

## **What Counts as Local Knowledge in Global Environmental Assessments and Conventions?**

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Several years ago, Arturo Escobar raised the specter of a new regime of “environmental managerialism” wherein the “Western scientist continues to speak for the Earth” (1995, 194). In its very conception, however, the Millennium Ecosystem Assessment (MA) represents a challenge to such a business-as-usual approach, and the current volume clearly shows this. One defining characteristic of the MA is a concern to link scales of analysis by integrating local/indigenous knowledge into global scientific assessments. At the same time, it represents an effort to create a scientific assessment process designed to meet the needs of decision makers (Millennium Ecosystem Assessment 2003; Reid 2000). Taken together, these two characteristics present several challenges to those involved in the MA process and to those responsible for translating MA outputs into policy.

In this chapter, I explore these challenges by examining how “local knowledge” is constituted in global environmental assessments and conventions, and I argue for a more expansive conception. My argument assumes that bridging scales requires more than bridging epistemologies. Across a range of disciplines, the theoretical landscape today is defined by a concern with questions of power, and the boundaries between the epistemological and the political are not as clear as we once took them to be.

In making this argument, I follow two trajectories. First, I consider the constitution of the “local” and the politics of translation. Specifically, I examine how local perspectives are elicited and presented in various mediated forms.

Second, I consider the constitution of “knowledge,” showing how scientists interested in local/indigenous knowledge have focused overwhelmingly on environmental knowledge and ignored other domains of knowledge that are salient in the effort to link scales of analysis

The 1980s and 1990s showed remarkable growth and proliferation in indigenous movements worldwide. Much of the momentum for this movement was built around opposing the presence of extractive industries on indigenous lands, and the indigenous movement forged alliances with, among others, the global rainforest movement. Somewhat later, as the term *indigenous knowledge* began to appear on international agendas, the issues of bioprospecting and intellectual property rights became central concerns around which indigenous activists organized (Brush 1993).

Shifts in the conservation field have been equally significant. As global environmental change proceeds at an unprecedented pace, conservation has emerged as a central element in civic and political debates in the nations of both the North and the South. Responding to these debates, new forms of conservation practice are continually emerging. In the early 1990s, we witnessed the proliferation of bottom-up models under the rubric of community-based conservation. Since then, the “requiem for nature” argument has questioned the effectiveness of community-based approaches and called for stricter enforcement of protected area boundaries (Terborgh 1999). Simultaneously, we are seeing a host of new strategic priority-setting approaches that fall under the rubric of ecoregional conservation. Taking developments such as these into consideration, I conclude by offering an alternative approach to integrating local/indigenous knowledge into global scientific assessments that is premised on distinguishing several forms of mediation of local perspectives, and that incorporates a more expansive definition of knowledge.

## **The Constitution of the Local and the Politics of Translation**

What counts as “local” when we speak of “local knowledge”? I want to suggest that when we invoke the “local,” we might in fact be speaking about two distinct things. On the one hand are the voices of peasants, farmers, fishers, or indigenous peoples, often living in out-of-the-way places, frequently marginalized politically and economically. These are people we have come to

valorize as possessing richly detailed knowledge representing generations of observation and experimentation about medicinal plants, crop varieties, trees, the habits of animals, and much more.

On the other hand are the voices of those who *are delegated* to speak for local or indigenous communities in national and international fora. They are no less local—it is more the context in which we encounter them. We do not go to them; they come to us. These are actors who have much to say to the scientific community and to decision makers. In an effort to counter long histories of oppression and dispossession, they are forthright in challenging national and international conservation or development agendas, conventions, and assessments and in asserting their rights to lands and livelihoods. These are relatively new actors on the global stage. Though local and indigenous peoples have mobilized in many times and places over the centuries, it has really only been since the 1980s that we have witnessed the emergence of a *global* indigenous rights movement—what Friedman has referred to as “the rise of the indigenous voice” (Friedman 1998, 567).<sup>1</sup>

These are the people who have increasingly made such a dramatic impression at such international events as the Fifth World Parks Congress (Durban, South Africa, September 2003), the CBD/COP7 (Seventh Meeting of the Conference of the Parties to the Convention on Biological Diversity, Kuala Lumpur, Malaysia, February 2004), the MA Bridging Scales and Epistemologies conference (Alexandria, Egypt, March 2004), and the World Conservation Congress (Bangkok, Thailand, November 2004). Over the last few years at these and similar events, representatives from indigenous and local communities worldwide have appeared in large numbers. At plenary sessions, on panels, and in workshops, indigenous and local community representatives speak of conservation initiatives undertaken without their consent, and of exclusion from ancestral lands.

