Why transforming biodiversity conservation conflict is essential and how to begin

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Conserving biodiversity requires productive management of conflict. Currently, wildlife are often portrayed as conscious human antagonists, which must be fought. We suggest using the 'comic corrective' to experiment with ways to reframe human–human conflicts over wildlife management and wildlife damage. This requires a deep commitment to change, often made more palatable through humour. This effort to fight the use of the term human–wildlife conflict should not be interpreted as a call to reject human–human conflict as a useful conservation tool. Conservationists, who value wildlife, often misleadingly suggest that conservation can sidestep irreducible value differences and political processes that see proponents of different views as antagonists. Because democracies cannot function without dissent, we suggest that conservation biologists should embrace stakeholder conflicts over wildlife conservation as a way to improve decision making. In particular, we should challenge the view that wildlife are willfully antagonistic to people while recognizing conflict among humans over how biodiversity conservation should occur.

Key words: biodiversity conservation, conflict, human–wildlife conflict, consensus-based conservation, collaboration, communication, terministic screens

INTRODUCTION

CONFLICT over protecting biodiversity is one of the greatest challenges faced by the conservation community. We define conflict as "expressed disagreements among people who see incompatible goals and potential interference in achieving these goals" (Pearce and Littlejohn 1997; Peterson, M. N. *et al.* 2002:947). Biodiversity conservation conflict refers to specific conflicts involving natural resources associated with wildlife and plant habitats or specific species (Marshall *et al.* 2007; White, R. M. *et al.* 2009). Biodiversity conservation requires prioritizing protection and management of ecosystems, landscapes, habitats, and species. It also involves determining the level of resource allocation appropriate for each objective. As these decisions are made in contexts of increasingly scarce resources (Day *et al.* 2009), conflict will increasingly shape biodiversity conservation contexts.

Although conflict and dissent form the backbone of liberal democracies (Mouffe 2000, 2005), and define most important conservation biology contexts, most papers framing priorities for conservation biology scholarship and action deal with conflict and dissent only marginally (Sutherland *et al.* 2009). Indeed, when conflict is considered, even indirectly, the goals typically involve trying to resolve it (i.e.,

eliminate it) through education, financial compensation, and/or devolved collaboration (Treves and Karanth 2003; Sutherland *et al.* 2009). Globally, conservation biologists ask, "how can we ensure that conservation policies are based on science and not emotion" (Peterson, M. N. *et al.* 2007b: 2500; Shine 2011).

The answer is not one we want to hear, but it is simple: policy decisions will never be based primarily on science. Science can inform a decision, but political processes that include conflicts among people with different values, power, history, and emotions will determine what policies are developed, followed, and enforced (Peterson, M. N. *et al.* 2007b; Wilhere 2008; Francis and Goodman 2010). The most important issues will not be fully addressed by collecting more biological data, paying stakeholders to acquiesce, or giving local people decision-making authority. Such issues include: overabundant wildlife (Lunney *et al.* 2008), wildlife feeding and harassment, road construction (Trombulak and Frissell 2000), the wildlife pet trade (Fabinyi 2009), listing and delisting of endangered species, setting harvest levels in internationally valuable species such as bluefin tuna (Kolody *et al.* 2008) and

whales (Bowett and Hay 2009; Gross 2010), human overpopulation (Peterson, M. N. *et al.* 2007a), housing sprawl (Pejchar *et al.* 2007; Peterson, M. N. *et al.* 2008), moral treatment of animals (Lunney 2012a,b), zoonotic diseases (Bidwell 2009), protected area establishment and management (Chan *et al.* 2007; Robbins *et al.* 2009; McShane *et al.* 2011), forestry (Freudenburg *et al.* 1998), agricultural expansion (Harvey *et al.* 2008), and climate change (Duffy 2011).

