

Cultural diversity and conservation

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Reconceptualising the link between cultural diversity and biodiversity: beyond the biocultural perspective

This article is premised on the assumption that any effort to explore the links between cultural diversity and conservation must begin with providing a productive analysis of the link between cultural diversity and biological diversity. Our analysis is premised on recognition that diversity can be an elusive concept, particularly when attempting to describe it across the parallax of cultural and biological definitions. As Magurran notes:

diversity is rather like an optical illusion. The more it is looked at, the less clearly defined it appears to be and viewing it from different angles can lead to different perceptions of what is involved. (Magurran 1988, p.1)

The semantic range of the concept of diversity spans the gulf from being a number or index to a value commitment, and this semantic range must be acknowledged and embraced.

In the last two decades scholars, practitioners and

policy-makers have recognised that there is both a spatial and conceptual link between cultural diversity and biodiversity. Though the genealogy of this recognition is complex, a simple version is that it originates mostly from indigenous

advocates who deployed this idea as a strategy for valorising indigenous people as holders of valuable knowledge and as guardians of biodiversity (Brush 1996; Burger 1990; Gray 1991; International Work Group for Indigenous Affairs [IWGIA] 1993–1994; Kempf 1993; Suzuki 1990; Suzuki and Knudtson 1992; Taylor 1990). In the interval 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, p.7)

These are the people – often living in out-of-the-way places (Tsing 1993), frequently marginalised politically and economically – we have come to valorise as possessing

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

Perhaps the most prevalent argument, and the one in which the most direct linkage is made between the fate of forests and peoples, is to assert the importance of indigenous knowledge for preserving biodiversity and to raise the spectre of its loss. According to Ausable:

The extinction of biological diversity is inextricably linked with the destruction of cultural diversity. With the loss of native cultures, there is also disappearing the vital and important knowledge of a way of living in balance with the earth and the value system in which it is encoded. (Ausable 1994, p.211)

One of the first documents to explicitly make this connection was the 1988 Declaration of Belem, which recognised the inextricable link between cultural and biological diversity. In 1992, Bernard Nietschmann gave further shape to this link when he proposed what he called “the biocultural axiom” (Nietschmann 1992).

The source of what has come to be called the “biocultural perspective” lies in a sense of crisis – that the world is experiencing unprecedented levels of loss of both biodiversity and cultural diversity. The biodiversity crisis narrative has a very long genealogy (Myers 1979; Wilson 1988), and current expressions of urgency are an extension of this. John Terborgh speaks of the fact that we are currently facing “the prospect of biological Armageddon” (Terborgh 1999, p.123). Soulé and Terborgh describe “a world in pieces” and warn that “each isolated remnant of nature is caught in a tightening tourniquet of civilization” (Soulé and Terborgh 1999, p.12). The not-so-indirect implication is that the clock of biological extinction is ticking and that even if our methods are imperfect there is no time left for delay. At the same time that the biodiversity crisis narrative was gaining momentum we witnessed a growing global concern for the fate of indigenous peoples threatened by dispossession and culture loss (Conklin and Graham 1995; Niezen 2003; Varese 1996), exemplified by a transnational indigenous rights movement and the advocacy of non-governmental organisations such as Forest People’s Programme, Cultural Survival

International and the International Working Group for Indigenous Affairs.

The biocultural perspective emerged through recognition that biological and cultural diversity were inextricably linked. To many advocates of both cultural and biological diversity, working under the rubric of biocultural diversity (Harmon 1996; Loh and Harmon 2005; Maffi 2005; Sutherland 2003), this is a seductive idea that is “good to think” of as a response to the loss of global diversity. The result is that several initiatives have emerged that attempt to add substance to this insight by documenting the co-occurrence of biological and cultural diversity. Proponents of the biocultural perspective have declared the emergence of a new “integrated, transdisciplinary field . . . spanning the natural and social sciences, as well as linking theory with practice and science with policy, ethics, and human rights” (Maffi 2005, pp.612–613).

It is one thing to recognise that a link between biological and cultural diversity exists; it is another thing altogether to conceptualise the nature of that link in a way that is productive either of new insights or new forms of practice, and a further step still to understand the implications for policy and governance. In this respect, the biocultural perspective must be found wanting.

Despite the claim that we are witnessing the emergence of a new trans-disciplinary field, to date proponents of the biocultural perspective have devoted an inordinate amount of attention to identifying indices that allow them to develop maps demonstrating the spatial correlations between biological and cultural diversity at a range of scales. A key actor in the effort to link these correlations to conservation policy is the non-governmental organisation Terralingua (n.d.). These spatialised cartographic images are potentially important tools for visualising – and valorising – the link between biological and cultural diversity, but they are of limited relevance in advancing a coherent trajectory of research or in promoting policies that support either biological or cultural diversity. There are a number of reasons why this is so.

Firstly, the cartographic and correlative approach seems to be guided by the assumption that these visualisations speak for themselves and that their significance to researchers or policy-makers is somehow intuitive. As such, a biocultural perspective provides only a vague

link to action – whether we mean by “action” research, interdisciplinary collaboration or engagement in policy, practice or rights issues. To assert that a linkage between biological and cultural diversity exists, and to represent that link cartographically, is not the same as providing a conceptual roadmap for addressing the threats to either form of diversity. Thus, in the end it is unclear what these spatial correlations produce.

Secondly, there is a series of fundamental questions that must be raised about the reliability of the correlations produced, given that results are so variable depending on the scale of analysis (Manne 2003) and that the indices on which these correlations are based use overly reductive proxies of diversity – for instance, passerine birds as a stand-in for biodiversity. There is an inherent contradiction in using reductive measures to represent diversity.

Thirdly, the biocultural perspective is of limited utility because it tends to privilege only one part of humanity – those small, diverse indigenous communities living in places of high biodiversity, thereby rendering them “spatially incarcerated” (Appadurai 1988, p.37). While such communities have certainly suffered from long histories of marginalisation and stand to benefit from projects that privilege them for a change, the biocultural perspective is something of a two-edged sword. This unspoken primordialism (Appadurai 1996, p.139) implies that places less diverse are sacrifice zones, of lesser interest to those engaged in promoting either biological or cultural diversity (Cocks 2006).

Fourthly, the biocultural perspective is entirely a product of the crisis narrative. While there are certainly very good reasons to be concerned about the rapid erosion of both biological and cultural diversity on a global scale (Redford and Brosius 2006), a perspective that is defined entirely with regard to crisis ignores the dynamic, creative possibilities that can emerge from human agency and processes of hybridity.

Finally, the biocultural perspective suffers from

the assumed isomorphism of space, place, and culture . . . [in which] space itself becomes a kind of neutral grid on which cultural difference, historical memory, and societal organization are inscribed. It is in this way that space functions as a central organizing principle in the social sciences at the same time that it disappears from analytical purview. (Gupta and Ferguson 1992, p.7)

As we argue in the following, it is crucial that we acknowledge the creative dynamism of culture and its autonomy from space and place.

It is clear that in order to productively link cultural diversity and conservation we require an alternative approach to thinking about the link between cultural and biological diversity. A biocultural approach which relies so heavily on the visual representation of spatial correlations between biological and cultural diversity is clearly inadequate to the task. The following is an attempt to define a more generative conceptual approach to understanding this link and to provide a framework for research, policy and practice.

We provide two ways of addressing the link between cultural and biological diversity. Firstly, in response to a biocultural perspective based on the crisis narrative, we suggest that we can more productively link cultural diversity and conservation through the recognition of a broader spectrum of processes impinging on diversity. While the loss of diversity is a matter of major concern, there are also processes at work which produce diversity. It is important to recognise the broad spectrum of processes rather than focusing on only one end of the spectrum. Secondly, we attempt an analysis that links cultural diversity and conservation through an understanding of trends in conservation. Conservation is not a static enterprise. On the contrary, it is characterised as an ongoing series of changing priorities and practices that shape the way conservation actors address the human element. Thus, developing new strategies for linking cultural diversity and conservation is not simply a matter of recognising patterns of distribution of cultural and biological diversity. It lies in recognising how a series of shifts in conservation policy and practice has positioned human social and cultural considerations in their practice past and present, and defining alternatives for the future.