That indigenous issues are increasingly on the agendas of such international events is in no small part the result of extensive preparatory work by indigenous organizations and their allies. They have lobbied to secure prime speaking slots and seats on drafting committees for indigenous representatives, sought funding for indigenous participation, and coordinated regional and preparatory meetings. As a result, indigenous and local representatives have been well prepared to make their voices heard and to ensure they are included in the final outputs of these events.

What this indigenous presence represents is a challenge to many basic

assumptions about conservation. Indigenous representatives are suggesting that conservation can be done without externally imposed models, management plans, or monitoring and evaluation. They are also challenging assumptions about the roles of both Western science and major conservation organizations, asserting that conservation goals can be accomplished outside circuits of transnational expertise. Their message is that indigenous and local communities must represent something other than a “transaction cost,” that threat assessments that classify their land use practices as disturbances are unacceptable, and that participatory methods that define them as just one more category of stakeholder have no place in their vision of conservation.

Though both kinds of actors—“local locals” and local/indigenous advocates—get coded as “local” in international fora, important differences exist between them. When we consider how their words, their insights, and their knowledge move between scales in the process of translation, we must recognize that both are mediated, albeit in very different ways. Making an effective link between local knowledge and policy requires that we recognize these different forms of mediation.

For researchers interested in local or indigenous knowledge, it is those “local locals” that we usually work with the most. After all, these are the people who exist “on the ground” as repositories of the knowledge that interests us. The point, however, is that their knowledge enters circuits of global knowledge production in mediated form *through us*. Most of us who conduct research on local knowledge are able to do so because powerful institutions are interested in supporting our research, and because these institutions are increasingly interested in what we have to say about particular peoples and places. When they want to learn about local realities and local perspectives, they turn to the social sciences. This is what Gledhill was getting at when he reminded us that “intellectuals are contributing to new regulatory strategies being pursued by states and transnational agencies. There is a particular danger that anthropologists will reinforce a politics of containment where this offers a new market opportunity for peddling our services as experts on ‘culture,’ either to the national state as an employer of specialists in the administration of ethnic difference or to the wider world of transnational agencies and NGOs” (1998, 516–17).

The key to understanding this process of mediation lies in an understanding of the tools we use. As an anthropologist, I believe in the value of ethnographic research methods. Other social scientists rely on more rapid, formalistic,

survey-based methods. Whichever methods we prefer, the social sciences get positioned as speaking for the local. In so doing, the danger is that the representations of those who possess expertise in making the local legible and intelligible to those working at other scales are conflated with local voices themselves. These are not the same thing; we must never conflate data provided by those who work at a local level with local voices themselves. We can offer our translations, our mediated accounts, and these can be very valuable, but we must never presume that we actually ever speak *for* the local.

The voices of indigenous advocates or representatives are mediated as well, albeit very differently. While they may be unmediated by social science conventions and formalistic methods, they *are* mediated by transnational discourses of indigeneity. While asserting locality and connection to place, they simultaneously speak with reference to global categories. This does not make their claims any less authentic: there is nothing inauthentic about the solidarity that is emerging from a recognition of shared histories of marginalization. Still, the fact that indigenous representatives are compelled to speak in global categories is a form of mediation.

There is yet another aspect of how the local is constituted that deserves our attention: the pervasive distinction made between local actors and “decision makers.” This is achieved in part through what I have elsewhere termed the “topology of simple locality” (Brosius 1999c): a topology that defines the task of the ethnographer as one of inscribing and representing for an audience some actually existing place or set of places—our research sites, the communities in which we work. It is a kind of focalizing strategy, drawing our attention to particular places as the most significant loci for the production of knowledge, and diverting our attention from the ways in which those places articulate with other places or with actors working at other scales. The topology of simple locality suffers from the same shortcoming that has produced critiques of that other convention of anthropological writing, the “ethnographic present.”