Although biodiversity conflict is grounded in material reality, materiality alone does not explain social actions. Rather, past experiences, values, beliefs, and social power frame what people consider important and how they interpret conflicts (Giddens 1979, 1984; Lewicki *et al.* 2003; White, R. M. *et al.* 2009). Language is especially important in these processes, as people use it to both represent and constitute their social realities (Burke 1966, [1950] 1969; Orwell 1946). One way to understand and even change perspectives is to identify and revise how they are created through language (Barua 2011; Orwell 1946; Peterson, M. N. *et al.* 2010). Despite increased awareness of language's constitutive functions, however, the ballooning literature addressing best practices

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in conflict management or collaboration (e.g., Conley and Moot 2003; Leach 2006) largely ignores the role of language in creating and framing the views people use to understand biodiversity conservation.

Burke (1966) argued that people's vocabularies create 'terministic screens' wherein individual terms interact to emphasize some aspects of reality while deemphasizing others. Terministic screens are far more than isolated symbols. To construct them, people weave individual words together, forming a screen that enables users to decide whether an experience is important, what the experience means, and what (if any) action the meaningful experience calls for (Peterson, T. R. 1997). Thus, terministic screens guide people through the processes of evaluating situations, and selecting appropriate actions. For example, Weurthner (2006) notes that the language used to describe wildfire has contributed to failed forest policy. He argues that, beyond the individual words used in conjunction with wildfire — such as "catastrophic", devastated', and "destroyed" — the militaristic tone of the entire discourse attenuates thoughtful consideration of fire's restorative potential.

As with communication regarding wildfire, communication of biodiversity conservation conflict reflects the terministic screen through which it is articulated. We argue two key transformations could enable more productive framings of biodiversity conservation conflict. First, conservation biologists should replace the *human–wildlife conflict* terministic screen with one reflecting the underlying conflicts among people over how to manage wildlife (Peterson, M.N. *et al.* 2010). A summary of the rapidly growing scholarship on human–wildlife conflict (Peterson, M.N. *et al.* 2010) indicates that the human–wildlife terministic screen inadvertently characterizes wildlife as purposefully undermining human interests. Indeed, most cases where the

vocabulary is used (Peterson, M. N. *et al*. 2010) involve wildlife impacting humans only by virtue of trying to survive in progressively human dominated landscapes (e.g., Meijaard *et al*. 2011).

The second shift involves transforming the *consensus-based conservation* terministic screen to one highlighting dissent. For the last century, most biodiversity conservation decisions and successes in nominally democratic nations emerged from contexts privileging dissent, argumentation, and negotiation (Peterson, M. N. *et al*. 2005). The terministic screen for collaborative forms of conservation started shifting from one emphasizing dissent to one emphasizing consensus during the late 1980s in association with the widespread public enthusiasm for sustainable development that grew out of the 1987 United Nations report, *Our Common Future* (Aguirre 2002, Peterson, T. R., 1997). Sustainable development's focus on local participation and development highlighted the value of consensus-based decision making in part because consensus is easiest to attain at small scales. The dizzying array of collaborative approaches used for managing natural resource conflict (Conley and Moot 2003) were gradually included in the consensus-based conservation terministic screen (Peterson, M. N. *et al*. 2005).

Although each of these consensus-based models defines success independently, all share varying degrees of commitment to mutual agreement as an end goal and metric of success. Whereas the human–wildlife conflict terministic screen makes efforts to conserve biodiversity seem unreasonable and misanthropic, consensus-based conservation portrays efforts to protect biodiversity as reasonable and anthropocentric. The dangers of consensus-based conservation as a terministic screen for biodiversity conservation conflict lie elsewhere (Peterson, M. N. *et al*. 2005). Specifically, the central issues for

conservation of biodiversity are not, and will not, be amenable to consensus (i.e., where everyone fully agrees) in the foreseeable future. In most instances, framing biodiversity conflict as a consensus process weakens the dissent required to challenge the *status quo* of subjugating conservation of biodiversity to countless other objectives.

In this essay, we first describe the threats associated with the human–wildlife conflict and consensus-based conservation terministic screens. Specifically, we discuss the dangers of appealing to human–wildlife conflict "whenever an action by humans or wildlife has an adverse effect on the other" (White, R. M. *et al*. 2009:242), and appealing to consensus whenever some form of public involvement is needed. Second, we describe potential alternatives to the terministic screens: human–wildlife coexistence for human–wildlife conflict, and dissent-based conservation for consensus-based conservation. Finally, we discuss how the recommended transformations can be achieved.