Between homogenisation and hybridity: reconsidering the link between cultural diversity and conservation

In the effort to seek conceptual integration between cultural diversity and biological diversity, and thus between cultural diversity and

conservation, we need to understand a spectrum of contemporary processes that not only reduce diversity but also produce or modify it. Recognising that a spectrum exists between homogenisation and hybridity is not a repudiation of the crisis narrative and is not intended to deny the threat that exists to diversity through processes of homogenisation. As Redford and Brosius note:

the forces promoting diversity and the forces promoting homogeneity are playing their endgame on a global scale with the outcome all too apparent. Almost everywhere in the world diversity is being lost to homogeneity. (Redford and Brosius 2006)

Rather, it is an attempt to supplement it with a broader appreciation for the diversity of processes that both erode and create global diversity.

Homogenisation

One of the key conceptual links between cultural and biological diversity is the recognition that both are today being diminished through a diverse set of processes that fall under the rubric of homogenisation. As Redford and Brosius note:

In recent years across a variety of domains – science, advocacy, and academia – we have witnessed an extraordinary proliferation of commentaries on the loss of diversity and the threat of homogenization. The dimensions of this diversity loss extend throughout the cultural and natural realms in complicated, interconnected ways. Starting from the purely human side they include destruction of old urban centres in the Middle East and small villages in Japan, the loss of pilgrimage routes in Europe, the extinction of languages and, with this, the rich tapestry of cultural diversity throughout the world. Poised between the human realm and the natural realm are eroding dimensions of diversity that include dramatic loss of livestock breeds and agricultural varieties as well as traditions for raising them, and erosion or obliteration of regional cuisines and foodways. At the more biological end of this spectrum can be counted the extinction or erosion of genes, populations, species and ecosystems as well as the loss of migratory routes, and ecological interactions. (Redford and Brosius 2006)

In looking for conceptual linkages between the loss of both forms of diversity, an obvious question is whether the same set of forces is responsible or whether we observe different kinds of process at work. As Redford and Brosius also note:

Whichever forms of diversity we might wish to focus on, the drivers of homogenization are much the same: the hypermobility of capital, increasingly unfettered free trade policies driven by neoliberal agendas, structural violence and physical violence; all those things we gloss under the label “globalization”. No matter the cause, this cascading homogenization produces the same result – a simplified world. In fact, in the biological literature a name for this impending epoch has emerged – the homocene (Rosenzweig 2001). (Redford and Brosius 2006)

In recent years we have witnessed a proliferation of commentaries on the subject of globalisation, and it is clear that we have increasingly come to lump those processes under the broader rubric of globalisation are responsible for much of the homogenisation we observe. Explaining homogenisation as a result of globalisation, however, obscures three important things. Firstly, globalisation is not a singular process: it is a plural one, a phenomenon under which we must include things as diverse as neoliberal economic ideologies, global commodity markets, transnational religious fundamentalism and indigenous social movements. Many of these processes have been the product of extensive commentary and debate and we have a substantial published record of how a range of processes operate in the domains of language loss (Crystal 2000; Dalby 2003; Harrison 2007; Nettle and Romaine 2000; Wurm 2001), development (Banuri 1990; Giddens 1990; Nederveen Pieterse 1995), resource extraction (Perreault 2006; Roe and van Eeten 2004), market integration (Cox 1992; Peterson 2004), religious conversion and the growth fundamentalisms (Heimbrock 2001; Moten 2005; Wessels 2008) and education (Matthews and Sidhu 2005; Robertson 2006), among others. All have implications for diversity and homogenisation, but in very different ways.

Secondly, we must recognise that the drivers of homogenisation are to be found across a range of scales. Certainly, in many historical instances, the nation-state has been a key agent in the production of homogenising processes. Numerous scholars have explored this process in the context of the making of national subjects and the establishment of “the national order of things” (Malkki 1995, p.1) (Anderson 1983; Fox 1990; Rosaldo 2003; Scott 1998; Weber 1979). The publication of *Imagined communities* (Anderson 1983) was a watershed in scholarly interest in the

study of nations, nationalism and the constitution of national political cultures.

Such national political cultures have a strong environmental component to them. On the one hand, they have as their basis particular topologies: not just the larger national “geo-body” (Thongchai 1994) but zones of inclusion and exclusion within that geo-body. What are the appropriate spaces (intensively cultivated plains versus sparsely populated upland rainforests) and occupations (urban dweller, peasant farmer, shifting cultivator, hunter-gatherer) for citizenship in the nation-state? To what extent are government decisions about mines, dams, plantations or timber concessions premised on assumptions about the communities that exist in those areas? At the same time, nation-states produce national spaces and subjects through the establishment of grids of legibility. In invoking the idea of legibility we are drawing on the work of James Scott in *Seeing like a state* (1998). For Scott, legibility – achieved through a series of state simplifications designed to reduce the opacity of the local – is the central problem of statecraft. Anna Tsing’s discussion of marginality in Indonesia (1993) is perhaps the best ethnographic treatment of a national topology of citizenship to date. Recent work on what Rosaldo (2003) has termed “cultural citizenship” also holds great promise for understanding national topologies.

Another aspect of national environmental ideologies concerns the matter of blood and soil essentialisms. To what degree and in what ways do national governments purvey images of timeless rootedness, and to what extent do such images serve to include or exclude certain categories of people in ways that reduce diversity? At a time when conservation is increasingly tied up with identity politics and the line between the potentially emancipatory and the potentially reactionary is no longer clear, understanding this aspect of the discursive linkages made between national communities and natural communities is critical (Malkki 1992; Zimmerman 1994).

From homogenisation to hybridity: three broad trends

While globalisation is certainly implicated as a major agent of homogenisation, it is simultaneously

a source of creativity, invention, difference and diversification. Thus, against the discourse of homogenisation, the last couple of decades have witnessed a series of conceptual developments that compel us to interrogate the crisis narrative. These are (a) decentring primordialism and essentialism, (b) the politics of knowledge and (c) in the domain of the natural sciences, the emergence of the “new ecologies”. Each of these, taken separately and together, renders the conventional biocultural perspective problematic.

Decentring primordialist and essentialist notions of culture

One of the key developments in social theory in the last two decades – from across a range of academic disciplines – has been a proliferation of commentaries challenging conventionally spatialised primordialist and essentialist notions of culture (Appadurai 1996; Bhabha 1994; Gupta and Ferguson 1992, 1997; Hannerz 1996; Malkki 1992; Rosaldo 1989; Tsing 1993). The sources of this challenge are diverse – post-structuralism, feminist theory, post-colonial theory, border theory, critical race theory, queer theory and other allied perspectives concerned with de-essentialising difference. What this body of work has challenged is the idea that culture is always and everywhere something that is fixed, timeless, and bounded in space (García Canclini 1995). Gupta and Ferguson, for instance, challenge the traditionally “assumed isomorphism of space, place, and culture” (Gupta and Ferguson 1992, p. 7). Rather than focusing on cores of assumed purity, this body of work reminds us of the need to recognise that culture is dynamic, that humans exercise agency, and that it is at borders, margins and through zones and processes of hybridity that processes of cultural production are manifested. From this perspective, culture is not a timeless entity, but something that is actively produced through processes of articulation (Appadurai 1996; Gupta and Ferguson 1992; Pemberton 1994; Rosaldo 1989; Tsing 2004). Further, culture is no longer viewed as simply something that is shared. Rather, contemporary theorisations of culture view it as contextual, polyphonic, disjunctive, negotiated and contested in ways that acknowledge human agency and recognise

that “loss occurs alongside invention” (Gupta and Ferguson 1992, p.8).

