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### **Can Environmental and Conservation Research Do without Social Scientists? A Comment on Victoria Y. Martin (2019)**

In her recent Viewpoint article, Victoria Y. Martin (2019) questions why natural scientists conduct social science research without specific training or experience in the social sciences and calls for more collaboration between natural and social scientists. As two geographers with years of experience of working with ecologists, we concur and, furthermore, ask why many environmental studies deploy social research tools or collaborative approaches with local stakeholders without enrolling social scientists. In our experience, one of the main factors underpinning these failures in the collaborative process is the high diversity of approaches in social sciences. For too long, natural scientists have considered social scientists to be facilitators for implementing conservation solutions, unaware that the latter have a different understanding and vision of what a society is and of what nature is, based on different theoretical frameworks.

In the present letter, we distinguish three different approaches in environmental social science and recommend that natural scientists discuss them with prospective collaborators when building joint projects, to minimize misunderstandings (Mathevet 2010). A first group includes social scientists who focus on specific questions from the social sciences and implement their research without consideration for the natural scientists' work, even if their outcomes might be of interest to conservation biology (e.g., surveys on environmental attitudes and values). A second group includes researchers focused on the social–ecological community made of humans and nonhumans (e.g., plants, animals, objects). They describe how the members of this community interact and live together and address the plurality of values and legitimacies of actions (Latour 2018). A last group of social scientists is engaged in power relationships between stakeholders and can be further split in two subgroups. Members of the first subgroup focus on people, considering environmental problems to be mainly socially constructed. They critically analyze the power relationships, being particularly attentive to the most vulnerable and marginalized social groups (Robbins 2012). Researchers in the second subgroup focus on the environmental problem itself and look for ways of solving it. They too analyze power relationships but are particularly sensitive to impacts on sustainability, wildlife, and biodiversity, supporting key strategic stakeholders in decision-making processes (Stern 2018). Some social scientists may move across groups according their interactions with natural scientists, whereas others are stable in their position.

If natural scientists aim to implement action research, only the last subgroup of social scientists fully aligns with their approach. If they are instead attempting to understand general or specific social processes, the other groups fit better. While recognizing that disciplinary knowledge is important in environmental research, we argue that the lack of environmental social scientists

trained in interdisciplinarity and action research may help to explain why some natural scientists implement social research by their own means. Acknowledging the need for mutual learning and joint problem-solving, we invite the conservation community to move beyond shallow engagement with the environmental social sciences (Bennett et al. 2017) and social scientists to increase their familiarity with conservation biology.

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