances, logging becomes an act of symbolic violence against the nation, sparking vociferous debate. One of Berglund's points is that the moti-

vations and logics that come into ecological play are not, as modernist ecologies would have it, rational. Forest science has flourished in Finland in large part because of the symbolic load on forests, and the "forest group," a network of activists upon whom Berglund focuses, are emotionally involved in green issues, despite their thoroughly modern embrace of science.

Greenberg's essay implicitly continues in this vein, with a critique of modernist approaches to nature. His theme is the disconnect between political economic and ecological logics when nature is bureaucratized by the state. In the Gulf of California, marine resources are commodified through state-directed territorializations, which place rivers under one agency, fish under another, forests under a third, and so on, in violation of a natural order that has its own logic and functionality. As nature is dispersed across managerial structures and domains, natural resources fall subject to political and economic logics, with tragic consequences, a conclusion that Rappaport's later writings on capitalism and maladaptation adumbrated.

Like Greenberg, Wilk is interested in market penetration and its negative impacts upon the environment. Whenever the markets allowed a favorable conversion of labor into commodities, the Mayan Kekchi of Belize did not hold to local ecological limits but increased their consumption in pursuit of their consumer dreams. Without ignoring globalization, Wilk locates these dreams not outside but *within* a culture that over the long haul has altered under transnational pressures. "Culture does not disappear as people enter a cash and commodity economy; instead, new forms of consumer culture appear" (166, emphasis deleted), consumption itself being "everywhere highly cultural and specific to particular times and places." Since consumption places demands on resources, the study of consumption, in its cultural no less than in its economic dimensions, is critical to a political ecology that connects "the globalizing aspects of the modern world economic system to the very local level where real people make choices on a daily basis and within very particular circumstances" (167). While Wilk does not say as much, clearly he realizes that cultural studies and transnational studies, focused as they are on the nexus of capitalism, culture, and the media, are important resources for any political ecological probe into consumption and its mediation of human-nature articulations. The young men of Kekchi no longer want to farm. They want and seek wage work outside Belize, traveling as far as the United States to support a lifestyle they and their relatives desire but do not need—succumbing, then, to transnational pressures and imaginings.

Like Wilk, Joel Robbins, in "Properties of Nature, Properties of Culture," demonstrates the complicity of local actors in development and their role in the creation and exploitation of transnational spaces. Property is an appropriation of nature, one, moreover, that entails the assignment of rights in the nature that is thus appropriated, making property central to political ecology. Property is also culturally variable, a matter of rendering things significant in specific ways, making property irreducible to economic or ecological factors. Following G. W. F. Hegel's theory (expressed in the *Philosophy of Right*, 1942) Robbins argues that politics is "a matter of the pursuit of mutual recognition, not of the struggle for self-aggrandizement or self-protection" (Robbins 172), and shows how the Urapmin of Papua New Guinea use property in a bid for the recognition of foreign resource developers. From the perspective of the white developers, this effort is doomed from the start because property transactions are all about profit making at somebody's expense, exploitation so-called; they are emphatically *not* about mutual recognition.

The third section, "Ethnographies of Nature," offers "thick descriptions" (Geertz 1973) of the complex politics that comes into play regionally, nationally, and internationally when nature is brought within the human sphere—"humanized," in Lansing and Kremer's (1993) use of that term.

From its title and first note forward, Søren Hvalkof's chapter, "Progress of the Victims: Political Ecology in the Peruvian Amazon," sets itself at odds with the kind of master narrative that envisions "relatively isolated tribal groups" as "victimized by the cruel and genocidal expansion of Western civilization threatening their very existence" (this volume, 196). The "victims of progress" trope inscribes indigenous peoples as essentialized, isolated, and fundamentally passive others in a process that remains dominated by colonial and/or capitalist powers (cf. Sahlins 2000:chapter 14). But "the indigenous peoples did not vanish or assimilate as anticipated—on the contrary, many of them created their own political spaces for agency in the reconfiguring modern states" (Hvalkof, this volume, 196–97). This shift from the top-down structural approach of world system theory to a "practice theory" investigation of grassroots resistance establishes the platform for an "ethnography [and also history] of nature" focused on how the Ashéninka operate within local-national and local-global spaces to forestall the encroachments of cattle-raising colonists and preserve their way of life.

My chapter, "Red River, Green War," concerns the division between up-stream and downstream Porgerans that gold mining has engendered. The re-

sources of so-called Lower Porgerans have been jeopardized by the waste products of mining, which have discolored and contaminated the Porgera River and which have also buried the alluvial gold that has been the Lower Porgerans' livelihood since the 1960s. Years of negotiation have established no universally accepted standard of compensation, and as time has worn on, issues have festered and proliferated rather than been resolved. From a world system perspective, the animosity of the Lower Porgerans toward the mine and also toward those residing upstream, the principal beneficiaries of the mining, may be explained entirely in terms of the differential positioning of each group vis-à-vis the mine. But a political economy perspective would overlook the emotional charge on Lower Porgerans' censure of upstreamers as *bad kith and kin* and the cultural roots of this emotional charge. That upstream relatives benefit at the ecological expense of Lower Porgerans is morally offensive to Lower Porgerans. Hence, the "green war" of the title: that conflict that sets Porgerans against not only the mine but Porgerans themselves. The "politics of place" along the Porgera River must therefore be understood both historically and culturally, with respect to a *conjuncture* (of outside and inside forces) over the long run.<sup>28</sup>

As much as any ecologist, J. Peter Brosius has been conscious of the transnational alliances that are forged in the context of environmental social movements and oppositional campaigns. Caught up in the Penan's antilogging campaign have been NGOs, international activists, the international media, the anthropologist himself or herself. While "Between Politics and Poetics" expands upon Brosius's reporting on the transnational dimensions of the campaign of the Penan of Sarawak to check logging, its main focus is the relationship between meaning and politics, language and practice, within a new, culturally inflected political ecology. Brosius is interested not in symbolism as such but rather in "the . . . complex relationship between representation, discursive production, and political agency" (this volume, 282) that undergirds efforts by the Penan to convince a variety of audiences and political actors that logging violence threatens their identity and way of life.

The final section, "Between Nature and Culture," contains the only interdisciplinary essay in the book, an essay that builds on the work of the anthropologist J. Stephen Lansing. While the nature/culture binary framed much of Rappaport's thinking—underwriting his adaptationism, for example, and his distinction between "operational" (or "etic") and "cognized" (or "emic") perspectives—Lansing, Schoenfelder, and Scarborough recollect that Rappaport himself, in his "long struggle to reconcile his scientific methods with his

humanist aims" (this volume, 325), recognized that the nature/culture dualism was difficult to uphold. The essay provides an ethnography of second (or, in Lansing's terminology, "humanized") nature centered on the Balinese irrigation system that has brought nature within the human realm. In a move that echoes Dove's and Pálsson's appreciation of the soundness of local practices, Lansing, Schoenfelder, and Scarborough uncover the sheer success of the way that the Balinese manage water. The bulk of the chapter demonstrates how decentralized decision making, aiming for local maximization, results in regional adjustments and adaptations, a demonstration that is unique in the ecological literature.

### Conclusion

As environmental crises multiply and the ecological costs of capitalism compete with its social and human costs for practical and theoretical attention, political ecology is poised to make its strongest contributions to date. Refashioning itself in post-Marxist and poststructuralist terms, political ecology engages with key contemporary debates but brings to them a measure of realism and materialism that it will not, cannot surrender and that is lacking in other frameworks. It thus reorients these debates away from Scylla and Charybdis extremes and toward Herzfeld's "militant middle ground." Given its interdisciplinarity, political ecology's contributions are not only theoretical but methodological (see Lansing et al., this volume). Moreover, its language is not only inter- but *post*disciplinary, intelligible to geographers, sociologists, anthropologists, political scientists, and historians alike. Political ecology is thus well positioned to become a premier domain of empirical inquiry and site of theoretical production for decades to come.

### Notes

The Duke University readers were wonderfully helpful in pinpointing strengths and weaknesses in an earlier draft of this writing, and I would like to thank them for their committed and helpful readings. I also thank Anf Dirlik, Arturo Escobar, Jim Greenberg, Jerry Jacka, and Dianne Rocheleau for readings of drafts of this introduction. I have found useful prods in the finalization of this introduction the discussions of Pete Brosius and Jim Scott at the close of my panel "Political Ecology and the Politics of Place" at the 2003 annual meeting of the American Anthropological Association in Chicago. Further, I would like to thank Carolyn Carrier, Corinna McMackin, Dianne

Rocheleau, Kristina Tiedje, and the anonymous Duke University Press readers for bibliographic tips, and Wendy Harcourt for making available her special issue of *Development* ("Place, Politics and Justice: Women Negotiating Globalization") as this piece was still in progress. Many of the ideas expressed in this introduction have crystallized as a result of my research in Papua New Guinea, conducted most recently with Wenner-Gren, ACUS, Fulbright, and CSWS (the University of Oregon's Center for the Study of Women in Society) funding, and I am most grateful for the generous support of these agencies.

1. The term *political ecology* had some currency before it appeared in a paper by Eric Wolf in 1972. In the 1960s and 1970s it referred to a neo-Malthusianism that stressed the need to control population expansion and the pressures it placed on land utilization in the interest of solving a perceived environmental crisis (Bryant and Bailey 1997:10-11; see also Castree 1995:18-19). This "political ecology school" was discredited across the political spectrum (*ibid.*:11). Geographers in particular dismissed it as too narrowly focused on demography and local practices (see Bryant 2001:152-55; Harvey 1974; Hecht 1985; Peluso and Watts 2001; N. Smith 1984; Watts 1983a, 1983b, 2000). Beginning with Wolf's use of the term, political ecology became Marxist in its orientation (Greenberg and Park 1994; Peet and Watts 1993:238-39, 1996:4-5; Scoones 1999; N. Smith 1984:53; Vayda and McKay 1975; Watts 1983a:234-39).

2. As a "green" Marxism, neo-Marxist political ecology offers a *heterodox rather than an orthodox* reading of Marx. However useful the Marxist legacy retrospectively appears, those looking for a systematic ecological framework have found the classic texts disappointing. Some even find them wide of the mark, inspiring drubbings as well as neo-Marxist revisions and post-Marxist departures (see Greenberg, this volume; see also discussions in Benton 1989; Castree 1995; Castree and Braun 1998:7-10; Eckersley 1992:chapter 4; Foster 2000; Grundmann 1991; Harvey 1996; O'Connor 1998; Peet and Watts 1996:28-30; Schmidt 1971; and N. Smith 1984). Perhaps the best-known critique of Marxist orthodoxy is that of the Frankfurt School, which faulted Marx for his promotion of progress, seemingly at all costs, and for his infatuation with an industry- and technology-driven "domination" or "mastery" of nature, at the expense of nature itself and its evalue. The Frankfurt School replaced class conflict with "the larger conflict between men and nature" (Jay 1973:256; see Baudrillard 1975; Eckersley 1992:chapters 4, 5; Harvey 1996:133-39; Jay 1973:chapter 8; N. Smith 1984). Although a Marxist might counter that these two conflicts are inextricable, that class conflict and the conflict between nature and humanity alike derive from the mode of production, the Frankfurt School, in an unprecedented way, succeeded in putting the need to theorize nature and human-nature articulations on the historical materialist map. The Frankfurt School's critique reverberates in ecofeminist writings, especially in Carolyn Merchant's *The Death of Nature*, which locates the domination of nature in the domination of a *patriarchal* capitalism.

3. On the shift from neo- to post-Marxist political ecology, see Bryant 1998; Escobar 1995a, 1995b; Peet and Watts 1993, 1996; Peet and Watts, eds., 1996; and Peluso and Watts 2001.
4. A classic instance of materialist reasoning, one that is paradigmatic for cultural ecology, is Marvin Harris's (1966) account of why Hindus prohibit the eating of beef. Harris reasoned that cattle are a better resource alive than dead and that prohibiting the consumption of beef is a way of assuring that cattle will not be slaughtered. True, dead cattle are a source of leather and beef, but live cattle provide dung for fertilizer as well as milk, and they also serve as work animals, pulling the plows that furrow the fields that the dung fertilizes. An idealist, by contrast, would explain the Hindu prohibition on eating beef in religious terms.
5. On the constructionist turn in political ecology, see Alvarez, Dagnino, and Escobar 1998a, 1998b; Alvarez, Dagnino, and Escobar, eds., 1998; Anderson and Berglund, eds., 2003; Berglund and Anderson 2003; Brosius 1999c; Escobar 1995a; Gibson-Graham, Resnick, and Wolff 2001; Hajer 1995; Laclau and Mouffe 1987; Leach and Mearns, eds., 1996; Peet and Watts 1993, 1996; Peet and Watts, eds., 1996.
6. The critique of the nature/culture dualism is most strident in Descola and Pálsson 1996 and Lansing and Kremer 1993. See also Descola 1994; Pálsson and Lansing et al., this volume; and Soper 1995. On the term *social nature*, see Braun and Castree, eds., 1998; Castree and Braun 1998 and 2000; Castree and Braun, eds., 2001; Braun and Castree, eds., 1998. On the term *humanized nature*, see Lansing and Kremer 1993 and Lansing et al., this volume.
7. Reading *Pigs for the Ancestors* this way directs attention away from the environment and toward Maring politics, including gender politics. Although *Pigs for the Ancestors* was written before the great efflorescence of interest in gender studies and feminist anthropology, Maring gender politics is all but featured in Rappaport's account of how the *kaiko* is triggered. Of *Pigs for the Ancestors* it could be said that it offered the very first glimpses into the gender politics of production, warfare, and exchange in the New Guinea highlands, themes that would begin to engulf New Guinea ethnography in the decade following the book's publication.
8. Critiques of Rappaport's work, especially *Pigs for the Ancestors*, appear in Friedman 1974; Lees and Bates 1990; Moran 1990; Sahlins 1976; and Vayda and McKay 1975. See Rappaport's responses in the "Epilogue" to the 1984/2000 edition of *Pigs for the Ancestors* and Rappaport 1990; see also Kottak 1980:chapter 8.
9. In his "Epilogue" to the 1984/2000 editions of *Pigs for the Ancestors*, Rappaport rejected in no uncertain terms the reductive materialism of the first edition: "The emphasis put upon organic and ecological functions in explanations of cultural phenomena was too great in early formulations . . . , including that developed in *Pigs for the Ancestors*. There was a tendency to strip cultural phenomena of their distinctiveness as such and to grant to the possibly adaptive roles of some cultural forms a comprehensive signifi-

cance approaching explanatory sufficiency. The explanatory power of the general ecological formulation was, in short, exaggerated" (1984:333-34). Rappaport's signature move consisted in replacing the reductions of *Pigs for the Ancestors* with an appreciation of the incommensurabilities of the human condition (Biersack 1999c): "What seems to me distinctive of humanity is that it lives in terms of meanings it itself must construct but it is not fully constituted by those meanings, nor is the world in which it lives. . . . The makers of meaning are organisms living in and absolutely dependent upon ecological processes, process constituted not by meanings but by natural law. . . . We are, furthermore, only *loosely constrained* by our circumstances from constructing meanings that do not conform to law or, for that matter, even to organic need. We are not, that is to say, debarred from the construction of self-destructive or even world-destructive follies" (Rappaport 1984:335-36; emphasis added).

10. Antecedents to this argument may be found in the writings of Benjamin Whorf, who argued that a language that has twenty words for snow constructs a reality that differs from the reality that a language having only one word for snow constructs. It may also be found in the structuralist emphasis upon differences that make a difference. In his *Course on General Linguistics*, the structural linguist Ferdinand de Saussure famously observed that the French term *mouton* and the English term *mutton* have different signifieds (that is, reference different realities) because the one refers to sheep on the hoof and lamb on the plate but the other only refers to food (1966[1915]:115-16; see discussion in Sahlins 1976:62-64). Instead of *reflecting* a reality that is *anterior* to signification, classification, the business of recognizing differences that make a difference, signification *produces* a reality that is *posterior* to signification.

11. This distinction between sex/sexuality as a datum of nature and gender as a datum of culture is itself now interrogated, queer theory arguing that sexuality is itself constructed.

12. In this regard, the term *transnational corporation* (TNC) suggests what the term *multinational corporation* cannot: a displaced-replaced *enplaced* enclave that is enmeshed not only in "specific social relations established between specific people, situated in unequivocal localities, at historically determined time" (Guarnizo and M. Smith 1998:11), but also in the transnational circuits that are the condition of its own transplantation. TNCs operate within local-regional/global matrices, and it is these matrices and their dynamics that are the topics of a transnational, place-based political ecology.

13. On the concept of place as used here, see Biersack 1999b:81-82, 1999c:14, 2003, 2004; Dirlik 2001; Escobar 2001; Harcourt, ed., 2002; Harcourt and Escobar 2002; Massey 1993; Moore 1998; and Prazniak and Dirlik, eds., 2001.

14. Harvey uses the term *place* to mean the local in the sense of a geographically delimited, self-oriented and self-organizing entity, one that is "constructed out of an introverted, inward-looking history based on delving into the past for internalized origins" (Massey 1993:64; see Harvey 1993). In this usage, *place* suggests an enclave "of

backwardness left out of progress," a "realm of rural stagnation against the dynamism of the urban, industrial civilization of capitalism, as the realm of particularistic culture against universal scientific rationality" (Dirlik 1996:23).

15. *Place* is not the only term that has been used to signify local-global intersections (and, admittedly, this is not the only meaning given to the word *place* [see Feld and Basso, eds., 1996, for another usage]). Thus, Featherstone writes of "third cultures," which emerge through the interaction of the global and the local (1993:174). Wilson uses "global/local" to refer to intermediacy—to suggest, as he puts it, "situated [global/local] interrelationships" (2000:250) in "third spaces" (ibid.:249) and the "impurity and synergy" (ibid.) inherent in the "global/local interaction" (ibid.); emphasis removed) of these "third spaces." Robertson is well known for his neologisms "glocal" and "glocalization" (1995) to suggest the spaces and processes of intermingling in and through which the peculiar mixture of homogeneity and heterogeneity (see Appadurai 1996:32–33) of the contemporary world takes shape. In his contribution to *Building a New Biocultural Synthesis*, Roseberry "reject[s] the attempts of world-systems theories to explain local processes and relations in terms of the dynamics and needs of global capitalism" (1998:75) and concentrates instead "on the specifically local construction and shaping of power relations, including those that have their source outside of particular regions" (ibid.). The "social field" approach that he recommends dispenses with the structural or "level"-based approach of world system theory, which privileges the global over the local, and considers instead the way in which external factors contextualize internal factors, which then respond to these external factors, etc. "The social field places the local within larger networks and therefore requires a knowledge of those networks. But the networks themselves are uniquely configured, socially and historically, in particular places at particular times." To the extent that this is true, "the local is global . . . , but the global can only be understood as always and necessarily local" (ibid.). Most recently, Raffles has promoted the notion of "locality" (1999, 2002). Differing from location, which is narrowly spatialized qua locale, locality partakes of "a chain and a series of ever-widening concentric circles" (Raffles 2002:70) and must be understood through these articulations.

16. Henri Lefebvre was the first to insist on the contingent and activity-dependent nature of space (*The Production of Space* [1991]).

17. There is no lack of terminology to talk about the contingent, historical character of space and its organization. Appadurai, for example, has recently coined the term *process geography* to refer to spatializations that precipitate out of "various kinds of action, interaction, and motion" (2001:7) and that establish, reinforce, or undermine the very articulations that define and make a place (ibid.:7–9). He prefers "process geographies" to "area" (as in "area studies"), a term that presumes geographical fixity and insularity and that is tied to an outmoded concept of culture and its territorialization (ibid.:7–9). James Ferguson and Akhil Gupta (2002), Anna Tsing (2000, 2002a,

2001b), and Neil Smith have written about "scale-making," "scale-jumping," and other spatialization practices. Actor network theory approaches space through its production, focusing on agents' networking activities (see Latour 1993; Law and Hassard, eds., 1999). Nancy Munn was perhaps the first anthropologist to provide an ethnography of the production of space—or, in her language, "spacetime"—in her phenomenological study of *kula* exchanges in the Massim area of coastal eastern New Guinea. Spacetime is "a lived world that is not only the arena of action, but is actually constructed by action" (1992:8). She elaborates in true Lefebvrian fashion: "sociocultural practices 'do not simply go on *in or through* time and space, but [they also] . . . constitute (create) the spacetime . . . in which they 'go on'" (Munn 1992, quoting Munn 1983:280). Munn does not consider (as N. Smith does [1992]) the possibly transgressive, subversive nature of the *kula*'s regionalism, but this regionalism emerges, and has emerged, in colonial and postcolonial contexts; it arguably constitutes an alternative, oppositional "politics of scale" (ibid.), one that installs itself transgressively in the interstices of colonial and postcolonial geographies (see ibid.).

