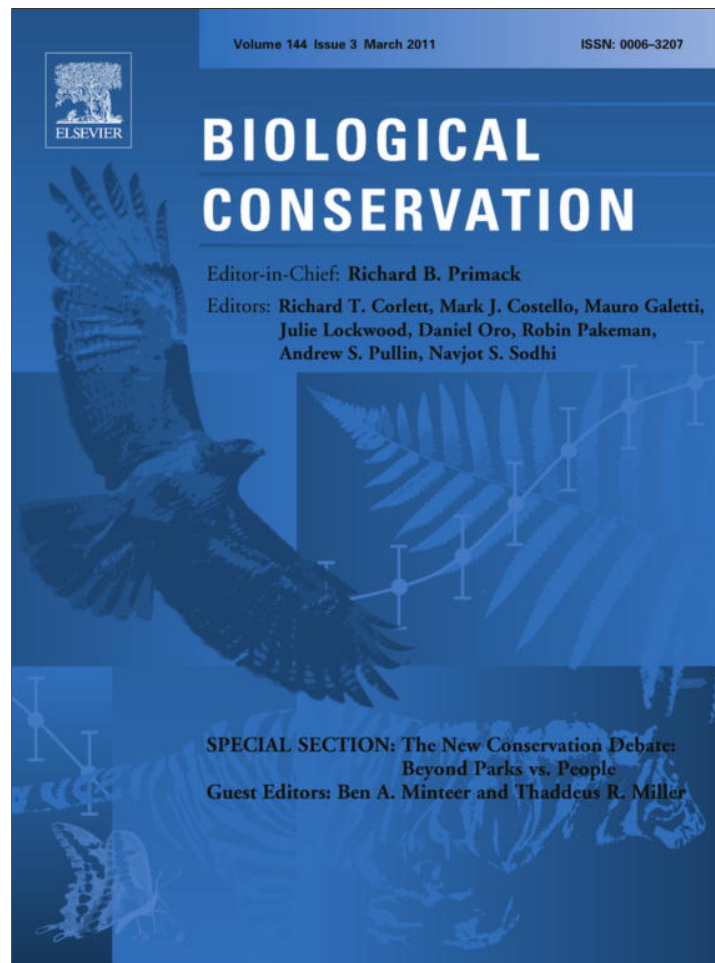


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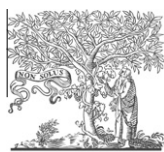


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Biological Conservation

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The new conservation debate: The view from practical ethics

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ARTICLE INFO

Article history:

Received 16 October 2009

Received in revised form 28 March 2010

Accepted 5 April 2010

Available online 4 May 2010

Keywords:

Protected areas

Sustainable use

Nature protectionists

Social conservationists

Ecological ethics

ABSTRACT

In this paper we provide an analysis of the “new conservation debate,” a still-evolving dispute in which conservation scientists and advocates defending a strong protected-areas approach (“nature protectionists”) have become pitted against more development-oriented conservationists (“social conservationists”) intent on reforming the dominant protected areas model to embrace sustainable use and poverty alleviation efforts. We focus in particular on identifying and clarifying the divergent normative and descriptive claims made by the two camps in the debate, an activity that we suggest will improve communication and understanding among conservationists. We suggest that more explicit discussion of the value and ethical dimensions of this debate is needed, and describe efforts to reduce value conflict and harmonize ethical positions. We conclude with a discussion of emerging planning and policy models that may facilitate a convergence of values in the new conservation debate on a common policy of eco-social sustainability.

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1. Debating conservation, then and now

A century ago American conservation was a house divided. Originally united by the common goal of halting the wasteful exploitation of forests and wildlife at the hands of “cut-and-run” timber barons and market hunters, resource professionals and nature advocates during the Progressive Era found themselves at odds over the policy objectives and deeper philosophical commitments driving the nascent conservation impulse. Should, for example, wildlife, wilderness, and other natural assets be managed wisely for human economic benefit, or should they be protected from such development for aesthetic, moral, and spiritual reasons? Today, the classic “conservation–preservation debate” is well known among students of conservation history and philosophy (e.g., Fox, 1981; Norton, 1991; Oelschlaeger, 1991). It is a rich and diverse narrative, one propelled by iconic figures like Teddy Roosevelt, Gifford Pinchot, and John Muir. The latter two men, of course, had a memorable “showdown” over the damming of the Hetch Hetchy Valley in California’s Yosemite National Park in the early years of the twentieth century. Hetch Hetchy was, in effect, a battleground of early conservation philosophy and policy, a powerful early indication that the means and ends of conservation were not always clear, even to the participants (Nash, 2001; Righter, 2005).

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A new kind of conservation debate emerged at the end of the 20th century, one that echoed the earlier conservation–preservation debate but that assumed a distinctive shape as a result of its development within the domain of the environmental sciences, especially the field of conservation biology. Commonly referred to as the “parks vs. people” debate, this argument largely turns on the question of whether biodiversity scientists and advocates should prioritize nature protection or human welfare in conservation projects – and within the wider conservation agenda more generally.

It has been a wide-ranging and often heated dispute, dividing segments of the wider conservation community along philosophical, strategic, and disciplinary lines. In one corner are what might be called “nature protectionists,” or conservation scientists and scholarly allies in fields such as environmental philosophy who defend protected areas (PAs) and conservation policies that strictly limit human presence and who advance biodiversity protection as the primary goal of international conservation efforts (e.g., Redford, 1992; Katz and Oechsli, 1993; Kramer et al., 1997; Redford et al., 1998; Oates, 1999, 2006; Terborgh, 1999, 2000, 2004; Rolston, 2001; Sanderson and Redford, 2003). In the other are “social conservationists” who advocate various forms of sustainable use and privilege conservation-oriented development and welfare-oriented goals such as poverty alleviation and social justice (e.g., Schwartzman et al., 2000; Chapin, 2004; Roe and Elliot, 2004, 2006; Brockington et al., 2006; West et al., 2006; Sachs et al., 2009).