Anthropologists today are much more alert to the politics and histories that have shaped the communities they study.<sup>2</sup> However, the “ethnographic present” is a still-extant convention of ethnographic writing wherein an anthropologist describing a particular set of cultural practices writes about them in the present tense, even though their research may have occurred many years in the past and though much of what is described may no longer exist in the same form as it did when it was observed (Fabian 1983). Just as the

ethnographic present acts as a distancing mechanism that relegates our research subjects to a timeless irrelevancy, immune from history and from the effects of our ethnographic presence, so too does the topology of simple locality create a coherent “there” that can be known and represented and kept in its place.

As Tawfic Ahmed and Reid (2002, 219) remind us, the Millennium Ecosystem Assessment is “designed to meet the needs of decision-makers.” Unspoken here is an assumption about the inherent distance between local actors and decision makers and, therefore, about the relation between scale and hierarchy. Viewed in this way, indigenous knowledge is provided to those in the policy domain, but it speaks only in the passive voice of science rather than in the active voice of advocacy and it speaks from the subordinate position of knowledge solicited and translated up for the purpose of governance.

Whether our goals are purely instrumental (rendering local voices and local knowledge into forms useful in managerial terms) or emancipatory (rendering local voices into compelling narratives designed to secure rights), those local voices are situated in a subject position (Laclau and Mouffe 2001, 84).

## The Constitution of Knowledge

I now turn to the question of what counts as “knowledge” when we speak of “local knowledge.” As it is used by ethnoecologists and others, reference to indigenous or local “knowledge”—often referred to by the acronyms IK (indigenous knowledge) or TEK (traditional ecological knowledge)—is generally applied to knowledge of the natural world: what such groups know about the resources they exploit, how these societies cognize or interpret natural processes, and so forth. In short, when we speak of indigenous or local knowledge, what we generally mean is *environmental* knowledge.

That we are at last recognizing the value of local/indigenous knowledge, rather than dismissing it as anecdotal, irrelevant, or merely a lesser form of knowledge, is clearly a positive development. But that we limit our valorization of knowledge largely to that which pertains to the natural world yet again consigns that knowledge to the irrelevancy of the ethnographic present, destined forever to fill what Trouillot has termed the “savage slot” (Trouillot 1991), an epistemological backwater distinct from, and subordinate to, the forms of knowledge possessed by decision makers.

Let us, for a moment, consider the domains of knowledge that concern the

Millennium Ecosystem Assessment. One strength of the MA is not only that it is firmly science driven, dedicated to producing and synthesizing reliable scientific data, but that it goes beyond this to identify trends, scenarios, trade-offs, and response options (MA 2003; Reid 2000). Central to the MA vision is that it provide information that is not only scientifically credible but salient and legitimate as well. According to Reid: “Scientific information is *salient* if it is perceived to be relevant or of value to particular groups who might use it to change management approaches, behavior, or policy decisions. . . . It is *legitimate* if the process of assembling the information is perceived to be fair and open to input from key political constituencies, such as the private sector, governments, and civil society” (Reid 2000; emphasis added).

But what might happen, we may ask, if these three criteria were applied not only to objective scientific information but to local and indigenous knowledge as well? What if, when we went out to seek information from local people, we not only asked about their knowledge of the natural world but also sought their analyses of the political world? How might their analyses of drivers and their assessments of threats differ from our own? What if we asked them about trends, scenarios, trade-offs, and response options? In other words, instead of treating our informants as reservoirs of local/indigenous knowledge, what if we treated them as political agents with their own ideas about the salience and legitimacy of various forms of knowledge? And what if we made a more systematic effort to incorporate that into MA outputs?

A brief example illustrates what is at stake here. For several years in the 1980s and 1990s, I worked with various groups of Penan hunter-gatherers in the Malaysian state of Sarawak. As traditionally nomadic hunter-gatherers, Penan depend on the forest for virtually every aspect of their existence. They exemplify the depth and richness of environmental knowledge that indigenous peoples hold, with a remarkable knowledge of trees, plants, and animals and of the relations among them. Penan also possess a rich vocabulary for describing landscape and an extensive knowledge of places in the landscape they inhabit. This landscape is more than a reservoir of detailed ecological knowledge or a setting in which they satisfy their nutritional needs. It is also a repository for the memory of past events, a vast mnemonic representation of social relationships and of society. For Penan, landscape, history, and kinship—the bonds linking individuals to households to communities to generations past and future—are part of a larger whole.

