CORRESPONDENCE

Caveating Behavior Modification Approaches to Conservation

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Reddy *et al.* (2016) provide a worthwhile discussion of some approaches to influencing human behavior for conservation. They categorize behavior change approaches in three ways: promoting awareness and concern, incentivizing behavior, and nudging behavior. Although these each reflect well-known relevant approaches, grouping norms, values, and other intrinsic elements within "incentivizing behavior" obfuscates a critical element of conservation initiatives that may more powerfully drive outcomes than any of the approaches suggested in the manuscript. That element is the quality of relationships between conservation practitioners and the various target audiences of their initiatives. Incentives make up only one part of these relationships.

Any prescribed step-by-step process to conservation will inevitably be incomplete if not complemented with meaningful efforts in relationship building. This is particularly the case with larger scale, "wicked" conservation challenges, in which problems are difficult to define, desired outcomes may not be agreed upon (let alone strategies), and situations are likely to change fluidly, and sometimes dramatically, over time. In these cases,

the prescribed steps of (1) defining a target audience and (2) target behavior(s), (3) understanding baseline behaviors, and even (4) understanding underlying motivations for those behaviors prior to (5) the design of an intervention to change them imply a more linear approach than is likely to be successful over time, even when effective monitoring (6) and feedbacks (7) are included. While these steps may be helpful, they are not sufficient to build enduring conservation strategies or behaviors likely to be resilient in a changing social, political, economic, and ecological environments.

Conservation efforts are often stymied by issues of distrust between conservation practitioners and various relevant stakeholder groups, ranging from political groups to local people living in and around conservation areas. Trust issues have been demonstrated to overpower more seemingly rational concerns regarding incentives in multiple contexts (Stern 2008).

Trust and distrust are based on a wider array of factors than incentives, emerging from dispositional, rational, affinitive, and systems-based antecedents (Stern & Coleman 2015). Participants in conservation challenges

commonly start from a baseline disposition of general distrust for those attempting to change their behaviors or lifestyles (Smith *et al.* 2013). Rational antecedents include perceptions of consistent performance and expected benefits and disadvantages of engagement (incentives). Affinitive elements, however, which are based on the qualities of personal relationships and/or respectful communication, may often overpower rational elements in conservation settings (e.g., Stern 2008). Systems-based trust, or faith in the rules and procedures that govern interactions, is also critical to conservation outcomes, and is commonly based upon meaningful power-sharing, transparency, and joint procedural development.

Adequate stores of rational, affinitive, and systems-based trust are essential for conservation efforts to be resilient to inevitable disturbances (Stern & Baird 2015). In a realm in which incentive-based programs are typically short-lived and one-time interventions rarely produce long-term conservation results (Baral *et al.* 2007), focusing on getting the incentives right, educating, or nudging targeted audiences toward desired behaviors without attention to building frameworks for fair, transparent, meaningful, and lasting relationships is a recipe for continued failure.

References

Baral, N., Stern, M.J. & Heinen, J.T. (2007). Integrated conservation and development project life cycles in the Annapurna Conservation Area, Nepal: is development overpowering conservation? *Biodivers. Conserv.*, **16**, 2903-2917.

Reddy, S.M.W., Montambault, J., Masuda, Y.J. *et al.* (2016). Advancing conservation behavior by understanding and influencing human behavior. *Conserv. Lett.*, Doi:10.1111/conl.12252.

Smith, J.W., Leahy, J.E., Anderson, D.H. & Davenport, M.A. (2013). Community/agency trust and public involvement in resource planning. *Soc. Nat. Resour.*, **26**(4), 452-271.

Stern, M.J. (2008). The power of trust: toward a theory of local opposition to neighboring protected areas. *Soc. Nat. Resour.*, **21**(10), 859-875.

Stern, M.J. & Baird, T.D. (2015). Trust ecology and the resilience of natural resource management institutions. *Ecol. Soc.*, **20**(2), 14. [online] URL: http://www.ecologyandsociety.org/vol20/iss2/art14/.

Stern, M.J. & Coleman, K.J. (2015). The multi-dimensionality of trust: applications in collaborative natural resource management. *Soc. Nat. Resour.*, **28**(2), 117-132.