While this conflict will not be unfamiliar to followers of the biodiversity science and conservation literatures, we believe that the

debate has not received sufficient philosophical scrutiny, particularly regarding the interplay of factual/empirical claims and normative/value arguments – the latter of which are often tacit – in the larger conflict. Indeed, in our view, one of the reasons the debate become so protracted over the past two decades is because of the tendency of its participants to conflate descriptive claims about the success or failure of particular conservation projects or conservation strategies (e.g., statements regarding the efficacy of PAs, ICDPs, and so on), and normative claims concerning the proper ends of conservation projects (e.g., whether these should be focused primarily on biodiversity protection, human welfare, or both).

This conflation of empirical and normative arguments and assertions, we suggest, all too frequently results in communication failures and missed opportunities for consensus-building within the conversation science, advocacy, and policy communities. The lack of explicitness and linguistic clarity in the debate will, we believe, only continue to add fuel to the fire; a more open dialogue about the values and ethical rationales driving biological conservation today is needed. Indeed, as [Robinson \(2006\)](#) has persuasively argued, conservation biology could benefit from a clearer inclusion of conservation values in the definition of research questions, experimental design, and data collection. We concur, and would add that the field must also be clearer about its motivating values and the ethical principles supporting the policy agendas of conservation scientists and advocates in international projects and programs.

In this paper we therefore seek to address this need for a deeper philosophical analysis of the conservation mission by distinguishing and making more legible the various empirical claims and normative assertions that have framed what we are calling the “new conservation debate.”¹ Our approach is to qualitatively analyze this debate as it has taken place in academic journals and books, and in major conservation policy and position statements. We hope that this analysis – a mapping of the philosophical and strategic terrain of the dispute from the general perspective of practical ethics – will sharpen the logic and substance of the new conservation debate, and that our attempt to impose greater semantic clarity will help improve conservation communication, while also drawing more attention to the normative foundations of biodiversity science and conservation practice. It is important to understand just what is being debated in this exchange; and whether any particular dispute over parks, development, etc., concerns disagreements over particular management options and outcomes, or whether a deeper division over the proper ends of conservation is driving such disagreements.

We suggest that new models of practical ethics tailored for conservation decision-making could become valuable tools for identifying, clarifying, and harmonizing ethical conflicts in such disputes. Our discussion closes with a brief consideration of how the conservation debate may be in the process of being eclipsed by emerging landscape-level and ecosystem-service models that offer new ways to think about the values and strategies of biodiversity protection and human well-being as converging interests within the wider framework of eco-social sustainability.

2. Biodiversity loss, protected areas, and sustainable development: a brief overview

As [Adams et al. \(2004\)](#) write, biodiversity conservationists frequently hold that protected areas (PAs) – traditionally understood

as those areas with a minimal human presence and history of alteration – are the best, if not the only means to adequately protect all elements of biodiversity (i.e., genes, populations, and landscapes). The biological justification for a strong PA system as a harbor of biodiversity is certainly compelling given that species and habitat loss due to human encroachment continues to accelerate, especially in the tropics. Indeed, according to some estimates, species extinctions are now occurring at upwards of 1000 times the natural “background” rate ([MEA, 2005](#)), a trend expected to be magnified by current and future patterns of urbanization and resource development. Biodiversity loss is, of course, a complex phenomenon, owing to a range of human motives and actions including economic development, habitat modification, climate change, invasive species, overexploitation, poaching, pollution, and population growth ([Wilson, 2002](#); [MEA, 2005](#)). Given the seriousness and scope of such threats, it is thus not surprising that many conservation scientists describe themselves as in a “race against time,” a high-stakes contest to save the imperiled biological legacy of the planet (see e.g., [Terborgh and van Schaik, 2002](#)).

It is within this context of the crisis of biodiversity loss that PAs are defended as beachheads in the global war against extinction. Such martial language, in fact, is commonplace in the literature and on the conservation “front lines.” Many conservationists, for example, have described the dominant PA approach to biodiversity protection as “fortress conservation” in which people-free parks and reserves are viewed as nature’s last line of defense against development and eventual biological destruction ([Brockington, 2002](#)). Another popular metaphor depicts parks as islands surrounded by an external threat; namely, the social context within which the park exists. The island metaphor extends to objective physical boundaries as well as the socially constructed boundaries between the park and the outside ([Brandon, 1998](#)). According to this frame, inside the park there is a higher level of biodiversity; things are in order and natural. Inside the park are people quietly dedicated to biodiversity protection “frequently mute in the published literature, intimately involved in trying to achieve the on the ground park protection, and little aware of the debate swirling around it” ([Brandon, 1998](#), p. 455). Outside the park, however, is a social context with problems like poverty, conflict and lower levels of biodiversity. Under this view it is the forces outside of the islands of protection that threaten the existence of biodiversity and the natural order of things inside the park.

While there are of course many technical and scientific challenges to establishing and maintaining an effective park or reserve in developing regions from the perspective of nature conservation, the mission to protect global biodiversity via a strong PA network also faces an increasingly difficult set of social and political challenges ([Naughton-Treves et al., 2005](#)). Many of these involve articulating and negotiating trade-offs between the immediate economic gains of resource consumption for local residents and the often diffuse, long-term benefits of biological conservation (which are shared by local, national, regional, and global communities). The establishment of a nature park, as both supporters and critics have observed, often entails restricting most of the land use options of local residents. It can deprive citizens of their access to park resources (e.g., food, firewood, fodder), as well as force them to tolerate the presence of large, roaming animals – a potential threat to both life and livelihood. As mentioned earlier, an especially serious concern is the displacement of local peoples due to evictions resulting from PA establishment, a practice that many development-oriented conservationists suggest raises troubling questions of procedural and distributive justice (e.g., [Neumann, 1998](#); [Geisler, 2003](#); [Dowie, 2005, 2009](#); [West et al., 2006](#); [Adams and Hutton, 2007](#)).