In the late 1980s, the Penan became the focus of a high-profile transnational indigenous rights campaign concerned with logging. Since the 1980s, timber companies have expanded their reach throughout virtually every river valley occupied by Penan, and Penan have responded with intermittent blockades. During the first wave of blockades in 1987, images of Penan resisting the approach of logging companies traveled global environmental and indigenous rights circuits, producing an outpouring of support (Brosius 1997a, 1997b, 1999b, 2001a, 2001b, 2003a, 2003b). Penan continue to assert their rights to land using every tool of persuasion available to them, though their efforts have largely been futile. The official government view of Penan is that their way of life is little more than a form of vagrancy in which would-be subjects are able to evade the gaze of the state. The only way Penan can be heard, the only discourse audible to the state, is that of development. The overall effect of the campaign was that the government shifted the debate over logging in Sarawak from a focus on forest destruction and the rights of indigenous communities to an issue of sustainable forest management. The discursive contours of the debate were shifted away from the moral and political domain toward the domain of environmental management (Brosius 1999a). By the mid-1990s, the campaign's momentum had largely dissipated.

The question I want to pose is, in a "policy environment" characterized by dispossession, where the threats to local communities result from the actions of "decision makers," of what relevance is indigenous knowledge of nature by itself, divorced from its significance with respect to the making of claims? What is needed, I would argue, is a more expansive, less fixed notion of knowledge. What matters is not how much Penan know about the landscape they inhabit but how they position that knowledge, and themselves, within the broader contours of power.

Whether or not they are actively engaged in explicit acts of resistance, the topic of logging is one that consumes Penan and that they discuss endlessly. Their narratives recount confrontations between themselves and state authorities or company representatives: police, judges, government ministers, camp managers, and others. They recount the arguments put forth by themselves or others: why they decided to blockade, why they should not be blamed for those blockades, and who they believe to be ultimately responsible.

Any effort to understand Penan narratives of dispossession must begin with recognizing the variety of forms they take. Such narratives, and the forms of action they prescribe, exist on a continuum from the concrete to the aesthetic



and oblique. Many of the concerns they express are practical in nature—for instance, the simple difficulty of making a living in a logged-over landscape. Penan describe in matter-of-fact terms the destruction of the forest and the hardship this has caused them. They speak of river siltation, the destruction of sago, rattan, and fruit trees, and the depletion of game. At times, Penan make direct claims: they speak of boundaries and of the need to prohibit the entry of outsiders onto their lands. At other times they speak movingly about the qualities of the forest and their life within it. They speak of the heat, dust, and desolation of logging against the coolness and cleanliness of the forest, the harsh sound of chainsaws versus the squeaking of trees rubbing in the wind. The words and images they employ are contrastive and tinged with nostalgia: what the forest was like before logging and after it. And they speak of loss and pain—at seeing valuable fruit trees destroyed and the graves of loved ones bulldozed.

What is further striking about Penan commentaries on landscape and forest destruction is the degree to which the arguments they put forth are about *locality* and *biography*. Penan do not talk about the need to preserve rainforests as a generic abstraction; they talk about the need to preserve particular watersheds “from which we eat.” It is the transgression of that densely biographical and genealogical locality that Penan find to be such a great injustice.

Often too, Penan speak in metaphors—for example, linking the forest to a supermarket or a bank. Such arguments are meant to appeal to what Penan presume is a shared sense of justice and respect. The arguments that Penan are putting forth should be viewed not exclusively as acts of resistance but simultaneously as efforts at engagement. In making their arguments to loggers, civil servants, environmentalists, and others, Penan are attempting to speak across difference, to *familiarize* themselves, to frame their arguments in ways that they hope outsiders will recognize. Their purpose is to persuade.

In considering how Penan frame their struggle against logging, it is important to consider not merely the rhetorical elements of these narratives but the *forms* they take as well: letters addressed to government officials, verbal arguments with timber company managers, maps produced with the aid of local activists, videotaped interviews produced by Euro-American documentary filmmakers, and others. What happens when Penan claims are textualized in different ways? How do Penan conceptions of their audience condition the arguments they put forth and the forms of knowledge they deploy?

What this points to is the need to foreground notions of agency in

narratives of landscape and dispossession. The questions of whom Penan believe to be responsible for their plight and whom they believe is in the best position to help them are as central to this whole domain of discourse as are statements about what is occurring and how it effects their everyday lives. These are as much narratives of culpability as narratives of place.