18. Gupta and Ferguson (1997a) use *place* and *place-making* in a rather different way, in terms of the local and its construction (see also Feld and Basso, eds., 1996): "Too often . . . anthropological approaches to the relation between 'the local' and something that lies beyond it (regional, national, international, global) have taken the local as given, without asking how perceptions of locality and community are discursively and historically constructed. In place of the question, How is the local linked to the global or the regional? then, we prefer to start with another question . . . : How are understandings of locality, community, and region formed and lived? To answer this question, we must turn away from the commonsense idea that such things as locality and community are simply given or natural and turn toward a focus on social and political processes of place-making" (ibid.:6).

19. It could be argued that the theme of the production of space inheres in transnational studies. The various "scapes" of which Appadurai has written over the past fifteen years (1996) are transnational spaces that are contingently created through the "flow" of images, capital, technology, ideology, and people.

20. Contributing to a critical understanding of the contemporary world, its marginalizations and injustices, environmentalist social movements and oppositional campaigns increasingly preoccupy today's political ecology (Alvarez, Dagnino, and Escobar, 1998a, 1999b; Alvarez, Dagnino, and Escobar, eds., 1998; Brostius 1999c, 2001b, and this volume; Escobar 1992; Escobar and Alvarez, eds., 1992; Greenough and Tsing, 2003; Greenough and Tsing, eds., 2003; Hvalkof and Escobar 1998; Kalland and Persson, 1998; Kalland and Persson, eds., 1998; Peluso and Watts, eds., 2001).

21. The social movements and oppositional campaigns of which political ecologists and others write today tend to rest upon a variety of differences other than class (gender, sexuality, age, ethnicity, "race," and the like) (see Moore 1998:349–50). In fact, they

rest upon a "discourse of difference" (Escobar 1995a:226) and a search for "collective identity" (Dirlik and Prazniak 2001) within a cultural politics that cannot be reduced to class and class struggle. They thus open a window upon how differences other than class mediate human-nature relations in the contemporary world.

22. The answer must be: in some times and in some places (see Ortner 1996; McCormack and Strathern, eds., 1980; Merchant 1980; Valeri 1990).

23. See Carney 1996; Escobar, Rocheleau, and Kothari 2002; Rocheleau, Thomas-Slayter, and Wangari, eds., 1996; Schroeder 1999; Schroeder and Suryanata 1996; Thomas-Slayter and Rocheleau 1995; Thomas-Slayter and Rocheleau, eds., 1995).

24. See Comaroff and Comaroff 1991; Gates, Jr., ed., 1985; Said 1978; Thomas 1994. Indeed, the critique of development, as proffered originally by Escobar (see also Gupta 1998), calls development discourse to task for its *cultural* politics, which cast as inferior the colonial and postcolonial Southern or non-Western world, converting spatial distance into evolutionary remoteness (Fabian 1983) and racial hierarchy. Several of the essays in this volume call attention to the invidious distinctions that lend a prima facie credibility to various "civilizing" missions, development among them, and that function powerfully to marginalize and disenfranchise groups. According to Brosius (this volume), loggers and their supporters conceptualize the Penan as near-animals in need of development's evolutionary boost and the forest as an atavistic, savage realm of particularism that undermines a "mainstream" vanguard of modernization, development, and Malaysian nationalism. In much the same way, the Ashéninka of Amazonian Peru are signified by mestizo-associated groups as primitive, backward, uncivilized, and the like (Hvalkof, this volume) and are handicapped through these cultural politics of denigration.

25. See Berkes 1999; Brosius 2000, 2001b; R. Ellen, P. Parkes, and A. Bicker, eds., 2000; Gupta 1998; Nazarea, ed., 1999; see also Dove; Lansing, Schoentfelder, and Scarborough; and Pálsson, this volume.

26. See Brosius, this volume; see also Brosius 2000, 2001b, 2003; Gibson-Graham, Resnick, and Wolff 2001; Hyndman 2001; Kirsch 2002.

27. On the debate between extreme realism and extreme constructionism in ecology, see Balée 1998; Blühdorn 2000; Braun and Castree, eds., 1998; Burningham and Cooper 1999; Casey 1996; Castree and Braun 1998, 2000; Castree and Braun, eds., 2001; Crumley 1994; Demeritt 1998; Rolston 1997; Watts 1998).

28. On the "politics of place," see Biersack 2003, 2004; Harcourt, ed., 2002; Moore 1998; and Prazniak and Dirlik, eds., 2001.

## Beyond Modernist Ecologies

## Works Cited

- Abu-Lughod, Janet. 1997. "Going Beyond Global Babble." In *Culture, Globalization and the World System*, ed. Anthony King, 131-38. Minneapolis: University of Minnesota Press.
- Acheson, J. M., and J. A. Wilson. 1996. "Order Out of Chaos: The Case for Parametric Fisheries Management." *American Anthropologist* 98: 579-94.
- Alcoff, Linda. 1991. "The Problem of Speaking for Others." *Critical Inquiry* 20: 5-32.
- Althusser, Louis. 1977. *Lenin and Philosophy (and Other Essays)*. London: New Left Books.
- Alvarez, Robert R., Jr. 1994. "La Maroma: Chile, Credit, and Chance: An Ethnographic Case of Global Finance and Middlemen Entrepreneurs." Manuscript.
- Alvarez López, Juan. 1988. "El medio ambiente en el desarrollo económico de la frontera norte de México." *Cuadernos de economía* (Tijuana, Baja California, Mexico); ser. 3, no. 5. Tijuana, B. C., Mexico: Universidad Autónoma de Baja California, Facultad de Economía.
- Alvarez, Sonia E., Evelina Dagnino, and Arturo Escobar, eds. 1998a. *Cultures of Politics/Politics of Cultures: Re-visioning Latin American Social Movements*. Boulder: Westview Press.
- . 1998b. "Preface and Acknowledgments." In *Cultures of Politics/Politics of Cultures: Re-visioning Latin American Social Movements*, ed. S. Alvarez, E. Dagnino, and A. Escobar, xi-xiii. Boulder: Westview Press.
- . 1998c. "Introduction: The Cultural and the Political in Latin American Social Movements." In *Cultures of Politics/Politics of Cultures: Re-visioning Latin American Social Movements*, ed. S. Alvarez, E. Dagnino, and A. Escobar, 1-29. Boulder: Westview Press.
- Anderson, Benedict. 1983. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. London: Verso.

- Anderson, David G., and Eeva Berglund, eds. 2003. *Ethnographies of Conservation: Environmentalism and the Distribution of Privilege*. New York: Berghahn Books.
- Anonymous. 1964. *Commercial Fisheries Review* 26(11): 98-102.
- Appadurai, Arjun. 1990. "Disjuncture and Difference in the Global Economy." *Public Culture* 2(2):1-24.
- . 1991. "Global Ethnoscapes: Notes and Queries for a Transnational Anthropology." In *Recovering Anthropology*, ed. Richard G. Fox, 191-210. Santa Fe: School of American Research Press.
- . 1996. *Modernity at Large: Cultural Dimensions of Globalization*. Minneapolis: University of Minnesota Press.
- . 2001. "Grassroots Globalization and the Research Imagination." In *Globalization*, ed. A. Appadurai, 1-21. Durham: Duke University Press.
- Arendt, Hannah. 1998 (1958). *The Human Condition*. Chicago: University of Chicago Press.
- Arnold, Guy. 1958. "Nomadic Penan of the Upper Rejang (Plieran), Sarawak." *Journal of the Malayan Branch of the Royal Asiatic Society* 31(Pt. 1)(181):40-82.
- Arthur, Chris. 1985. "Personality and the Dialectic of Labour and Property—Locke, Hegel, Marx." In *Radical Philosophy Reader*, ed. R. Edgley and R. Osborne, 43-68. London: Verso.
- Asad, Talal. 1975. *Anthropology and the Colonial Encounter*. Ithaca: Cornell University Press.
- Asian Development Bank. 1988. *Project Performance Audit Report, Bali Irrigation Project in Indonesia*. PE-241 I-352-INO. Manila: Asian Development Bank, Post Evaluation Office.
- Aubert, V. 1959. "Chance in Social Affairs." *Inquiry* 2:1-24.
- Aryawan, I. G. N., I. N. Widiarta, Y. Suzuki, and F. Nakasuji. 1993. "Life Table Analysis of the Green Rice Leafhopper, *Nephotettix virescens* (Distant), an Efficient Vector of Rice Tungro Disease in Asynchronous Rice Fields in Indonesia." *Research in Population Ecology* 35:31-43.
- Bahl, Vinay, and Arif Dirlik, eds. 2000. "Introduction." In *History after the Three Worlds: Post-Eurocentric Historiographies*. Lanham, Md.: Rowman and Littlefield.
- Balée, William, ed. 1998. "Introduction." *Advances in Historical Ecology*. New York: Columbia University Press.
- Ballard, Chris. 1997. "It's the Land, Stupid! The Moral Economy of Resource Ownership in Papua New Guinea." In *The Governance of Common Property in the Pacific Region*, ed. P. Larmour, 47-65. Canberra: National Centre for Development Studies and Resource Management Asia-Pacific.
- . 1998. "The Sun by Night: Huli Moral Topography and Myths of a Time of Darkness." In *Fluid Ontologies: Myths, Ritual and Philosophy in the Highlands of Papua New Guinea*, ed. L. R. Goldman and C. Ballard, 67-85. Westport, Conn.: Bergin and Garvey.
- Ballard, Chris, and Bryant Allen. 1991. "Inclined to be Checkey": Huli Responses to First Contact." Paper presented at the conference "New Perspectives on the Papua New Guinea Highlands: An Interdisciplinary Conference on the Huli, Duna, and Ipipli Peoples," organized by A. Biersack, Canberra, August 16-18, 1991, Australian National University.
- Ballard, Chris, and Glenn Banks. 2003. "Resource Wars: The Anthropology of Mining." *Annual Review of Anthropology* 32:287-313.
- Banks, Glenn. 1997a. "Mountain of Desire: Mining Company and Indigenous Community at the Porgera Gold Mine, Papua New Guinea." Ph.D. thesis, Department of Human Geography, Research School of Pacific and Asian Studies, Australian National University.
- . 1997b. "Mountain of Desire, Rivers of Controversy: A Post-Colonial Geography of Pollution." Paper given at the second joint Institute of Australian Geographers, New Zealand Geographical Society Conference, Hobart, Tasmania, January 1997.
- . 1998. "Compensation for Communities Affected by Mining and Oil Developments in Melanesia." *Malaysian Journal of Tropical Geography* 29(1):53-67.
- . 1999a. "The Economic Impact of the Mine." In *Dilemmas of Development: The Social and Economic Impact of the Porgera Gold Mine, 1989-1994*, ed. C. Filer, 88-127. Canberra: Asia Pacific Press and Research School of Pacific and Asian Studies, Australian National University.
- . 1999b. "Gardens and Wantoks." In *Dilemmas of Development: The Social and Economic Impact of the Porgera Gold Mine, 1989-1994*, ed. C. Filer, 160-90. Canberra: Asia Pacific Press and Research School of Pacific and Asian Studies, Australian National University.
- . 1999c. "The Next Round of Relocation." In *Dilemmas of Development: The Social and Economic Impact of the Porgera Gold Mine, 1989-1994*, ed. C. Filer, 191-221. Canberra: Asia Pacific Press and Research School of Pacific and Asian Studies, Australian National University.
- . 2002. "Mining and the Environment in Melanesia: Contemporary Debates Reviewed." *The Contemporary Pacific* 14(1):39-67.
- Banuri, Tariq. 1993. "The Landscape of Diplomatic Conflicts." In *Global Ecology: A New Arena of Political Conflict*, ed. Wolfgang Sachs, 49-67. London: Zed Books.
- Barber, Benjamin. 1995. *Jihad vs. McWorld*. New York: Ballantine.
- Baring-Gould, S., and C. A. Bampfyld. 1909. *A History of Sarawak under its Two White Rulers*. London: Henry Sothoran.
- Barlow, Kathleen. 2001. "Working Mothers and the Work of Culture in a Papua New Guinea Society." *Ethos* 29(1):78-107.

- Barrera Guevara, J. C. 1992. "The Conservation of Totoaba macdonaldi (Gilbert) (Pisces Sciaenidae) in the Gulf of California, Mexico." *Journal of Fish Biology* 37 (Suppl A):201-02.
- Basch, Linda, Nina Glick Schiller, and Cristina Szanton Blanc. 1994. *Nations Unbound*. Langhorne, Penn.: Gordon and Breach.
- Basso, Keith. 1984. "Stalking with Stories: Names, Places and Moral Narratives among the Western Apache." In *Text, Play, and Story: The Construction and Reconstruction of Self and Society*, ed. E. Bruner, 19-55. Washington: American Ethnological Society.
- Batson, Gregory. 1936. *Naven*. Stanford: Stanford University Press.
- . 1958. *Naven*, 2nd ed. Stanford: Stanford University Press.
- . 1972. *Steps to an Ecology of Mind*. New York: Ballantine Books.
- Batson, Mary Catherine. 1984. *With a Daughter's Eye: A Memoir of Margaret Mead and Gregory Bateson*. New York: Washington Square Press.
- Battaglia, Debora. 1994. "Retaining Reality: Some Practical Problems with Objects as Property." *Man* (n.s.) 29(4):631-44.
- Baudrillard, Jean. 1975. *The Mirror of Production*. Translated by Mark Poster. St. Louis: Telos Press.
- Belk, Russell. 1983. "Worldly Possessions: Issues and Criticisms." *Advances in Consumer Research* 10:514-19.
- Benavides, Margarita. 1992. "Asháninka Self-Defence in the Central Forest Region." IWGIA Newsletter 2/92, April-June, pp. 36-45. IWGIA, Copenhagen.
- . 1993. "Los Asháninka, víctimas de la violencia y la guerra." *Ideele* 59-50 (December 1993): 116-18. Lima.
- von Benda-Beckmann, Keebet, and Fons Strijbosch, eds. 1986. *Anthropology of Law in the Netherlands: Essays on Legal Pluralism. Verhandelingen van het Koninklijk Instituut voor Taal-, Land-, en Volkenkunde* 116. Dordrecht, Netherlands: Foris Publications.
- Benhabib, Seyla. 1984. "Obligation, Contract and Exchange: On the Significance of Hegel's Abstract Right." In *The State and Civil Society: Studies in Hegel's Political Philosophy*, ed. Z. A. Pelczynski, 159-303. Cambridge: Cambridge University Press.
- Bennett, John. 1976. *The Ecological Transition*. New York: Pergamon Press.
- Benton, Ted. 1989. "Marxism and Natural Limits: An Ecological Critique and Reconstruction." *New Left Review* 178:51-86.
- . 1991. "Biology and Social Science: Why the Return of the Repressed Should Be Given a (Cautious) Welcome." *Sociology* 25(1):1-29.
- Berglund, Eeva. 1997. "Clear-Cut Madness in Russian Karelia." *The Ecologist* 27(6):237-41.
- . 1998. *Knowing Nature, Knowing Science: An Ethnography of Local Environmental Activism*. Cambridge: White Horse Press.
- . 2001. "Facts, Beliefs and Biases: Perspectives on Forest Conservation in Finland." *Journal of Environmental Planning and Management* 44, part 6, 833-49.
- Berglund, Eeva, and David G. Anderson. 2003. "Introduction: Towards an Ethnography of Ecological Underprivilege." In *Ethnographies of Conservation: Environmentalism and the Distribution of Privilege*, ed. D. Anderson and E. Berglund, 1-15. New York: Berghahn Books.
- Bergmann, Frithjof. 1975. "On the Inadequacies of Functionalism." *Michigan Discussions in Anthropology* 1:2-23.
- Berlin, Brent, Dennis Breedlove, and Peter Raven. 1974. *Principles of Tzeltal Plant Classification: An Introduction to the Botanical Ethnography of a Mayan-Speaking People of the Highland Chiapas*. New York: Academic Press.
- Berry, Erick. 1972. *The Land and People of Finland*, revised edition. Philadelphia: J. B. Lippincott.
- Biddick, Kathleen. 1990. "People and Things: Power in Early English Development." *Comparative Studies in Society and History* 32(1):3-23.
- Biersack, Aletta. 1987. "Moonlight: Negative Images of Transcendence in Paicla Pollution." *Oceania* 57:178-94.
- . 1990. "Histories in the Making: Paicla and Historical Anthropology." *History and Anthropology* 5:63-85.
- . 1995a. "The Huli, Duna, and Iplili Peoples Yesterday and Today." Introduction to *Papuan Borderlands: Huli, Duna, and Iplili Perspectives on the Papua New Guinea Highlands*, ed. A. Biersack, 1-54. Ann Arbor: University of Michigan Press.
- . 1995b. "Heterosexual Meanings." In *Papuan Borderlands: Huli, Duna, and Iplili Perspectives on the Papua New Guinea Highlands*, ed. A. Biersack, 231-63. Ann Arbor: University of Michigan Press.
- . 1996a. "Word Made Flesh: Religion, the Economy, and the Body in the Papua New Guinea Highlands." *History of Religions* 36:85-111.
- . 1996b. "Making Kinship: Marriage, Warfare, and Networks among Paiclas." In *Works in Progress*, ed. H. Levine and A. Ploeg, 19-42. Frankfurt am Main: Peter Lang.
- . 1996c. "The Human Condition and Its Transformations: Nature and Society in the Paicla World." Paper given at the annual meeting of the American Anthropological Association.
- . 1998a. "Sacrifice and Regeneration among Iplili: The View from Tipimini." In *Fluid Ontologies: Myth, Ritual, and Philosophy in the Highlands of Papua New Guinea*, ed. L. Goldman and C. Ballard, 43-66. Westport, Conn.: Greenwood Press.
- . 1998b. "Horticulture and Hierarchy: The Youthful Beautification of the Body in the Paicla and Porgera Valleys." In *Adolescence in Pacific Island Societies*, ed. G. Herdt and S. Leavitt, 71-91. Pittsburgh: University of Pittsburgh Press.
- . 1999a. "The Mount Kare Python and His Gold: Totemism and Ecology in the New Guinea Highlands." In "Ecologies for Tomorrow: Reading Rappaport Today," ed. A. Biersack, a "contemporary issues forum," *American Anthropologist* 101:68-87.