The social impacts of PAs began to draw attention among conservationists in the 1970s and reached a crescendo with the World

¹ In calling this the “new conservation debate,” we are not implying that the park vs. people/biodiversity conservation vs. poverty alleviation debate has only emerged very recently; rather, we are using this term to indicate a deeper historical perspective relative to the original conservation-preservation debate at the turn of the 20th Century.

Conservation Strategy (IUCN/UNEP/WWF, 1980), the 1982 World Parks Congress in Bali, and again with the publication of the 1987 Brundtland Report from the World Commission of Environment and Development. These events are notable for directly linking the more socially-oriented goals of sustainable development to the traditional nature-centered agenda of biodiversity conservation. The World Conservation Strategy, for example, called for a “globally coordinated effort to increase human well-being and half the destruction of Earth’s capacity to support life” (IUCN/UNEP/WWF, 1980) and originated the term “sustainable development.” The Brundtland Report acknowledged the importance of natural resources to human economic welfare and the very real threat of species extinction. In protecting these resources, however, the authors suggested that new approaches to conservation were needed: the traditional park-centered approach should be replaced by a strategy that combined conservation and development. Indeed, governments should consider “parks for development” (WCED, 1987, p. 159). The Brundtland Report, moreover, framed sustainable development as a win–win concept, thereby re-framing conservation as an activity essential to economic development, particularly for the poor.

In the early 1990s, the integration of socio-economic goals with conservation was further codified in the IUCN/UNEP/WWF (1991) document *Caring for the Earth: A Strategy for Sustainable Living*, which stressed the importance of integrating anthropocentric sustainability principles with conservation and environmental protection. Building on both the World Conservation Strategy and the Brundtland Report, the document defined sustainable development as “improving the quality of human life within in the carrying capacity of supporting ecosystems” (IUCN/UNEP/WWF, 1991, p. 10). Importantly, this report acknowledged that the need to protect human welfare often comes in direct conflict with the protection of biodiversity. It called for a comprehensive system of PAs, improving conservation of wild plants and animals, improving knowledge and understanding of species and ecosystems, and conserving species and genetic resources through both *in situ* and *ex situ* methods.

The emerging emphasis on sustainability in the conservation community, especially its poverty alleviation and economic development dimensions, became most directly – and controversially – intertwined with the PA approach through the vehicle of Integrated Conservation and Development Projects, or ICDPs, which rose to prominence in the 1990s. An application of sustainable development principles at the project level, ICDPs are intended to link the conservation of PAs with the development of better living conditions in local human communities, including programs promoting agroforestry, ecotourism, and various models of sustainable use alongside traditional biodiversity protection in parks (Western et al., 1994; Alpert, 1996; McShane and Wells, 2004). While some critics recognize the conservation and human welfare-promoting potential of ICDPs, many conservationists – including those concerned about human welfare in conservation projects – have argued that these projects have failed to deliver adequate conservation and development benefits in tandem, or, indeed, to create any tangible benefits at all (e.g., Brandon and Wells, 1992; Ferraro, 2001). For example, even one of the more successful ICDPs of the 1990s, the Ranomafana National Park Project in Madagascar, has been faulted for its inability to halt forest clearing in the park buffer zone and for the failure of sufficient tourism revenue and social services to reach local people (e.g., Wright, 1997; Peters, 1998).

Furthermore, ICDP initiatives, it is claimed, are often hindered by indirect or ambiguous incentives, complexity of implementation, and a lack of conformity with temporal and spatial dimensions of ecosystem conservation objectives (Ferraro, 2001). Critics have also noted the paradox that development can conflict with conservation goals as local residents often incorporate new sources

of income from ICDPs as a supplement to income from the exploitation of biotic resources rather than substitutes (Ferraro, 2001; Ferraro and Kiss, 2002; van Schaik and Rijksen, 2002).

As people-oriented conservation gained steam through the early 1990s and the “new paradigm” became entrenched in conservation discourse (Phillips, 2003), the backlash from the perceived failure of ICDPs and the sustainable development approach with respect to nature protection has resulted in a call for a return to rigorous biological science as the basis for biodiversity conservation. This has been joined by arguments reasserting the strong park model as the best hope for the protection of species and habitat (e.g., Gartlan, 1997; Brandon, 1998; Terborgh et al., 2002; Locke and Deardon, 2005;). Many PA defenders in the conservation community doubtless agree with Sanderson and Redford (2003), who worry that poverty alleviation has come to supplant biodiversity conservation on the international development assistance agenda and fear that poverty alleviation schemes such as the Millennium Development Goals (MDGs) may actually mark the end of biodiversity if it is not adequately and explicitly considered in such efforts. Tropical biologist John Terborgh, perhaps the most outspoken advocate of a strong PA vision for conservation, states this concern very plainly:

Sustainable development means development, just as surely as sustainable use means the exploitation of natural resources. Although there would be caveats and restrictions under sustainable development, the primary goal would still be the production of goods and services for human beings. There is nothing about sustainable development that requires the existence of biodiversity or wild nature. Those are separate issues, to be debated and decided on other grounds (Terborgh, 1999, p. 143).

