

School of Anthropology and Conservation, University of Kent at Canterbury, Kent, UK; ⁷Department of Ecology, Faculty of Sciences, Autonomous University of Madrid, Madrid, Spain; ⁸Department of Community Development and Communication Sciences, Faculty of Human Ecology, Bogor Agricultural University, Bogor, Indonesia; ⁹NORAGRIC, Norwegian University of Life Sciences, Ås, Norway; ¹⁰CGIAR Research Program on Climate Change, Agriculture and Food Security (CAAFS), Gund Institute, University of Vermont, Burlington, VT; ¹¹FAO Regional Office for Asia and the Pacific, Bangkok, Thailand

Sheil D, Boissière M, and Beaudoin G. 2015. Unseen sentinels: local monitoring and control in conservation's blind spots. *Ecol Soc* 20: 39.

Sheil D and Meijaard E. 2010. Purity and prejudice: deluding ourselves about biodiversity conservation. *Biotropica* 42: 566–68.

Stevens C, Winterbottom R, Springer J, and Reytar K. 2014. Securing rights, combating climate change: how strengthening community forest rights mitigates climate change. Washington, DC: World Resources Institute.

Vedeld PO. 1994. The environment and interdisciplinarity ecological and neoclassical economical approaches to the use of natural resources. *Ecol Econ* 10: 1–13.

doi:10.1002/fee.1224



The authors' reply

While conservation science is an evidence-based endeavor, ethical considerations are important for formulating conservation policy. We believe that the influence of cultural relativism on ethics has been somewhat neglected by conservationists. That was the motivation for our piece (2015; *Front Ecol Environ* 13[6]: 325–31). We are delighted to see the interest it has sparked in the letter by Sheil *et al.* However, Sheil *et al.* have misunderstood us in places, which we seek to clarify here.

We cannot see how our piece can be interpreted as advocating conservation action “without the consent of local stakeholders”. We emphasized that heavy-handed approaches to conservation have often failed, at least partly because they were perceived as echoing Western imperialism. In our paper's second WebPanel, we gave examples of poor conservation outcomes following the forced removal of people and cattle from parks. Even where conservation goals are achieved, we do not support “tyranny” by scientists. We entirely agree with Sheil *et al.* that “We should condemn such practices, not endorse them”. Sheil *et al.* note that the “enlightened absolutism” driving conservation in the colonial era is “obsolete”. It is a mystery to us

how our paper could be interpreted as supporting that indubitably obsolete view. Indeed, we held up the example of the Kenyan “Lion Guardians” program as a model of good practice. A cultural practice was recognized as a conservation issue, and transformation was achieved by persuasion and cooperation, not coercion. This was also true of the Panthera campaign to substitute fake fur for leopard skins in Shembe ceremonies. We gave these as examples of exactly the benefits of “collaborative re-workings of social norms” to which Sheil *et al.* refer. A “rush to confrontation” is, we agree, likely to exacerbate human–wildlife conflict.

Our central argument was that *elements* of different cultural practices that negatively affect conservation may be respected for no other reason than that they constitute part of a culture, and that perception may inhibit action. Our case histories show where that idea may be influential. In an earlier correspondence with Sheil, we were alerted to a study concerning the conservation of hornbills (*Buceros* spp) in Borneo, as an example of sensitive engagement of conservationists with local culture (Bennett *et al.* 1997). The recommendations emerging from that study summarize our case even better than our original examples. The hornbills were hunted unsustainably for both meat and ornamentation for ceremonial costumes. The first two concluding recommendations of the paper are: (1) hunting for meat alone should be stopped and (2) hunting for feathers should be reduced to levels that are sustainable. Why the difference? Pragmatic considerations may be responsible. It is true that we cannot *prove* that relativism is at work in any of our case histories – the mindsets of the conservation agents are not accessible to us. But we suspect it is, and it is overstating the case to say we “offer no evidence”.