- Biersack, Aletta. 1999b. "Porgera—Whence and Whither?" In *Dilemmas of Development: The Social and Economic Impact of the Porgera Gold Mine, 1989–1994*, ed. C. Filer, 260–79. Canberra: National Research Institute and Asia Pacific Press.
- . 1999c. "Introduction: From the 'New Ecology' to the New Ecologies." In "Ecologies for Tomorrow: Reading Rappaport Today," ed. A. Biersack, a "contemporary issues forum." *American Anthropologist* 101(1):5–18.
- . 2001a. "Reproducing Inequality: The Gender Politics of Male Cults in Melanesia and Amazonia." In *Gender in Amazonia and Melanesia: An Exploration of the Comparative Method*, ed. T. Gregor and D. Tuzin, 69–90. Berkeley: University of California Press.
- . 2001b. "Dynamics of Porgera Gold Mining: Culture, Capital, and the State." In *Mining in Papua New Guinea: Analysis and Policy Implications*, ed. B. Y. Imbun and P. A. McGavin, 25–44. Waigani, NCD: University of Papua New Guinea Press.
- . 2003. "Introduction to the panel 'Political Ecology and the Politics of Place.'" Annual meeting of the American Anthropological Association, November 22, 2003, Chicago.
- . 2004a. "Grassroots Globalization: Joint-Venture Capitalism at Mt. Kare." Paper given at the annual meeting of the Association of Social Anthropologists of Oceania, Salem, Massachusetts, February 25, 2004.
- . 2004b. "The Bachelors and Their Spirit Wife." In *The Unseen Characters: Women in Men's Rituals in New Guinea*, ed. P. Bonnemère, 203–45. Philadelphia: University of Pennsylvania Press.
- . 2004c. "Political Ecology and the Politics of Place." *Anthropology News* (February 2004), 33.
- Bird-David, Nurit. 1990. "The Giving Environment: Another Perspective on the Economic System of Gatherer-Hunters." *Current Anthropology* 31(2):189–96.
- . 1992. "Beyond the Original Affluent Society: A Culturalist Reformulation." *Current Anthropology* 33(1):25–47.
- . 1993. "Tribal Metaphorizations of Human–Nature Relatedness: A Comparative Analysis." In *Environmentalism: The View from Anthropology*, ed. K. Milton, 112–25. London: Routledge.
- Blaikie, Piers. 1985. *The Political Economy of Soil Erosion in Developing Countries*. London: Longman.
- . 1999. "A Review of Political Ecology: Issues, Epistemology and Analytic Narratives." *Zeitschrift für Wirtschaftsgeographie* 43(nos. 3–4):131–47.
- Blaikie, Piers, and Harold Brookfield, eds. 1987a. "Introduction." *Land Degradation and Society*. London: Methuen.
- . 1987b. "Defining and Debating the Problem." In *Land Degradation and Society*, ed. P. Blaikie and H. Brookfield, 1–26. London: Methuen.
- . 1987c. "Retrospect and Prospect." In *Land Degradation and Society*, ed. P. Blaikie and H. Brookfield, 239–50. London: Methuen.
- Bloch, Maurice. 1986. *From Blessing to Violence*. Cambridge: Cambridge University Press.
- . 1997. "Ideology." In *Encyclopedia of Social and Cultural Anthropology*, 293–94. London: Routledge.
- Blihdorn, Ingolfur. 2000. *Post-Ecologist Politics: Social Theory and the Abolition of the Ecologist Paradigm*. London: Routledge.
- Bodley, John H. 1975. *Victims of Progress*. Menlo Park, N. J.: Cummings.
- Bourdieu, Pierre. 1977. *Outline of a Theory of Practice*. Cambridge: Cambridge University Press.
- . 1990. *The Logic of Practice*. Translated by R. Nice. Cambridge: Polity Press.
- Braudel, Fernand. 1972/73 [1966]. *The Mediterranean and the Mediterranean World in the Age of Philip II*. Translated by Siân Reynolds. 2 vols. New York: Harper and Row.
- . 1986 [1979]. *The Perspective of the World: Civilization and Capital, 15th–18th Century*, vol. 3. Translated by Siân Roberts. New York: Harper and Row.
- Braun, Bruce, and Noel Castree, eds. 1998. *Remaking Reality: Nature at the Millennium*. London: Routledge.
- Braun, Bruce, and Joel Wainwright. 2001. "Nature, Poststructuralism, and Politics." In *Social Nature: Theory, Practice, and Politics*, ed. Noel Castree and Bruce Braun, 41–63. Malden, Mass.: Blackwell.
- Brennan, Timothy. 2001. "The Cuts of Language: The East/West of North/South." *Public Culture*. Special Issue:39–63.
- Brosius, J. Peter. 1986. "River, Forest and Mountain: The Penan Gang Landscape." *Sarawak Museum Journal* 36(57) (n.s.):173–84.
- . 1988. "A Separate Reality: Comments on Hoffman's *The Punan: Hunters and Gatherers of Borneo*." *Borneo Research Bulletin* 20(2):81–106.
- . 1991a. "Foraging in Tropical Rainforests: The Case of the Penan of Sarawak, East Malaysia (Borneo)." *Human Ecology* 19(2):123–50.
- . 1991b. "Thrice-Told Tales: A Review of *The Nighbind Songs: Chants and Songs of Sarawak Dayaks*." *Borneo Research Bulletin* 22(2):241–67.
- . 1992a. "The Axiological Presence of Death: Penan Geng Death-Names." Ph.D. diss., University of Michigan.
- . 1992b. "Perspectives on Penan Development in Sarawak." *Sarawak Gazette* 119(1519):5–22.
- . 1993a. "Contrasting Subsistence Ecologies of Eastern and Western Penan Foragers (Sarawak, East Malaysia)." In *Food and Nutrition in the Tropical Forest: Biocultural Interactions and Applications to Development*, ed. C. M. Hladik et al., 515–22. Paris: UNESCO, Parthenon Man and the Biosphere Series.

- Brosius, J. Peter. 1993b. "Penan of Sarawak." In *State of the Peoples: A Global Human Rights Report on Societies in Danger*, ed. Marc S. Miller, 142-43. Boston: Beacon Press (for Cultural Survival, Inc.).
- . 1995a. "Bornean Forest Trade in Historical and Regional Perspective: The Case of Penan Hunter-Gatherers of Sarawak." In *Society and Non-Timber Products in Tropical Asia*, ed. J. Fox, 13-26. East-West Center Occasional Papers: Environmental Series no. 19.
- . 1995b. "Signifying Bereavement: Form and Context in the Analysis of Penan Death-Names." *Oceania*, 66(2):119-46.
- . 1995-96. "Father Dead, Mother Dead: Bereavement and Fictive Death in Penan Geng Society." *Omega: Journal of Death and Dying* 32(3):197-226.
- . 1997a. "Endangered Forest, Endangered People: Environmentalist Representations of Indigenous Knowledge." *Human Ecology* 25(1):47-69.
- . 1997b. "Prior Transcripts, Divergent Paths: Resistance and Acquiescence to Logging in Sarawak, East Malaysia." *Comparative Studies in Society and History* 39(3):468-510.
- . 1999a. "Green Dots, Pink Hearts: Displacing Politics from the Malaysian Rainforest." In "Ecologies for Tomorrow: Reading Rappaport Today," a "contemporary issues forum," ed. A. Biersack. *American Anthropologist* 101(1):36-57.
- . 1999b. "Locations and Representations: Writing in the Political Present in Sarawak, East Malaysia." In special issue of *Identities: Global Studies in Culture and Power* 6(2-3) entitled "Ethnographic Presence: Environmentalism, Indigenous Rights and Transnational Cultural Critique," ed. J. Peter Brosius.
- . 1999c. "Analyses and Interventions: Anthropological Engagements with Environmentalism." *Current Anthropology* 40(3): 277-309.
- . 2000. "Endangered Forest, Endangered People: Environmentalist Representations of Indigenous Knowledge." In *Indigenous Environmental Knowledge and Its Transformations: Critical Anthropological Perspectives*, ed. R. Ellen, P. Parkes, and A. Bicker, 293-318. Australia: Harwood Academic Publishers.
- . 2001a. "Local Knowledges, Global Claims: On the Significance of Indigenous Ecologies in Sarawak, East Malaysia." In *Indigenous Traditions and Ecology*, ed. J. Grim, 125-57. Cambridge, Mass.: Harvard University Press and the Center for the Study of World Religions, Harvard University.
- . 2001b. "The Politics of Ethnographic Presence: Sites and Topologies in the Study of Transnational Movements." In *New Directions in Anthropology and Environment: Intersections*, ed. C. Grumley, with E. van Deventer and J. Fletcher, 150-76. Walnut Creek, Calif.: Altamira Press.
- . 2003. "Voices for the Borneo Rain Forest: Writing the History of an Environmental Campaign." In *Nature in the Global South: Environmental Projects in South and Southeast Asia*, ed. Paul Greenough and Anna Lowenhaupt Tsing, 319-46. Durham: Duke University Press.
- Brown, Michael F., and Eduardo Fernández. 1991. *War of Shadows: The Struggle for Utopia in the Peruvian Amazon*. Berkeley: University of California Press.
- Bryant, Raymond L. 1992. "Political Ecology: An Emerging Research Agenda in Third World Studies." *Political Geography* 11:12-36.
- . 1998. "Power, Knowledge and Political Ecology in the Third World: A Review." *Progress in Physical Geography* 21(1):79-94.
- . 2001. "Political Ecology: A Critical Agenda for Change?" In *Social Nature: Theory, Practice, and Politics*, ed. N. Castree and B. Braun, 151-69. Malden, Mass.: Blackwell.
- Bryant, Raymond L., and S. Bailey. 1997. *Third World Political Ecology*. London: Routledge.
- Bunker, Stephen G. 1985. *Underdeveloping the Amazon: Extraction, Unequal Exchange, and the Failure of the Modern State*. Urbana: University of Illinois Press.
- Burningham, Kate, and Geoff Cooper. 1999. "Being Constructive: Social Constructionism and the Environment." *Sociology* 33(2):297-316.
- Burridge, Kenelm. 1960. *Mambra: A Study of Melanesian Cargo Movements and Their Social and Ideological Background*. New York: Harper and Row.
- Burton, John. 1997. "Principles of Compensation in the Mining Industry." In *Compensation for Resource Development in Papua New Guinea*, ed. S. Toff, 116-36. Law Reform Commission of Papua New Guinea, monograph no. 6.
- Carney, Judith A. 1996. "Converting the Wetlands, Engendering the Environment: The Intersection of Gender with Agrarian Change in Gambia." In *Liberation Ecologies: Environment, Development, Social Movements*, ed. R. Peet and M. Watts, 165-87. London: Routledge.
- Carrier, James G. 1998. "Property and Social Relations in Melanesian Anthropology." In *Property Relations: Renewing the Anthropological Tradition*, ed. C. M. Hann, 85-103. Cambridge: Cambridge University Press.
- Carrier, James G., and Josiah Heyman. 1997. "Consumption and Political Economy." *Journal of the Royal Anthropological Institute* 3(2):355-73.
- Casey, Edward S. 1996. "How to Get from Space to Place in a Fairly Short Stretch of Time: Phenomenological Prolegomena." In *Senses of Place*, ed. S. Feld and K. Basso, 13-52. Santa Fe: School of American Research Press.
- Castree, Noel. 1995. "The Nature of Produced Nature: Materiality and Knowledge Construction in Marxism." *Antipode* 27(1):12-48.
- Castree, Noel, and Bruce Braun. 1998. "The Construction of Nature and the Nature of Construction: Analytical and Political Tools for Building Survivable Futures." In *Re-making Reality: Nature at the Millennium*, ed. B. Braun and N. Castree, 3-42. London: Routledge.

- Castree, Noel, and Bruce Braun. 2000. "The Production of Nature." In *A Companion to Economic Geography*, ed. E. Sheppard and T. Barnes, 275-89. Oxford: Blackwell.
- Castree, Noel, and Bruce Braun, eds. 2001. *Social Nature: Theory, Practice, and Politics*. Malden, Mass.: Blackwell.
- Castree, Noel, and Tom Macmillan. 2001. "Actor-Networks and the Reimagination of Nature." In *Social Nature: Theory, Practice, and Politics*, ed. N. Castree and B. Braun, 208-24. Malden, Mass.: Blackwell.
- Castro Arenas, M. 1973. *La Rebelión de Juan Santos*. Lima: Editorial Millas Batres.
- Chávez, Ernesto A., and Daniel Lluch. 1971. "Estado actual de la pesca de camarón en el noroeste de México." *Revista de la Sociedad Mexicana de Historia Natural* 32:141-56.
- Chayanov, A. V. 1966. *The Theory of the Peasant Economy*. Homewood, Ill.: Richard Irwin.
- Childe, V. Gordon. 1953. *What Is History?* New York: Henry Schuman.
- Clark, Jeffrey. 1993. "Gold, Sex, and Pollution: Male Illness and Myth at Mt. Kare, Papua New Guinea." *American Ethnologist* 20:742-57.
- . 1995. "Highlands of History: Images of Deviance and Desire." In *Papuan Borderlands: Huli, Duna, and Ipih Perspectives on the Papua New Guinea Highlands*, ed. A. Biersack, 379-400. Ann Arbor: University of Michigan Press.
- Clifford, James. 1992. "Traveling Cultures." In *Cultural Studies*, ed. L. Grossberg, C. Nelson, and P. Treichler, 17-51. Cambridge, Mass.: Harvard University Press.
- . 1997a. *Routes: Travel and Translation in the Late Twentieth Century*. Cambridge, Mass.: Harvard University Press.
- . 1997b. "Spatial Practices: Fieldwork, Travel, and the Disciplining of Anthropology." In *Routes: Travel and Translation in the Late Twentieth Century*, 52-91. Cambridge, Mass.: Harvard University Press.
- Clifford, James, and George E. Marcus, eds. 1986. *Writing Culture: The Poetics and Politics of Ethnography*. Berkeley: University of California Press.
- Cohen, I. Bernard. 1994. *Interactions: Some Contacts between the Natural Sciences and the Social Sciences*. Cambridge: MIT.
- Cohn, N. 1981. *En Pos del Milenio: Revolucionarios milenaristas y anarquistas místicos de la Edad Media*. Madrid: Editorial Alianza Universidad.
- Colchester, M. 1989. *Pirates, Squatters and Poachers: The Political Ecology of Dispossession of the Native Peoples of Sarawak*. London: Survival International.
- Comaroff, Jean. 1985. *Body of Power, Spirit of Resistance: The Culture and History of a South African People*. Chicago: University of Chicago Press.
- Comaroff, Jean, and John Comaroff. 1991. *Of Revelation and Revolution*. Volume 1: *Christianity, Colonialism, and Consciousness in South Africa*. Chicago: University of Chicago Press.
- Conklin, B. 1997. "Body Paint, Feathers, and vcrs: Aesthetics and Authenticity in Amazonian Activism." *American Ethnologist* 24(4):711-37.

- Conklin, Harold C. 1954. "The Relation of Hanuno'o Culture to the Plant World." Ph.D. diss., Yale University. Ann Arbor: University Microfilms.
- . 1975/1957. *Hanuno'o Agriculture: A Report on an Integral System of Shifting Cultivation in the Philippines*. Northford, Conn.: Elliot's Books. (Originally published by the Food and Agriculture Organization, Rome.)
- . 1980. *Ethnographic Atlas of Ifugao: A Study of Environment, Culture, and Society in Northern Luzon*. New Haven: Yale University Press.
- Craig, J. A. 1926. "A New Fishery in Mexico." *California Fish Game* 12(4):166-69.
- Croll, E., and David Parkin, eds. 1992. *Bush Base, Forest Farm: Culture, Environment and Development*. London: Routledge.
- Cronon, William, ed. 1996. *Uncommon Ground: Rethinking the Human Place in Nature*. New York: W. W. Norton.
- Crumley, Carol L., ed. 1994. *Historical Ecology: Cultural Knowledge and Changing Landscapes*. Santa Fe: SAR Press.
- . 2001. *New Directions in Anthropology and Environment: Intersections*. Walnut Creek, Calif.: Altamira Press, Rowan and Littlefield.
- CSIRO. 1996. "Review of Riverine Impacts: Pongera Joint Venture." ACT, Australia: CSIRO Environmental Projects Office.
- Dacol Plant Pty Ltd. 1990. "FRGD Gold Project Environmental Plan." Volume B. Prepared for Ipih-Pongera Gold Dredging Joint Venture, July 16, 1990, report no. DR8925A; office of the Pongera Mining Coordinator, Department of Mining, PNG Government, Konedobu.
- Davis, J. 1992. "The Anthropology of Suffering." *Journal of Refugee Studies* 5(2):149-61.
- Davis, Shelton H. 1977. *Victims of the Miracle: Development and the Indians of Brazil*. Cambridge: Cambridge University Press.
- Davis, Wade, and Thom Henley. 1990. *Penan: Voice for the Borneo Rainforest*. Vancouver: Western Canada Wilderness Committee.
- Deacon, Margaret. 1997. *Scientists and the Sea 1650-1900: A Study of Marine Science*. Aldershot, Hampshire: Ashgate.
- DeLuca, Kevin. 1999. *Image Politics: The New Rhetoric of Environmental Activism*. New York: Guilford Press.
- DeMarrais, Elizabeth, Luis Jaime Castillo, and Timothy Earle. 1996. "Ideology, Materialization, and Power Strategies." *Current Anthropology* 37:15-31.
- Demcritt, David. 1998. "Science, Social Constructivism, and Nature." In *Remaking Reality: Nature at the Millennium*, ed. B. Braun and N. Castree, 173-93. New York: Routledge.
- . 2001. "Being Constructive about Nature." In *Social Nature: Theory, Practice, and Politics*, ed. N. Castree and B. Braun, 22-40. Malden, Mass.: Blackwell.
- Denevan, William, and M. S. Chrostowski. 1970. *The Biogeography of a Savanna Landscape: The Gran Pajonal of Eastern Peru*. Montreal: McGill University.

- Denevan, William, and Christine Padoch, eds. 1988. *Swidden-Fallow Agroforestry in the Peruvian Amazon*. Advances in Economic Botany, no. 5. New York: New York Botanical Gardens.
- Derkley, H., ed. 1989. "The Porgera Agreements (Annotated)." Enga Province: Legal Services Unit, Office of the Secretary, Department of Enga. Typescript.
- Derrida, Jacques. 1978. *Writing and Difference*. Translated by A. Bass. Chicago: University of Chicago Press.
- Descola, Philippe. 1994. *In the Society of Nature: A Native Ecology of Amazonia*. Translated by Nora Scott. Cambridge: Cambridge University Press.
- Descola, Philippe, and Gis l P lsson, eds. 1996. *Nature and Society: Anthropological Perspectives*. London: Routledge.
- Diamond, Jared. 1996. "Bach, God and the Jungle." *Natural History* 12(90):22-27.
- Dickens, P. 1996. *Reconstructing Nature: Alienation, Emancipation and the Division of Labour*. London: Routledge.
- Dirlik, Anif. 1996. "The Global in the Local." In *Global-Local: Cultural Production and the Transnational Imaginary*, ed. Rob Wilson and Wimal Dissanayake, 21-45. Durham: Duke University Press.
- \_\_\_\_\_. 2001. "Place-Based Imagination: Globalism and the Politics of Place." In *Places and Politics in an Age of Globalization*, ed. R. Prazniak and A. Dirlik, 15-51. Lanham, Md.: Rowman and Littlefield.
- Dirlik, Anif, Vinay Bahl, and Peter Gran, eds. 2000. *History after the Three Worlds: Post-Eurocentric Historiographies*. Lanham, Md.: Rowman and Littlefield.
- Dirlik, Anif, and Roxann Prazniak. 2001. "Introduction: Cultural Identity and the Politics of Place." In *Places and Politics in an Age of Globalization*, ed. R. Prazniak and A. Dirlik, 3-13. Lanham, Md.: Rowman and Littlefield.
- Dove, Michael R. 1982. "The Myth of the 'Communal' Longhouse in Rural Development." In *Too Rapid Rural Development*, ed. C. MacAndrews and L. S. Chin, 14-78. Athens: Ohio University Press.
- \_\_\_\_\_. 1983a. "Forest Preference in Swidden Agriculture." *Tropical Ecology* 24(1):122-42.
- \_\_\_\_\_. 1983b. "Theories of Swidden Agriculture and the Political Economy of Ignorance." *Agroforestry Systems* 1:85-99.
- \_\_\_\_\_. 1984. "The Chayanov Slope in a Swidden Economy." In *Chayanov, Peasants, and Economic Anthropology*, ed. P. E. Durrenberger, 97-132. New York: Academic Press.
- \_\_\_\_\_. 1985a. "The Agroecological Mythology of the Javanese and the Political Economy of Indonesia." *Indonesia* 39:1-36.
- \_\_\_\_\_. 1985b. *Swidden Agriculture in Indonesia: The Subsistence Strategies of the Kalimantan Kantru*. Berlin: Mouton.
- \_\_\_\_\_. 1988. "The Ecology of Intoxication Among the Kantru' of West Kalimantan." In

- The Real and the Imagined Role of Culture in Development: Case Studies from Indonesia*, ed. M. R. Dove, 139-82. Honolulu: University of Hawaii Press.
- \_\_\_\_\_. 1993a. "Smallholder Rubber and Swidden Agriculture in Borneo: A Sustainable Adaptation to the Ecology and Economy of the Tropical Forest." *Economic Botany* 47(2):136-47.
- \_\_\_\_\_. 1993b. "Uncertainty, Humility and Adaptation to the Tropical Forest: The Agricultural Augury of the Kantru'." *Ethnology* 40(2):145-67.
- \_\_\_\_\_. 1994. "The Transition from Native Forest Rubbers to *Hevea Brasiliensis* (EUPHORBIACEAE) Among Tribal Smallholders in Borneo." *Economic Botany* 48(4):382-96.
- \_\_\_\_\_. 1996a. "Process versus Product in Kantru' Augury: A Traditional Knowledge System's Solution to the Problem of Knowing." In *Redefining Nature: Ecology, Culture, Domestication*, ed. K. Fukui and R. F. Ellen, 557-96. Oxford: Berg.
- \_\_\_\_\_. 1996b. "Rice-Eating Rubber and People-Eating Governments: Peasant versus State Critiques of Rubber Development in Colonial Indonesia." *Ethnohistory* 43(1):33-63.
- \_\_\_\_\_. 1997. "Political Ecology of Pepper in the 'Hikayat Banjar': The Historiography of Commodity Production in a Bornean Kingdom." In *Paper Landscapes: Explorations in the Environmental History of Indonesia*, ed. P. Boomgaard, F. Colombijn, and D. Henley, 341-77. Verhandelingen 178. Leiden: Koninklijk Instituut voor Taal-, Land- en Volkenkunde.
- \_\_\_\_\_. 1998. "Living Rubber, Dead Land, and Persisting Systems in Borneo: Indigenous Representations of Sustainability." *Bijdragen tot de taal-, land- en volkenkunde* 154(1):20-54.
- \_\_\_\_\_. 1999a. "The Agronomy of Memory and the Memory of Agronomy: Ritual Conservation of Archaic Cultigens in Contemporary Farming Systems." In *Ethnology: Situated Knowledge/Located Lives*, ed. V. Nazarea, 45-70. Tucson: University of Arizona Press.
- \_\_\_\_\_. 1999b. "Forest Augury in Borneo: Indigenous Environmental Knowledge—About the Limits to Knowledge of the Environment." In *Cultural and Spiritual Values of Biodiversity*, ed. D. Posey, 376-80. London: Intermediate Technology Publications, for UNEP.
- \_\_\_\_\_. 2001. "Interdisciplinary Borrowing in Environmental Anthropology and the Critique of Modern Science." In *New Directions in Anthropology and Environment: Intersections*, ed. C. Crumley, with A. van Deventer and J. Fletcher, 90-110. Lanham, Md.: Altamira Press.
- Dove, Michael R., and D. M. Kammen. 1997. "The Epistemology of Sustainable Resource Use: Managing Forest Products, Swiddens, and High-Yielding Variety Crops." With D. M. Kammen. *Human Organization* 56(1):91-101.