3. Mapping the debate

Although the parks vs. people/biodiversity protection vs. sustainable development argument has received considerable attention from conservation scientists and advocates over the past two decades, in our view the debate has been hindered by a lack of linguistic explicitness and conceptual clarity, particularly with respect to the ethical motives and goals driving international conservation efforts. For example, a review of some of the more significant papers and interchanges among defenders and critics of PAs and their place in the conservation mission leaves one with the sense that the debate largely turns on a disagreement over the worth and efficacy of PAs in developing regions and the comparative value of their main rivals, i.e., ICDPs and extractive reserves. That is, the new conservation debate, as we are calling it, appears to be an empirical disagreement about whether or not PAs or ICDPs work – whether they are effective instruments of conservation. While this is a critical discussion, we believe the overwhelming focus on efficacy question has tended to mask the value dimensions of the argument, particularly with respect to the question of the ultimate ends of conservation. The absence of a sustained consideration of the normative dimensions of the new conservation debate is quite noticeable.

Given this, as well as the fact that the debate has been roiling in a number of academic journals, books, and symposia for some time, we think it is useful at this juncture to bring some conceptual and semantic specificity to the discussion, particularly regarding the nature of the various claims being made by the parties to the dispute and the philosophical and policy foundations upon which the division rests. As mentioned above, this analysis is primarily motivated by our concern about the neglect of the normative elements of the new conservation debate – and how, in particular,

ethical commitments to biodiversity, human welfare, etc., commingle with factual/descriptive claims in the various interchanges and commentaries within the conservation community. Among other things, we believe that clarifying the normative and descriptive claims in the debate – and the related philosophical foundations and policy goals – holds the potential to improve communication by delineating assertions of fact and expressions of value, and that it can help identify cases where disputants are talking past each other as a consequence of using different argumentative strategies.

As we outlined above, we can identify two broad camps within the international conservation community (understood in the widest sense): (1) nature protectionists (NP), a group comprised of conservation scientists (and their scholarly allies in environmental philosophy) who embrace the strong preservationist mission and defend an undiluted PA model as the best means to protect biodiversity and (2) social conservationists (SC), a category which tends to include environmentally-oriented social scientists (e.g., anthropologists, political ecologists, and rural sociologists) and development professionals who view conservation efforts as a means to address social, cultural, and political goals such as poverty alleviation, economic development, and political participation. While these categories are somewhat loose and conceptually porous – doubtless many conservationists would also fall between the two camps, and/or endorse one or more claims on either pole of the debate – we believe that they do provide a useful framework for understanding the values and beliefs of the participants in the debate (Table 1).

3.1. Policy goals and instruments

The main policy goal of the nature protectionists is the protection (or preservation) of biological diversity. While it is possible to parse this even further – for example, to distinguish between NPs whose focus is primarily on population diversity vs. those who are more concerned with habitat or ecosystem diversity, etc. – it is obvious that the major policy goal of the NPs is the safeguarding of biological diversity and the prevention of human-driven species extinctions. On the other hand, social conservationists believe that conservation policy should primarily serve the goals of sustainable development, especially the improvement of human welfare (e.g., poverty alleviation, political empowerment). Biodiversity protection, the primary goal of NPs, thus is valued by SCs as one (though

not the only) mechanism for improving overall human well-being. Likewise, sustainable development, when it is accommodated within the policy goals of NPs, is pressed into a secondary role: it becomes either a beneficial byproduct of a biodiversity-driven PA policy, or a recognized precondition for enticing local communities to support the goals of park protection (Adams et al., 2004). NPs do not necessarily deny the need for economic development and the existence of social problems, but they are concerned that undue pressure is being placed on parks to address social problems in addition to the already onerous task of protecting biodiversity.

These divergent policy goals, in turn, are viewed by the two camps as being delivered by different policy tools or instruments, a divide that captures in summary form the most obvious element of the PA debate in the conservation literature. NPs believe that the goal of biodiversity protection is more effectively achieved through the establishment and careful management of PAs (especially “people-free” parks), and that any failure of PAs to achieve this goal may be corrected through tighter regulations and increased enforcement (Brandon, 2002; Terborgh and van Schaik, 2002). On the other hand, SCs support ICDPs, extractive reserves, and various forms of community-based conservation and natural resource management enterprises as the vehicles for sustainable development policy within conservation programs (Schwartzman et al., 2000; Roe and Elliot, 2004).

This dispute can be read in part as a disagreement over sustainability or sustainable development as an overarching policy goal. Based on the empirical claim, which we explore in greater detail below, that “people and wildlife do not go together” (Terborgh cited in Steinglass, 2004), the notion of sustainable development is not just rejected by NPs but viewed as a threat to biodiversity in PAs (Brandon, 1998; Oates, 1999; Terborgh, 1999). SCs, on the other hand, appear to be following the policy formulations of the Brundtland Report (WCED, 1987) and *Caring for the Earth* (IUCN/UNEP/WWF, 1991), both of which identify poverty as a cause of environmental degradation. Therefore, the solution is to follow policies that provide people access to natural resources and use PAs to generate income that improves economic welfare and leads to an appreciation of the value of biodiversity. Such principles of sustainability favor an approach that includes rather than excludes local communities in policy formulation and decision-making.

With biodiversity under threat and immediate and dramatic options needed, some NPs (e.g., Brandon, 1998; Oates, 1999; Terborgh, 1999; Rolson, 2001) seem to use this crisis as a justification to sus-

Table 1
Mapping the new conservation debate.