For instance, in asserting claims to land, arguing for the establishment of reserved areas, attempting to demarcate borders, or contesting the claims of timber companies, Penan—often with the help of nongovernmental organization allies—produce maps or written declarations. Penan see that loggers bring maps, show them official letters, and try to compel them to sign documents, and that all of these serve to validate company claims to Penan lands. Penan recognize that these methods are the single most effective way to assert their claims in a way that is meaningful to outsiders

At the same time they are asserting their own claims to land, Penan deny the validity of maps produced by others. One nomadic headman, referring to map-making practices, described timber companies as “stealing [land] from open places”—that is, from the outside. He declared government maps a lie because they are made from high above, showing only the shape of the land. The Penan see the fact that these maps are made from a distance as an indication of duplicity. Penan contrast the way companies make maps from a distance with the way they themselves do: by walking through and over every valley and ridge, by filling the place with names, and by sustaining themselves on resources that have been passed down for generations. As one nomadic Penan man sarcastically told me, he would ask loggers, “If this is your land, why do you always ask us the names of rivers? Do you know the names of places? You and your people are always asking—what is the name of this river?, what is the name of that river? If you don’t know these, you don’t belong here.”

The Penan response to logging is a product not only of the tangible effects of environmental degradation but also of the way Penan perceive themselves to have been treated by those with an interest in its continuation. They are responding not only to logging as an activity that directly affects their lives but also to the *agents* of logging. When Penan discuss why they erect blockades, one theme arises more than any other: they say they blockade because “the government does not hear what we say,” repeatedly describing the government and companies as being “deaf.” Company and government officials do not listen to them, Penan assert, because the officials do not respect them, and they

interpret this as a form of insult. Further, because they have made innumerable good-faith attempts at dialogue, any action they might then take—most often blockades—can no longer be considered their fault.

In recent years, we have observed a florescence of scholarship focused on indigenous conceptions of landscape (Basso 1984; Feld 1982; Hirsch and O'Hanlon 1995; Myers 1991; Povinelli 1993; Rosaldo 1980; Roseman 1991; Weiner 1991; Zerner 2003). This literature has alerted us to the rich variety of narrative forms through which societies inscribe their presence in places. Yet in listening to Penan statements about the forest and its destruction, we should be cautious about assuming that documenting Penan conceptions of landscape as some fixed entity—"indigenous knowledge"—is ever enough. Rather, we also need to try to discern how Penan conceptions of their audience condition the arguments they put forth.

## **Discussion: Local Knowledge, Indigenous Peoples, and Environmental Governance**

In the past decade or so, it has become axiomatic to state that indigenous peoples "possess, in their ecological knowledge, an asset of incalculable value: a map to the biological diversity of the earth on which all life depends. Encoded in indigenous languages, customs, and practices may be as much understanding of nature as is stored in the libraries of modern science" (Durning 1992, 7). As self-evident as this may now seem, it does not provide much guidance with respect to how one moves between local knowledge and global science. That is the question that animates this volume and the Millennium Ecosystem Assessment as a whole.

In our efforts to bridge scales and epistemologies, we stand at a critical crossroad. For today we are confronted with two apparently contradictory trends in the domain of environmental governance. On the one hand, we have witnessed a trend toward valorizing indigenous/local forms of knowledge and mobilizing indigenous peoples. The Bridging Scales and Epistemologies conference, the outputs of the World Parks Congress, the World Conservation Congress, and the CBD/COP7—all of which express some form of support for indigenous priorities—are four manifestations of this trend.

On the other hand, in the last few years we have witnessed a decisive move by major conservation organizations toward cartographically enabled regional

land use planning approaches under the rubric of ecoregional conservation (Olson et al. 2000, 2001; TNC 2000, 2001; World Wildlife Fund–US 2000). Along with this, we have witnessed the emergence of the field of “conservation finance” (Bayon, Lovink, and Veening 2000; Conservation Finance Alliance 2002; WWF-US 2001) and the proliferation of social science–based metrics and models designed to monitor and manage social and political processes in conservation (Brosius and Russell 2003). These three are linked discursively, strategically, and institutionally in a broader process of consolidation, and together they are reshaping the way conservation is conceptualized, planned, and administered. The comprehensive visions being promoted and the proprietary databases being produced in the emerging complementarities of spatial planning, investment, and social metrics have the potential to reshape the contours of the relationship between humanity and nature for generations to come.