- Dow, James. 1981. "The Image of Limited Production: Envy and the Domestic Mode of Production in Peasant Society." *Human Organization* 40:360-64.
- Durkheim, Émile. 1964 [1933]. *The Division of Labor in Society*. Translated by George Simpson (Original: *De la division du travail social* [Paris, Félix Alcan]). New York: Free Press.
- . 1984 (1893). *The Division of Labor in Society*. Translated by W. D. Halls. New York: Free Press.
- Dwyer, Peter D., and Monica Minnegal. 1999. "The Transformation of Use-Rights: A Comparison of Two Papua New Guinean Societies." *Journal of Anthropological Research* 55(3):361-83.
- Ebihara, May M., Carol A. Mortland, and Judy Ledgerwood, eds. 1994. *Cambodian Culture Since 1975: Homeland and Exile*. Ithaca: Cornell University Press.
- Echols, John M., and Hassan Shadily. 1992. *Kamus Indonesia-Inggris: An Indonesian-English Dictionary*. 3d edition. Jakarta: P. T. Gramedia.
- Eckersley, Robyn. 1992. *Environmentalism and Political Theory: Toward an Ecocentric Approach*. Albany: State University of New York Press.
- Effendi Norwawi, Datuk. 1993. "A Vision of Sarawak as a Model State." *Backbench* 8, August 1993:27.
- Ellen, Roy. 1996. "Introduction." In *Redefining Nature: Ecology, Culture and Domestication*, ed. R. Ellen and K. Fukui. Oxford: Berg.
- Ellen, Roy, Peter Parkes, and Alan Bicker, eds. 2000. *Indigenous Environmental Knowledge and Its Transformations: Critical Anthropological Perspectives*. Australia: Harwood Academic Publishers.
- Engel, J. Ronald. 1989. "The Symbolic and Ethical Dimension of the Biosphere Reserve Concept." In *Proceedings of the Symposium on Biosphere Reserves, Fourth World Wilderness Congress, Estes Park, Colorado, Sept. 11-18, 1987*, ed. William P. Gregg, Jr., Stanley L. Krugman, and James D. Wood Jr., 21-32. Atlanta: National Park Service, Science Publications Office.
- Equihua Ballesteros, Serafin. 1983. "El puerto de San Felipe." In *Panorama histórico de Baja California*, ed. David Piera Ramirez, 507-15. Mexico City: Centro de Investigaciones Históricas, Universidad Nacional Autónoma-Universidad Autónoma de Baja California.
- Erikson, Kai. 1976. *Everything in Its Path*. New York: Simon and Schuster.
- Escobar, Arturo. 1992. "Culture, Economics, and Politics in Latin American Social Movements Theory and Research." In *The Making of Social Movements in Latin America: Identity, Strategy, and Democracy*, ed. A. Escobar and S. Alvarez, 62-85. Boulder: Westview Press.
- . 1995a. *Encountering Development: The Making and Unmaking of the Third World*. Princeton: Princeton University Press.
- . 1995b. "Imagining a Post-Development Era?" In *Power of Development*, ed. J. Crush, 211-27. London: Routledge.
- . 1996. "Constructing Nature: Elements for a Poststructural Political Ecology." In *Liberation Ecologies: Environment, Development, Social Movements*, ed. R. Peet and M. Watts, 46-68. London: Routledge.
- . 1997. "Cultural Politics and Biological Diversity: State, Capital, and Social Movements in the Pacific Coast of Colombia." In *Between Resistance and Revolution: Cultural Politics and Social Protest*, ed. R. Fox and O. Starn, 40-64. New Brunswick: Rutgers University Press.
- . 1999a. "After Nature: Steps to an Antiesentialist Political Ecology." *Current Anthropology* 40:1-30.
- . 1999b. Comment on Brosius' "Analyses and Interventions: Anthropological Engagements with Environmentalism." *Current Anthropology* 40(3):291-93.
- . 2001. "Culture Sits in Places: Reflections on Globalism and Subaltern Strategies of Localization." *Political Geography* 20:139-74.
- Escobar, Arturo, and Sonia E. Alvarez, eds. 1992. *The Making of Social Movements in Latin America: Identity, Strategy, and Democracy*. Boulder: Westview Press.
- Escobar, Arturo, Dianne Rocheleau, and Smitu Kothari. 2002. "Environmental Social Movements and the Politics of Place." In "Place, Politics and Justice: Women Negotiating Globalization," ed. W. Harcourt. Special issue. *Development* 45(1):28-36.
- Fabian, Johannes. 1983. *Time and the Other: How Anthropology Makes Its Object*. New York: Columbia University Press.
- Fairhead, James, and Melissa Leach. 1996. *Misreading the African Landscape: Society and Ecology in a Forest-Savanna Mosaic*. Cambridge: Cambridge University Press.
- Featherstone, Mike. 1993. "Global and Local Cultures." In *Mapping the Futures: Local Cultures, Global Change*, ed. J. Bird, B. Curtis, T. Putnam, G. Robertson, and L. Tickner, 169-87. London: Routledge.
- Feld, Steven. 1982. *Sound and Sentiment: Birds, Weeping, Poetics, and Song in Kabuli Exile*. Philadelphia: University of Pennsylvania Press.
- Feld, Steven, and Keith Basso, eds. 1996. *Senses of Place*. Santa Fe: School of American Research Press.
- Ferguson, James. 1990. *The Anti-Politics Machine: "Development," Depoliticization, and Bureaucratic Power in Lesotho*. Cambridge: Cambridge University Press.
- . 2000. *Expectations of Modernity: Myths and Meanings of Urban Life on the Zambian Copperbelt*. Berkeley: University of California Press.
- Ferguson, James, and Akhil Gupta. 2002. "Spatializing States: Toward an Ethnography of Neoliberal Governmentality?" *American Ethnologist* 29(4):981-1002.
- Filer, Colin. 1990. "The Bougainville Rebellion, the Mining Industry and the Process of Social Disintegration in Papua New Guinea." In *The Bougainville Crisis*, ed. R. J. May and Matthew Spriggs, 73-112. Bathurst: Crawford House Press.

- . 1999. "Introduction." In *Dilemmas of Development: The Social and Economic Impact of the Porgera Gold Mine 1989-1994*, ed. C. Filer, 1-18. Canberra: Asia Pacific Press and Research School of Pacific and Asian Studies, Australian National University.
- . 2001. "Between a Rock and a Hard Place: Mining Projects, 'Indigenous Communities', and Melanesian States." In *Mining in Papua New Guinea: Analysis and Policy Implications*, ed. B. Y. Imbun and P. A. McGavin, 7-23. Waigani, NCD: University of Papua New Guinea Press.
- Finnish Forest Industries. 1994. "Renewable, Recyclable, Responsible." Promotional brochure. Helsinki: Finnish Forest Industries Federation.
- Fortes, Meyer. 1970. *Kinship and the Social Order*. Chicago: Aldine.
- Foster, John Bellamy. 2000. *Marr's Ecology: Materialism and Nature*. New York: Monthly Review Press.
- Foucault, Michel. 1973. *The Birth of the Clinic: An Archaeology of Medical Perception*. Translated by A. M. Sheridan. London: Tavistock.
- . 1978. *The History of Sexuality*. Volume 1. New York: Random House.
- . 1982. "Afterword: The Subject and Power." In *Michel Foucault: Beyond Structuralism and Hermeneutics*, ed. Hubert L. Dreyfus and Paul Rabinow, 208-26. Chicago: University of Chicago Press.
- Fox, James J. 2000. "The Impact of the 1997-98 El Niño on Indonesia." In *El Niño - History and Crisis*, ed. Richard H. Grove and John Chappell, 171-90. Cambridge: White Horse Press.
- Fox, Richard G, and Orin Starn, eds. 1997. "Introduction." In *Between Resistance and Revolution: Cultural Politics and Social Protest*, 1-16. New Brunswick: Rutgers University Press.
- Frank, Andre Gunder. 1969a. *Capitalism and Underdevelopment in Latin America: Historical Studies of Chile and Brazil*. New York: Monthly Review Press.
- . 1969b. *Latin America: Underdevelopment or Revolution*. New York: Monthly Review Press.
- . 1978. *World Accumulation, 1492-1789*. New York: Monthly Review Press.
- Franklin, Sarah. 1995. "Science as Culture, Cultures of Science." *Annual Review of Anthropology* 24:163-84.
- . 1996. "Making Transparencies: Seeing through the Science Wars." In *Science Wars*, ed. A. Ross, 151-67. Durham: Duke University Press.
- Fraser, Nancy. 1997. *Justice Interruptus: Critical Reflections on the "Postsocialist" Condition*. London: Routledge.
- . 1999. "Introduction." In *Dilemmas of Development: The Social and Economic Impact of the Porgera Gold Mine 1989-1994*, ed. C. Filer, 1-18. Canberra: Asia Pacific Press and Research School of Pacific and Asian Studies, Australian National University.
- Freeman, J. D. 1960. "Iban Augury." In *The Birds of Borneo*, ed. B. E. Smythies, 73-98. Edinburgh: Oliver and Boyd.
- . 1970. *Report on the Iban*. London School of Economics Monographs on Social Anthropology no. 41. New York: Humanities Press.
- Friedman, Jonathan. 1974. "Marxism, Structuralism and Vulgar Materialism." *Man* (n.s.) 9:444-69.
- . 1975. "Tribes, States, and Transformations." In *Marxist Analyses and Social Anthropology*, ed. M. Bloch, 161-202. London: Malaby.
- . 1979. "Hegelian Ecology: Between Rousseau and the World Spirit." In *Social and Ecological Systems*, ed. P. C. Burnham and R. Ellen, 253-70. A.S.A. Monograph no. 18. London: Academic Press.
- . 1994. *Cultural Identity and Global Process*. London: Sage.
- FSIS (Forest Statistics Information Service) Statistical Yearbook of Forestry 1995. Helsinki: Finnish Forest Research Institute/METLA.
- Fujimura, Joan. 1992. "Crafting Science: Standardized Packages, Boundary Objects, and 'Translation.'" In *Science as Practice and Culture*, ed. Andrew Pickering, 168-211. Chicago: University of Chicago Press.
- Gammage, Bill. 1998. *The Sky Travellers: Journeys in New Guinea 1939-1939*. Melbourne: Melbourne University Press.
- Gaonkar, Dilip Parameswar, ed. 2001. *Alternative Modernities*. Durham: Duke University Press.
- García Hierro, Pedro, Søren Hvalkof, and Andrew Gray. 1998. *Liberation through Land Rights in the Peruvian Amazon*, ed. A. Parellada and S. Hvalkof. IWGIA Document no. 80. Copenhagen: IWGIA.
- Gare, Arran E. 1995. *Postmodernism and the Environmental Crisis*. London: Routledge.
- Gates, Henry Louis, Jr., ed. 1985. *Race, Writing, and Difference*. Chicago: University of Chicago Press.
- Gatti, Luis María, and Graciela Alcalá. 1985. *La Vida en un Lance: Los Pescadores de México*. Mexico City: Museo Nacional de Culturas Populares, Dirección General de Culturas Populares, SEP Cultura: Secretaría de Pesca.
- Geertz, Clifford. 1973. *The Interpretation of Cultures*. New York: Basic Books.
- . 1980. *Negara*. Princeton: Princeton University Press.
- Gellert, Paul. 1998. "A Brief History and Analysis of Indonesia's Forest Fire Crisis." *Indonesia* 65: 63-85.
- Gewertz, Deborah, and Frederick Errington. 1991. *Twisted Histories, Alternate Contexts*. Cambridge: Cambridge University Press.
- Geyer, Michael, and Charles Bright. 1995. "World History in a Global Age." *American Historical Review* (October 1995):1034-60.
- Ghai, Yash P., Robin Luckham, and Francis G. Snyder. 1987. *The Political Economy of Law: A Third World Reader*. New York: Oxford University Press.
- Gibson-Graham, J. K. 1995. "Waiting for the Revolution, or How to Smash Capitalism While Working at Home in Your Spare Time." In *Marxism in the Postmodern*

- Age: Confronting the New World Order*, ed. A. Callari, S. Cullenberg, and C. Biewener, 188-97. New York: Guilford Press.
- . 1996/97. "Querying Globalization." *Rethinking Marxism* 9(1):1-27.
- Gibson-Graham, J. K., Stephen Resnick, and Richard Wolff. 2001. "Toward a Poststructuralist Political Economy." Introduction to *Re/Presenting Class: Essays in Postmodern Marxism*, ed. J. K. Gibson-Graham, S. Resnick, and R. Wolff, 1-22. Durham: Duke University Press.
- Giddens, Anthony. 1981. *A Contemporary Critique of Historical Materialism*. Berkeley: University of California Press.
- Godelier, Maurice. 1984. *The Mental and the Material: Thought, Economy and Society*. Bristol: Verso.
- . 1986. *The Making of Great Men*. Cambridge: Cambridge University Press.
- Goldammer, J. G. 1990. "The Impact of Drought and Forest Fires on Tropical Lowland Rain Forest of East Kalimantan." In *Fire in the Tropical Biota: Ecosystem Processes and Global Challenges*, ed. J. G. Goldammer, 11-31. Berlin: Springer-Verlag.
- Goldman, Stanford. 1960. "Further Consideration of Cybernetic Aspects of Homeostasis." In *Self-Organizing Systems*, ed. M. Yovits and S. Cameron, 108-21. New York: Pergamon Press.
- Golub, Alex. 2001. *Gold Positive: A Short History of Porgera 1930-1997*. A Porgera Development Authority Monograph. Porgera: Porgera Development Authority.
- Gomes, E. H. 1911. *Seventeen Years Among the Sea Dynaks of Borneo: A Record of Intimate Association with the Natives of the Bornean Jungles*. London: Seeley.
- Goodman, Alan H., and Thomas L. Leatherman. 1998. "Traversing the Chasm between Biology and Culture: An Introduction." In *Building a New Biocultural Synthesis: Political-Economic Perspectives on Human Biology*, ed. A. Goodman and T. Leatherman, 3-41. Ann Arbor: University of Michigan Press.
- Gore, Al. 1992. *Earth in the Balance: Ecology and the Human Spirit*. New York: Plume/Penguin.
- Gould, David M. 1996. "Mexico's Crisis: Looking Back to Assess the Future." In *Changing Structure of Mexico: Political, Social, and Economic Perspectives*, ed. Laura Randall, 15-39. New York: M. E. Sharpe.
- Greenberg, James B. 1998. "The Tragedy of Commoditization: Political Ecology of the Colorado River Delta's Destruction." *Research in Economic Anthropology* 19:133-52.
- Greenberg, James B., and Thomas K. Park. 1994. "Political Ecology." *Journal of Political Ecology* 1:1-12.
- Greenough, Paul, and Anna Lowenhaupt Tsing. 2003. "Introduction." *Nature in the Global South: Environmental Projects in South and Southeast Asia*, ed. P. Greenough and A. Tsing, 1-23. Durham: Duke University Press.
- , eds. 2003. *Nature in the Global South: Environmental Projects in South and Southeast Asia*. Durham: Duke University Press.
- Greider, William. 1997. *One World, Ready or Not*. New York: Simon and Schuster.
- Grey, Andrew. 1997. "Peru. Freedom and Territory: Slavery in the Peruvian Amazon, Enslaved Peoples in the 1990s." In *Indigenous Peoples, Debt Bondage and Human Rights*, 183-215. Anti-Slavery International and IWGIA Document no. 83. Copenhagen: IWGIA.
- . 1998. "Demarcating Development: Titing Indigenous Communities in Peru." In *Liberation through Land Rights in the Peruvian Amazon*, ed. A. Parellada and S. Hvalkof, 163-216. IWGIA Document no. 80. Copenhagen: IWGIA.
- Grey, Andrew, and Søren Hvalkof. 1990. "Indigenous Land Titing in the Peruvian Amazon." In *IWGIA Yearbook 1989*, 230-43. Copenhagen: IWGIA.
- Grim, John, ed. 2001. *Indigenous Traditions and Ecology: The Interbeing of Cosmology and Community*. Cambridge, Mass.: Harvard University Press.
- Grimshaw, Jean. 1986. *Philosophy and Feminist Thinking*. Minneapolis: University of Minnesota Press.
- Gross, Daniel, George Eiten, Nancy Flowers, Francisca Leoi, Madeline Ritter, and Dennis Werner. 1979. "Ecology and Acculturation among Native Peoples of Central Brazil." *Science* 206(30):1043-50.
- Gross, Paul R., and Norman Levitt. 1994. *Higher Superstition: The Academic Left and Its Quarrels with Science*. Baltimore: Johns Hopkins University Press.
- Grundmann, Reiner. 1991. *Marxism and Ecology*. Oxford: Clarendon Press.
- Guadarrama, Roco. 1985. "Los Proyectos Colonizadores." In *Historia General de Sonora: Historia Contemporánea de Sonora 1929-1984*, volume 5, ed. Gerardo Consejo Muurieta, 167-71. Hermosillo, Sonora: Gobierno del Estado de Sonora.
- Guarnizo, Luis Eduardo, and Michael Peter Smith. 1998. "The Locations of Transnationalism." In *Transnationalism from Below*, ed. M. Smith and L. Guarnizo, 3-34. Comparative Urban and Community Research. New Brunswick: Transaction.
- Gudeman, Stephen. 1992. "Remodeling the House of Economics: Culture and Innovation." *American Ethnologist* 19(1):141-54.
- Gupta, Akhil. 1998. *Postcolonial Developments: Agriculture in the Making of Modern India*. Durham: Duke University Press.
- Gupta, Akhil, and James Ferguson. 1997a. "After 'Peoples and Cultures'." In *Culture, Power, Place: Explorations in Critical Anthropology*, ed. A. Gupta and J. Ferguson, 1-29. Durham: Duke University Press.
- . 1997b. "Beyond 'Culture': Space, Identity, and the Politics of Difference." In *Culture, Power, Place: Explorations in Critical Anthropology*, ed. A. Gupta and J. Ferguson, 33-51. Durham: Duke University Press.
- . 1997c. "Discipline and Practice: 'The Field' as Site, Method, and Location in Anthropology." In *Anthropological Locations: Boundaries and Grounds of a Field Science*, ed. A. Gupta and J. Ferguson, 1-46. Berkeley: University of California Press.