	Nature protectionists	Social conservationists
Policy goal	Protection of biodiversity	Sustainable development/conservation with poverty alleviation
Policy instruments	Protected areas (PAs) – esp. “people-free parks”	ICDP’s, extractive reserves
Empirical claims	<ul style="list-style-type: none"> • PAs are the most effective means to protect biodiversity • PAs can bring considerable benefits to local people • the human presence is a threat to biodiversity conservation • ICDPs fail to protect biodiversity • conservation must focus on biodiversity protection to succeed • the goals of conservation and development are often, if not inherently, incompatible 	<ul style="list-style-type: none"> • PAs often fail to protect biodiversity • social costs of PAs are real and substantial • humans and biodiversity can co-exist productively • ICDPs will work if properly reformed • conservation will fail unless poverty is addressed • human livelihoods can improve with effective conservation efforts (e.g., ecosystem services)
Normative claims	<ul style="list-style-type: none"> • conservation should focus primarily on biodiversity protection • biodiversity should be protected for its intrinsic value • in some cases, biodiversity conservation is more important than poverty alleviation 	<ul style="list-style-type: none"> • conservation should be focused on human welfare • biodiversity should be protected for its instrumental value to humans • poverty alleviation rightly trumps biodiversity protection as a conservation goal
Ethical foundations	Nonanthropocentrism, preservationism	Enlightened anthropocentrism, social justice
Primary disciplines	Conservation biology, environmental philosophy	Anthropology, political ecology, development economics

pend participatory and democratic policy processes because they would take too long (Bailey, 2006; Habermas, 1975). Instead, we are told by some that a more top-down approach to the creation of parks is required (Terborgh, 1999, p. 207) and that certain international and national policies are justified, such as the use of armed forces to protect the boundaries of PAs (Kramer et al., 1997). In such cases, local communities are perceived to lack the big picture and they are excluded from the decision process on the basis of expediency – “Bottom-up approaches (to conservation) are unlikely to generate lasting change because people near the bottom of the economic ladder are so fundamentally dependent on decisions made at the top” (Terborgh, 1999, p. 203).

3.2. Empirical claims

The general policy differences that separate the NPs and SCs are reinforced by the divergent descriptive claims made by these two groups of conservationists. NPs and SCs appear to make very different empirical observations and assertions about the goals and instruments of conservation policy. For example, NPs suggest that their preferred policy instrument (i.e., PAs) is the most effective means to protect biodiversity. Furthermore, they argue that any perceived failures of PAs are a result of inadequate implementation, not a conceptual design flaw (Gartlan, 1997; Brandon, 1998; Terborgh et al., 2002). SCs, however, often claim that PAs frequently fail to protect biodiversity and predict that they will not be truly effective unless they acknowledge and address the problem of rural poverty and the equity issues raised by foreclosing land use options as a result of park designation (Brechtin et al., 2002; Geisler, 2003; Adams et al., 2004).

In broader terms, NPs generally conceive of humans as a threat to strict biodiversity conservation, particularly in ecologically sensitive areas like the tropics (see e.g., Terborgh, 1999), while SCs believe that humans (e.g., people living adjacent to PAs and within biologically-rich regions) can be allies in the conservation effort if incorporated effectively in park planning and management (Shepherd, 2004; Wells and McShane, 2004). Similarly, NPs often emphasize the benefits of successful PAs for local people (e.g., Davenport et al., 2002), while SCs stress that “fortress conservation” imposes serious social and economic costs on citizens, including displacement and restrictions on access and resource consumption (Brockington, 2002; Brockington and Igoe, 2006).

As mentioned earlier, the efficacy of ICDPs and extractive reserves is a particularly contested topic in the debate between the NPs and the SCs. The former believe that ICDPs are largely unmitigated failures; they are seen as undermining rather than protecting biodiversity in developing regions (e.g., van Schaik and Rijksen, 2002). SCs, however, hold a more optimistic view toward such sustainable use approaches to conservation, suggesting that they can work if they are properly designed and run, are adaptive to changing socio-economic and ecological conditions, and are supported for more than the initial short-term project cycle (Wells and McShane, 2004; Baral et al., 2007). These beliefs are related to a deeper set of convictions regarding the compatibility of conservation and development. While the NPs hold that these goals are either inherently or historically incompatible – and thus argue for disentangling them in practice (e.g., Terborgh, 1999; Robinson and Redford, 2004) – SCs assert that improvements in both human welfare and biodiversity protection can be achieved in the same conservation project if we learn from past failures and successes (e.g., Wells and McShane, 2004; Kilbane Gockel and Gray, 2009).

In summary, NPs contend that ICDPs have failed to protect biodiversity. They contest ICDPs and sustainable development in general on empirical grounds: “The trend to promote sustainable use of resources as a means to protect these resources, while politically expedient and intellectually appealing, is not well grounded in bio-

logical and ecological knowledge” (Brandon, 1998, p. 6). SCs, on the other hand, argue that the “park-centered” approach of the PAs, i.e., “protection by all means necessary,” fails to be achieved in practice and also results in substantial social costs (Brechtin et al., 2002; Geisler, 2003; Adams et al., 2004; Dowie, 2009). Each side, in other words, appears to be looking at the same problem (the tension between conservation and development), while arriving at very different conclusions about the practical efficacy of PAs and more development-oriented alternatives.

3.3. Normative claims and ethical foundations

Although the two sides of the new conservation debate are at odds with respect to many of the empirical claims and beliefs about the policies, instruments, and effectiveness of biodiversity conservation in developing regions, they are perhaps even more divided by their different normative (i.e., value) and ethical commitments regarding the justification and ends of the conservation effort. According to the NPs, the conservation agenda should primarily focus on the protection of biodiversity (genes, populations, and ecosystems), not on more socially defined targets like poverty alleviation and economic development. Furthermore, NPs frequently assert (and often imply) that the protection of biodiversity is motivated by a recognition of the intrinsic value of wild species and habitats. That is, biodiversity should be conserved/protected for its own sake, regardless of its contribution to human values or interests (see e.g., Katz and Oechsli, 1993; Rolston, 1994, 1998; Oates, 1999; Terborgh, 1999).