This effort to problematize conventional primordialist and essentialist ideas of culture has proceeded along a series of more specific conversations about globalization (Featherstone 1990; Jameson and Miyoshi 1998; Kearney 1995; Robertson 1992; Tomlinson 1999; Waters 1995; Wilson and Dissanayake 1995), hybridity (Bakhtin 1981; Bhabha 1994; García Canclini 1995; Gilroy 1993; Hall 1990; Young 1995), *metissage* (Glissant 1981; Hill 2002; Mary 2005; Vergès 1999), transculturation (Ortiz 1978; Pratt 1992), creolization (*American Ethnologist* 2006; Khan 2007; Stewart 2007; Young 1995), diaspora and transnationalism (Brah 1996; Clifford 1994; Gilroy 1993; Hall 1990; Lavie and Swedenburg 1996; Ong 1999; Ong and Nonini 1996; van der Veer 1994), deterritorialization/delocalization/displacement/migration (Appadurai 1990; Bender and Winer 2001; Brettell 2003; Brettell and Hollifield 2000; García Canclini 1995; Giddens 1990; Gupta and Ferguson 1992; Kaplan 1996; Lull 1995; Mattelart 1994; Mlinar 1992; Morley and Robins 1995; Latouche 1996; Smith 1994; Thompson 1995; Tomlinson 1999), borders (Alvarez 1995; Anzaldúa 1987; Arteaga 1994; Calderón and Saldivar 1991; Michaelsen and Johnson 1997; Rosaldo 1989; Rouse 1991; Saldivar 1997) and the politics of authenticity (Friedman 1996; Griffiths 1994; Hanson 1989, 1991; Jackson 1989, 1995; Jolly 1992; Keesing 1989; Keesing and Tonkinson 1982; Lattas 1993; Linnekin 1991, 1992; Ramos 1994; Rogers 1996; Zerner 1994). Equally significant in this regard has been a proliferation of interest in the concept of agency (Archer 1988; Bhabha 1994; Bourdieu 1977; de Certeau 1984; Giddens 1979; Johnson 2003; Ortner 2001; Spivak 1985; Sztompka 1993), a ‘term referring to the role of the human actor as individual or group in directing or effectively intervening in the course of history’ (Brooker 1999, p. 3).

For all the advances that have been made in theorising culture, Ashcroft *et al.* warn that the emergence of certain fixed, stereotypical representations of culture remains a danger. The tendency to employ generic signifiers for cultures that may have many variations within them may override the real differences that exist within such cultures. Markers of cultural difference may well be perceived as authentic cultural signifiers, but that claim to authenticity

can imply that these cultures are not subject to change. The use of signifiers of authenticity may be a vital part of the attempt by many subordinated societies to argue for their continued and valid existence as they become inevitably hybridized and influenced by various social and cultural changes. But too rigid a definition can militate against such resistance if they are used to police and license the determining boundaries of the culture by the dominant group. (Ashcroft *et al.* 1998, p. 21)

Considered within the context of conservation, what this passage points to is the inherent danger in primordialist and essentialist notions of culture. Conservation programmes guided by such notions deny communities agency and make the extension of rights contingent on adherence to externally mandated standards of what constitutes tradition.

Politics of knowledge

In the last few decades scholars have come to recognise that the contours of power are more convoluted and more implicit than we once thought. Across a range of disciplines, the theoretical landscape is defined by a concern with the links between knowledge and power and the boundaries between epistemology and politics are much more problematic than once assumed. We recognise that who we are has a great deal to do with what we can claim to know and with how valid others take our knowledge to be. As a result, we can no longer take our categories, our knowledge-making practices or our representational conventions for granted.

This body of scholarship on the politics of knowledge (Agrawal 2002; Cohn 1996; Escobar 1995; Ferguson 1994; Foucault 1972, 1973, 1980; Haraway 1988, 1991; Nadasdy 2003; Rabinow 1984; Said 1978; Stehr 2005) is premised on the recognition that all forms of knowledge are inherently political and it challenges the assumption that there is any such thing as objective knowledge. Scholars working in this area have demonstrated this in the context of medicine, education, development, environment and technology and in numerous other domains. They examine how knowledge is produced and who is empowered to produce it, how it circulates, how some knowledge is taken to be authoritative while other knowledge is marginalised and how some forms of knowledge are taken to be credible by certain categories of actors or contested by others.

They have also explored how various forms of knowledge are represented – through narrative, statistically, cartographically and otherwise – and how various technologies of visualisation have unexpected implications. What is important for the present discussion is understanding the way in which various forms of knowledge production construct and deploy a discourse of crisis and the ways in which this discourse in turn creates the ground for various forms of intervention.

Nature, the new ecologies and the critique of wilderness

In recent decades a number of developments both in the domain of theory and in the domain of scientific research have converged towards a series of insights that call into question conventional ways of thinking about the relationship between humanity and nature.

Firstly, we have witnessed a sustained effort to challenge and dismantle that fundamental western intellectual construct dividing and dichotomising nature and culture, nature being “that which is opposed to, prior to, or simply outside human society and culture” (Edgar and Sedgwick 1999, p.256). This work has challenged the nature–culture construct by showing both that, at a theoretical level, this dichotomy is discursively constructed and, at an empirical level, the boundaries between these two domains are constantly crossed, rarely as discreet or absolute as we once presumed them to be (Braun 2002; Braun and Castree 1998; Castree 2005; Castree and Braun 2001; Ellen and Fukui 1996; Haraway 1991; MacCormack and Strathern 1980; Ortner 1974; Soper 1995, 1996; Whatmore 2001; Williams 1976, 1980; Wolch and Emel 1998).

Secondly, in the past two decades many of our conventional assumptions about how ecosystems work have been overturned by what Scoones (1999) has called the new ecology. Against assumptions about balance, order, stability, homeostasis and equilibrium, the new ecology stresses uncertainty, non-linearity, indeterminacy, surprise and complexity operating across scales, and notes that non-equilibrium processes are a more representative way to view ecological process than equilibriums (Botkin 1990; Scoones 1999; Zimmerman 1994). This shift in perspective has had profound effects in the field of ecosystem management, at least in

some circles (for instance, environmental management in the USA) and has given rise to the field of adaptive management (Holling 1978).

Finally, we have witnessed a series of influential critiques of the idea of wilderness. Until recently much conservation thinking has been guided by the idea of that the places most worth protecting are those that exist untouched by human presence. Humans have been viewed primarily as an invasive species, encroaching on otherwise pristine areas, their activities leading inexorably to the erosion of biodiversity (Brockington 2002; Terborgh 1999). This assumption has had two major consequences for the practice of conservation. Firstly, conservation planning and implementation has mostly been based on models that mandate the exclusion of humans from biologically diverse landscapes or that restrict livelihoods of local people in such areas (Bergerhoff-Mulder and Coppolillo 2005; Brown 1998; Colchester 1992, 2005; Peluso 1994; Sheil and Lawrence 2004). Secondly, anthropogenic landscape processes have been viewed almost exclusively as threats to biodiversity. Conservation research has focused overwhelmingly on elements or patterns of biodiversity while largely ignoring histories of land use in areas of conservation interest (Brosius and Russell 2003; Foster *et al.* 2003). As a result, many ways in which previous generations of local peoples have shaped current patterns of biodiversity composition have been overlooked. In short, the identification and creation of protected areas has not been much informed by a historical perspective (Bergerhoff-Mulder and Coppolillo 2005; Foster *et al.* 2003).