- Haberle, Simon. 1998a. "Report on the Gunung Kawi Sabatu Pollen Samples: Core 16 and 14." Unpublished report in files of Vernon L. Scarborough.
- . 1998b. "Second Report on the Gunung Kawi Sabatu Pollen Samples: Core 14 and 17." Unpublished report in files of Vernon L. Scarborough.
- Haberlas, Jürgen. 1971. *Knowledge and Human Interests*. Translated by Jeremy Shapiro. London: Heinemann Educational Books.
- Haddock, Bruce. 1994. "Hegel's Critique of the Theory of Social Contract." In *The Social Contract from Hobbes to Rawls*, ed. D. Boucher and P. Kelly, 147–63. London: Routledge.
- Hajer, Maarten A. 1995. *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process*. Oxford: Clarendon Press.
- Hall, Stuart. 1997a. "Introduction: Spaces of Culture, Spaces of Knowledge." In *Culture, Globalization and the World-System: Contemporary Conditions for the Representation of Identity*, ed. Anthony D. King, 19–39. Minneapolis: University of Minnesota Press.
- . 1997b. "The Work of Representation." In *Representation: Cultural Representations and Signifying Practices*, ed. S. Hall, 13–74. London: Sage Publications.
- Handley, G. A. 1987. "Exploration of the Porgera Gold Deposit." In *Pacific Rim Congress 87*, 145–49. Parkville, Victoria: Australasian Institute of Mining and Metallurgy.
- Handley, G. A., and D. D. Henry. 1990. "Porgera Gold Deposit." In *Geology of the Mineral Deposits of Australia and Papua New Guinea*, ed. F. E. Hughes, 1717–24. Melbourne: Australasian Institute of Mining and Metallurgy.
- Hann, C. M. 1998. "Introduction: The Embeddedness of Property." In *Property Relations: Renewing the Anthropological Tradition*, ed. C. M. Hann, 1–47. Cambridge: Cambridge University Press.
- Hanna, Susan, Carl Folke, and Karl-Göran Maler. 1996. "Property Rights and the Natural Environment." In *Rights to Nature: Ecological, Economic, Cultural, and Political Principles of Institutions for the Environment*, ed. S. Hanna, C. Folke, and K.-G. Maler, 1–10. Washington: Island Press.
- Hannerz, Ulf. 1989. "Notes on the Global Ecumene." *Public Culture* 1(2):66–75.
- Hannigan, John A. 1995. *Environmental Sociology: A Social Constructionist Approach*. London: Routledge.
- Hansen, Art. 1994. "The Illusion of Local Sustainability and Self-Sufficiency: Famine in a Border Area of Northwestern Zambia." *Human Organization* 5(1):11–20.
- Haraway, Donna. 1989. *Primate Visions: Gender, Race and Nature in the World of Modern Science*. New York: Routledge.
- . 1991. *Simians, Cyborgs, and Women: The Reinvention of Nature*. London: Free Association Books.
- . 1997. *Modest\_Witness@Second\_Millennium: FemaleMan\_Meets\_OncoMouse Feminism and Technoscience*. London: Routledge.
- Harcourt, Wendy, ed. 2002. "Place, Politics and Justice: Women Negotiating Globalization." Special Issue, *Development* 45(1):7–14.
- Harcourt, Wendy, and Arturo Escobar. 2002. "Women and the Politics of Place." In "Place, Politics and Justice: Women Negotiating Globalization," ed. W. Harcourt. Special issue. *Development* 45(1):7–14.
- Hardin, G. 1968. "The Tragedy of the Commons." *Science* 162:1243–48.
- Harrison, Robert P. 1992. *Forests: The Shadow of Civilization*. Chicago: University of Chicago Press.
- Harrison, Tom. 1949. "Notes on Some Nomadic Punans." *Sarawak Museum Journal* 5(1)(n.s.):130–46.
- . 1960. "Men and Birds in Borneo." In *The Birds of Borneo*, ed. B. E. Smythies, 20–61. Edinburgh: Oliver and Boyd.
- Harvey, David. 1974. "Population, Resources and the Ideology of Science." *Economic Geography* 50:256–77.
- . 1989. *The Condition of Postmodernity*. Oxford: Basil Blackwell.
- . 1993. "From Space to Place and Back Again: Reflections on the Condition of Postmodernity." In *Mapping the Futures: Local Cultures, Global Change*, ed. J. Bird, B. Curtis, T. Putnam, G. Robertson, and L. Tickner, 3–29. London: Routledge.
- . 1996. *Justice, Nature and the Geography of Difference*. Cambridge, Mass.: Blackwell.
- Harwell, Emily. 2000a. "The Unnatural History of Culture: Ethnicity, Tradition and Territorial Conflicts in West Kalimantan, Indonesia, 1800–1997." Ph.D. diss., Yale University.
- . 2000b. "Remote Sensibilities: Discourses of Technology and the Making of Indonesia's Natural Disaster." *Development and Change* 31:307–40.
- Hecht, Susanna B. 1985. "Environment, Development and Politics: Capital Accumulation and the Livestock Sector in Eastern Amazonia." *World Development* 13(6):663–84.
- Hecht, Susanna B., Richard B. Nordgaard, and Giorgio Possio. 1988. "The Economics of Cattle Ranching in Eastern Amazonia." *Interiencia* 13(5):233–39.
- Hegel, Georg Wilhelm Friedrich. 1942. *Hegel's Philosophy of Right*. Translated by T. M. Knox. Oxford: Oxford University Press.
- Helgason, Arnar S., and Gísli Pálsson. 1997. "Contested Commodities: The Moral Landscape of Modernist Regimes." *Journal of the Royal Anthropological Institute* (incorporating *Man*) 3(3):451–71.
- . 1998. "Cash for Quotas: Disputes over the Legitimacy of an Economic Model of Fishing in Iceland." In *Virtualism: A New Political Economy*, ed. J. Carrier and D. Miller, 117–34. Oxford: Berg.
- Henry, D. D., and G. A. Handley. 1987. "Report on Small Scale Mining." Appendix 8

- of TAC 1995. Prepared for Porgera Joint Venture. Department of Mining, Papua New Guinea Government.
- Herzfeld, Michael. 2001. *Anthropology: Theoretical Practice in Culture and Society*. London: Blackwell.
- Hewitt, K., ed. 1983. *Interpretations of Calamity, from the Viewpoint of Human Ecology*. Boston: Allen and Unwin.
- Heyman, Josiah. 1994. "The Mexico-United States Border in Anthropology: A Critique and Reformulation." *Journal of Political Ecology* 1:43-65.
- Heyman, Josiah. 1997. "Imports and Standards of Justice on the Mexico-United States Border." In *The Allure of the Foreign*, ed. Benjamin Orlove, 151-83. Ann Arbor: University of Michigan Press.
- Hirsch, Eric, and Michael O'Hanlon, eds. 1995. *The Anthropology of Landscape: Perspectives on Place and Space*. Oxford: Clarendon Press.
- Holbrook, Morris. 1991. *The Semiotics of Consumption: Interpreting Symbolic Consumer Behavior in Popular Culture and Works of Art*. Berlin: Mouton de Gruyter.
- Holleman, J. F., ed. 1981. *Van Vollenhoven on Indonesian Adat Law*. Koninklijk Instituut voor Taal-, Land-, en Volkenkunde Translation Series 20. The Hague: Martinus Nijhoff.
- Holling, C. S. 1978. "Myths of Ecological Stability: Resilience and the Problem of Failure." In *Studies on Crisis Management*, ed. C. F. Smart, C. F. Stanbury, and W. T. Stanbury, 97-109. Toronto: Institute for Research on Public Policy.
- . 1994. "Simplifying the Complex: The Paradigms of Ecological Function and Structure." *Futures* 26(6):598-609.
- Holling, C. S., P. Taylor, and M. Thompson. 1991. "From Newton's Sleep to Blake's Fourfold Vision: Why the Climax Community and the Rational Bureaucracy Are Not the Ends of the Ecological and Social-Cultural Roads." *Annals of the Earth* 9(3):19-21.
- Hong, E. 1987. *Natives of Sarawak: Survival in Borneo's Vanishing Forests*. Pulau Pinang: Institut Masyarakat.
- Honneth, Axel. 1996. *The Struggle for Recognition: The Moral Grammar of Social Conflicts*. Translated by Joel Anderson. Cambridge: MIT.
- Hooker, M. B. 1978a. *Adat Law in Modern Indonesia*. Kuala Lumpur: Oxford University Press.
- . 1978b. *A Concise Legal History of South-East Asia*. Oxford: Clarendon Press.
- Hornborg, Alf. 1999. Comment on Brosius' "Analyses and Interventions: Anthropological Engagements with Environmentalism." *Current Anthropology* 40(3):294.
- Horowitz, Daniel. 1988. *The Morality of Spending*. Baltimore: Johns Hopkins University Press.
- Huehne, W. H. 1959. "A Doctor Among 'Nomadic' Punans." *Sarawak Museum Journal* 9(13-14)(n.s.):195-202.
- Hunt, Robert C. 1998. "Properties of Property: Conceptual Issues." In *Property in Economic Context*, ed. R. C. Hunt and A. Gilman, 7-27. Lanham, Md.: University Press of America.
- Hurst, Philip. 1990. *Rainforest Politics: Ecological Destruction in South-East Asia*. London: Zed Books.
- Hvalkof, Søren. 1986. "El Drama Actual del Gran Pajonal. Primera parte: Recursos, Historia, Población y Producción Ashéninka." In *Amazonia Indígena, Boletín de Análisis* 6(12). Lima: Copal.
- . 1987. "El Drama Actual del Gran Pajonal. Segunda parte: Colonización y Violencia." In *Amazonia Indígena, Boletín de Análisis* 7(13). Lima: Copal.
- . 1989. "The Nature of Development: Native and Settlers' Views in Gran Pajonal, Peruvian Amazon." *Folk* 31:125-50. Copenhagen: Danish Ethnographic Society.
- . 1994. "The Ashéninka Disaster and Struggle—The Forgotten War in the Peruvian Amazon." *Indigenous Affairs* no. 2/94. Copenhagen: IWGIA.
- . 1997. "From Curaca to President . . . Indigenous Leadership in Peruvian Amazon: The Ashéninka Case." Paper presented at the session "Contemporary Indigenous Leadership in the Amazon." American Anthropological Association annual meeting, Washington, D.C., November 19-23.
- . 1998. "From Slavery to Democracy: The Indigenous Process of Upper Ucayali and Gran Pajonal." In *Liberation through Land Rights in the Peruvian Amazon*, ed. A. Parellada and S. Hvalkof, 83-162. IWGIA Document no. 90. Copenhagen: IWGIA.
- . 2002. "Beyond Indigenous Land Titling: Democratizing Civil Society in the Peruvian Amazon." In *Space, Place and Nation: Neoliberalism in the Americas*, ed. J. Chase, 87-118. Bloomfield, Conn.: Kumarian Press.
- Hvalkof, Søren, and Arturo Escobar. 1998. "Nature, Political Ecology and Social Practice: Toward an Academic and Political Agenda." In *Building a New Biocultural Synthesis: Political-Economic Perspectives on Human Biology*, ed. A. H. Goodman and T. L. Leatherman, 425-50. Ann Arbor: University of Michigan Press.
- Hyndman, David. 1994. *Ancestral Rainforests and the Mountain of Gold: Indigenous Peoples and Mining in New Guinea*. Boulder: Westview Press.
- . 2001. "Academic Responsibilities and Representation of the Ok Tedi Crisis in Postcolonial Papua New Guinea." *The Contemporary Pacific* 13/1:33-54.
- Illich, Ivan. 1977. *Toward a History of Needs*. New York: Pantheon.
- Imbun, Benedict. 2000. "Mining Workers or 'Opportunist' Tribesmen?: A Tribal Workforce in a Papua New Guinea Mine." *Oceania* 71:129-49.
- . 2001. "Human Resource Management in Papua New Guinea Mining: Evidence from Porgera." In *Mining in Papua New Guinea: Analysis and Policy Implications*, ed. B. Y. Imbun and P. A. McGavin, 95-112. Waigani, NCD: University of Papua New Guinea Press.

- Ingold, Tim. 1991. "Foreword." In *Coastal Economies, Cultural Accounts: Human Ecology and Icelandic Discourse*, by Gisli Pálsson, vii-x. Manchester: University of Manchester Press.
- . 1993. "Globes and Spheres: The Topology of Environmentalism." In *Environmentalism: The View from Anthropology*, ed. K. Milton, 31-42. London: Routledge.
- . 1995. "Building, Dwelling, Living: How Animals and People Make Themselves at Home in the World." In *Shifting Contexts: Transformations in Anthropological Knowledge*, ed. M. Strathern, 57-80. London: Routledge.
- . 2000. *The Perception of the Environment: Essays in Livelihood and Dwelling and Skill*. London: Routledge.
- INSAN (Institute for Social Analysis). 1989. *Logging against the Natives of Sarawak*. Petaling Jaya: INSAN.
- Instituto Nacional de Estadística, Geografía e Informática. 1990. *Estadísticas Históricas de México*. Volume 1: *Aguascalientes, Ags*. Mexico City: Instituto Nacional de Estadística, Geografía, e Informática.
- Ipara, Kurubu. 1994. "Lower Porgera Land Investigation Report." Prepared for Porgera Joint Venture.
- . 1995. "Brief History of Negotiations." In "Minutes of meeting on the environment and alluvial gold compensation (lower Porgera)," March 2, 1995. File SLO 1/6/2J, Project Coordination Unit, PDA files.
- Irwin, A., and B. Wynne, eds. 1996. *Misunderstanding Science: The Public Reconstruction of Science and Technology*. Cambridge: Cambridge University Press.
- Irwin, Graham. 1955. *Nineteenth-Century Borneo: A Study in Diplomatic Rivalry*. Singapore: Donald Moore Books.
- Jacka, Jerry. 2001a. "Coca-Cola and Kolo: Land, Ancestors, and Development." *Anthropology Today* 17: 3-8.
- . 2001b. "On the Outside Looking In: Attitudes and Responses of Non-Landowners towards Mining at Porgera." In *Mining in Papua New Guinea: Analysis and Policy Implications*, ed. B. Y. Imbun and P. A. McGavin, 45-62. Waigani, NCD: University of Papua New Guinea Press.
- . 2003. "God, Gold, and the Ground: Place-Based Political Ecology in a New Guinea Borderland." Ph.D. thesis, University of Oregon.
- Jackson, J. 1995. "Culture, Genuine and Spurious: The Politics of Indianness in the Vaupés, Colombia." *American Ethnologist* 22(1): 3-27.
- Jackson, Peter. 2002. "Consumption in a Globalizing World." In *Geographies of Global Change*, ed. R. J. Johnston, P. J. Taylor, and M. J. Watts, 283-95. Oxford: Basil Blackwell.
- Jackson, Richard. 1997. "Cheques and Balances: Compensation and Mining in Papua New Guinea." In *Compensation for Resource Development in Papua New Guinea*, ed.
- S. Toft, 105-15. Law Reform Commission of Papua New Guinea, Monograph no. 6. Canberra: Australian National University.
- Jackson, Richard, and Glenn Banks. 2002. *In Search of the Serpent's Skin: The Story of the Porgera Gold Project*. Port Moresby: Placer Niugini Limited.
- Jameson, Fredric. 1984. "Postmodernism, or the Cultural Logic of Late Capitalism." *New Left Review* 146: 53-92.
- Jay, Martin. 1973. *The Dialectical Imagination: A History of the Frankfurt School and the Institute of Social Research, 1923-39*. Boston: Little, Brown.
- Jensen, E. 1974. *The Iban and Their Religion*. Oxford Monographs on Social Anthropology. Englewood Cliffs, N.J.: Oxford University Press.
- Jorgensen, Dan. 1997. "Who and What Is a Landowner? Mythology and Marking the Ground in a Papua New Guinea Mining Project." *Anthropological Forum* 7(4): 599-627.
- . 1998. "Whose Nature? Invading Bush Spirits, Travelling Ancestors and Mining in Telefolmin." *Social Analysis* 42(3): 100-116.
- . 1999. "Generic Tradition, Legibility and the Politics of Identity in a Papua New Guinea Mining Project." Paper presented at the Annual Meeting of the American Anthropological Society.
- . 2003. "Mining and Its Cultural Consequences in Papua New Guinea: A Brief History from Telefolmin." Paper given at the workshop "Mining Frontiers: Social Conflicts, Property Relations and Cultural Change in Emerging Boom Regions, organized by G. Schlee, T. Grätz, and Katja Werthmann, Max-Planck-Institut, Halle, Germany, June 16-18, 2003.
- Kalland, Arne, and Gerard Persoon, eds. 1998. *Environmental Movements in Asia*. Richmond, Surrey: Curzon.
- . 1998. "An Anthropological Perspective on Environmental Movements." In *Environmental Movements in Asia*, ed. A. Kalland and G. Persoon, 1-43. Richmond, Surrey: Curzon.
- Karjalainen, Harri, et al. 1993. "Finland and Forest—A Success Story?" Bulletin of Finnish nongovernmental organizations on the Ministerial Conference on the Protection of Forests in Europe, Helsinki, June 16-17, 1993. Helsinki: World Wildlife Fund, Finland.
- Kealhofer, Lisa. 1999. "Preliminary Phytolith Report: Core 16, Sebatu, Bali." Unpublished report in files of the authors.
- Kearney, Michael. 1995. "The Local and the Global: The Anthropology of Globalization and Transnationalism." *Annual Review of Anthropology* 24: 547-65.
- Kedit, Peter M. 1978. *Gunong Mulu Report: A Human-Ecological Survey of Nomadic/ Settled Penan within the Gunong Mulu National Park Area, Fourth/Fifth Division, Sarawak*. Sarawak Museum Field Report Series no. 1. Kuching: Sarawak Museum.

- Kedit, Peter M. 1982. "An Ecological Survey of the Penan." *Sarawak Museum Journal*, Special Issue no. 2, 30(51)(n.s.):225-79.
- Kelly, Raymond C. 1968. "Demographic Pressure and Descent Group Structure in the New Guinea Highlands." *Oceania* 39:36-63.
- Kennedy, Danny. 1996. "Ok Tedi All Over Again: Placer and the Porgera Gold Mine." *Multinational Monitor*, March 1996, 22-24.
- Kennedy, Paul. 1993. *Preparing for the Twenty-First Century*. New York: Harper Collins.
- King, Victor T. 1977. "Unity, Formalism and Structure: Comments on Iban Augury and Related Problems." *Bijdragen tot de taal-, land- en volkenkunde* 133(1):63-87.
- \_\_\_\_\_. 1993. *The Peoples of Borneo*. Oxford: Blackwell.
- \_\_\_\_\_. 1996. "Environmental Change in Malaysian Borneo: Fire, Drought and Rain." In *Environmental Change in South-East Asia: People, Politics and Sustainable Development*, ed. Michael J. G. Pattnell and Raymond L. Bryant, 165-89. London: Routledge.
- Kirsch, Patrick V. 1997. "Introduction." In *Historical Ecology in the Pacific Islands: Prehistoric Environmental and Landscape Change*, ed. P. Kirsch and T. Hunt, 1-21. New Haven: Yale University Press.
- Kirsch, Stuart. 1996. "Return to Ok Tedi." *Meanjin* 55(4):657-66.
- \_\_\_\_\_. 1997. "Indigenous Response to Environmental Impact along the Ok Tedi." In *Compensation for Resource Development in Papua New Guinea*, ed. S. Toft, 143-55. Monograph no. 6, Law Reform Commission of Papua New Guinea. Boroko: Law Reform Commission.
- Knapen, Han. 1997. "Epidemics, Droughts, and Other Uncertainties on Southeast Borneo during the Eighteenth and Nineteenth Centuries." In *Paper Landscapes: Explorations in the Environmental History of Indonesia*, ed. P. Boomgaard, F. Colombijn, and D. Henley, 121-52. Verhandelingen 178. Leiden: Koninklijk Instituut voor Taal-, Land- en Volkenkunde.
- Knauff, Bruce M. 2002. *Exchanging the Past: A Rainforest World of Before and After*. Chicago: University of Chicago Press.
- \_\_\_\_\_. n.d. "Complicated Subjects in Melanesian Modernities." In *Interrogating Individuals: Crossing Discourses of Subjectivity in the Western Pacific*, ed. K. Sykes. Manuscript under review.
- Kottak, Conrad. 1980. *The Past in the Present: History, Ecology, and Cultural Variation in Highland Madagascar*. Ann Arbor: University of Michigan Press.
- \_\_\_\_\_. 1999. "The New Ecological Anthropology." In "Ecologies for Tomorrow: Reading Rappaport Today," ed. A. Biersack, a "contemporary issues forum." *American Anthropologist* 101(1):23-35.
- Kottak, Conrad, and Elizabeth Colson. 1994. "Multilevel Linkages: Longitudinal and Comparative Studies." In *Assessing Cultural Anthropology*, ed. Robert Borofsky, 396-412. New York: McGraw-Hill.

- Krüggele, Thomas. 1997. "Changing Consumption Patterns and Everyday Life in Two Peruvian Regions: Food, Dress, and Housing in the Central and Southern Highlands (1820-1920)." In *The Allure of the Foreign*, ed. Benjamin Orlove, 31-66. Ann Arbor: University of Michigan Press.
- Kulick, Donald. 1992. *Language Shift and Cultural Reproduction*. Cambridge: Cambridge University Press.
- Kumar, Amitava. 1997. "Translating Resistance." In *Articulating the Global and the Local: Globalization and Cultural Studies*, ed. A. Cvetkovich and D. Kellner, 207-25. Boulder: Westview Press.
- Laaksonen, P., and S. L. Mettomäki, eds. 1994. *Metsä ja metsäntutkimus*, Kalevalaseuran vuosikirja 73. Helsinki: Suomalaisen Kirjallisuuden Seura (SKS).
- Laclau, Henri, and Chantal Mouffe. 1987. "Post-Marxism without Apologies." *New Left Review* 166:79-106.
- Laitakari, Erkki. 1961. "A Century of Finnish State Forestry, 1859-1959." *Silva Fennica*, no. 112, offprint. Helsinki.
- Lakoff, George, and Mark Johnson. 1980. *Metaphors We Live By*. Chicago: University of Chicago Press.
- Langub, Jayl. 1972a. "Adaptation to a Settled Life by the Punans of the Belaga Subdistrict." *Sarawak Gazette* 98(1371):83-86.
- \_\_\_\_\_. 1972b. "Structure and Progress in the Punan Community of Belaga Subdistrict." *Sarawak Gazette* 98(1378):219-21.
- \_\_\_\_\_. 1974. "Background Report on Potential for Agricultural and Social Extension Service in the Penan Community of Belaga District." *Sarawak Gazette* 100(1395):93-96.
- \_\_\_\_\_. 1975. "Distribution of Penan and Punan in the Belaga District." *Borneo Research Bulletin* 7(2):45-48.
- \_\_\_\_\_. 1984. "Tamu: Barter Trade between Penan and Their Neighbors." *Sarawak Gazette* 110(1485):11-15.
- \_\_\_\_\_. 1989. "Some Aspects of Life of the Penan." *Sarawak Museum Journal*, Special Issue no. 4, Pt. III, 40(61)(n.s.):169-84.
- \_\_\_\_\_. 1990. "A Journey through the Nomadic Penan Country." *Sarawak Gazette* 117(1514):5-27.
- Lansing, J. Stephen. 1987. "Balinese Water Temples and the Management of Irrigation." *American Anthropologist* 89(2):326-41.
- \_\_\_\_\_. 1991. *Priests and Programmers: Technologies of Power in the Engineered Landscape of Bali*. Princeton: Princeton University Press.
- Lansing, J. Stephen, and James N. Kremer. 1993. "Emergent Properties of Balinese Water Temple Networks: Coadaptation on a Rugged Fitness Landscape." In *Artificial Life III*, ed. C. G. Langton. Reading, Mass.: Addison-Wesley.
- Latour, Bruno. 1987. *Science in Action*. Cambridge, Mass.: Harvard University Press.