For their part, the SCs argue that conservation should devote much, if not most of its attention to these latter concerns; i.e., the improvement of human welfare. While the SCs do not dispute the value of biodiversity, the “new paradigm” of people-oriented conservation considers PAs and biodiversity as crucial instruments for achieving the human-centered goals of sustainable development (Phillips, 2003). Theirs is a view dominated by a “broad” or enlightened anthropocentric outlook that recognizes a range of material and non-material values of biodiversity for present and future generations, including the right of people to develop resources (sustainably) to support their livelihoods (Norton, 1987, 1991; Sarkar and Montoya, 2011). As mentioned above, such a position has been characterized by the incorporation of human rights and poverty alleviation as evidenced by the “new paradigm” and Millennium Development Goals (Phillips, 2003; Sachs et al., 2009).

A related point of normative contention between the NPs and the SCs is the weighting of biological and social claims in the conservation mission when difficult decisions must be made. Locke and Deardon (2005), for example, examine the sustainable development approach to conservation in light of the main purpose of PAs, which they assert is the “protection of wild biodiversity.” This goal, they believe, requires human sacrifice. In addition, they argue that the shift to sustainable development devalues biologists, turns PAs into tools for social planning, and is a human-centered distraction from the main purpose of conservation. For some NPs, as well as their philosophical allies in environmental ethics, nature’s rights or interests in extreme cases (e.g., when the risk of extinction is high) clearly trump human rights when the two come into direct conflict (Katz and Oechsli, 1993; Gartlan, 1997).

For a provocative illustration of this view, consider how Holmes Rolston, a prominent environmental philosopher who has written extensively on the moral foundations of conservation, discusses the park-people conflict at Nepal’s Chitwan National Park (CNP). CNP is a UNESCO World Heritage Site that protects the habitat of several endangered and threatened species – including the one-horned rhinoceros (*Rhinoceros unicornis*) – and is home to a large tiger population (*Panthera tigris*). A massive (and highly successful) malaria eradication program, in tandem with a resettlement pro-

gram to reduce population pressure in the hill regions, resulted in a dramatic increase in the Valley's population density throughout the 1950s and 1960s. The Valley forests and wildlife habitat in the region absorbed the brunt of this transformation, with the result that the tiger and rhino were both pushed to the brink of extinction in less than a decade of settlement (Gurung, 1983). In response, the government established a wildlife sanctuary to protect the rhino in the early 1960s, and expanded this to a national park (the nation's first) in 1973.

In a series of papers remarking on the plight of people and biodiversity in the Chitwan case (Rolston, 1998, 2009), Rolston articulates the strong NP position in stark terms. "I put the tigers first," he writes, and "have financially supported WWF efforts to save Asian and African species, and morally approve the present policies, on grounds that tigers as a species ought not to be sacrificed on the altar of human mistake, regardless of what persons made mistakes where in the complex chain of events..." (Rolston, 1998, p. 350). For NPs like Rolston, the conclusion is clear: wild species have suffered enough at the hands of humans and only an unwavering nonanthropocentric ethical position – i.e., a "tigers first" stance justified by an absolutist ethical commitment to intrinsic natural value – can justify appropriately strong conservation policy.

It is important to emphasize again that most NPs are not unconcerned with the extreme poverty and human misery that exists in all too many parts of the world. But with respect to PAs (and in the conservation context), they view efforts to address human well-being as a means to a more ultimate end; namely, the protection of biodiversity. At the same time, SCs often seem to value PAs only insofar as they promote more socially-oriented goals, such as providing scarce subsistence resources and ecosystem services to local communities.

From the SC perspective, there appear to be at least two primary subsets to the social advocacy argument, each articulating responsibility to local communities slightly differently. One is pragmatic and argues that conservation must be framed against the reality that it will fail without local participation and support (Brechin et al., 2002; Rosenzweig, 2003). The other views conservation as a means to poverty reduction with biodiversity as an ancillary goal (Brockington et al., 2006). In each case, there is recognition of the *a priori* importance of human dignity and legitimacy. At a minimum, the moral claim is a version of the Hippocratic oath; i.e., to do no harm (Adams et al., 2004; Scherl et al., 2004). SCs, in short, are driven by an ethical commitment to human rights and equity in resource allocation and decision-making – the view that poor people have the right to develop an adequate livelihood through the sustainable use of natural resources. To deny this right based on scientific (and typically Western) notions of biodiversity is thus for many SCs a violation of basic human rights (Guha, 1997; Siurua, 2006; Sarkar and Montoya, 2011).

In many cases, then, NPs and SCs, may be said to approach the conservation enterprise from different ethical foundations: The NP position generally expresses a nature-centered or nonanthropocentric orientation to conservation, while the SC stance is best characterized as a form of "broad" or enlightened anthropocentrism. We believe that this division is partly explained by the different disciplinary profile of the NP and SC camps. The NPs are comprised mostly of conservation biologists (and their allies in environmental philosophy), while the SCs are typically from the ranks of the social sciences, especially anthropologists, political ecologists, and development economists (Blaustein, 2007). In other words, the disciplines that comprise the SC group are traditionally occupied with understanding human behavior, values, and institutions, which presumably makes these scholars and advocates sensitive to the issues of social and political justice raised by international conservation activities. Conservation biology and

environmental philosophy, on the other hand, are often identified with a more nonanthropocentric outlook, a direct consequence of its subject matter (nonhuman populations and ecosystems) and a foundation for advocacy on behalf of endangered species and wildlands (see e.g., Soulé, 1985; Ehrenfeld, 1993; Rolston 1999; Takacs, 1996; Kingsland, 2005).