Events such as the World Parks Congress and the World Conservation Congress can be seen, in essence, as exercises devoted to normalizing and reinforcing these complementary manifestations of consolidation. Attending these events, one is left with the impression that an enormous weight of managerialism has descended over conservation, much as it once did on development, and that this state of affairs is in large part due to the efforts of major conservation organizations to consolidate their authority over global conservation practices. They are achieving this consolidation by establishing administrative technologies in which they are taken for granted as methodological gatekeepers. Increasingly, conservation has become a gated community that one can enter only by accepting the methodological terms promulgated by major conservation organizations. This has occurred as tools or approaches that originated as emancipatory moves—stakeholder analysis, participatory mapping, community-based natural resource management—have been incorporated into the managerial apparatus of conservation. Once incorporated, they become tied to the imperatives of funding cycles, scaling up, accountability to donors, and more.

This situation is ironic, and it has major implications for integrating local and indigenous perspectives into conservation. Just when local voices and local forms of knowledge are being invoked as relevant to the setting of global conservation strategies and local conservation management, the institutional structures of global conservation that are now emerging are preventing them from being meaningfully included. What then becomes of alternative forms of conservation that are informed by local ways of knowing?

This consolidation of conservation practices by major conservation organizations is being achieved by the shift in scale that I have described. As Smith (1992) and Harvey (1996) remind us, scale is always political. Left unspoken in contemporary conservation is the relation between scale and hierarchy. Higher-level scales of visualization require higher-level structures of governance. Ecoregional conservation is fundamentally *about* scale—both enlarging the scale of environmental interventions and linking information created at different scales into a single strategic blueprint for the future at an extended temporal scale. All the talk about scaling up in conservation is accompanied by a concern for improving “efficiencies” and reducing “transaction costs.” Indigenous knowledge, when it moves up the scale, becomes both simplified and embedded in a range of other agendas.

Earlier I drew a distinction between two forms of locality: that mediated by the research activities of social scientists and that articulated by local/indigenous activists and advocates. One speaks in the passive voice of science, translating indigenous ways of knowing into forms intelligible to practitioners and decision makers; the other speaks in the active voice of advocacy. Making this distinction draws our attention to the question of how local/indigenous perspectives and ways of knowing are elicited and translated between scales and how the link is made between this knowledge and the policy domain. The former reifies the distinction between local/indigenous peoples living their lives in particular places and policy makers who are making sometimes momentous decisions about those peoples’ lives.

Local/indigenous advocates, on the other hand, are refusing that distinction. Making meaningful progress in the future will entail a willingness on the part of conservation scientists and practitioners to work with indigenous/local communities in new ways, ways in which the tools of Western science are offered in support of local conservation priorities. What that means for how conservation initiatives are planned, implemented, and governed is not yet clear, but it is an effort that we must take seriously. The challenge is to seek productive terms of engagement. We cannot afford to perpetuate the polemic that the goals of conservation and indigenous rights are at odds with each other, or that indigenous knowledge is something to be packaged and passed up to “decision makers.” The fate of biodiversity rests in part on how the conservation community responds to the challenge posed by indigenous and local communities and whether it is able to embrace this as an opportunity to create new alliances for conservation.