In recent years this assumption has been challenged on several fronts. Firstly, a substantial body of critical scholarship has emerged challenging the idea of the pristine wilderness on conceptual grounds (Cronon 1995; Guha 1989; Guyer and Richards 1996; Nash 1967; Proctor and Pincetl 1996). Secondly, archaeologists, geographers, ecologists and conservation practitioners have produced empirical studies demonstrating the anthropogenic nature of much of what had been deemed to be pristine natural areas (Adams and McShane 1992; Balée 1992; Denevan 1992; Hitchner 2009b; Nyerges 1996; Roosevelt 1989; Schwartzman *et al.* 2000a, b). Actions taken in the past without thorough knowledge of historical patterns of land use have

resulted in the exclusion of humans from areas where management has shaped species composition and density over millennia (Adams and McShane 1992; Neumann 1998; Raffles 1999). Thirdly, against assumptions that anthropogenic landscape modifications are inherently destructive, researchers have demonstrated that human modification of landscapes can actually enhance soil and water quality and maintain or increase levels of biodiversity (Fairhead and Leach 1996; Gadgil and Guha 1992; Guyer and Richards 1996; Michon *et al.* 2000) and that agro-ecological biodiversity as a result of landscape management by local communities may be an important means of *in situ* conservation (Marjokorpi and Ruokolainen 2003). Fourthly, indigenous communities have increasingly challenged the assumptions of conservation practitioners as latter-day manifestations of the idea that indigenous lands are *terra nullius* (Martin 2000; Wright *et al.* 1995). Taken together, these studies and critiques have questioned the strict separation between pristine nature and humans and argued for a recognition of the role of human history in the creation of landscapes. A key challenge for contemporary conservation practice is to acknowledge histories of human presence and anthropogenic modification by incorporating landscape history into conservation planning and implementation.

Linking cultural diversity and conservation through a series of trends

In seeking a productive conceptual link between cultural diversity and conservation, we need to recognise three fundamental characteristics of the conservation enterprise. Firstly, conservation is never static. Rather, it is a constantly changing configuration of institutions, initiatives, funding streams, alliances, practices, buzzwords and critiques. Secondly, conservation is a nexus of relationships between large organisations and donors, between organisations and national governments, between national governments and local people and more. All of these relationships are negotiated in various ways, with some actors privileged and some actors marginalised to varying degrees in the process.

Thirdly, conservation is inherently political in all the ways in which it involves institutions, local communities, livelihoods, legal codes, knowledge-making practices and more – establishing and enforcing boundaries, curtailing subsistence activities, negotiating benefits, making eco-regional maps, applying reserve selection algorithms. However, different actors – and different analytical perspectives – locate the politics in different domains of conservation practice. Many conservation practitioners clearly see politics at local sites of conservation intervention. But politics occurs in other places too: in the adoption of categories like “stakeholder”, in the use of reserve selection algorithms, in the production of eco-regional maps, in the application of tools for monitoring and evaluation, in the expectation that conservation can only be achieved through the application of management plans and in a thousand other ways.

In the present discussion we examine a series of broad historical developments in the conservation field as a series of discursive and scalar shifts. We begin by tracing two ways in which community, locality and indigenism came to be valorised in conservation; followed by a move to conceptualise conservation at a broader, more strategic scale.

Valorising cultural diversity in conservation: participation and community-based conservation (CBC)

Against a long legacy of fortress conservation in the 1980s (Brockington 2002), various models of conservation began to emerge that incorporated or claimed to incorporate the needs and priorities of local communities under the rubrics of CBC, community-based natural resource management (CBNRM) and other participatory, livelihoods or stakeholder-based approaches (Brosius *et al.* 1998, 2005; Kemf 1993; Lynch and Talbot 1995; McNeely 1995; Pye-Smith *et al.* 1994; Stevens 1997; Western and Wright 1994). As Brosius *et al.* observe, such approaches

are based on the premises that local populations have a greater interest in the sustainable use of resources than does the state or distant corporate managers; that local communities are more cognizant of the intricacies of local ecological processes and practices; and that they are more

able to effectively manage those resources through local or “traditional” forms of access. In insisting on the link between environmental degradation and social inequity, and by providing a concrete scheme for action in the form of the CBNRM model, NGOs and their allies have sought to bring about a fundamental rethinking of the issue of how the goals of conservation and effective resource management can be linked to the search for social justice for historically marginalized peoples. (Brosius *et al.* 1998, p.158)

These models emerged in part in response to a steady series of critiques, primarily by Southern (that is, Third World) intellectuals and activists, aimed originally at international agencies concerned with development and, increasingly, with the larger project of “sustainable development”. It was also the result of the work of practitioners such as Robert Chambers (1983) and Michael Cernea (1985), who were reacting against the waste and inequity of traditional development project research, design and implementation.

In the conservation realm, advocacy for community must be seen in the context of a series of other panaceas that were being proposed in the late 1980s and early 1990s: extractive reserves, debt-for-nature swaps and the like. A consensus began to emerge (in some quarters at least) that top-down approaches to conservation were likely to be successful only in limited cases, that conservation biology alone was inadequate as an exclusive framework for the development of conservation paradigms and initiatives and that conservation organisations must make every effort to foster meaningful community participation in conservation and resource management. By the mid-1990s, in a variety of guises, CBC had become established as the norm and so-called integrated conservation and development projects proliferated rapidly (Brown and Wyckoff-Baird 1993; Peters 1996).

At a time when many donors, non-governmental organisations, conservation practitioners and indigenous advocates were lauding the emancipatory potential for CBC, questions were also being raised (Brosius *et al.* 1998, 2005). How, for instance, do communities get constituted as the abode of harmony and equity? In what ways are ideas of community made generic in the process of scaling-up conservation initiatives? What is the potential for community-based initiatives to be coercive while being discursively configured as civil, consultative,

participatory and democratic? Seen from this perspective, participation represents a regime of civility intended to contain and domesticate dissent by creating a somewhat inauthentic place at the table (MacDonald 1995; Rahnema 1992; Ribot 1996).

No sooner had CBC and CBNRM become widely accepted approaches to conservation practice than a series of trenchant critiques appeared in a concerted backlash (Brechin *et al.* 2002, Wilshusen *et al.*, 2002). Many conservation biologists felt that the emphasis on participation, development and equity diluted the main goal of conservation: saving species and habitats. Oates described community-based approaches as an alternative romantic myth (Oates 1999, p.xi). What most concerned critics of CBC and CBNRM was that conservation organisations allowed donors to shape their agendas (Oates 1999; Soulé and Terborgh 1999; Terborgh 1999). Critics have been unsparing in their condemnation of conservation organisations that have embraced CBC. Terborgh argues that

[w]hen conservation organizations begin to advocate sustainable use of tropical forests, it is a signal that conservation is on the run. Starting down the slippery road to sustainable use is stepping back from that crucial line in the sand that defines one's beliefs and principles. Sustainable use represents a gray zone where politics, economics, and social pressures, not science, decide what is good for humans, with scarcely a nod to nature. (Terborgh 1999, p.140)

With this critique have come calls for a return to more authoritarian, top-down approaches: what Peluso (1993) has termed “coercive conservation”. Oates, for example, calls for a return to the “reserve concept” and advocates strong policing to safeguard protected areas (Oates 1999, pp.239–240). The most ardent proponent of authoritarian conservation is Terborgh, who advocates “building a bulwark of security around the last remnants of tropical nature” (Terborgh 1999, p.17) and who believes that “A national parks agency with the best of intentions remains powerless without the backing of those who carry the guns” (1999, p.163). Terborgh further advocates the creation of “internationally financed elite forces within countries . . . legally authorized to carry arms and make arrests” (1999, p.199).