TRANSFORMING HUMAN–WILDLIFE CONFLICT BY REFRAMING IT AS COEXISTENCE

The human–wildlife conflict terministic screen has come to include nearly any wild animal behavior (including their existence) that one or more humans find unwelcome (Peterson, M. N. *et al*. 2010). It also encompasses conflicts humans have with each other regarding wildlife. In their review of 309 publications and 117 conference presentations addressing human–wildlife conflict, Peterson, M.N. *et al*. (2010) found that most conservation professionals using the human–wildlife conflict terministic screen referred to wild animal threats to the human food supply, safety, or property, with fewer discussing conflicts among people regarding wildlife. Only one paper reported an actual conflict between wild animals and humans. Similarly,

when search terms were limited to "wildlife" and "conflict", the majority of papers focused on conflicts among people or wildlife damage, and no papers addressed conflict between people and wildlife (Leong and Decker 2007). These studies demonstrated that while conflict among humans concerning wildlife certainly occurs, the human–wildlife conflict terministic screen is misleading.

The dangers of the human–wildlife conflict terministic screen

Conflict is a well-developed, interdisciplinary concept. Definitions generally converge around disagreements among people who believe they have incompatible goals and will face interference achieving them (Pearce and Littlejohn 1997; Peterson, M. N. *et al.* 2002; Pruitt and Kim 2004). Environmental conflicts implicate consciousness and social interaction, are intensely political, and are always linked to power relationships and values (Peterson, T. R. and Franks 2006; Raik *et al.* 2008). Recent definitions of biodiversity conservation conflict reflect this in part by suggesting that interests of two or more parties must clash and at least one of the parties must attempt to assert its interests at the expense of another (Bennett *et al.* 2001; Marshall *et al.* 2007). Conflict emerges out of actors' interpretation of a situation instead of simply competition for limited resources (Yasmi *et al.* 2006). This version of conflict excludes most wildlife species as parties to conflict because few, if any, wild species could be simultaneously aware of their own goals and human goals, while purposefully seeking to undermine human goals.

Despite being factually erroneous, the human–wildlife conflict language frames some of the most high profile wildlife conservation cases on Earth (e.g., those involving whales, seals, sea turtles, tigers, wolves, bears, elephants; Sukumar 1991; Dublin and Hoare 2004; Omondi *et al.* 2004; Patterson *et al.* 2004). Despite the human–wildlife conflict

label, the wildlife species in question were not purposefully seeking to undermine human goals. Concepts encompassed by this phrase have inspired books and international collaborations, started centres, and generally shaped research addressing interactions between humans and wildlife. The Jack H. Berryman Institute for Wildlife Damage Management, for example, changed its web tagline from "Wildlife Damage Management" to "Resolving Human–Wildlife Conflicts" in 2007, coinciding with the inaugural issue of the academic journal, *Human–Wildlife Conflicts*[5].

Re-presenting human–wildlife interactions as human–wildlife conflicts not only is factually erroneous, but also counterproductive for biodiversity conservation due to predictable, if unintended consequences (Peterson, M.N. *et al.* 2010). The human–wildlife conflict terministic screen places wildlife, entities that cannot represent themselves in politics or law, as combatants against humans. If people are combatants, it makes sense for them to direct their anger, frustration, and even attacks at wildlife rather than their actual human adversaries, with potentially grave conservation consequences (e.g., Peterson, M. N. *et al.* 2002; Brook *et al.* 2003).