## References

- Basso, K. 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, DC: American Ethnological Society.
- Bayon, R., J. S. Lovink, and W. J. Veening. 2000. *Financing biodiversity conservation*. Washington, DC: Sustainable Development Department, Inter-American Development Bank. <http://www.iadb.org/sds/doc/ENV-134FinancingBiodConservaE.pdf> (accessed September 25, 2005).
- Benhabib, S., ed. 1996. *Democracy and difference*. Princeton, NJ: Princeton University Press.
- Brosius, J. P. 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. Analyses and interventions: Anthropological engagements with environmentalism. *Current Anthropology* 40 (3): 277–309.
- . 1999b. Green dots, pink hearts: Displacing politics from the Malaysian rainforest. *American Anthropologist* 101 (1): 36–57.
- . 1999c. Locations and representations: Writing in the political present in Sarawak, East Malaysia. *Identities: Global Studies in Culture and Power* 6 (2/3): 345–86.
- . 2001a. Local knowledges, global claims: On the significance of indigenous ecologies in Sarawak, East Malaysia. In *Indigenous traditions and ecology*, ed. J. Grim and L. Sullivan, 125–57. Cambridge, MA: Harvard University Press and Center for the Study of World Religions.
- . 2001b. The politics of ethnographic presence: Sites and topologies in the study of transnational environmental movements. In *New directions in anthropology and environment: Intersections*, ed. C. Crumley, 150–76. Walnut Creek, CA: Altamira.
- . 2003a. The forest and the nation: Negotiating citizenship in Sarawak, East Malaysia. In *Cultural citizenship in Island Southeast Asia: Nation and belonging in the hinterlands*, ed. R. Rosaldo, 76–133. Berkeley: University of California Press.
- . 2003b. Voices for the Borneo rainforest: Writing the history of an environmental campaign. In *Imagination and distress in southern environmental projects*, ed. A. Tsing and P. Greenough, 319–46. Durham, NC: Duke University Press.
- . 2004. Indigenous peoples and protected areas at the World Parks Congress. *Conservation Biology* 18 (5): 609–12.
- Brosius, J. P., and D. Russell. 2003. Conservation from above: An anthropological perspective on transboundary protected areas and ecoregional planning. *Journal of Sustainable Forestry* 17 (1/2): 39–65.
- Brosius, J. P., A. Tsing, and C. Zerner. 1998. Representing communities: Histories and politics of community-based natural resource management. *Society and Natural Resources* 11 (2): 157–68.
- . 2005. *Communities and conservation: Histories and politics of community-based natural resource management*. Walnut Creek, CA: Altamira.
- Brush, S. 1993. Indigenous knowledge of biological resources and intellectual property rights: The role of anthropology. *American Anthropologist* 95 (3): 653–86.

- Conservation Finance Alliance. 2002. Conservation Finance Alliance. <http://www.conservationfinance.org> (accessed September 25, 2005).
- Dirks, N., G. Eley, and S. Ortner, eds. 1993. *Culture/power/history: A reader in contemporary social theory*. Princeton, NJ: Princeton University Press.
- Dryzek, J. 1990. *Discursive democracy: Politics, policy and political science*. Cambridge: Cambridge University Press.
- Durning, A. 1992. *Guardians of the land: Indigenous peoples and the health of the earth*. Worldwatch Paper 112. Washington, DC: Worldwatch Institute.
- Escobar, A. 1995. *Encountering development: The making and unmaking of the third world*. Princeton, NJ: Princeton University Press.
- Fabian, J. 1983. *Time and the other: How anthropology makes its object*. New York: Columbia University Press.
- Feld, S. 1982. *Sound and sentiment: Birds, weeping, poetics, and song in Kaluli expression*. Philadelphia: University of Pennsylvania Press.
- Friedman, J. 1998. The heart of the matter. *Identities* 4 (3/4): 561–69.
- Gledhill, J. 1998. Contesting regimes of truth: Continuity and change in the relationships between intellectuals and power. *Identities* 4 (3/4): 515–28.
- Harvey, D. 1996. *Justice, nature and the geography of difference*. Oxford: Blackwell.
- Hirsch, E., and M. O'Hanlon, eds. 1995. *The anthropology of landscape: Perspectives on place and space*. Oxford: Clarendon.
- IUCN (World Conservation Union). 2003. *Message to the Convention on Biological Diversity, Vth IUCN World Parks Congress, Durban, South Africa, 8–17 September 2003*. Gland, Switzerland: IUCN. <http://www.iucn.org/themes/wcpa/wpc2003/pdfs/outputs/wpc/cbdmessage.pdf> (accessed September 25, 2005).
- Laclau, E., and C. Mouffe. 2001. Hegemony: The genealogy of a concept. In *The new social theory reader: Contemporary debates*, ed. S. Seidman and J. C. Alexander, 76–86. London: Routledge.
- Mascia, M., J. P. Brosius, T. A. Dobson, B. C. Forbes, L. Horowitz, M. A. McKean, and N. J. Turner. 2003. Conservation and the social sciences. *Conservation Biology* 17 (3): 649–50.
- Millennium Ecosystem Assessment. 2003. *Ecosystems and human well-being: A framework for assessment*. Washington, DC: Island Press.
- Mintz, S. 1985. *Sweetness and power: The place of sugar in modern history*. New York: Viking Penguin.
- Myers, F. 1991. *Pintupi country, Pintupi self: Sentiment, place, and politics among Western Desert Aborigines*. Berkeley: University of California Press.
- The Nature Conservancy. 2000. *Designing a geography of hope: A practitioner's handbook to eco-regional conservation planning*. Vols. 1 and 2. Washington, DC: The Nature Conservancy. <http://conserveonline.org/docs/2000/11/GOH2-v1.pdf> (accessed September 25, 2005).
- . 2001. *Conservation by design: A framework for mission success*. Washington, DC: The Nature Conservancy. [http://nature.org/aboutus/howwework/files/cbd\\_en.pdf](http://nature.org/aboutus/howwework/files/cbd_en.pdf) (accessed September 25, 2005).
- Olson, D. M., E. Dinerstein, R. Abell, T. Allnutt, C. Carpenter, L. McClenachan, J. D'Amico, et al. 2000. *The global 200: A representation approach to preserving the earth's*