4. Discussion: making conservation values more explicit

Our approach in the preceding discussion has been largely taxonomic and analytical; i.e., we have sought to identify and clarify the various claims made by each camp in the new conservation debate, and in particular to tease out NPs' and SCs' views surrounding the goals and instruments of conservation as well as highlighting their more significant factual assertions and value/normative positions in the dispute. Our hope is that this activity will prove helpful in improving understanding and communication within the wider conservation community, including both academics and professionals wrestling with the challenges of doing conservation work in an increasingly dynamic and complicated environment. While conservationists will and should continue to be concerned with the protection of biological diversity at all levels, it is nevertheless true that conservation scientists and their allies will unavoidably find themselves grappling with an array of difficult social, cultural, and economic issues – from concerns about poverty, participation, and political corruption, to proper institutional incentives and design – and these issues will provoke (among other things) challenging ethical questions about the methods and ends of conservation in an inherently complex socio-ecological environment (Chan et al., 2006).

Yet rather than occurring in a stark, binary world of "win-win" or "win-lose," there is a growing consensus that the relationship between conservation and development is better expressed as a complex matrix of trade-offs – win-win, win-lose, lose-win and lose-lose (e.g., Brown, 2004; Christensen, 2004; Faith and Walker, 2002; McShane et al., 2011; Peterson et al., 2005; Wells et al., 2004). Therefore, evaluating both PAs and ICDPs along multiple criteria (and employing multiple disciplinary perspectives) promises to offer a more complete and sophisticated view of the costs and benefits of particular vehicles of conservation and development, and make clear the relative virtues and drawbacks of particular conservation strategies on the landscape (Salafsky, under review). Articulating this continuum of conservation outcomes and values is thus a critical scholarly and practical task and has the potential to move the debate onto far more productive ground (Sunderland et al., 2008; Upton et al., 2008; McShane et al., 2011).

At the same time, we want to emphasize the importance of holding a more expansive and serious discussion of the value and ethical dimensions of biological conservation in what we might call the "age of sustainability." Although we have attempted to highlight how different value commitments divide the two camps in the new conservation debate, in our reading the normative (especially ethical) aspects of the disagreement are frequently tacit and poorly understood by conservationists. We believe that it is a mistake to continue to downplay (or worse, ignore) the role of different ethical and value commitments in shaping the activities of conservation goal setting and decision-making. Policy scholar Daniel Sarewitz (2004), for example, has warned about the "scientization" of environmental disputes wherein unacknowledged normative and ethical dissent masquerades as empirical disagreement – and thus thwarts attempts to build consensus to the degree that such value conflicts are not openly discussed and deliberated upon. Sarewitz goes so far as to suggest that in especially protracted disputes there should be a kind of "quiet period" in which countervailing scientific/empirical claims are temporarily silenced

so that a more open and articulate discussion over contested values – and not just facts – may take place.

In the case of the new conservation debate as we have described it here, we believe that a full “quiet period” is neither practical nor desirable; the strategic/policy issues are perhaps all too real and urgent in the face of the biodiversity loss and global poverty. But we agree that in many cases factual disputes often become proxies for a more fundamental argument over values and the proper goals of the scientific enterprise. In the new conservation debate, we believe this dynamic may be at play, for example, in conservationists' overwhelming focus on empirical assessments of the efficacy or failure of PAs and ICDPs.

This is not to gainsay the importance of that particular discussion – evaluating parks and reserves and improving their ability to be successful instruments of conservation should of course continue to draw significant attention in the literature and (especially) on the ground.

What we are suggesting, however, is that this fairly narrow empirical focus has tended to obscure the deeper value and philosophical divisions within the scientific community over the proper motives and goals driving conservation efforts today, especially in developing regions, and the relationship of these values and goals to the still-emerging global sustainability agenda. To the extent that this is true, a more explicit and probing discussion of values and ends in conservation promises to enhance collective understanding, while at the same time reducing many of the tensions driving the pitched debate between nature protectionists and social conservationists.

One approach that could prove useful for encouraging and informing this discussion is the “ecological ethics” framework recently developed by Minter and Collins in a series of publications (Minter and Collins, 2005a,b, 2008). Recognizing that the dilemmas that emerge in conservation and ecological management, research, and policy making often involve conflicting moral duties, goods, and interests, the ecological ethics approach attempts to identify, clarify, and harmonize the plural values in ecological decision-making. In doing so, it draws from the full sweep of relevant ethics scholarship (i.e., traditional (human-centered) ethical systems that include principles of social justice and welfare; environmental ethics; animal ethics; and research/professional ethics), as well as the principles captured in the codes of ethics of key scientific/professional societies such as the Society for Conservation Biology and the Ecological Society of America.

This more practical and contextual approach to ethical analysis and decision-making does not require conservationists to embrace any particular anthropocentric or nonanthropocentric philosophy toward nonhuman nature; instead it focuses on articulating the multiple ethical commitments embedded in concrete problematic situations in conservation practice, and encourages and guides the search for areas of reduced ethical tension and policy common ground. In the process it promotes a more useful and collaborative relationship between, on the one hand, applied philosophers and environmental social scientists, and, on the other, biodiversity/ecological scientists and professionals. The ecological ethics strategy of resolving value and ethical disputes by making explicit and accommodating ethical pluralism rather than ignoring or rejecting it is congruent with similar calls by Norton (2005) and Robinson (2011) to adopt a less ideological stance in environmental policy and management discussions, a sympathy that suggests a growing pragmatic movement among conservation scientists and policy-minded environmental philosophers (Minter et al., 2008).