Sheil *et al.* appear to have confused our message concerning the influence of relativism in inhibit-

- Dowie M. 2011. Conservation refugees: the hundred-year conflict between global conservation and native peoples. Cambridge, MA, and London, UK: MIT Press.
- Elliott MA. 2014. The institutionalization of human rights and its discontents: a world cultural perspective. *Cult Sociol* 8: 407–25; doi:10.1177/1749975514541099.
- Gavin MC, McCarter J, Mead A, *et al.* 2015. Defining biocultural approaches to conservation. *Trends Ecol Evol* 30: 140–45.
- Hanna P and Vanclay F. 2013. Human rights, indigenous peoples and the concept of free, prior and informed consent. *Impact Assess Proj Appr* 31: 146–57.
- Hitzhusen GE and Tucker ME. 2013. The potential of religion for Earth stewardship. *Front Ecol Environ* 11: 368–76.
- Maffi L. 2005. Linguistic, cultural, and biological diversity. *Annu Rev Anthropol* 34: 599–617.
- Meijaard E and Sheil D. 2011. A modest proposal for wealthy countries to reforest their land for the common good. *Biotropica* 43: 524–28.
- Newell BR, McDonald RI, Brewer M, and Hayes BK. 2014. The psychology of environmental decisions. *Annu Rev Environ Resour* 39: 443–67.
- Porter-Bolland L, Ellis EA, Guariguata MR, *et al.* 2012. Community managed forests and forest protected areas: an assessment of their conservation effectiveness across the tropics. *Forest Ecol Manage* 268: 6–17.
- Sen A. 1988. The concept of development. In: Chenery H and Srinivasan TN (Eds). *Handbook of development economics*. North Holland, Amsterdam: Elsevier Science Publishers BV.

ing action with advocacy for insensitive action. Part of the problem may lie in our use of “misguided respect”. We acknowledge that respect for culture will very often be part of successful conservation. Our use of “misguided” alluded to reticence in acknowledging that some conservation problems are linked to specific cultural practices.

Sheil *et al.* argue that relativism and science are compatible. If “relativism” is used in the trivial sense of striving to accommodate the perspectives of all interest groups, then few will disagree. But where relativism is used in its wider sense of contending that science is just one way of interpreting the world and is no more valid than witchcraft, for example, what basis remains for advocating evidence-based conservation policy? We do not believe Sheil *et al.* are supporting this interpretation of relativism, but it is worthwhile drawing attention to the continuum of usages of the term. It may indeed be wise not to be too belligerent about the omniscience of science, as Mary Midgley has argued (Midgley 2001). But as Sheil and Meijaard stated: “Scientific data and models remain the best means for improved understanding of how the world works, communicating ideas, informing options, and challenging nonsense” (Sheil and Meijaard 2010). Identifying conservation goals is

undoubtedly a complex societal issue, with different interest groups having distinct opinions as to what is desirable. We argue that science should substantially contribute to that process, but we are aware that beyond science comes judgment. Conservation scientists clearly need to collaborate with local people, whose beliefs about the natural world may conflict with science. However, we oppose the active exploitation of such beliefs, even where this benefits conservation (such as conservationists propagating taboos to protect wildlife). Doing so risks advocating anti-science, and we believe that to be an opportunistic step too far.

We support the “capabilities” approach of Sen (1988) and others as providing the basis for universal human rights. Sheil *et al.* argue that “society” also protects cultural diversity. But culture can conflict with human rights, as it can with conservation. Chris Patten – among other things, the last Governor of Hong Kong – often encountered the argument that different attitudes to human rights (particularly freedom of speech) were just part of cultural diversity (“Asian Values”) and that no value judgment about the difference could be made (Patten 1999). We agree with him that such judgments *can* be made, and maintain that conservationists should not be

inhibited from tackling conservation problems rooted in cultural practices.

Scientific data and models remain the best means for improved understanding of how the world works, communicating ideas, informing options, and challenging nonsense.

Amy Dickman^{1†}, Paul J Johnson^{1†}, Freya van Kesteren^{1,2}, and David W Macdonald¹

¹Wildlife Conservation Research Unit, Department of Zoology, University of Oxford, Tubney, UK* (amy.dickman@zoo.ox.ac.uk); ²Department of Psychology, University of Michigan, Ann Arbor, MI; [†]these authors contributed equally to this work

- Bennett EL, Nyaoi AJ, and Sompud J. 1997. Hornbills *Buceros* spp. and culture in northern Borneo: can they continue to co-exist? *Biol Conserv* 82: 41–46.
- Midgley M. 2001. *Science and poetry*. London, UK, and New York, NY: Routledge.
- Patten C. 1999. *East and West: the last governor of Hong Kong on power, freedom and the future*. London, UK: Pan.
- Sen A. 1988. The concept of development. In: Chenery H and Srinivasan TN (Eds). *Handbook of development economics*. North Holland, Amsterdam: Elsevier Science Publishers BV.
- Sheil D, and Meijaard E. 2010. Purity and prejudice: deluding ourselves about biodiversity conservation. *Biotropica* 42: 566–68.

doi:10.1002/fee.1223