- Latour, Bruno. 1993. *We Have Never Been Modern*. Translated by Catherine Porter. Cambridge, Mass.: Harvard University Press.
- . 1999. "On Recalling ANT." In *Actor Network Theory and After*, eds. J. Law and J. Hassard, 15–25. Oxford: Blackwell.
- Lattas, Andrew. 1993. "Essentialism, Memory and Resistance: Aboriginality and the Politics of Authenticity." *Oceania* 63(3):240–67.
- Lave, Jean. 1988. *Cognition in Practice: Mind, Mathematics and Culture in Everyday Life*. Cambridge: Cambridge University Press.
- Law, John, and John Hassard, eds. 1999. *Actor Network Theory and After*. Oxford: Blackwell and Sociological Review.
- Lawrence, Peter. 1984. *The Garia: An Ethnography of a Traditional Cosmic System in Papua New Guinea*. Melbourne: Oxford University Press.
- Lea, David. 1997. *Melanesian Land Tenure in a Contemporary and Philosophical Context*. Lanham, Md.: University Press of America.
- Leach, Melissa, and Robin Mearns, eds. 1996. *The Lie of the Land: Challenging Received Wisdom on the African Environment*. London: International African Institute.
- Lees, Susan H., and Daniel G. Bares. 1990. "The Ecology of Cumulative Change." In *Ecosystem Ecology in Biology and Anthropology: A Critical Assessment*, ed. Emilio Moran, 247–78. Ann Arbor: University of Michigan Press.
- Lefebvre, Henri. 1991. *The Production of Space*. Oxford: Oxford University Press.
- Lehnertz, Jay F. 1972. "Juan Santos, Primitive Rebel on the Campa Frontier (1742–52)." In *Actas del XXXIX Congreso Internacional de Americanistas*. Volume 4. Lima.
- Lehtinen, Ari Aukusti. 1991. "Northern Natures: A Study of the Forest Question Emerging within the Timber-line Conflict in Finland." *Fennia* 169(1):57–169.
- . 2001. "Globalization and the Finnish Forest Sector: On the Internationalization of Forest Industrial Operations." *Fennia* 179(2):57–169.
- Leighton, Mark, and Nengah Wirawan. 1986. "Catastrophic Drought and Fire in Borneo Associated with the 1982–1983 El Niño Southern Oscillation Event." In *Tropical Rainforests and the World Atmosphere*, ed. Gillian T. Prance, 75–102. Washington: American Association for the Advancement of Science.
- Lenoir, Timothy. 1997. *Instituting Science: The Cultural Production of Scientific Disciplines*. Stanford: Stanford University Press.
- Lewellen, Ted. 1978. *Peasants in Transition: The Changing Economy of the Peruvian Aymara: A General Systems Approach*. Boulder: Westview Press.
- Lévi-Strauss, Claude. 1966. *The Savage Mind*. Chicago: University of Chicago Press.
- . 1985. *The View from Afar*. Translated by Joachim Neugroschel and Phoebe Hoss. New York: Basic Books.
- Lieftrink, F. A. 1969. "Rice Cultivation in Northern Bali." In *Bali: Further Studies in Life, Thought and Ritual*, ed. J. L. Swellengrebel, 3–73. The Hague: Van Hoeve.
- Lilla, Mark, ed. 1994. *New French Thought: Political Philosophy*. Princeton: Princeton University Press.
- Linden, Eugene. 1991. "Lost Tribes, Lost Knowledge." *Time*, September 23, 1991, 138(12):46–56.
- Little, Paul. 1998. "Beyond Sovereignty and Autonomy: Political Ecology Research and Contemporary Amazonian Territorial Struggles." Paper presented at the session "Political Ecology and Action Research in Forest Communities," Fourteenth ICAES, July 26–August 1, College of William and Mary, Williamsburg, Virginia.
- Little, Peter D., and Michael M. Horowitz. 1987. "Introduction: Social Science Perspectives on Land, Ecology, and Development." In *Lands at Risk in the Third World: Local-Level Perspectives*, ed. P. Little, M. Horowitz, and A. Nyerges, 1–16. Boulder: Westview Press.
- Low, Setha M., and Denise Lawrence-Zúñiga, eds. 2003. *The Anthropology of Space and Place: Locating Culture*. Malden, Mass.: Blackwell.
- Lower Porgera Landowners. 1995. "The Lower Porgera Compensation Dispute: The Landholders' Submission." Department of Mining, Papua New Guinea Government.
- Loyaza, Francisco A. 1942 (1742–55). *Juan Santos, el invencible*. Lima: Editorial D. Miranda.
- Ludwig, D., R. Hilborn, and C. Walters. 1993. "Uncertainty, Resource Exploitation, and Conservation: Lessons from History." *Science* 260 (April 2):17–36.
- MacCormack, Carol, and Marilyn Strathern, eds. 1980. *Nature, Culture and Gender*. Cambridge: Cambridge University Press.
- Malkki, Liisa H. 1997a. "News and Culture: Transitory Phenomena and the Fieldwork Tradition." In *Anthropological Locations: Boundaries and Grounds of a Field Science*, ed. A. Gupta and J. Ferguson, 86–101. Berkeley: University of California Press.
- . 1997b. "National Geographic: The Rooting of Peoples and the Territorialization of National Identity among Scholars and Refugees." In *Culture, Power, Place: Explorations in Critical Anthropology*, ed. A. Gupta and J. Ferguson, 52–74. Durham: Duke University Press.
- Mann, Michael. 1993. *The Sources of Social Power*. Volume 2: *The Rise of Classes and Nation-States, 1760–1914*. Cambridge: Cambridge University Press.
- Manser, Bruno. 1996. *Voices from the Rainforest: Testimonies of a Threatened People*. Basel and Petaling Jaya (Malaysia): Bruno Manser Foundation and INSAN (Institute of Social Analysis).
- Marcus, George E. 1995. "Ethnography off/in the World System: The Emergence of Multi-Sited Ethnography." *Annual Review of Anthropology* 24:95–117.
- Marcus, George E., and Michael Fischer. 1986. *Anthropology as Cultural Critique: An Experimental Moment in the Human Sciences*. Chicago: University of Chicago Press.

- Margalef, Ramon. 1968. *Perspectives in Ecological Theory*. Chicago: University of Chicago Press.
- Marx, Karl. 1977 [1867]. *Capital*. Volume 1. New York: Vintage Books.
- . 1967 [1867]. *Capital*. Volume 1. New York: International Publishers.
- . 1961 [1844]. *Economic and Philosophical Manuscripts of 1844*. Moscow: Foreign Languages Publishing House.
- Marx, Karl, and Fredrick Engels. 1947 [1845–46]. *The German Ideology*. New York: International Publishers.
- . 1977 [1845–46]. "The German Ideology." In *Karl Marx: Selected Writings*, ed. David McLellan, 159–91. Oxford: Oxford University Press.
- . 2000. "The German Ideology." Excerpted in *Anthropological Theory: An Introductory History*, ed. R. McGee and R. Warms, 53–66. 2d edition. Mountain View, Calif.: Mayfield.
- . 1927. *Historisch-Kritische Gesamtausgabe*. Berlin and Frankfurt am Mein: Marx Engels Instituts.
- Massey, Doreen. 1993. "Power-Geometry and a Progressive Sense of Place." In *Mapping the Futures: Local Cultures, Global Change*, ed. J. Bird, B. Curtis, T. Putnam, G. Robertson, and L. Tickner, 59–69. London: Routledge.
- Maxwell, J. C. 1890. *Scientific Papers*, 2 vols., ed. W. D. Niven. Cambridge: Cambridge University Press.
- Mayer, Judith. 1996. "Impacts of the East Kalimantan Forest Fires of 1982–1983 on Village Life, Forest Use, and Land Use." In *Borneo in Transition: People, Forests, Conservation, and Development*, ed. C. Padoch and N. Peluso, 187–218. Kuala Lumpur: Oxford University Press.
- Maynard Smith, John. 1982. *Evolution and the Theory of Games*. Cambridge: Cambridge University Press.
- McCay, Bonnie J. 1998. *Oyster Wars and the Public Trust: Property, Law, and Ecology in New Jersey History*. Tucson: University of Arizona Press.
- McCay, Bonnie J., and James M. Acheson, eds. 1987. *The Question of the Commons: The Culture and Ecology of Communal Resources*. Tucson: University of Arizona Press.
- McCracken, Grant. 1988. *Culture and Consumption: New Approaches to the Symbolic Character of Consumer Goods and Activities*. Bloomington: Indiana University Press.
- McGoodwin, James R. 1979. "The Decline of Mexico's Pacific Inshore Fisheries." *Oceanus* 22(2):51–59.
- . 1987. "Mexico's Conflictual Inshore Pacific Fisheries: Problems Analysis and Policy Recommendations." *Human Organization* 46(3):221–32.
- . 1990. *Crisis in the World's Fisheries: People, Problems, and Policies*. Stanford: Stanford University Press.
- McGuire, Thomas R., and James B. Greenberg, eds. 1993. "Maritime Community and Biosphere Reserve: Crisis and Response in the Upper Gulf of California." Occasional

- Paper Number 2. Tucson, Arizona: Bureau of Applied Research in Anthropology, University of Arizona.
- Mead, William R. 1968. *Finland*. London: Ernest Benn.
- Meade, Adalberto Walther. 1986. *El Distrito Norte de Baja California*. Mexicali, B.C.: Universidad Autónoma de Baja California.
- Melucci, Alberto. 1998. "Third World or Planetary Conflict?" In *Cultures of Politics/Beliefs of Cultures: Re-visioning Latin American Social Movements*, ed. S. Alvarez, E. Dagnino, and A. Escobar, 422–36. Boulder: Westview Press.
- Mercado, S. P., and S. Leanos-G. 1976. "Fish Resources in the Gulf of California." *Natural Resources Journal* 16(3):515–34.
- Merchant, Carolyn. 1980. *The Death of Nature: Women, Ecology and the Scientific Revolution*. New York: Harper and Row.
- Messer, Ellen, and Michael Lambek, eds. 2001. *Ecology and the Sacred: Engaging the Anthropology of Roy A. Rappaport*. Ann Arbor: University of Michigan Press.
- Mercalf, Peter. 1976. "Birds and Deities in Borneo." *Bijdragen tot de taal-, land- en volkenkunde* 132(1):96–123.
- Metraux, Alfred. 1942. "A Quechua Messiah in Eastern Peru." *American Anthropologist* 44:721–25.
- Michelsen, Karl-Erik. 1995. *History of Forest Research in Finland, Part I: The Unknown Forest*. Helsinki: Finnish Forest Research Institute.
- Mikkeli, Heikki. 1992. "Metsäturkki ja sen jurot parturit: Näkemyksiä metsännonnija kansansluunteen suhteesta 1800–1900 luvulla." *Historiallinen Aikakauskirja* 90:200–215.
- Miller, Daniel. 1990. "Fashion and Ontology in Trinidad." *Culture and History* 7:49–78.
- . 1995a. "Consumption and Commodities." *Annual Review of Anthropology* 24:141–61.
- , ed. 1995b. *Acknowledging Consumption*. London: Routledge.
- . 1997. *Capitalism: An Ethnographic Approach*. Oxford: Berg.
- Milton, Kay. 1996. *Environmentalism and Cultural Theory: Exploring the Role of Anthropology in Environmental Discourse*. London: Routledge.
- Mineral Policy Institute (MPI). 1995. "The Porgera File: Adding to Australia's Legacy of Destruction; A Report on the Environmental and Social Impacts of the Porgera Mine, Papua New Guinea." Sydney: MPI.
- Mintz, Sidney. 1985. *Sweetness and Power: The Place of Sugar in Modern History*. New York: Penguin.
- Mitchell, Timothy. 1988. *Colonising Egypt*. Cambridge: Cambridge University Press.
- Mitelman, James, ed. 1997. *Globalization: Critical Reflections*. Boulder: Lynne Rienner.
- Moberg, Mark. 1991. "Marketing Policy and the Loss of Food Self-Sufficiency in Rural Belize." *Human Organization* 50(1):16–25.

- Moberg, Mark. 1992. *Citrus, Strategy, and Class: The Politics of Development in Southern Belize*. Iowa City: University of Iowa Press.
- Moctezuma-Hernández, Patricia, and Juan Alvarez-López. 1989. "Estructura y funcionamiento de la industria pesquera." In *La pesca en Baja California*, ed. Mario Siri Chiesa and Patricia Moctezuma-Hernández, 145-64. Mexicali, B.C.: Universidad Autónoma de Baja California.
- Moore, Donald S. 1998. "Subaltern Struggles and the Politics of Place: Remapping Resistance in Zimbabwe's Eastern Highlands." *Cultural Anthropology* 13(3):344-81.
- Moore, Donald S., Anand Pandian, and Jake Kosek. 2003. "Introduction: The Cultural Politics of Race and Nature: Terrains of Power and Practice." In *Race, Nature, and the Politics of Difference*, ed. D. Moore, J. Kosek, and A. Pandian, 1-70. Durham: Duke University Press.
- Moore, Donald S., Jake Kosek, and Anand Pandian, eds. 2003. *Race, Nature, and the Politics of Difference*. Durham: Duke University Press.
- Moran, Emilio F., ed. 1990. *The Ecosystem Approach in Anthropology: From Concept to Practice*. Ann Arbor: University of Michigan Press.
- Morley, David, and Kevin Robins. 1995. *Spaces of Identity: Global Media, Electronic Landscapes, and Cultural Boundaries*. London: Routledge.
- Munk-Christiansen, Peter, ed. 1996. *Governing the Environment: Politics, Policy and Organization in the Nordic Countries*. Copenhagen: Nordic Council of Ministers.
- Munn, Nancy D. "Gawan Kula: Spatiotemporal Control and the Symbolism of Influence." In *The Kula: New Perspectives on Massim Exchange*, eds. J. Leach and E. Leach, 277-308. Cambridge: Cambridge University Press.
- . 1986. *The Fame of Gawa: A Symbolic Study of Value Transformation in a Massim (Papua New Guinea) Society*. New York: Cambridge University Press. 1st paperback printing, Durham: Duke University Press, 1992.
- Myers, Fred. 1991. *Pintupi Country, Pintupi Self: Sentiment, Place, and Politics among Western Desert Aborigines*. Berkeley: University of California Press.
- N.A. 1994. "A Petition from the Lower Porgera River People to Porgera Joint Venture on the 15th Day of December 1994." In file 3-1-6 ("Porgera Alluvial Mining Compensation EPPOR"), in the office of the Porgera mining coordinator, Porgera District Administration, Porgera Station.
- Nader, Laura. 1997. "The Phantom Factor: Impact of the Cold War on Anthropology." In *The Cold War and the University: Toward an Intellectual History of the Postwar Years*, ed. Noam Chomsky et al., 107-46. New York: New Press.
- Nash, John. 1950. "The Bargaining Problem." *Econometrica* 18:155-62.
- National Research Council. 1997. *Environmentally Significant Consumption: Commitment on Human Dimensions of Global Change*. National Research Council. Washington: National Academy Press.

- Nazarea, Virginia D., ed. 1999. *Ethnoecology: Situated Knowledge/Located Lives*. Tucson: University of Arizona Press.
- Needham, Rodney. 1954a. "A Penan Mourning Usage." *Bijdragen tot de Taal-, Land- en Volkenkunde* 110:263-67.
- . 1954b. "Penan and Punan." *Journal of the Malayan Branch, Royal Asiatic Society* 27(1):73-83.
- . 1954c. "Reference to the Dead among the Penan." *Man* 54:10.
- . 1954d. "The System of Teknonyms and Death-Names of the Penan." *Southwestern Journal of Anthropology* 10:416-31.
- . 1965. "Death-Names and Solidarity in Penan Society." *Bijdragen tot de Taal-, Land- en Volkenkunde* 121:58-76.
- . 1972. "Punan-Penan." In *Ethnic Groups of Insular Southeast Asia*. Volume 1: *Indonesia, Andaman Islands, and Madagascar*, ed. Frank M. Lebar, 176-80. New Haven: Human Relations Area Files Press.
- Nelson, Hank. 1976. *Black, White and Gold: Goldmining in Papua New Guinea 1978-1930*. Canberra: Australian National University.
- Netting, Robert McC. 1965. "A Trial Model of Cultural Ecology." *Anthropological Quarterly* 38:81-96.
- . 1969. "Ecosystems in Process: A Comparative Study of Change in Two West African Societies." In *Ecological Essays: Proceedings of the Conference on Cultural Ecology*, ed. David Damas, 102-12. National Museum of Canada Bulletin no. 230. Ottawa: National Museum of Canada.
- . 1981. *Balancing on an Alp: Ecological Change and Continuity in a Swiss Mountain Community*. Cambridge: Cambridge University Press.
- . 1993. *Smallholders, Householders: Farm Families and the Ecology of Intensive, Sustainable Agriculture*. Stanford: Stanford University Press.
- Newman, C. J. 1995. Letter to the Secretary of Mining and Petroleum and the Technical Advisory Committee, Water Resources Board, October 27, 1995. In "Porgera Alluvial Compensation Report," by C. Newman and E. Plawi, in "Submission by the Department of Mining & Petroleum." DMP files.
- Nicholls, Neville. 1993. "ENSO, Drought and Flooding Rain in South-East Asia." In *South-East Asia's Environmental Future: The Search for Sustainability*, ed. H. Brookfield and Y. Byron, 154-75. Tokyo and Kuala Lumpur: United Nations University Press and Oxford University Press.
- Nicolaisen, Johannes. 1976a. "The Penan of Sarawak: Further Notes on the Neoevolutionary Concept of Hunters." *Folk* 18:205-36.
- . 1976b. "The Penan of the Seventh Division of Sarawak: Past, Present and Future." *Sarawak Museum Journal* 24(45)(n.s.):35-61.
- . 1978. "Penan Death-Names." *Sarawak Museum Journal* 26(47)(n.s.):29-41.