Conflicts labeled as human–wildlife conflict associated with the U.S. Endangered Species Act exemplify mislabelled human–human conflicts. Without the Act, there would be little animosity toward a host of rather benign wild species, such as the northern spotted owl *Strix occidentalis caurina* or the Florida Key deer *Odocoileus virginianus clavium*, whose existence constrains human development projects in the Pacific Northwest and Florida Keys (United States) only by their listing under the Act (Freudenburg *et al.* 1998; Peterson, M. N. *et al.* 2002). For example, the controversy leading up to listing the northern spotted owl as threatened under the Act in June 1990,

[5]The journal name was changed to *Human–Wildlife Interactions* in 2010.

precipitated one of the greatest political firestorms surrounding a wild animal species in U.S. history. This species' requirement for old-growth forest pitted the Northwest timber industry, its employees, and rural communities that relied on this industry against those interested in spotted owl conservation in a scenario often framed by the media as "jobs vs. owls" or "pro-cut vs. pro-save" (Freudenburg *et al.* 1998; Bendix and Liebler 1999). Similarly, the listing of the Florida Key deer as endangered in 1967 greatly constrained what undoubtedly would have been extremely lucrative real-estate development on the islands where this species occurred (near Key West, Florida; Peterson, M. N. *et al.* 2002). By conflating owls and deer with conscious human antagonists, the human–wildlife conflict terministic screen contributed to angry citizens hanging individuals from these species in effigy. Although these species cannot survive without protection, humans, not the species themselves, are demanding the protection. Further, labeling human–human conflicts as human–wildlife conflicts may limit opportunities for conflict resolution by diverting attention from addressing conflicts within human political systems until they escalate to self-reinforcing levels that are much more difficult to resolve (Peterson, M. N. *et al.* 2002).

Another predictable problem with the human–wildlife conflict terministic screen is that it reinforces the notion that humans are apart from, rather than a part of, nature (Peterson, M. N. *et al.* 2010). Although those passionately concerned with biodiversity conservation have long recognized the problems associated with separating humanity and nature (e.g., Naess 1973; Devall and Sessions 1985; Soulé 1985), and most conservation researchers recognize that humans are intimately and inexorably connected with nature, this awareness is far from universal. Labelling conflict among humans regarding biodiversity conservation and animal damage as human–wildlife conflict

further dichotomizes humans and nature, framing wildlife as something that threatens human existence, rather than contributing to human welfare (Peterson, M. N. *et al*. 2010). Thus, the human–wildlife conflict terministic screen reifies the nature–society dualism ultimately responsible for most threats to biodiversity. What we need is a shift toward a terministic screen, or set of screens, that directs attention toward the potential for coexistence among species, while recognizing conflict among humans over how that coexistence should occur.

Making a terministic screen that emphasizes coexistence

Perhaps the most obvious solution is to replace the human–wildlife conflict terministic screen with one that more honestly describes the underlying relationships. We will not attempt to choose the actual label here, but there are at least two sets of relationships that should be described in the new terministic screens: 1) people disputing with other people over how to address impacts of wildlife in their lives, and 2) people upset about negative impacts they experience from wildlife (Decker *et al*. 2006; Peterson, M. N. *et al*. 2010; White, P. C. L. and Ward 2011). The former has been labelled stakeholder conflict, whereas the latter has most often labelled wildlife damage prior to the emergence of the human–wildlife conflict terministic screen (Conover 2002; Leong and Decker 2007). Adopting terministic screens that more accurately describe the conflict or interaction of interest will allow stakeholders and managers to work towards coexistence with wildlife, rather than presume conscious hostility between humans and wildlife.

Recognizing that an unintended consequence of the label "human–wildlife conflict" is the implication that wildlife is consciously antagonistic against humans opens the door to alternative ways of framing conflicts over biodiversity conservation. If the goal is to use "language as an instrument for expressing and not for concealing or preventing thought" (Orwell 1946, p. 265), then language should encourage people to re-imagine biodiversity conflicts as disputes among people over how to manage wildlife, rather than as disputes between people and other creatures over anything at all.

Human imagining and conceptualization of reality are deeply embedded in and dependent on language (Burke 1966, [1950]1969). Where multiple parties with little in common are thrust into disputes over how to manage wildlife, language serves strategic goals. A rhetorical perspective on language focuses attention on its strategic potential, including the terministic screens that emerge to frame any situation. Given that a terministic screen is a social construct, it remains vulnerable to reconstruction when contingencies change.