Valorising cultural diversity in conservation: indigenous knowledge (IK/TEK)

As they are used by ethno-ecologists, conservation practitioners and others, the terms “indigenous knowledge or traditional ecological knowledge” (often designated by the acronyms IK/TEK) are generally applied to discussions of indigenous understandings of the natural world: systems of classification, how various societies cognise or interpret natural processes, what such groups know about the resources they exploit and so forth (Agrawal 2002; Brosius 1997, 2001; Brush and Stabinsky 1995; Sillitoe 1998; Warren *et al.* 1995). Brush has suggested that the forms that the study of indigenous knowledge has taken have changed considerably, and that four distinct, historically situated approaches can be discerned: descriptive historical particularism, cultural ecology, cognitive anthropology and human ecology (Brush 1993, p.658). Each of these presupposes a different set of starting assumptions regarding the nature of indigenous knowledge and the purposes and epistemological bases for studying it. Central to the latter two approaches in particular has been a concern with the structural or systemic nature of indigenous knowledge (Brush 1993, p.658) and its utilitarian or adaptive significance (Brush 1993, p.659).

Brush also describes how, after 1980, addition of the word “indigenous” produced a more politicised discourse concerned with the issue of rights, which has culminated in contemporary controversies over indigenous intellectual property rights (Brush 1993, pp.659–660). Politicised though it was (and is), the discourse of indigenous intellectual property rights has adhered strongly to the objectivist conception of knowledge. This is necessary given the goal of defining indigenous knowledge as an entity subject to statutory recognition and framed with reference to metropolitan forms of legal textualisation.

One of the factors that sustain academic and practitioner interest in IK/TEK is the belief that it has instrumental value in conservation and resource management (Agrawal 1995; Berkes 1999; Brosius 2006; Ellen *et al.* 1998; Foale 2006; Nadasdy 1999, 2003). Recent research has demonstrated the relevance of indigenous/local knowledge to successful conservation outcomes

(Berkes 2004; Colchester 2000; Sheil and Lawrence 2004). In the last two decades we have witnessed a proliferation of research initiatives, programmes and policies that are premised on the inclusion of IK/TEK in environmental decision-making. Numerous conservation initiatives have shown how projects in biologically diverse regions can improve and steer conservation practices by incorporating local knowledge and land use systems into science-based conservation plans (Colchester 1994; Colfer and Soedjito 1996; Colfer *et al.* 1997; Hitchner 2009a).

The strategic turn in conservation

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 valorising communities, participation, and indigenous and local forms of knowledge. On the other hand, in the last few years we have also witnessed a series of four linked developments in what we call the strategic turn in conservation: (a) a decisive move by major conservation organisations towards cartographically enabled regional land-use planning approaches under the rubric of eco-regional conservation, (b) the emergence of the field of conservation finance, (c) monitoring and evaluation and (d) the proliferation of social science-based metrics and models designed to manage social and political processes in conservation. These four are linked discursively, strategically and institutionally in a broader process of consolidation and together they are reshaping the way conservation is conceptualised, planned and administered.

Eco-regional conservation

In the last decade we have witnessed a decisive move towards cartographically enabled regional land-use planning approaches under the rubric of eco-regional conservation. While the backlashes against CBC need not necessarily lead in the direction of eco-regional conservation, there is a degree of complementarity between them with respect to defining a successor project to CBC, especially as a strategy to increase funding for conservation: eco-regional conservation is, after all, first and foremost concerned with identifying and prioritising places for

protection. The eco-regional approach displays several general characteristics:

- It entails an effort to envision conservation at a larger scale than in the past, moving beyond the protected area paradigm in order to provide a representative perspective for the development of effective conservation strategies.
- It relies on powerful cartographic technologies (participatory geographical information systems (GIS), remote sensing imagery) that allow for the development of multiple data layers.
- It expands the temporal scale of conservation planning, providing practitioners with the means to approach conservation strategically by establishing priorities for future conservation investments.
- It is deeply imbricated with advances in the science of conservation biology, particularly with regard to issues such as fragmentation.
- It is guided by biological rather than political criteria. Political boundaries are not irrelevant – merely secondary.

The best-known such eco-regional programme is *The global 200*, an initiative undertaken by the WWF Conservation Science Programme to identify “the Earth’s most biologically outstanding terrestrial, freshwater and marine habitats” (Olson *et al.* 2000). WWF characterises *The global 200* initiative as “a map guiding conservation investments so that a comprehensive plan eventually can be achieved by the global conservation community and the world’s nations” (Olson *et al.* 2000, p. 21). The Nature Conservancy’s (TNC) strategic vision for eco-regional conservation is termed Conservation by Design. According to TNC President Steven McCormick, Conservation by Design

directs us to systematically identify the array of places around the globe that embrace the full spectrum of the Earth’s natural diversity; to develop the most effective strategies to achieve tangible, lasting results; and to work collaboratively to catalyze action at a scale great enough to ensure the survival of entire ecosystems. (TNC 2001, p.1)

It would be a mistake to assume that the history of eco-regional conservation could be told only with reference to its technical and scientific foundations or with reference to the conceptual and ideological shifts in the conservation community. The history of

eco-regional conservation is also the history of institutions that became aware of the possibilities it presented for attracting donor support. In the pursuit of sustained funding, expressions of urgency are no longer enough. Conservation organisations need to give shape to that urgency and demonstrate that they are guided by a strategic vision that will allow them to direct their efforts effectively and efficiently in the task of saving nature. Donors, for their part, demand not only strategic visions but also structures of accountability and ways of measuring the success of initiatives they fund. Eco-regional conservation provides all these and more: a complete and highly marketable package.

There are a number of reasons to be concerned about the proliferation of eco-regional conservation initiatives. Firstly, we need to consider the consequences of the assertion of cartographic naturalism. At times it seems that those who produce eco-regional maps take them to be unmediated representations of biophysical reality. For example, the description of one eco-regional initiative on the TNC website is headed. “When nature draws the maps” (n.d.). The Wildlife Conservation Society describes its Living Landscapes initiative as setting “priorities for conservation by looking through the eyes of wildlife” (Wildlife Conservation Society n.d.). The many strategic mediations involved in the making of eco-regional maps, each subject to extensive commentary by their designers – decisions about scale, bio-geographical boundaries and “potential natural vegetation” – are made to disappear in the final product, which is then taken to represent the actual or potential natural state of the world. Secondly, there is the problem of the effacement of history as eco-regional maps overwrite human presence in the landscape. There are several ways this is achieved. One is through the aforementioned cartographic privileging of natural boundaries over political boundaries. Another is the overwriting of human use of the environment in the production of both maps and the strategic plans that they generate, whether in the guise of land classification categories, assumptions about potential natural vegetation, re-wilding or the establishment of corridors. Reflect, for example, on the implications for local populations of the designation, “Congo Basin Wilderness Area”, as depicted in a Conservation International Hot

Spots map. Another form of effacement is the coding of people as threats. What happens when all the cartographic and algorithmic visualising power I have described is turned on the assessment of threat and when “disturbed” establishes itself as a stand-in term for “inhabited”? Each of these raises the question of how assumptions about human communities become coded or elided cartographically in eco-regional maps and how this in turn produces capillary processes of power by which visualisations are transferred from map to ground.

We are entering a new era of environmental enclosure and the enclosures being produced are emerging from a series of proprietary maps and databases designed and constructed by a small number of practitioners in the North. As one proponent of eco-regional conservation remarked to me, somewhat tongue-in-cheek, “The future of the planet is being mapped out by about seven guys in Washington DC”.

Conservation finance

The recognition of the need for new ways to finance conservation is not new. Several elements of a conservation finance approach have been around for over a decade: such as debt-for-nature swaps, conservation trust funds and certification schemes. But it is only in the last couple of years that we have seen this coalesce into a coherent new sub-field intended both to bring all of these approaches into a single frame of reference and to develop new approaches as conservation organisations and donors have increasingly stressed the need to think about funding for conservation in new ways.