- Nietschmann, Bernard. 1973. *Between Land and Water: The Subsistence Ecology of the Miskito Indians, Eastern Nicaragua*. New York: Seminar Press.
- Nita, Albert K. 2001. "New Power Structures and Environmental Management: Evidence from Porgera Gold Mine." In *Mining in Papua New Guinea: Analysis and Policy Implications*, ed. B. Y. Imbun and P. A. McGavin, 157-72. Waigani, NCD: University of Papua New Guinea Press.
- Nyerges, A. Endre, and Glen Martin Green. 2000. "The Ethnography of Landscape: GIS and Remote Sensing in the Study of Forest Change in West African Guinea Savanna." *American Anthropologist* 102(2):271-89.
- O'Connor, James. 1998. *Natural Causes: Essays in Ecological Marxism*. New York: Guilford Press.
- Odling-Smee, F. J. 1994. "Niche Construction, Evolution and Culture." In *Encyclopedia of Anthropology*, ed. T. Ingold. London: Routledge.
- Odum, Eugene P. 1971. *Fundamentals of Ecology*. 3d ed. Philadelphia: Saunders College Publishing.
- OECD. 1997a. *Economic Globalization and the Environment*. Paris: Organization for Economic Cooperation and Development.
- . 1997b. *Sustainable Consumption and Production*. Paris: Organization for Economic Cooperation and Development.
- Oliver-Smith, Anthony, and Susanna M. Hoffman. 1999. *The Angry Earth: Disasters in Anthropological Perspective*. London: Routledge.
- ONERN. 1968. Inventario, Evaluación e Integración de los Recursos Naturales de la Zona del Río Tambo-Gran Pajonal. Lima: ONERN, Republica del Peru.
- Ong, Aihwa. 1987. *Spirits of Resistance and Capitalist Discipline: Factory Women in Malaysia*. Albany: State University of New York Press.
- . 1999. *Flexible Citizenship: The Cultural Logics of Transnationality*. Durham: Duke University Press.
- Orlove, Benjamin S., John C. H. Chiang, and Mark A. Cane. 2000. "Forecasting Andean Rainfall and Crop Yield from the Influence of El Niño on Pleiades Visibility." *Nature* 403: 68-71.
- Ortner, Sherry B. 1974. "Is Female to Male as Nature Is to Culture?" In *Woman, Culture and Society*, ed. M. Rosaldo and L. Lamphere, 67-88. Palo Alto: Stanford University Press.
- . 1984. "Theory in Anthropology Since the Sixties." *Comparative Studies in Society and History* 26:126-66.
- . 1996a. "Resistance and the Problem of Ethnographic Refusal." In *The Historic Turn in the Human Sciences*, ed. T. McDonald, 281-304. Ann Arbor: University of Michigan Press.
- . 1996b. "So, Is Female to Male as Nature Is to Culture?" In *Making Gender: The Politics and Erotics of Culture*, 173-80. Boston: Beacon Press.
- Paasi, Anssi. 1996. *Territories, Boundaries and Consciousness: The Changing Geographies of the Finnish-Russian Border*. New York: John Wiley and Sons.
- Pacific Agribusiness. 1987. "Social and Economic Impact Study—Porgera Gold Mine." 2 vols. Melbourne.
- Painter, Joe, and Chris Philo. 1995. "Spaces of Citizenship: An Introduction." *Political Geography* 14(2):107-20.
- Palo, Matti, and Eeva Hellström, eds. 1993. *Metsäpolitiikka Valinkauhassa—yleiskatsaus*. Helsinki: Finnish Forest Research Institute/METLA.
- Pálsson, Gísli. 1994. "Enskilmint at Sea." *Mán* 29(4):901-27.
- . 1998. "The Birth of the Aquarium: The Political Ecology of Icelandic Fishing." In *The Politics of Fishing*, ed. T. Gray, 209-27. London: Macmillan.
- Pálsson, Gísli, and Kristin E. Harðardóttir. 2002. "For Whom the Cell Tolls: Debates in Biomedicine." *Current Anthropology* 43 (2):271-301.
- Papo, Opis J. 1992. "A Report on the Porgera River Alluvial Goldfield Prepared for Porgera Development Authority," November 1992.
- Paré, Luisa. 1986 [1975]. "Caciquismo y Estructura de Poder en la Sierra Norte de Puebla." In *Caciquismo y poder político en el México rural*, ed. Roger Bartra, 31-61. 8th edition. Mexico City: Siglo Veintiuno.
- . 1990. "The Challenges of Rural Democratization in Mexico." *Journal of Development Studies* 26(4):79-97.
- Parpart, Jane L. 1993. "Who Is the 'Other'? A Postmodern Feminist Critique of Women and Development Theory." *Development and Change* 24: 439-64.
- Payne, Robert. 1960. *The White Rajahs of Sarawak*. New York: Funk and Wagnalls.
- Peet, Richard, and Michael J. Watts. 1993. "Introduction: Development Theory and Environment in an Age of Market Triumphalism." *Economic Geography* 69:227-53.
- . 1996. "Liberation Ecology: Development, Sustainability, and Environment in an Age of Market Triumphalism." Introduction to *Liberation Ecologies: Environment, Development, Social Movements*, ed. R. Peet and M. Watts, 1-45. London: Routledge.
- , eds. 1996. *Liberation Ecologies: Environment, Development, Social Movements*. London: Routledge.
- Peluso, Nancy Lee. 1992. *Rich Forests, Poor People: Resource Control and Resistance in Java*. Berkeley: University of California Press.
- Peluso, Nancy Lee, and Michael Watts. 2001. "Violent Environments." In *Violent Environments*, ed. N. Peluso and M. Watts, 3-38. Ithaca: Cornell University Press.
- Pemberton, John. 1994. *On the Subject of "Java"*. Ithaca: Cornell University Press.
- Plant, Roger, and Søren Hvalkof. 2001. "Land Titling and Indigenous Peoples." Technical Paper Series. Inter-American Development Bank. Sustainable Development Department, Indigenous Peoples and Community Development Unit. SDS/IND, August, Washington, D.C.

- Poke, Puluku. 1995. "A Brief History of Puluku Poke, Paramount Chief of Lower Porgera." Typescript.
- Polanyi, Karl. 1944. *The Great Transformation*. Boston: Beacon Press.
- Porgera Joint Venture (PJV). 1996. "Porgera and the Environment: The Porgera Joint Venture's Response to the Mineral Policy Institute's Document 'The Porgera File'." Sydney: Placer Pacific Limited.
- Porgera River Alluvial Miners Association (PRAMA). 1995. "The Lower Porgera Compensation Dispute: The Landholders' Submission." In the files of the Porgera Mining Coordinator, Department of Mining, PNG Government. NCD, Papua New Guinea.
- Portitt, Vernon L. 1997. *British Colonial Rule in Sarawak, 1946-1963*. Oxford: Oxford University Press.
- Povinelli, Elizabeth. 1993. *Labor's Lot: The Power, History and Culture of Aboriginal Action*. Chicago: University of Chicago Press.
- Prazniak, Roxann. 2000. "Is World History Possible? An Inquiry." In *History after the Three Worlds: Post-Eurocentric Historiographies*, eds. Arif Dirlik, Vinay Bahl, and Peter Gran, 221-40. Lanham, Md.: Rowman and Littlefield.
- Prazniak, Roxann, and Arif Dirlik, eds. 2001. *Places and Politics in an Age of Globalization*. Lanham, Md.: Rowman and Littlefield.
- Pringle, Robert. 1970. *Rajaks and Rebels: The Ibans of Sarawak under Brooke Rule, 1841-1941*. Ithaca: Cornell University Press.
- Puntunney, P. 1995. "Solving the Environmental Equation: An Engaging Anthropology." In *Global Ecosystems: Creating Options through Anthropological Perspectives*, ed. Pamela Puntunney, 4-18. NAPA Bulletin 15. Washington: American Anthropological Association.
- Putu, Benedict. 1999. "Life in Porgera: The Environmental Issue." Manuscript in the hands of its author.
- Quesada, Alejandro. 1952. *La pesca*. Mexico City: Fondo de Cultura Económica.
- Radcliffe-Brown, A. R. 1952. *Structure and Function in Primitive Society: Essays and Addresses*. New York: Free Press.
- Raffles, Hugh. 1999. "Local Theory: Nature and the Making of an Amazonian Place." *Cultural Anthropology* 14(3):323-60.
- \_\_\_\_\_. 2002. *In Amazonia: A Natural History*. Princeton: Princeton University Press.
- Ramírez, José Carlos, and Roco Guadarrama. 1985. "La Agricultura Comercial." In *Historia General de Sonora. Historia Contemporánea de Sonora 1920-1984*, volume 5, ed. Gerardo Conejo Murrieta, 175-86. Hermosillo: Gobierno del Estado de Sonora.
- Rappaport, Roy A. 1968. *Pigs for the Ancestors: Ritual in the Ecology of a New Guinea People*. New Haven: Yale University Press.
- \_\_\_\_\_. 1978. "Maladaptation in Social Systems." In *Evolution of Social Systems*, ed. J. Friedman and M. Rowland, 49-71. London: Duckworth.
- \_\_\_\_\_. 1979. *Ecology, Meaning, and Religion*. Richmond, Calif.: North Atlantic Books.
- \_\_\_\_\_. 1984. *Pigs for the Ancestors: Ritual in the Ecology of a New Guinea People*. New, enlarged edition. New Haven: Yale University Press.
- \_\_\_\_\_. 1990. "Ecosystems, Populations, and People." In *The Ecosystem Approach in Anthropology: From Concept to Practice*, ed. Emilio Moran, 41-72. Ann Arbor: University of Michigan Press.
- \_\_\_\_\_. 1993. "The Anthropology of Trouble." Distinguished Lecture in General Anthropology. *American Anthropologist* 95(2):295-303.
- \_\_\_\_\_. 1994a. "Disorders of Our Own: A Conclusion." In *Diagnosing America: Anthropology and Public Engagement*, ed. S. Forman, 235-94. Ann Arbor: University of Michigan Press.
- \_\_\_\_\_. 1994b. "Humanity's Evolution and Anthropology's Future." In *Assessing Cultural Anthropology*, ed. Robert Borofsky, pp. 153-67. New York: McGraw-Hill.
- \_\_\_\_\_. 1995. "Foreword." In *Global Ecosystems: Creating Options through Anthropological Perspectives*, ed. Pamela J. Puntunney, 1. NAPA Bulletin 15. Washington: National Association for the Practice of Anthropology, American Anthropological Association.
- \_\_\_\_\_. 1999. *Ritual and Religion in the Making of Humanity*. Cambridge: Cambridge University Press.
- Redclift, Michael. 1996. *Wasted: Counting the Costs of Global Consumption*. London: Earthscan Publications.
- Reece, R. H. W. 1982. *The Name of Brooke: The End of White Rajah Rule in Sarawak*. Oxford: Oxford University Press.
- Renard-Casevitz, France-Marie. 1980. "Contrast between Amerindian and Colonist Land Use in the Southern Peruvian Amazon (Machiguenga Area)." In *Land, People and Planning in Contemporary Amazonia*, ed. F. Barbra-Scazzocchio, 249-55. Cambridge: Cambridge University Centre of Latin American Studies.
- Richards, Anthony. 1972. "Iban Augury." *Sarawak Museum Journal* 20:63-81.
- \_\_\_\_\_. 1981. *An Iban-English Dictionary*. Oxford: Clarendon.
- Ritchie, James. 1994. *Bruno Manser: The Inside Story*. Singapore: Summer Times.
- Robbins, Joel. 1994. "Equality as a Value: Ideology in Dumont, Melanesia and the West." *Social Analysis* 36:21-70.
- \_\_\_\_\_. 1995. "Dispossessing the Spirits: Christian Transformations of Desire and Ecology among the Urapmin of Papua New Guinea." *Ethnology* 34(3):211-24.
- \_\_\_\_\_. 1996. "Between Apology and Compensation: Equivalent Exchange as Ritual Reconciliation among the Urapmin of Papua New Guinea." Paper presented at the annual meeting of the Association of Social Anthropologists of Oceania.
- \_\_\_\_\_. 1999. "This Is Our Money: Modernism, Regionalism, and Dual Currencies in Urapmin." In *Money and Modernity: State and Local Currents in Contemporary Melanesia*, ed. J. Robbins and D. Akin, 82-102. Pittsburgh: University of Pittsburgh Press.
- \_\_\_\_\_. 2003. "Properties of Nature, Properties of Culture: Possession, Recognition,

- and the Substance of Politics in a Papua New Guinea Society." *Suomen Antropologi* 28(1):9-28.
- . n.d. "Welcome to Big Bush Urapmin: Environment, Development and the Construction of Poverty in a Papua New Guinea Society." Manuscript.
- Robinson, N. C. 1960. "Report of Extended Patrol in the Native Mining Area of the Porgera River Western Highlands, August-October, 1960." National Archives of Papua New Guinea, Waigani, NCD, Papua New Guinea.
- Rocheleau, Dianne, Mohamad Jama, and Betty Wamalwa-Muragoti. 1995. "Gender, Ecology, and Agroforestry: Science and Survival in Kathama." In *Gender, Environment and Development in Kenya. Perspectives from the Grassroots*, eds. B. Thomas-Slayer and D. Rocheleau, 47-74. Boulder: Lynn Rienner.
- Rocheleau, Dianne, Barbara Thomas-Slayer, and Esther Wangari. 1996. "Gender and Environment: A Feminist Political Ecology Perspective." In *Feminist Political Ecology: Global Issues and Local Experiences*, ed. D. Rocheleau, B. Thomas-Slayer, and E. Wangari, 3-23. London: Routledge.
- , eds. 1996. *Feminist Political Ecology: Global Issues and Local Experiences*. London: Routledge.
- Rolston, Holmes III. 1997. "Nature for Real: Is Nature a Social Construct?" In *The Philosophy of the Environment*, ed. T. Chappell, 38-64. Edinburgh: Edinburgh University Press.
- Root, Deborah. 1996. *Cannibal Culture*. Boulder: Westview Press.
- Rosaldo, Renato. 1980. *Ilongot Headhunting, 1883-1974: A Study in Society and History*. Stanford: Stanford University Press.
- . 1993/1989. *Culture and Truth: The Remaking of Social Analysis*. Boston: Beacon Press.
- Rosebery, William. 1996. "The Unbearable Lightness of Anthropology." *Radical History Review* 65:5-25.
- . 1998. "Political Economy and Social Fields." In *Building a New Biocultural Synthesis: Political-Economic Perspectives on Human Biology*, ed. A. Goodman and T. Leatherman, 75-91. Ann Arbor: University of Michigan Press.
- Roseman, Marina. 1991. *Healing Sounds of the Malaysian Rainforest: Temiar Music and Medicine*. Berkeley: University of California Press.
- Rousseau, Jérôme. 1990. *Central Borneo: Ethnic Identity and Social Life in a Stratified Society*. Oxford: Clarendon Press.
- Rumsey, Alan, and James Weiner, eds. 2001. *Emplaced Myths*. Honolulu: University of Hawaii Press.
- Runciman, Steven. 1960. *The White Rajahs: A History of Sarawak from 1841 to 1946*. Cambridge: Cambridge University Press.
- Russell, Philip. 1977. *Mexico in Transition*. Austin: Colorado River Press.

- Ryan, Peter. 1991. *Black Bonanza: A Landslide of Gold*. South Yara, Victoria: Hyland House.
- Sahlins, Marshall. 1963. "Poor Man, Rich Man, Big Man, Chief." *Comparative Studies in Society and History* 5:285-303.
- . 1972. *Stone Age Economics*. Chicago: Aldine.
- . 1976. *Culture and Practical Reason*. Chicago: University of Chicago Press.
- . 1981. *Historical Metaphors and Mythical Realities: Structure in the Early History of the Sandwich Island Kingdom*. ASAO monographs no. 1. Ann Arbor: University of Michigan Press.
- . 1985. *Islands of History*. Chicago: University of Chicago Press.
- . 1992. "The Economics of Develop-man in the Pacific." *Res* 21:3-25.
- . 2000. *Culture in Practice*. New York: Zone Books.
- Said, Edward. 1978. *Orientalism*. New York: Pantheon.
- Sala, Fray Gabriel A. P. 1897. "Apuntes de Viaje de R.P. Fray Gabriel Sala, exploración de los ríos Pichis, Pachitea y Alto Ucayali, y de la Región del Gran Pajonal." In *Colección de Leyes, decretos, resoluciones y otros documentos oficiales referentes al Departamento de Loreto Lima*, ed. Carlos Larrabure y Correa. Imprenta de "la Opinión Nacional." 18 volumes, 1905-9.
- Salafsky, N. 1994. "Drought in the Rain Forest: Effects of the 1991 El Niño-Southern Oscillation Event on a Rural Economy in West Kalimantan, Indonesia." *Climatic Change* 27:373-96.
- Sandin, B. 1980. *Iban Adat and Augury*. Penang: Universiti Sains Malaysia.
- Santos-Granero, Fernando. 1987. "Epidemias y sublevaciones en el desarrollo demográfico de las misiones Amuesha del Cerro de la Sal, siglo XVIII." *Histórica* II(1). Lima: Pontificia Universidad Católica del Perú.
- . 1992. *Etnohistoria de la Alta Amazonía. Del siglo XV al XVIII*. Quito: Editorial Abya-Yala.
- Scarborough, Vernon L. 1993. "Water Management in the Southern Maya Lowlands: An Accretive Model for the Engineered Landscape." In *Economic Aspects of Water Management in the Prehistoric New World*, ed. Vernon L. Scarborough and B. Isaac, 17-69. *Research in Economic Anthropology*, Supplement 7. Greenwich, Conn. Scarborough, Vernon L., J. Stephen Lansing, and John Schoenfelder. 1999. "Water Management and Landscape Transformation in an Ancient Balinese Context." *Research in Economic Anthropology*, 20:299-330.
- Schack, Jon. 1986. "One God—Two Temples." Occasional Publications in Social Anthropology, Number 13. Oslo: University of Oslo.
- Schäfer, Manfred. 1988. "Ayompari, Amigos und die Peitsche: Die Verflechtung der Ökonomische Tauschbeziehungen der Ashéninka in der Gesellschaft des Gran Pajonal/Ostperu." Doctoral dissertation, Ludwig-Maximilians-Universität zu München. Amorbach: Selbstverlag.

- Scheper-Hughes, Nancy. 1995. "The Primacy of the Ethical: Propositions for a Militant Anthropology." *Current Anthropology* 36(3):409-40.
- Schmidt, A. 1971. *The Concept of Nature in Marx*. London: New Left Books.
- Schmink, Marianne, and Charles H. Wood. 1987. "The 'Political Ecology' of Amazonia." In *Lands at Risk in the Third World*, ed. Paul E. Little, Michael M. Horowitz, and Andre Nyerges, 38-57. Boulder: Westview Press.
- Schneider, David. 1980. *American Kinship: A Cultural Account*. 2d edition. Chicago: University of Chicago Press.
- Schroeder, Jeanne L. 1998. *The Vestal and the Furies: Hegel, Lacan, Property, and the Feminine*. Berkeley: University of California Press.
- Schroeder, Richard A. 1993. "Shady Practice: Gender and the Political Ecology of Resource Stabilization in Gambian Garden/Orchards." *Economic Geography* 69(4):349-48.
- . 1999. *Shady Practices: Agroforestry and Gender Politics in the Gambia*. Berkeley: University of California Press.
- Schroeder, Richard A., and Krisnawati Suryanata. 1996. "Gender and Class Power in Agroforestry Systems." In *Liberation Ecologies: Environment, Development, Social Movements*, ed. R. Peet and M. Watts, 188-204. London: Routledge.
- Scitovsky, T. 1992. *The Joyless Economy*. New York: Oxford University Press.
- Scoones, I. 1999. "New Ecology and the Social Sciences: What Prospects for a Fruitful Engagement?" In *Annual Review of Anthropology* 28:479-507. Palo Alto: Annual Reviews.
- Scott, Geoffrey A. J. 1979. *Grassland Development in the Gran Pajonal of Eastern Peru: A Study of Soil-Vegetation Nutrient Systems*. Hawaii Monographs in Geography, University of Hawaii, Honolulu.
- Scott, James. 1985. *Weapons of the Weak: Everyday Forms of Peasant Resistance*. New Haven: Yale University Press.
- . 1990. *Domination and the Arts of Resistance: Hidden Transcripts*. New Haven: Yale University Press.
- . 1998. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven: Yale University Press.
- Scott, L. n.d. Patrol report by reporting officer L. Scott for Pongera Station, Western Highlands District, Lagai Subdistrict, Pongera Census Division (estimated date: early 1970s).
- Secretaría de Medio Ambiente, Recursos Naturales, y Pesca. 1995. *Anuario Estadístico de Pesca*. Mexico City: Mexican Government.
- SEMARNP: <http://www.semarnp.gob.mx/sspesca/anoario95.htm>. 6/13/99. 1996. Anuario Estadístico de Pesca. Mexican Government: SEMARNP: <http://www.semarnp.gob.mx/sspesca/anoario96.htm>. 6/13/99. 1997. Anuario Estadístico de Pesca. Mexico Government: SEMARNP: <http://www.semarnp.gob.mx/sspesca/anoa97/anoa97.htm>. 6/13/99.
- Sen, Amartya. 1995. "Food, Economics, and Entitlements." In *The Political Economy of Hunger: Selected Essays*, ed. Jean Dreze et al., 50-68. Oxford: Clarendon.
- Sesser, Stan. 1991. "Logging the Rain Forest." *The New Yorker*, May 17, 1991, 42-67.
- Shaw, William H. 1978. *Marx's Theory of History*. Palo Alto: Stanford University Press.
- Shearman, Phil. 2001. "Giving Away Another River: An Analysis of the Impacts of the Pongera Mine on the Strickland River System." In *Mining in Papua New Guinea: Analysis and Policy Implications*, ed. B. Y. Imbun and P. A. McGavin, 173-90. Waigani, NCD: University of Papua New Guinea Press.
- Siep, Ludwig. 1996. "The Struggle for Recognition: Hegel's Dispute with Hobbes in the Jena Writings." In *Hegel's Dialectic of Desire and Recognition*, ed. J. O'Neill, 273-88. Albany: State University of New York Press.
- Sillitoe, Paul. 1986. "Property Ownership in the New Guinea Highlands." *Research in Malnesia* 10:1-II.
- Simpson, Colin. n.d. (ca. 1950). Interview with Joe Searson. Supplied to the author by William Searson. Handwritten transcription from taped materials collected in Sydney, April 1950.
- Sinclair, James. 1978. *Wings of Gold: How the Aeroplane Developed New Guinea*. Sydney: Pacific Publications.
- Siva Kumar, G. 1991. *Trib: A Vision of Sarawak*. Kuching: Jacamar.
- Smalley, Ian F. 1983. "Pongera Genealogical Survey, vol. 2: Angalaini, Mamai, Pakien, Pianda, Pulumaini." Prepared for Pongera Joint Venture.
- Smith, Michael Peter. 2001. *Transnational Urbanism: Locating Globalization*. Malden, Mass.: Blackwell.
- Smith, Neil. 1984. *Uneven Development: Nature, Capital and the Production of Space*. London: Basil Blackwell.
- . 1992. "Contours of a Spatialized Politics: Homeless Vehicles and the Production of Geographical Scale." *Social Text* 33:54-81.
- Smith, Neil, and Phil O'Keefe. 1996. "Geography, Marx and the Concept of Nature." In *Human Geography: An Essential Anthology*, ed. John Agnew, David N. Livingstone, and Alisdair Rogers, 282-95. London: Blackwell.
- Söderqvist, Thomas. 1986. *The Ecologists: From Merry Naturalists to Saviours of the Nation. A Sociologically Informed Narrative Survey of the Ecologization of Sweden, 1895-1975*. Stockholm: Almqvist and Wiksell International.
- Sokal, Alan, and Jean Brichmont. 1998. *Fashionable Nonsense: Postmodern Intellectuals' Abuse of Science*. New York: Picador.
- Solway, J. 1994. "Drought as 'Revelatory Crisis': An Exploration of Shifting Entitlements and Hierarchies in the Kalahari, Botswana." *Development and Change* 25(3):471-98.