Burke ([1937] 1984) suggests that human society may use both tragic and comic approaches to inject new functionality into dysfunctional terministic screens. The more common tragic approach rejects and seeks to destroy the entire social reality engendered by the offending terministic screen. This often reduces options for change, leading to violent revolution. The comic corrective, however, amplifies possibilities. It focuses on the contingent nature of any political decision, and recognizes humans as fallible, muddling through a constantly shifting reality. As such, the need to radically revise terministic screens is expected, because they simultaneously exceed and distort the intents of the people who created them. Comic corrective requires a deep commitment to change, often made palatable through humour (Peterson, M. N. *et al*. 2010).

Comic criticism of biodiversity conflict enables people to expand the variety of relationships previously considered possible. By promoting the knowledge that any social structure develops self-defeating emphases and unintended byproducts over time (e.g., conscious antagonism between people and wildlife in the case of human–wildlife conflict), it encourages people to discover aspects of current terministic screens that need revising, and encourages us toward that project. When words are wrenched from their traditional patterns, users may reinterpret their material circumstances. Constructing new, even incongruous, names for conflict over conserving biodiversity can improve professional dialogue and outcomes. Peterson *et al*. (2010, p. 80) argue that biodiversity professionals should use "the comic corrective to pun the internal contradictions associated with human–wildlife conflict and experiment with developing a terministic screen from the label, human–wildlife coexistence."

The comic corrective is not easy to employ because it requires acknowledging fallibility in ourselves and our establishments, and a willingness to adaptively reframe our perspectives. One emerging example of the comic corrective at work in the domain of conservation biology conflict is the shift among conservation biologists toward engaging animal welfare advocates rather than ignoring them (Tidemann and Vardon 2002) and accepting, or at least acknowledging, some merits associated with animal welfare and animal rights (Shine 2011; Lunney 2012a,b). The terministic screens associated with animal welfare and animal rights were abhorred by the wildlife conservation community before conservation biology even existed as a discipline, and the perspective was rooted in the assumption that populations, species, and habitat were important, but not individuals (Jamieson 1995). Asserting a value in the individual focus of animal welfare and animal rights may seem outrageous (an essential element of using the comic corrective), yet conservation biologists have begun to do so. Lunney suggests "far more can be gained by engaging in the debate (over how to

apply animal welfare principles within conservation biology science) than avoiding it" (Lunney 2011, p. 17), and that a focus on the context of interactions with animals (e.g., wild, contact, dependence) can facilitate co-existence of animal welfare and rights with efforts to promote conservation biology (Palmer 2011, Lunney 2012a,b).

Using the comic corrective, the more outrageous the claim, the faster adaptation to new social contexts can occur. What if the claims that animal welfare should be debated or considered were extended to suggest animal welfare and animal rights should be a tool to promote conservation biology? The new claim is indeed out-rageous, but considering its impli-cations creates opportunity for change. Recent research shows children who form bonds with personal pets (to whom most owners attribute rights) have more favorable attitudes toward wild species, even "unpopular" ones (Prokop and Tunnicliffe 2010). Terministic screens about animal rights and welfare formed by these claims would just as certainly have contradictions as their predecessors, but they would highlight limitations of terministic screens denying value in individual animals and engage additional stakeholders. By recogni-zing the inevitability of experi-mentation, a comic corrective facilitates adaptive management. Adaptive management refers to iterative decision making wherein system monitoring provides feed-back for successive management decisions, and has been widely endorsed by natural resource manage-ment agencies around the world in the last several decades (Holling 1978; Allan and Stankey 2009).