In June 2000 WWF founded the Centre for Conservation Finance (WWF 2001), dedicated to building the next generation of conservation-finance models – models that can be replicated in every corner of the world (WWF 2002). Another example of this shift is the Conservation Finance Alliance (CFA), a partnership between the Wildlife Conservation Society, TNC, Conservation International, International Union for Conservation of Nature (IUCN), the Ramsar Convention and the World Bank. Established in early 2002, the CFA was created

to catalyze increased and sustainable public and private financing for biodiversity conservation to support the

effective implementation of Multilateral Environment Agreements ... and other commitments to conservation. (CFA 2002)

A third example is the Critical Ecosystem Partnership Fund (CEPF), an initiative of Conservation International, the Global Environment Facility and the World Bank, which aims “to invest at least \$150 million over the next five years to advance biodiversity conservation projects in critical ecosystems that harbour the richest variety of life” (CEPF 2001).

One of the most significant aspects of conservation finance is that it represents an attempt to shift conservation discourse from romantic, scientific or crisis narratives towards a discourse of investment. To some extent this is because conservation finance adopted some of the valorising strategies of ecological economics; forests and other ecosystems are “natural capital” that provide “ecological services”. But it goes beyond that. The adoption of a discourse of investment represents an effort to fundamentally reframe the conservation enterprise in neoliberal terms. One might thus pose a few questions about conservation finance. What becomes of nature when biodiversity is coded as natural capital or comparative advantage? What are the implications when those who claim to speak for nature refer to themselves as “conservation brokers”? What are the implications for local communities when conservation organisations must provide measures of the success of their investments over 3-year funding cycles? When conservation organisations must be more accountable to investors, do they not become less accountable to local communities?

Monitoring and evaluation

One of the critical tangible manifestations of the strategic turn is that measuring the success of conservation investments has become absolutely obligatory. This has been going on in conservation for some time but the increasing centrality of conservation finance invests this process with additional momentum. Conservation was driven to adopt such metricised approaches in part because of their increasing closeness to major donors for whom these approaches were now part of their mandate – the United States Agency for International Development, the World Bank

and others – but also because of a trend towards understanding conservation in terms of ecosystem services rather than biodiversity.

These approaches have become increasingly programmatic in mandating, for instance, that organisations frame their efforts in terms of project cycles that include clear definitions of goals, objectives, activities, results and impact. In part this effort is being driven by several key actors, the two most significant being the Conservation Measures Partnership and the Foundations of Success (Margoluis and Salafsky 1998). A key development of late has been a broad effort to create a common vocabulary and toolkit of approaches.

Conservation organisations have not been unreflective about this trend, expressing concern, for instance, about the impediments to admitting and understanding failure. There is much at stake in assessments of success or failure and it is an intensely political process. There is much more at stake for conservation organisations than just success or failure at particular sites. Their institutional credibility may be at stake, along with the lucrative funding streams that usually accompany such credibility. Thus, it is important to know, for instance, whether certain structures of accountability compel conservation organisations to locate causes of failure in the wrong place. The question is how proliferating metrics of accountability impose certain definitions of failure or success and how does this marginalise or privilege certain actors in the conservation domain.

Social science methods and metrics

As conservation organisations (and the donors who fund them) have increasingly embraced more strategic approaches to conservation, we have simultaneously witnessed an ever-greater reliance on the use of formal social science models to manage outcomes. Several features distinguish this approach. Firstly, there is a strong emphasis on, and valorisation of, rapidity, achieved mostly through the use of survey-based approaches to data collection. Equally conspicuous is an emphasis on replicability: the value of these models, in the eyes of practitioners, is a function of their ability to provide measurable results wherever they are applied. This is most clearly evident in the

emphasis placed on scaling-up or moving to scale. There is a strong emphasis on producing credible results in conservation social research and, through a certain discursive sleight-of-hand, replicability becomes a stand-in for credibility. Thirdly, as Brosius and Russell have argued elsewhere, such methods “focus primarily on data concerning proximate threats – that is to say, actions by local communities – rather than on the broader contexts in which those threats occur” (Brosius and Russell 2003, p.41). All these features are closely tied to the imperatives of short funding cycles and accountability to donors. And, one might add, they are clearly designed for the convenience of researchers. Their embrace by conservation practitioners is illustrative of a general shift in conservation organisations from advocacy to management.

Questioning the strategic turn in conservation

As we have shown, the strategic turn in conservation must be located in the context of a long series of shifts that have moved through the conservation domain over time, shifts that have at times invoked, and at other times effaced, histories of human presence in the landscape. Eco-regional conservation, in particular, represents nothing less than a new regime of enclosure, and the consequences of this are anything but trivial. The comprehensive vision it promotes, the tools it deploys in pursuit of that vision, the proprietary databases it produces and the emerging complementarities of spatial planning, investment, monitoring and evaluation, and social metrics have the potential to reshape the contours of the relationship between humanity and nature for generations to come. It therefore behooves us to consider carefully what is at stake, and for whom, in this proliferation of efforts to classify and map the eco-regions of the world, to establish a set of comprehensive blueprints for the future of the planet, and to forge a new discursive order linking conservation and finance. What we would like to do now is to lay out some elements for thinking about the strategic turn, and to consider a series of questions regarding its prospects and its potential.

If we have learned one thing over the recent years, it is that maps and other technologies of visualisation have the potential to be both

emancipatory and reactionary. As Santos argues, “Ours is not a simple moment of oppression and victims; it is a moment of a double crisis of regulation and emancipation” (Santos 1998, p.531). And Sachs asks, is ecology

about to transform itself from a knowledge of opposition to a knowledge of domination . . . reshaped as expert neutral knowledge, until it can be wedded to the dominating world view? (Sachs 1993, p.xv)

Put another way, are we witnessing the emergence of a parallel to what Scott termed state simplifications which “enable much of the reality they depict to be remade” (Scott 1998, p.3)? Are we then, in our critiques, developing “a case against the imperialism of high-modernist, planned social order” (Scott 1998, p.6) which is “calculated to make the terrain, its products, and its workforce more legible – and hence manipulable – from above and from the centre” (Scott 1998, p. 2)? As Scott argues:

The clarity of the high-modernist optic is due to its resolute singularity. Its simplifying fiction is that, for any activity or process that comes under its scrutiny, there is only one thing going on. (1998, p.347)

At what point do organisations engaged in eco-regional conservation become agents of “homogenization, uniformity, grids, and heroic simplification” (Scott 1998, p.8)? Taking another tack, David Harvey has drawn on Hajer’s ideas about ecological modernisation to argue that

the authoritarian solution [to environmental problems] rests upon the application of techniques of scientific-technical rationality within an administrative state armed with strong regulatory and bureaucratic powers in liaison with “big” science and big corporate capital. The centre-piece of the argument here is that our definition of many ecological problems . . . is necessarily science led and that solutions equally depend upon the mobilization of scientific expertise and corporate technological skills embedded within a rational . . . process of political-economic decision-making. (Harvey 1996, pp.177–178)

What is at stake here is echoed in Hardt and Negri’s *Empire*:

[W]hat we are witnessing is a new planetary order, the consolidation of its administrative machine, and the production of new hierarchies of command over global space. Who will decide on the definitions of justice and

order across the expanse of this totality in the course of its process of constitution? . . . Who will be able to unify the process of suspending history and call this suspension just?(Hardt and Negri 2000, p.19)

One could cite any number of similar such statements of concern about regimes of environmental governmentality (Bäckstrand and Lövbrand 2006; Campbell 2007; Luke 1995; O’Malley *et al.* 1997; Rutherford 2007), and such concerns are quite valid. However, there is another side to this argument that cannot easily be dismissed. In opposition to the preceding remarks, one could argue that eco-regional conservation initiatives can be viewed as a kind of counter-mapping exercise against extractive forms of resource use. Given the low value conventionally afforded to biodiversity (Bayon *et al.* 2000), is it not a good idea to use the master’s tools to preserve it? Is it not better that maps, financial instruments and other such embodiments of power be directed towards the protection of biodiversity rather than to enriching the shareholders and CEOs of extractive industries? In a world increasingly characterised by corporate hegemony, don’t we want organisations like WWF and TNC to be more powerful? Conservation is expensive and becoming more so all the time. We should not expect conservation organisations to be effective if they cannot compete in domains where power and influence are unapologetically exercised as a matter of course.