- distinctive ecosystems*. Washington, DC: Conservation Science Program, World Wildlife Fund–US, Washington, D.C. <http://www.gm-uncd.org/FIELD/NGO/WWF/Global200.pdf> (accessed September 25, 2005).
- Olson, D. M., E. Dinerstein, E. D. Wikramanayake, N. D. Burgess, G.V.N. Powell, E. C. Underwood, J. A. D’Amico, et al. 2001. Terrestrial ecoregions of the world: A new map of life on earth. *BioScience* 51 (11): 933–38.
- O’Neill, J. 2001. Representing people, representing nature, representing the world. *Environment and Planning C: Government and Policy* 19 (4): 483–500.
- Painter, J., and C. Philo. 1995. Spaces of citizenship: An introduction. *Political Geography* 14 (2): 107–20.
- Povinelli, E. 1993. *Labor’s lot: The power, history and culture of Aboriginal action*. Chicago: University of Chicago Press.
- Reid, W. 2000. Ecosystem data to guide hard choices. *Issues in Science and Technology Online* 16 (3, Spring). Online journal. <http://www.nap.edu/issues/16.3/reid.htm>.
- Rosaldo, R. 1980. *Ilongot headhunting, 1883–1974: A study in society and history*. Stanford, CA: Stanford University Press.
- Roseberry, W. 1989. *Anthropologies and histories: Essays in culture, history, and political economy*. New Brunswick, NJ: Rutgers University Press.
- Roseman, M. 1991. *Healing sounds of the Malaysian rainforest: Temiar music and medicine*. Berkeley: University of California Press.
- Schneider, J., and R. Rapp, eds. 1995. *Articulating hidden histories: Exploring the influence of Eric R. Wolf*. Berkeley: University of California Press.
- Smith, N. 1992. Geography, difference and the politics of scale. In *Postmodernism and the social sciences*, ed. J. Dougherty, E. Graham, and M. Malek, 57–79. London: Routledge.
- Tawfic Ahmed, M., and W. Reid. 2002. Millennium Ecosystem Assessment: A healthy drive for an ailing planet. *Environmental Science and Pollution Research* 9 (4): 219–20.
- Terborgh, J. 1999. *Requiem for nature*. Washington, DC: Island Press.
- Trouillot, M. 1991. Anthropology and the savage slot: The poetics and politics of otherness. In *Recapturing anthropology: Working in the present*, ed. R. Fox, 17–44. Santa Fe, NM: School of American Research Press.
- Wallerstein, I. 1974. *The modern world system: Capitalist agriculture and the origins of the world economy in the sixteenth century*. Orlando, FL: Academic Press.
- Weiner, J. 1991. *The empty place: Poetry, space, and being among the Foi of Papua New Guinea*. Bloomington: Indiana University Press.
- Wolf, E. 1982. *Europe and the people without history*. Berkeley: University of California Press.
- World Wildlife Fund–US (WWF-US). 2000. *The global 200: A blueprint for a living planet*. Washington, DC: World Wildlife Fund–US. [http://www.panda.org/about\\_wwf/where\\_we\\_work/ecoregions/index.cfm](http://www.panda.org/about_wwf/where_we_work/ecoregions/index.cfm) (accessed September 25, 2005).
- . 2001. *Center for Conservation Finance business plan: Building conservation capital for the future*. Washington, DC: Center for Conservation Finance, World Wildlife Fund–US. [http://www.worldwildlife.org/conservationfinance/pubs/business\\_plan.pdf](http://www.worldwildlife.org/conservationfinance/pubs/business_plan.pdf) (accessed September 25, 2005).
- Zerner, C., ed. 2003. *Culture and the question of rights*. Durham, NC: Duke University Press.