TRANSFORMING CONSENSUS–BASED CONSERVATION TO EMPHASIZE DISSENT

The dangers of consensus

What elements of reality does the consensus-based conservation terministic screen emphasize and deemphasize? As a terministic screen, consensus-based conserva-tion emerges from the rhetoric within a community (Hikins 1989) and can ultimately mean many things (Leach 2006). We suggest it intuitively emphasizes agreement, resolution of differences, and cooperation while deemphasizing dissent, irreconcilable differences, and conflict. After all, varying degrees of commitment to mutual agreement as an end goal and as the metric of success explicitly or implicitly drive all forms of consensus–based conservation (Peterson, M. N. et al. 2005). When consensus is defined as majority opinion it becomes nothing more than a euphemism for democracy without protection for individual liberty. In our experience studying collabora-tive conservation processes, we have found that facilitators tend to claim that "general consensus" has been reached when a simple "majority rules" decision is made. Although the consensus-based conservation terministic screen sounds appealing, it proves uniquely unsuitable for addressing the challenges of biodiversity conservation conflict for two reasons.

First, most conservation biologists will rarely if ever encounter ultimate agreement, resolved differences, and genuine cooperation among stake-holders. The growing discussion over the impacts of free-ranging domestic cats on biodiversity, and how to appropriately respond to those impacts through policy interventions (Lilith et al. 2010; van Heezik et al. 2010; Calver et al. 2011; Phillips et al. 2005), is a case where consensus is unlikely to occur. A nationwide survey of cat colony caretakers in the United States suggests over 80% believe feral cats should be a protected wildlife species (Peterson, M. N. et al. 2012). Similarly, over 80% believe feral cats do not carry diseases, and only 3% believe cats harm wildlife anywhere but on islands. In this case, and many others, fundamental differences among value systems and beliefs make agreement on what should be highly unlikely. Indeed, 99% of cat colony caretakers in the United States believed euthanasia should not be a management option (Peterson, M. N. et al. 2012).

The problem of neglecting to acknowledge fundamental value differences is compounded by issues of power. Powerful interests who may oppose efforts to conserve biodiversity (e.g., residential and commercial developers, resource extraction corporations [e.g., mining, timber, commercial fishing], and governments or political factions) typically follow competitive negoti-ation strategies (Peterson, M. N. et al. 2005). They will not change their strategy simply because the consensus label is applied to a collaborative public process. Skilled consensus facilitators attempt to promote diversity among partici-pants and create a level playing field, but all public processes occur within existing political structures, where some groups have more power than others (Mouffe 2000). Groups with the most power rarely want to relinquish it, and they typically are willing and able to hold out for their preferences because they have access to more resources (Ivie 2002). The most powerful groups also have the strongest alternatives to consensus (e.g., litigation, public relations campaigns, bribing corrupt officials, and perpetuating the status quo).

Second, deemphasizing dissent weakens the most potent tool for change in modern society. Political dissent has long been the wellspring for change in liberal democracies (Mouffe 1993, 2005), and has proven a critical seed of change under even the most authoritarian regimes (Bellin 2012). Given its identification with social unanimity, consensus is effective for main-taining existing power structures that currently emphasize economic growth and efficiency (Czech 2000), but not changing them (Mouffe 1993, 2000). Officially sanctioned consensus processes often constrain conflict, and treat the current political hegemony as truth (Peterson, M. N. et al. 2005). The basic assumptions underlying many approaches to consensus-based

planning reduce deeply embedded power relationships to superficial conflicts of interest or misunderstandings about empirical facts that can be reconciled through mutual good will. Requiring social unanimity to make a decision regarding biodiversity conservation also gives one individual or group the power to veto change. For both of these reasons, those in power generally prefer consensus-based approaches over those based on argumentation, which are less predictable (Ivie 2005; Peterson, M. N. *et al.* 2005). Thus, consensus would be a strategically valuable way to frame biodiversity conservation conflict if efforts to conserve biodiversity currently had the status of efforts to create jobs or economic growth. Because consensus processes legitimize the *staus quo*, they often jeopardize biodiversity conservation. The biodiversity conservation policies around the world have not protected biodiversity adequately, and will not, without challenging current power structures.