- Soper, Kate. 1995. *The Problem of Nature*. Oxford: Blackwell.
- Spencer, Jonathan. 1997. "Post-Colonialism and the Political Imagination." *Journal of the Royal Anthropological Institute* 3(1):1-19.
- Starr, Orin. 1992. "I Dreamed of Foxes and Hawks': Reflections on Peasant Protest, New Social Movements and the *Rondas Campesinas* of Northern Peru." In *The Making of Social Movements in Latin America*, ed. A. Escobar and S. Alvarez, 89-111. Boulder: Westview Press.
- Staski, Edward, and Richard Wilk. 1985. "La cultura material de areas marginales y gente pobre: Un caso del distrito de Toledo, Belice." *Revista Mexicana de estudios antropologicos* 31:155-62.
- Steins, Nathalie A. 2001. "New Directions in Natural Resource Management: The Offer of Actor-Network Theory." *IDS Bulletin* 32(4):18-25.
- Stewart, Pamela J., and Andrew Strathern. 2002. *Remaking the World: Myth, Mining, and Ritual Change among the Duna of Papua New Guinea*. Washington: Smithsonian Institution Press.
- Strathern, Marilyn. 1972. *Women in Between: Female Roles in a Male World, Mount Hagen, New Guinea*. London: Seminar Press.
- . 1980. "No Nature, No Culture: The Hagen Case." In *Nature, Culture and Gender*, ed. C. McCormack and M. Strathern, 174-222. Cambridge: Cambridge University Press.
- . 1988. *The Gender of the Gift: Problems with Women and Problems with Society in Melanesia*. Berkeley: University of California Press.
- . 1990. "Negative Strategies in Melanesia." In *Localizing Strategies: Regional Traditions of Ethnographic Writing*, ed. R. Fardon, 204-16. Edinburgh: Scottish Academic Press.
- . 1992. *After Nature: English Kinship in the Late Twentieth Century*. Cambridge: Cambridge University Press.
- . 1998. "Divisions of Interest and Languages of Ownership." In *Property Relations: Renewing the Anthropological Tradition*, ed. C. M. Hann, 214-32. Cambridge: Cambridge University Press.
- Strogatz, Steven H. 1994. *Nonlinear Dynamics and Chaos*. New York: Addison-Wesley.
- Sturgeon, N. 1997. *Ecofeminist Natures: Race, Gender, Feminist Theory, and Political Action*. London: Routledge.
- Subak Dlod Blungbang. 1990. *Eka Ihtika: Monografi Subak Dlod Blungbang*. Tegallang.
- Sullivan, M. E., J. Galowa, S. Iddings, and R. Kimbu. 1992. "Porgera Environmental Impacts and Compensation." Prepared for Porgera Joint Venture.
- Talyaga, Kundapen. 1984. "Porgera Gold Mine: Socio-Economic Impact Study, Interim Report." Volume 2. *The Porgera District and the Mine Development*. Prepared for the National Planning Office.
- Tarling, Nicholas. 1971. *Britain, the Brookes and Brunei*. Oxford: Oxford University Press.
- . 1982. *The Burden, the Risk, and the Glory: A Biography of Sir James Brooke*. Oxford: Oxford University Press.
- Tausig, Michael. 1980. *The Devil and Commodity Fetishism*. Chapel Hill: University of North Carolina Press.
- Taylor, Charles. 1994. *Multiculturalism: Examining the Politics of Recognition*. Princeton: Princeton University Press.
- Technical Advisory Committee (TAC). 1995. "Lower Porgera River Compensation Claim Assessment Hearing by Members of the Government's Technical Advisory Committee (TAC)." Available in Graham Taylor's office.
- Thomas, Nicholas. 1991. *Entangled Objects: Exchange, Material Culture, and Colonialism in the Pacific*. Cambridge, Mass.: Harvard University Press.
- . 1994. *Colonialism's Culture: Anthropology, Travel and Government*. Cambridge: Polity Press, in conjunction with Blackwell.
- Thomas-Slayer, Barbara, and Dianne Rocheleau. 1995. "Gender, Resources, and Local Institutions: New Identities for Kenya's Rural Women." In *Gender, Environment and Development in Kenya: Perspectives from the Grassroots*, eds. B. Thomas-Slayer and D. Rocheleau, 7-22. Boulder: Lynn Rienner.
- , eds. 1995. *Gender, Environment and Development in Kenya: Perspectives from the Grassroots*. Boulder: Lynn Rienner.
- Thompson, E. P. 1966. *The Making of the English Working Class*. New York: Vintage Books.
- Tibesar. 1952. "San Antonio de Eneño: A Mission in the Peruvian Montana." *Primitive Man* 25(1-2):23-39.
- Timmerman, Peter. 1996. "Breathing Room: Negotiations on Climate Change." In *Earthly Goods: Environmental Change and Social Justice*, ed. Fen Hampson and Judith Reppy, 221-44. Ithaca: Cornell University Press.
- Toledo Maya Cultural Council and the Toledo Alcaldes Association. 1997. *Maya Atlas*. Berkeley: North Atlantic Books.
- Touraine, Alain. 1988. *Return of the Actor: Social Theory in Postindustrial Society*. Minneapolis: University of Minnesota Press.
- Tsing, Anna Lowenhaupt. 1993. *In the Realm of the Diamond Queen: Marginality in an Out-of-the-Way Place*. Princeton: Princeton University Press.
- . 2000. "The Global Situation." *Cultural Anthropology* 15(3):327-60.
- . 2001a. "Inside the Economy of Appearances." *Public Culture* 12(1):115-44.
- . 2001b. "Nature in the Making." In *New Directions in Anthropology and the Environment*, ed. C. Crumley, with A. van Denter and J. Fletcher, 3-23. Lanham, Md.: Altamira Press.

- . 2000. "Political Ecology." In *A Companion to Economic Geography*, ed. E. Shepard and T. Barnes, 257–74. Oxford: Blackwell.
- Watts, M. J., and H. G. Bohle. 1993. "Hunger, Famine and the Space of Vulnerability." *GeoJournal* 30(2):117–25.
- Weiner, Annette B. 1992. *Inalienable Possessions: The Paradox of Keeping-While-Giving*. Berkeley: University of California Press.
- Weiner, James. 1991. *The Empty Place: Poetry, Space, and Being among the Foi of Papua New Guinea*. Bloomington: Indiana University Press.
- White, Leslie A. 1949/1969. *The Science of Culture: A Study of Man and Civilization*. New York: Farrar, Straus and Giroux.
- Wilk, Richard. 1983. "Little House in the Jungle: The Causes of Variation in House Size Among Modern Kekchi Maya." *Journal of Anthropological Archaeology* 2(2):99–116.
- . 1987. "The Search for Tradition in Southern Belize: A Personal Narrative." *America Indígena* 47(2):77–95.
- . 1989. "Houses as Consumer Goods: Social Processes and Allocation Decisions." In *The Social Economy of Consumption*, ed. Ben Orlove and Henry Rutz, 373–406. Lanham, Md.: University Press of America.
- . 1991. *Household Ecology: Economic Change and Domestic Life Among the Kekchi Maya of Belize*. Tucson: University of Arizona Press, and DeKalb: Northern Illinois University Press.
- . 1993. "Consumer Goods as Dialogue about Development: Colonial Time and Television Time in Belize." In *Consumption and Identity*, ed. J. Friedman, 97–118. Chur, Switzerland: Harwood Academic.
- . 1994. "Colonial Time and tv Time." *Visual Anthropology Review* 10(1):94–102.
- . 1995. "Learning to Be Local in Belize: Global Systems of Common Difference." In *Worlds Apart: Modernity Through the Prism of the Local*, ed. D. Miller, 110–33. London: Routledge.
- . 1996. *Economics and Cultures: Foundations of Economic Anthropology*. Boulder: Westview Press.
- . 1997. "Emerging Linkages in the World System and the Challenge to Economic Anthropology." In *Economic Analysis Beyond the Local System*, ed. Richard Blanton, Peter Peregrine, Deborah Winslow, and Thomas Hall, 97–108. Monographs in Economic Anthropology, no. 13. Lanham, Md.: University Press of America.
- . 1998. "Emulation, Imitation, and Global Consumerism." *Organization and Environment* 11(3):314–33.
- Wilkinson, R. J. 1959. *A Malay-English Dictionary*. 2 vols. London: Macmillan.
- Wilson, H. Clyde. 1969. "Review: Pigs for the Ancestors: Ritual in the Ecology of a New Guinea People." *Journal of Asian Studies* 28(3):658–59.
- Wilson, Rob. 2000. *Reimagining the American Pacific: From South Pacific to Bamboo Ridge and Beyond*. Durham: Duke University Press.

- Wilson, Rob, and Wimal Dissanayake, eds. 1996. *Global-Local: Cultural Production and the Transnational Imaginary*. Durham: Duke University Press.
- Wolf, Eric R. 1972. "Ownership and Political Ecology." *Anthropological Quarterly* 45:201–5.
- . 1982. *Europe and the People without History*. Berkeley: University of California Press.
- . 1990. "Facing Power." *American Anthropologist* 92(3):586–96.
- . 1996. "Global Perspectives in Anthropology: Problems and Prospects." In *The Cultural Dimensions of Global Change: An Anthropological Approach*, ed. Lourdes Arizpe, 31–43. Vendôme, France: UNESCO.
- . 1999a. *Envisioning Power: Ideologies of Dominance and Crisis*. Berkeley: University of California Press.
- . 1999b. "Cognizing 'Cognized Models.'" In "Ecologies for Tomorrow: Reading Rappaport Today," ed. A. Biersack, a "contemporary issues forum." *American Anthropologist* 101(1):19–22.
- Wolff, Janet. 1997. "The Global and the Specific: Reconciling Conflicting Theories of Culture." In *Culture, Globalization and the World System*, ed. Anthony King, 161–73. Minneapolis: University of Minnesota Press.
- World Rainforest Movement and Forests Monitor, Ltd. 1998. *High Stakes. The Need to Control Transnational Logging Companies: A Malaysian Case Study*. Montevideo, Uruguay: World Rainforest Movement; Ely, U.K.: Forests Monitor, Ltd.
- World Rainforest Movement and Sahabat Alam Malaysia. 1990. *The Battle for Sarawak's Forests*. 2d edition. Penang: World Rainforest Movement and Sahabat Alam Malaysia.
- Worsley, Peter. 1968. *The Trumpet Shall Sound: A Study of "Cargo" Cults in Melanesia*. New York: Schocken.
- Worster, Donald. 1990. "The Ecology of Order and Chaos." *Environmental History Review* 14:11–18.
- . 1995. "Nature and the Disorder of History." In *Reinventing Nature: Responses to Postmodern Deconstruction*, ed. Michael E. Soule and Gary Lease, 65–85. Washington: Island Press.
- Wynne, Brian. 1996. "May the Sheep Safely Graze? A Reflexive View of the Expert-Lay Knowledge Divide." In *Risk, Environment and Modernity: Towards a New Ecology*, ed. S. Lash et al., 27–43. London: Thousand Oaks; New Delhi: Sage.
- Wynne-Edwards, V. C. 1965. "Self-Regulating Systems in Populations of Animals." *Science* 147:1543–47.
- Zarzar, Alonso. 1989. "Apo Capac Huayno Jesus Sacramento." *Mito, utopía y milenarismo en el pensamiento de Juan Santos Atahualpa*. Lima: CAAAAP.
- Zerner, Charles. 1994. "Through a Green Lens: The Construction of Customary En-

- Turner, Terrence. 1993a. "From Cosmology to Ideology: Resistance, Adaptation and Social Consciousness Among the Kayapo." In *Cosmology, Values and Inter-Ethnic Contact in South America*, ed. T. Turner, 1-13. South American Indian Studies no. 2, Bennington College, Bennington, Vt.
- . 1993b. "The Role of Indigenous Peoples in the Environmental Crisis: The Example of the Kayapo of the Brazilian Amazon." *Perspectives in Biology and Medicine* 36(3):526-45.
- . 2003. "Class Projects, Social Consciousness, and the Contradictions of 'Globalization.'" In *Violence, the State and Globalization*, ed. Jonathan Friedman, 35-66. New York: Altamira.
- Urquhart, Ian A. N. 1950. "More Pleasures and Tribulations in the Ulu." *Sarawak Gazette* 76(1112):278-80, 76(1113):303-7.
- . 1951. "Some Notes on Jungle Punans in Kapit District." *Sarawak Museum Journal* 5(13)(n.s.):495-533.
- . 1956. "Excerpts from Administrative Officers' Reports for the First-Half of 1956: Fourth Division (Baram District Report)." *Sarawak Gazette* 82(1185):292-94.
- . 1957. "Some Kenyah/Pennan Relationships." *Sarawak Museum Journal* 8(10)(n.s.):113-16.
- . 1959. "Nomadic Punans and Pennans." In *The Peoples of Sarawak*, ed. T. Harrison, 73-83. Kuching: Sarawak Museum.
- Vail, John. 1995. "All That Glitters: The Mt. Kare Gold Rush and Its Aftermath." In *Papuan Borderlands: Huli, Duna, and Ipi'li Perspectives on the Papua New Guinea Highlands*, ed. A. Biersack, 343-74. Ann Arbor: University of Michigan Press.
- Valeri, Valerio. 1990. "Both Nature and Culture: Reflections on Menstrual and Parturitional Taboos in Hualulu (Seram)." In *Power and Difference: Gender in Island Southeast Asia*, ed. J. M. Atkinson and S. Errington, 235-72. Stanford: Stanford University Press.
- Välvirronen, Esa. 1996. *Ympäristöihkem anatomia: tiehe, mediat ja metsän sairaskertomus*. Tampere, Finland: Vastapaino.
- Varese, Stefano. 1973. *La Sal de Los Cerros: Una Aproximación al Mundo Campa*. Lima: Retablo de Papel.
- Various Patrol Reports. Read at the National Archives, NCD, Papua New Guinea.
- Vasquez-Leon, Marcela. 1993. "The Political Organization of Fishing." In *Maritime Community and Biosphere Reserve: Crisis and Response in the Upper Gulf of California*, ed. Thomas R. McGuire and James B. Greenberg, 27-44. Tucson: Occasional Paper no. 2, Bureau of Applied Research in Anthropology.
- Vasquez-Leon, Marcela, Thomas R. McGuire, and Hernan Aubert. 1993. "Suggestions for a Sustainable Fishery." In *Maritime Community and Biosphere Reserve: Crisis and Response in the Upper Gulf of California*, ed. Thomas R. McGuire and James B. Greenberg, 118-34. Tucson: Occasional Paper no. 2, Bureau of Applied Research in Anthropology.
- Vayda, Andrew P., and Bonnie J. McCay. 1975. "New Directions in Ecology and Ecological Anthropology." *Annual Reviews in Anthropology* 5:293-306.
- Vayda, Andrew P., and B. B. Walters. 1999. "Against Political Ecology." *Human Ecology* 27(1):167-79.
- Weber, Hanne M. 1991. "Schools for the Ashéninka: Ethno-Development in the Making." Paper presented to 47th International Congress of Americanists, New Orleans, July 7-II.
- . 1998. "The Salt of the Montaña: Interpreting Indigenous Activism in the Rain Forest." *Cultural Anthropology* 13(3): 382-413.
- . 2001. "Arawakan Messianism: 'Black Hole' in Western Amazonian Ethnography?" Manuscript. Danish Institute for Advanced Studies in the Humanities.
- . 2003. "Asháninka Messianism: The Production of a 'Black Hole' in Western Amazonian Ethnography." *Current Anthropology* 44(2):183-211.
- Wagner, Roy. 1977. "Analogic Kinship: A Daribi Example." *American Ethnologist* 4(4):623-42.
- Ward, H. J. 1949. "Geological Reconnaissance of the Country Between Mount Hagen and Mongureba, Central Highlands District, Mandated Territory of Papua New Guinea." Photocopy of typescript supplied to author by William Searson.
- Wallerstein, Immanuel. 1974. *The Modern World System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*. New York: Academic Press.
- Warrilow. 1981. Report on a visit to Porgera filed with the Assistant Secretary (Major Projects), Department of Minerals and Energy, PNG Government. In the possession of the author.
- Watson, James B. 1969. "Review: 'Pigs for the Ancestors: Ritual in the Ecology of a New Guinea People'." *American Anthropologist* 71:527-29.
- Watson, James, ed. 1997. *Golden Arches East: McDonalds in East Asia*. Stanford: Stanford University Press.
- Watts, Michael J. 1983a. "On the Poverty of Theory: Natural Hazards Research in Context." In *Interpretations of Calamity from the Viewpoint of Human Ecology*, ed. K. Hewitt, 231-62. Boston: Allen and Unwin.
- . 1983b. *Silent Violence: Food, Famine and Peasantry in Northern Nigeria*. Berkeley: University of California Press.
- . 1983c. "The Political Economy of Climatic Hazards: A Village Perspective on Drought and Peasant Economy in a Semi-Arid Region of West Africa." *Cahiers d'Études Africaines* 89-90, 23(1-2):37-72.
- . 1998. "Nature as Artifice and Artifact." In *Remaking Reality: Nature at the Millennium*, ed. B. Braun and N. Castree, 243-68. London: Routledge.

- vironmental Law and Community in Indonesia's Maluku Islands." *Law and Society Review* 28(5):1079-1122.
- , ed. 2003. *Culture and the Question of Rights*. Durham: Duke University Press.
- Zimmerman, Michael E. 1994. *Contesting Earth's Future: Radical Ecology and Postmodernity*. Berkeley: University of California Press.

## Contributors

Eeva Berglund received her doctorate in anthropology from Cambridge University and currently writes for academic and nonacademic audiences on environmentalism, technoscience, and identity politics. She is the author of *Knowing Nature, Knowing Science* (1998), *Ethnographies of Conservation: Environmentalism and the Distribution of Privilege* (coedited with David G. Anderson [2003]).

Aletta Biersack is professor of anthropology at the University of Oregon. She is the editor of *Ecologies for Tomorrow* (1999), *Papuan Borderlands* (1995), and *Chio in Oceania* (1991).

J. Peter Brosius is associate professor, Department of Anthropology, and director of the Conservation and Community Lab at the University of Georgia. He is the author of *After Dumagan? Deforestation, Succession, and Adaptation in Upland Luzon, Philippines* (1990).

Michael R. Dove is the Margaret K. Musser Professor of Social Ecology and professor of anthropology at Yale University. He has carried out research in West Kalimantan, Indonesia, in Central Java, and in Pakistan on human use of tropical forests and grasslands, the political dimensions of natural disaster and resource degradation, indigenous environmental knowledge, and contemporary and historical environmental relations.

James B. Greenberg is Senior Research Anthropologist in the Bureau of Applied Research in Anthropology at the University of Arizona. He is the author of *Santiago's Sword: Chatino Peasant Religion and Economics* (1981), *Blood Ties: Life and Violence in Rural Mexico* (1989), and he is coeditor of the *Journal of Political Ecology*.

New Ecologies for the Twenty-First Century

SERIES EDITORS:

Arturo Escobar, University of North Carolina, Chapel Hill

Dianne Rocheleau, Clark University

# Reimagining Political Ecology

*Edited by Aletta Biersack and James B. Greenberg*

DUKE UNIVERSITY PRESS

*Durham & London 2006*

© 2006 Duke University Press  
All rights reserved

Printed in the United States of America on acid-free paper ©

Designed by Erin Kirk New

Typeset in Galliard by Tseng Information Systems, Inc.

Library of Congress Cataloging-in-Publication Data appear on the last printed page of this book.

Duke University Press gratefully acknowledges the support of two organizations that provided funds toward the production of this book:

NORDECO Foundation (Nordic Agency for Development and Ecology) of  
Copenhagen, Denmark

Provost's Author Support Fund of the University of Arizona

For Roy A. Rappaport (1926-97)  
in continuing conversation