Are we, then, merely stuck with a conundrum here or can we somehow analyse our way out of this? We are not sure. But we do think that we can at least try to move beyond generalised statements of concern about the politics of legibility and high-modernist ecology and perhaps try to specify a bit more precisely what is at stake in the recent turn towards the place-making (and place-effacing) practices of eco-regional conservation planning.

Conservation, cultural diversity and the politics of knowledge

Communities may look very different depending on the location and scale from which they are seen. Our goal here has been to pose a series of

questions about this relation between representation and resolution. We have, in a sense, been trying to understand the consequences for the analysis of communities and locales when we look at them not, as we are accustomed to, from the ground, but through a universalising, pixelated global optic from on high. Certainly, this has important implications for the ability of conservation practitioners to hear local voices, perceive local realities and take account of local particularity in the design and implementation of conservation initiatives. Equally consequential, however, such technologies of visualisation entail broader structures of intervention, structures of accountability and structures of deference. They thus have the potential to transfigure the contours of power in novel ways; ways we cannot yet imagine.

What this points to is a recognition that any effort to analyse the contemporary conservation domain must engage with the issue of knowledge. The effort by actors and institutions to address the erosion of global biodiversity intersects with the production, distribution and application of knowledge in myriad ways. There are innumerable manifestations of this: virtually all major conservation organisations stress that their efforts are firmly grounded in, and guided by, the production of credible scientific knowledge; IUCN has followed the lead of development institutions in promoting more rigorous knowledge management; and numerous individuals and institutions are linked through learning networks dedicated to sharing knowledge of best practices. In the global conservation realm, emergent regimes of environmental governmentality are mostly produced through categories and knowledge-making practices promulgated by major organisations located in the global North. The techno-scientific language of environmental management, the managerial rhetoric of stakeholder and participation, and the metricised discourse of monitoring and evaluation, together yield a seductive configuration of conservation knowledge, principles and practices.

For example, as we show above, in the past decade we have increasingly seen a valorisation of indigenous knowledge as being relevant to conservation and resource management decision-making. Reference to indigenous or local knowledge is generally applied to knowledge of the natural world: what such groups know about

the resources they exploit and how these societies cognise or interpret natural processes. That we are at last recognising the value of local and indigenous knowledge rather than dismissing it as anecdotal or irrelevant is clearly a positive development. But by limiting our valorisation of knowledge largely to that which pertains to the natural world, we subordinate such knowledge to the forms of knowledge possessed by decision-makers. Furthermore, one can draw a distinction between indigenous and local knowledge mediated by the research activities of social scientists and the knowledge articulated by local and indigenous activists and advocates themselves. 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 and 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.

Learning how to see: towards policies that link cultural diversity and conservation

If we are to define a new path towards linking cultural diversity and conservation – a path that avoids both the potential for oppressive homogenisation and the unproblematised spatial incarceration of the conventional biocultural perspective – what is needed is a new politics of knowledge that takes us from a politics of legibility (Scott 1998) to a politics of visibility. In speaking of visibility we refer to a whole set of potential approaches, both conceptual and practical, aimed at making multiple perspectives, multiple conceptions and multiple claims commensurable or at least able to converse across difference. This is something much more than a toolbox of approaches to be wielded by policy-makers and practitioners. It suggests the need to recognise approaches that acknowledge multiple forms of agency and that can be employed by multiple users. It also suggests that we need to seek approaches that valorise complexity and context over scalability or moving to scale.

Numerous efforts are already being made by a range of actors to devise approaches to linking cultural diversity and conservation in ways that meet these criteria, and the present is an opportune time to define more such approaches. The following is an attempt to suggest just a few elements towards a new politics of knowledge in making this link.

Community mapping

In the last decade we have witnessed a rapid proliferation of efforts by local and indigenous communities, working in collaboration with non-governmental organisations and other actors (sometimes even the state) to produce maps aimed at making their claims to land visible (Alcorn 2000; Chapin *et al.* 2005; Colchester 2005; Eghenter 2000; Flavelle 2002; Hitchner 2009c; Mohamed and Ventura 2000; Peluso 1995; Poole 1995; Rocheleau 2005; Warren 2005). Indeed, the vogue for community-mapping – sometimes also termed “counter-mapping” (Cooke 2003; Peluso 1995) – could well be described as a movement. Such mapping projects obviously hold great promise for local or indigenous communities whose historical land claims have been challenged or extinguished altogether or whose presence in the landscape has been rendered invisible by earlier state-sponsored mapping projects.

At the same time, there are reasons for concern about the emancipatory potential of counter-mapping. The production of such maps may empower some sectors of a community at the expense of others (Hodgson and Schroeder 2002), especially when the interest and knowledge of some subgroups, such as women or the elderly, are left off the maps (Rundstrom 1995; Russell and Harshbarger 2003). Critics of counter-mapping projects using GIS technologies have claimed that GIS requires and imposes a certain logic and way of spatially representing reality that favours western paradigms and therefore symbolises a scientific, masculine, data-driven and hegemonic worldview that cannot adequately include the worldviews of underrepresented peoples (Goss 1995; Gregory 1994; Kyem 2004; Roberts and Schein 1995). Some scholars argue that mapping can intensify land conflicts within and between communities (Berry 1993; Obermeyer and Pinto 1994) and others claim that introducing GIS to local

communities can also lead to power imbalances created by unequal access to technology (Aitken and Michel 1995; Curry 1994; Obermeyer 1991). Further, as Brosius *et al.* (1998) ask:

[W]hat are the larger potential legal and social implications of linking ethnicity to territory? How do maps function as an instrumentality leading to recognition of ethnically-linked claims to territory? Community-linked maps are not always homogeneously accepted. How might they precipitate or focus disputes? How might they lead to reification of cultural identities or ethnic boundaries? What kinds of rights and forms of authority are being proposed for communities within mapped territories? What tensions are there between images of community, ethnicity and space, on the one hand, and aspirations to citizenship, mobility and participation in national life? (Brosius *et al.* 1998, p.162)

Raising such questions does not suggest that concerns about the potential dangers of community mapping should preclude the effort to produce them. Rather, it simply suggests that these concerns should be confronted forthrightly if community mapping is to retain its emancipatory potential. It also reminds us that community mapping is not a singular panacea for reversing centuries of dispossession. Rather, it is one strategy among many for linking cultural diversity and conservation.

Emancipatory methods

Two challenges for researchers working with local peoples in biologically diverse and politically dynamic areas have been (a) moving beyond purely extractive research toward inquiry that is more relevant to the community being studied and (b) addressing critiques by local people that the products of research do not adequately represent them (Escobar 1998; O'Neill 2001; Orlove 1991; Peters 1996). As a result, anthropologists and other social scientists working with local communities have developed new hybrid research methodologies that better respond to the needs and priorities of communities where they work (Flocks and Monaghan 2003; Hitchner 2009c; Lassiter 2005; Sillitoe 1998; Smith 1999). There are at least three elements of the hybrid approach:

- A local definition of research needs. A core principle of this approach is that members of the local community should take a lead role

in defining steps in pursuit of their vision of conservation and development.