Using bounded conflict to make room for dissent

We are not advocating antagonistic and violent approaches to biodiversity conservation. Rather, we suggest that the practice of bounded conflict (Peterson, M. N. *et al.* 2004) offers a more realistic strategy than consensus for achieving biodiversity conservation. Bounded conflict replaces antagonism with agonism[6]. This channels conflict rooted in irreducible differences toward positive change. The perspective is rooted in agonistic political thought, which assumes deep social divisions will not be circumvented by deliberation, but can provide energy for an active political sphere and impetus for change (Mouffe 2005). The notion of agonism (Mouffe 2005) that underpins bounded conflict places difference and confrontation at the centre of public life. If conflict and antagonism are

[6]Agonism refers to a political theory that emphasizes the emancipatory potential of political conflict, and seeks to explore ways to accept and channel conflict positively, rather than attempting to do away with it (Mouffe 1993, 2005).

inevitable in political systems, one of the most important tasks is to envisage ways to create a pluralistic democratic order that can make space for those differences. The irreducible paradox between freedom derived from individual liberty and the equality derived from popular sovereignty provides a partial explanation for why these differences need to be recognized and validated (Mouffe 2005). Conflict is inevitable in democratic systems. To achieve and sustain widespread legitimacy within society, conservation biologists must recognize, and even contribute to, opportunities to debate the values, beliefs, and policies implicated in biodiversity conservation. Without promoting safe opportunities for resistance and dissent, biodiversity conservation is subsumed in a rhetorical maelstrom where efforts to prioritize genetically and culturally valuable species become the province of an exclusive elite; and conservation biologists are ironically framed as anti-humanistic. The history of biodiversity conservation is full of examples where ignoring fundamental differences and assuming that improved public processes will make the differences less salient have led to conflict escalation (e.g., Wondolleck and Yaffee 2000; Peterson, M. N. *et al.* 2002; Walker and Hurley 2004).

As an expression of democratic politics, bounded conflict should be context-dependent. There are, however, three practices that should improve the process (Peterson, M. N. *et al.* 2004): Collaboratively 1) develop the process for selecting the topics most essential to producing a conservation decision, 2) determine what conditions justify changing those topics, and 3) engage in debate on these topics, with an eye to achieving a positive outcome that remains open to change. Because the practices used to bound a conflict must emerge from interactions among all interested parties, opportunity to participate in these three collaborative practices must remain perpetually open. Main-

taining an open public process means that, although formal legal and political decisions may be taken, interested parties may continue their debate, simply recognizing that the political context has changed. Further, bounded conflict benefits from following basic rules for all forms of public engagement (Peterson, M. N. *et al.* 2004, Giordano *et al.* 2007):

1. Facilitators must be committed to using best practices for an effective public process, but not any particular outcome.

2. Participants should be warned at the beginning of the process that they must work within an uncertain environment, both in terms of influence over decisions and whether stakeholders will choose other venues to influence decisions.

3. Effective communication is essential, both in terms of the general formats for discussion and in terms of specific skills needed by participants.

4. The process must be designed with sufficient resiliency to recover when some participants attack others.

5. Statutory/regulatory boundaries and related decision space should be clear for all participants.

Bounded conflict benefits from these attributes of well-designed public processes, and allows participants to debate their differences without demonizing each other. Collaboration and a sense of community regarding biodiversity conservation remain possible within bounded conflict, but consensus no longer measures success. Although participants in bounded conflict recognize that any policy necessitates some agreement, agreement remains a means to the end of improved policy, rather than the end-goal. Indeed, the goal is to discover and implement actions likely to improve the current situation, and improvement is defined iteratively through argu-

mentation among all who participate. Participation in bounded conflict enables participants to explore ways their fundamental differences actually bind them together as part of a larger, but not necessarily unified, whole. Bounded conflict is particularly appropriate for managing biodiversity conflict in democracies because its practice requires that society be simultaneously sufficiently open to allow political competition, and sufficiently stable to render such competitive engagement safe.