5. Conclusion: moving toward convergence?

The conceptual and empirical aspects of the broader conservation debate clearly continue to draw the attention of conservation-

ists and development professionals (e.g., Roe, 2008; Redford et al., 2008; Mombeshora and Le Bel, 2009). In addition, particular issues and cases within the broader dispute have emerged as focal points of analysis and critique in the past few years, suggesting that the conflict remains at the heart of international conservation work. For example, the displacement or eviction of local peoples for park protection has received a great deal of scrutiny of late, revealing just how critical this particular aspect of the new conservation debate has become in the international conservation community (e.g., Brockington and Igoe, 2006; Schmidt-Soltau and Brockington, 2007; Agrawal and Redford, 2009; Dowie, 2009).

Although the parks vs. people/biodiversity conservation vs. poverty alleviation debate still divides many scholars and professionals in the conservation and development fields, we believe that the emergence of novel models of conservation planning and new policy instruments that attempt to integrate biodiversity protection with human well-being – without re-creating the divisions that have fueled the parks-or-people argument – provides some hope for eventually moving past the NP–SC dispute described here. One example of this trend is the rise of landscape-level conservation planning efforts that seek to widen the scale of conservation beyond protected areas to include a full mosaic of land-uses (and their accompanying mix of social and conservation values), including those supporting sustainable human livelihoods – as well as the protection of native species and degraded ecological systems (Wiens, 2009). Such large-scale ecosystem-based approaches are increasingly prominent in the agendas of international conservation organizations, including Conservation International and WWF.

A good illustration of this model in practice is the African Heartland Program (AHP), a landscape-level conservation planning process developed by the African Wildlife Foundation. The Heartland Program attempts to integrate protection of biodiversity and ecological systems with nature-based livelihood improvement at a large spatial scale through a range of strategies, from habitat and corridor protection, to local capacity and leadership building and the development of conservation-based enterprises (Henson et al., 2009). By broadening the scope of conservation planning to the landscape level, the AHP avoids becoming ensnared in the PA vs. ICDP debate and begins to reshape the strategic and ethical ground upon which the conservation–development discussion is held.

Another intriguing development that could provide an avenue for moving past the either–or debate over biodiversity protection and human well-being – and the specific contest over PAs and ICDPs – is the attempt to forge linkages between the ecosystem services framework, which has become a foundational element in sustainability science and policy over the past decade, and the ends of biodiversity conservation. In particular, the rise of new policy tools, such as payment for ecosystem services (PES), have great potential to incentivize land owners and actors to conserve species and systems critical for the provision of socially valued ecosystem benefits (Wunder, 2007; Engel et al., 2008).

Although some conservation scholars have voiced concern about the quick embrace of the PES framework by many conservationists because of the temptation for PES approaches to narrow the range of services considered valuable and insufficiently prioritize native species conservation (Redford and Adams, 2009), others have suggested that the PES framework has the potential to support both human livelihood and biodiversity in critical areas of interest. For example, Nelson et al. (2009) describe the successful application of the PES framework in northern Tanzania, in which a consortium of tourist companies have contracted with a pastoralist village to protect an important wildlife dispersal area outside Tarangire National Park. Payments by the tour operators to the community are made in return for the exclusion of livestock and permanent settlement in the area, thus incentivizing the develop-

ment of community-based conservation institutions among the Maasai herders.

Such strategies suggest that we may be moving toward an understanding of conservation that recognizes the fundamental convergence, or pragmatic compatibility of biodiversity conservation and human well-being when conceived at the appropriate scale and approached through a more sophisticated policy framework sensitive to value pluralism, socio-ecological context, and the complexity of conservation incentives and institutional design. Implicit here is that the ethical divisions between nature protectionists and social conservationists, while real, may eventually prove less critical in practice as integrative approaches to conservation policy and management are able to serve multiple values by safeguarding the larger ecological context; a context that is critical for the persistence of biodiversity and human communities over the long run.

Indeed, as environmental philosopher Bryan Norton has long argued, much of the debate between enlightened anthropocentric and nonanthropocentric ethics may in fact be unnecessary given that the interests of species and the health of ecological systems, when considered at an appropriate time scale and across a sufficiently large spatial extent, are generally congruent with the long-term economic and cultural interests of human communities (again, considered on the whole and into the future) (Norton, 1991; Minteer, 2009). Although Norton's approach has been criticized by committed nonanthropocentric philosophers such as Holmes Rolston (2009), the models mentioned above suggest that the concern for wild species and ecosystems and the advocacy of sustainable livelihoods and human welfare improvements do not have to be seen as warring ethical stances at the level of conservation planning and practice.

Moreover, to the extent that projected trends in global climate change undermine our ability to protect migrating species in traditional, fixed protected areas (e.g., Hannah et al., 2007; Barnosky, 2009), and pose as well a significant threat to the provision of vital ecosystem services (putting more vulnerable human communities at risk) (IPCC, 2007), nature protectionists and social conservationists have a powerful, mutual interest in working toward effective climate change mitigation policies (Roe, 2008). This pragmatic convergence of different conservation values on a common policy goal, which we might describe as an ecologically-grounded and socially just notion of sustainability, may ultimately transform the conservation debate into a far more collaborative and effective discussion, one focused on the common global stake in a biologically rich and productive future.

Acknowledgements

An earlier version of this paper was presented at a symposium organized by the authors at the 2008 Society for Conservation Biology Annual Meeting held in Chattanooga, TN. We thank the participants in the panel and the audience members for their thoughtful comments and criticisms, and acknowledge the helpful suggestions of two anonymous reviewers for *Biological Conservation*. This material is based on work supported in part by Advancing Conservation in a Social Context and the NSF IGERT Grant No. 0504248 in Urban Ecology to the Global Institute of Sustainability at Arizona State University.

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