- Local participation in research. While the discourse of participation has become a standard element in contemporary conservation planning and implementation, it is too often manifested as a set of managerial practices designed to make communities governable. Local participation in research entails a much more fundamental engagement with community members, an engagement premised on the recognition of their status as custodians of the knowledge and landscapes that are the focus of research interest.
- Return of research results to the community. Collaborative projects in which research results are returned in ways that are salient and meaningful to community members have had dramatic results in stimulating community interest in conservation, documenting land use history and in envisioning land use planning (Borrini-Feyerabend 1996; Sodhi and Liow 2000). Data produced through research should be processed, archived and displayed in forms that are meaningful to members of the local community.

Recognising hybrid landscapes

In spite of the multiple challenges to conventional ideas of a stable and pristine nature, few in the conservation community have responded proactively to critiques of the wilderness concept or to empirical studies of anthropogenic landscapes. Indeed, as we have shown, in some quarters we have witnessed a decisive backlash against such challenges. While conservation planners may recognise the validity of evidence regarding the anthropogenic nature of landscapes targeted for conservation, this has not translated into significant changes in the practice of conservation planning and implementation. And though the World Heritage Convention recognises the link between natural and cultural landscapes, its emphasis on landscapes with “outstanding universal value” does little to address the rights, livelihoods or well-being of the local communities who have created those landscapes. In planning and implementing conservation initiatives the inherent hybridity of most landscapes must be recognised and made

visible. A concerted effort needs to be made to incorporate human histories of landscape modification into conservation practice.

Regimes of credibility

As noted, virtually all major conservation organisations stress that their efforts are firmly grounded in and guided by the production of credible scientific knowledge. For most conservation and development practitioners it is taken as an article of faith that if their work is to be taken seriously by the scientific community and by policy-makers it must be credible. By this they mean that we must build a firewall between science as the domain of facts and advocacy as the domain of politics. It is as if credibility were a pure, singular, free-floating, abstract entity that exists outside the human sphere.

An alternative approach is to recognise that credibility is plural and contextual rather than singular and abstract. Thus, the analysis of conservation and development trade-offs must be premised on recognition of the significance of the multiple regimes of credibility that exist in the contexts in which academics, practitioners, state authorities, community members and other actors work. Many kinds of actors are weighing in on conservation and development decision-making and we can no longer write for a single audience even if we wanted to. Thus, research findings that are salient and credible to the scientific community, to policy-makers or to donors may not be salient or credible to those in the communities where we work. Insistence that credibility pertains exclusively to the production of certain kinds of scientific information ignores or disregards forms of credibility that are important to multiple other kinds of actors, including local communities. Credibility cannot only “look up” to members of the scientific community, it must also look down and around to other actors or communities. Accepting this proposition entails recognising that establishing credibility requires much more than just doing good science. Credibility is first and foremost a form of relationship premised on the trust that one set of actors has in the integrity, reliability and legitimacy of information provided by another. The goal, then, should be to establish credibility not only with the scientific community, but with as broad a range of actors as

possible. Acknowledging the plurality of regimes of credibility entails an engagement with the complexities of the multiple contexts in which the production and dissemination of knowledge takes place today.

Conclusion

At the beginning of the twenty-first century, as global environmental change is occurring at an unprecedented pace, conservation has emerged as a central element in the civic and political debates in the nations of both the North and the South. We are witnessing a rapid proliferation of efforts to strengthen the links between environmental science and management and a transformation of the institutional landscape in which conservation is shaped and debated. Accompanying these shifts, new forms of conservation practice are continually emerging.

One of the greatest contemporary challenges is acknowledging the complexity that characterises every conservation context. In conventional decision-making contexts the acknowledgement of complexity is generally regarded as a source of frustration and paralysis. That is precisely why some academic disciplines thrive in the domain of policy and practice while others do not. When one looks at different disciplines, one sees that some are very good at speaking the language of power. They are able to do so because they valorise clarity over complexity. Disciplines like economics and political science are very good at providing models that are both elegant and precise, and that hold out the promise of win-win solutions. Meanwhile, all anthropologists can ever seem to tell you is that things are complicated and messy.

In the years ahead we will see conservation initiatives unfold across a range of scales, but they are sure to be based on ever more economic logics that achieve their effects through abstraction, aggregation and simplification. In these models, local and indigenous peoples are mere data points, if they are visible at all. Through things like decision-support models and planning algorithms, interests will be traded off at many levels of abstraction and through assumptions about the commensurability of values, many layers removed from the lived experience of people, indigenous and

non-indigenous alike. What place is there for any notion of rights in formalistic models that are designed precisely to overwrite the complexity of local contexts for the benefit of decision-makers and that see dealing with that complexity as a transaction cost. In such abstract models, social costs – the collapse of social systems, languages, livelihoods, identities and the loss of places – are rendered invisible or seen as compensatable. They view the complexity and richness of local contexts as a problem to be overcome, as obstacles to maximising global interests.

Of course, there is danger in clarity and precision and in all the methodological forms of reduction, aggregation, pixelization and simplification that enable that clarity and precision. While a lot of things get done in the world by those who view the world through the resolute power and clarity of certain lenses, there is a cost. When we look at the history of conservation, what we see is an endless cycle of enthusiasm and disenchantment as one panacea after another – debt-for-nature swaps, extractive reserves, CBC, eco-regional conservation, ecosystem services, market-based mechanisms – fails to live up to its promise.

We would argue that that cycle of disillusionment is a direct result of our desire for clarity over complexity: when conservation practitioners see something working in some small place, the inevitable temptation is to extract from it models for action which are then scaled-up and replicated, forgetting the contextual factors that made it a success in its original context. And as it proliferates and moves into other contexts, the complexity of context that was treated as an externality in the process of scaling-up comes back around and presents itself as a set of fundamental challenges that may prove impossible to overcome. We suggest that while the clarity and precision gained through aggregation and abstraction can be crucial, this must not overshadow the acknowledgement of complexity. An effective response to complex conservation scenarios is not to charge through the messiness and complexity with technical fixes that hide the politics of argument or flatten the complexities of local contexts.

These concerns are especially relevant at a time when conservation is undergoing such rapid change, as conservation practices expand

beyond small-scale and locally based initiatives to include global issues and processes such as climate change, declining ocean health and conservation in production and mixed-use landscapes. We are witnessing the dramatic ascendance of ecosystem services as an foundational organising principle for conservation, and the proliferation of market-based mechanisms for achieving conservation goals and mitigating climate change such as Payment for Ecosystem Services, also called Payment for Environmental Services) and Reducing Emissions from Deforestation and Degradation). Conservation is no longer just about protected areas but entire landscapes and the planet as a whole. Subsequently, it has become increasingly difficult to determine which groups of people bear the costs or reap the benefits of conservation practices and it is even less clear how conservation organisations can operationalise their efforts to recognise cultural diversity and respect human rights while simultaneously preserving biodiversity and ecosystem functioning at multiple scales.

In response, major conservation organisations are busy redefining their missions. This has

been going on for a while but the degree to which it has now come to the fore in conservation is nothing short of remarkable. We are entering a whole new era. This will surely have a dramatic effect on the practice of conservation in the years ahead: one has to ask what the implications are for conservation science and for the forms of expertise that are valued in the practice of conservation. And one also has to ask what this means for proponents of cultural diversity.

It is an opportune time to re-envision forms of conservation practice that take account of the richness of human cultural diversity not simply by looking for cartographically driven visualisations of the link between cultural diversity and biological diversity but by a more fundamental effort to interrogate the ways in which knowledge about cultural diversity and biological diversity is produced, circulated and incorporated into decision-making. Some of the approaches we have suggested here move us towards that goal but ample opportunity remains to define a host of other creative approaches in making the link between cultural diversity and conservation.

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