The vigorous dissent that emerges from a bounded conflict scenario is likely to disturb current power structures that have enabled environmental destruction. Although such disturbances do not typically lead to orderly resolution of disputes, they do contribute to an expanded, meaningful public sphere that includes people who have not previously explored biodiversity conservation. We are not so naïve as to assume that drawing attention to power dynamics will automatically redress existing imbalances and ring in a new world where everyone supports biodiversity conservation. When done within the relative safety of bounded conflict, however, it does create real opportunities for diverse participants to recognize and perhaps transcend their different perspectives toward conservation. Further, by emphasizing the temporary nature of any decision, bounded conflict makes it easier for people to explore possibilities for biodiversity conservation without fully committing themselves to permanent allegiance to particular values, policies, or partners. Those who participate in the practices of bounded conflict learn that existing power dynamics are repeatedly subjected to deconstruction, and that, especially as they form alliances with other participants, they can influence the process.

CONCLUSIONS

Stakeholder interactions, rather than intentionally malicious wildlife, drive most contemporary biodiversity conservation conflict. Thus,

conservation biologists should embrace stakeholder conflicts over wildlife conservation and use bounded conflict approaches to improve decision making, rather than deflect the conflict onto innocent wildlife species. To reach this objective, two transformations regarding how biodiversity conflict is framed are required. First, the human–wildlife conflict terministic screen should be replaced by terministic screens that more honestly describe the underlying relationships and that encourage human–wildlife coexistence. We suggest using comic criticism (Burke 1984[1937]) to revize the dysfunctional human–wildlife conflict terministic screen into one that encourages coexistence, rather than hostility, between humans and wildlife (Peterson, M.N. *et al.* 2010). The second required transformation involves exchanging the consensus-based conservation terministic screen for one highlighting dissent. The practice of bounded conflict (Peterson, M. N. *et al.* 2004) offers a more realistic strategy than consensus for developing biodiversity conservation policy as this approach channels conflict rooted in irreducible differences toward positive change. Decisions reached through bounded conflict will be more robust when exposed to societal value differences and the conflict inherent to democratic decision making, because conflict was not repressed during decision making.

Our critique of the human–wildlife conflict and consensus-based conservation terministic screens should not be construed as criticism of actual public processes with the consensus label, or the scholars studying topics labeled human–wildlife conflict. Indeed, collaboration often associated with the consensus label (e.g., collaborative learning, building common ground, interest-based negotiation) is essential for productive debate in democracies (Ivie 2005, Peterson, M. N. *et al.* 2005). Being civil, however, does not require consensus (i.e., unanimity) among participants.

Similarly, we are not so arrogant as to presume that reframing human–wildlife conflict as human–human conflict and wildlife damage, or preferring bounded conflict over consensus-based conservation, offers a pat answer to the complex challenges of biodiversity conservation. Instead, we have argued that consensus approaches while appealing, may suppress deeply felt differences, and typically privilege the *staus quo*. For these reasons, enhanced biodiversity conservation is more likely to emerge from processes privileging dissent. Together, these ideas offer means for incorporating divergent ethical orientations and social norms into policies designed to conserve biodiversity. They also expand the variety of people who understand that people benefit in numerous ways from biodiversity conservation. Within that expanded public sphere, people have more opportunities to introduce incongruous perspectives that may enable them to recognize the inevitability of bumping up against fundamental differences (Ivie 2002; Peterson, M. N. *et al.* 2004), rather than merely pretending those differences away.

Voicing outrageous ideas (i.e., the comic corrective) and promoting dissent over their implementation may seem inadvisable for conservation biologists, but the approach works in democracies. No case demonstrates the possibilities better than wolf (*Canis lupus*) restoration in North America and Europe (Wilson 1997, Treves and Karanth 2003, Nilsen *et al.* 2007). The first mention of "wolf restoration" was undoubtedly deemed outrageous, every single step in the restoration of wolves has been met with vigorous debate, and dissent remains in every context where wolves persist, yet they persist.

Conservation biology is fundamentally about a set of values (Soulé 1985). To do proper justice to these values in the public sphere requires rhetoric and public processes that are honest about human politics and

human relationships with bio-diversity (Cox 2007). Otherwise we continue to contribute to the hegemonic power structures that devalue biodiversity conservation.

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