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LETTER TO THE EDITOR

Integrative reflections on the new conservation science debate

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In 2012, Kareiva and Marvier published *What is Conservation Science?* almost 30 years after Soulé's (1985) *What is Conservation Biology?* The "New Conservation Science" (NCS), as it has been called (Doak et al. 2014; Miller et al. 2014; Soulé 2013), refocuses *conservation biology* towards human wellbeing by placing it under the broader umbrella of *conservation science*. This stirred a volley of responses and debate—all of which contribute to a broader conservation dialogue (Soulé 1985, 2013; Noss 1999; Miller et al. 2011). Here, we pause to reflect on this debate, using our perspectives as members of an integrative conservation science doctoral program to emphasize the importance of divergent values in framing the NCS debate for current and future conservation scientists.

As members of the Applied Biodiversity Science (ABS) program at Texas A&M University (Fitzgerald and Stronza 2009), our academic training and development cultivates '*agile scientists*' (Welch-Devine et al. 2014) to effectively integrate ecological, cultural, and governance approaches to biodiversity conservation. As do Welch-Devine et al. (2014), ABS seeks to develop "the instincts to define and redefine conservation issues in ways that avoid the oversimplification to which these issues are often subjected" (4). This requires understanding disparate theories and methodologies, navigating disciplinary biases and assumptions, and negotiating and *appreciating* others' value systems (Pooley et al. 2014). In this sense, we, like (McEun 2014), also heard something different from the

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emerging NCS debate. Mainly, the debate is a recapitulation of historically repeated differences in value systems which, on one hand, are often inseparable from the broader biodiversity conservation dialogue, but on the other, have unnecessarily divided conservationists into a dichotomy of 'biocentric' (nature-centered) or 'anthropocentric' (people-centered) factions.

The relationship between society and nature has been questioned for centuries and is largely driven by how researchers and practitioners use value systems to frame conservation's purpose and goals. Conservation biology is itself a 'mission-driven discipline' fueled by a set of functional and normative postulates (i.e. fundamental principles and values), with the normative postulate that biodiversity holds intrinsic value (Soulé 1985) as a core unifying pillar of the discipline. However, Noss (1999) observed that, "one of the greatest strengths and weaknesses of conservation biology is that it is a normative, value-laden science" (117). This is most clearly demonstrated by conservationists' evolving perspectives about humanity's place in nature changing over time but continually revolving around the longstanding dichotomy of 'people' and 'nature' (Mace 2014). For example, the "New Conservation Debate", which preceded the current NCS debate, with an explicit focus on values and ethics, separated conservationists into two broad camps: nature protectionists (i.e. conservationists with preservationist inclinations) and social conservationists (i.e. conservationists focused on human wellbeing) (Miller et al. 2011). The current debate echoes this dichotomy in its use of 'intrinsic value' to affirm or discredit others' views.

In the current debate, NCS opponents characterize Kareiva and Marvier's framework as challenging the intrinsic value of nature (Cafaro and Primack 2014; Doak et al. 2014; Soulé 2013). These scholars place *traditional* (biocentric) conservationists against *new* (anthropocentric) conservationists (Soulé 2013). For example, they have referred to NCS as a manifesto (Soulé 2013) or ideology (Miller et al. 2014) amounting to an "[im]mature conservation ethic" (Noss et al. 2013, p. 242) that "does not deserve to be labeled conservation" (Soulé 2013, p. 895). As such, NCS may further distance people from nature by rationalizing man-made ecosystems for human benefit (Miller et al. 2014). In other words, NCS critics argue this approach shifts conservationists from "people and nature" to "nature for people" (Mace 2014).

Proponents of NCS claim these critiques misinterpret their message. They assert NCS "do(es) not demand that nature not be protected for its own sake" (Kareiva 2014, p. 634). Yet, in their original proposal, Kareiva and Marvier (2012) marginally address this point by accurately but fleetingly acknowledging the key importance of intrinsic value, stating "…we do not wish to undermine the ethical motivations of conservation action" (p. 965). However, in their attempt to promote an "integrative approach" they have not thoroughly addressed the core value that Soulé (1985) predicted would encourage "endless scholarly debate" (p. 732). If values, particularly intrinsic values, were fully addressed, we doubt Marvier (2014) would have questioned: "…why are people who love the diversity of plants and animals and habitats so afraid of a diversity of approaches and motivations within the conservation community?"

From our integrative conservation perspective, the NCS debate does advance scholarly understanding of conservation by reenacting and refreshing a well-documented and often unavoidable historical dichotomy in values. To mitigate further recapitulation and conflict, we recommend conservationists, of whatever bent, clearly articulate their assumptions and values to avoid oversimplified, reactionary, and counterproductive arguments (Pooley et al. 2014; Tallis and Lubchenco 2014). As represented by the ABS and similar programs, we promote integrative approaches to conservation which draw from both "traditional" and

"new" conservation values to work towards unified conservation goals, that, when coupled with the recent conceptual framework developed by the intergovernmental platform on biodiversity and ecosystem services (IPBES), will further help conservationists engage in transparent, inclusive, and participatory dialogue across a diversity of scientific disciplines, stakeholders, and knowledge systems (Díaz et al. 2015).

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