# Response to Moon et al (2018) in reply to "Sutherland, W. J., Dicks, L. V., Everard, M. and Geneletti, D. 2018. Qualitative methods for ecologists and conservation scientists. Methods Ecology and Evolution, 9: 7–9"

Nibedita Mukherjee[1, 4*], David Christian Rose[2], Mark Everard[3], Davide Geneletti [5] & William J. Sutherland[1]

1 Department of Zoology, University of Cambridge, The David Attenborough Building, Pembroke Street, Cambridge CB2 3QZ, UK

2 School of Environmental Sciences, University of East Anglia, Norwich Research Park, Norwich, NR4 7TJ

3 Department of Geography and Environmental Management, University of the West of England, Frenchay Campus, Coldharbour Lane, Bristol BS16 1QY, UK

4 Centre for Ecology and Conservation, College of Life and Environmental Sciences, University of Exeter, Exeter, UK TR10 9FE

5 Department of Civil, Environmental and Mechanical Engineering, University of Trento, Trento, Italy

*corresponding author

**Abstract**

1. Understanding conservation issues requires understanding human values as an integral part of the discourse on conservation problems and potential solutions. In a previous series of papers (Sutherland *et al.*, 2018), we summarise the use of a range of social science methods in conservation decision making.

2. Moon *et al.* (submitted) claim that the special issue risks narrowing the scope of social science research and suggest that we presented a limited perspective on the field. They thereby criticise the special issue for not doing something that it never intended to do in the first instance. We did not claim that the list of articles covered in the special issue is a comprehensive list (which it obviously is not) and we are unclear why anyone would think it is.
3. While we consider the Moon et al. (submitted) paper to be a useful contribution for conservation scientists wishing to use social science methods as a supplementary paper, it serves less as a critique to the special issue. Moon et al.'s (submitted) paper makes few direct and substantive criticisms of points raised in the special issue. We respond to areas of contention referring specifically to research philosophy, bias, and data reporting.
4. Moon *et al.* (submitted) criticise the set of papers for perpetuating an objectivist view of the world. We believe that it would be rather disconcerting for the research community if there were no social truths to discover. Rather, social science research methods, (e.g. interviews and focus groups), conducted in specific places can be good ways of exploring how truths vary in different contexts.
5. We also note that Moon et al. (submitted) completely missed the point we were trying to make about *psychological biases*, which are quite different to the issues associated with *researcher bias* highlighted by them.
6. We encourage readers to pay close attention to the use of social science methods in conservation science. We reiterate, however, that the main purpose of the special issue was to ensure that social science methodologies for decision making are accessible for all conservation scientists to use, regardless of disciplinary background.

**Keywords**: bias, conservation social science; decision-making; focus groups; interviews; philosophy; policy-making; qualitative methods

## Introduction

Moon *et al.* (submitted) welcomed the aims of the special issue, and set out to provide additional insights into social science research philosophies, as well as presenting further methods, which the special issue did not have room to consider. In relation to their main point that the special issue underplayed the value of understanding research philosophies, this is a point that we do not dispute in any of the articles in the special issue. We agree with Moon *et al.* (submitted) that a deeper understanding of the philosophical underpinnings of social science research is needed given the disciplinary training of most readers of *Methods in Ecology and Evolution*. We do not say that these philosophies are unimportant, but deliberately present accessible 'how-to guides' in the instrumental journal of *Methods in Ecology and Evolution*, for which undue attention on research philosophies would feel out of place. Thus, we encourage researchers to view the paper by Moon et al. (submitted) as an additional paper to the special issue, rather than a response to any claims made by the original set of papers. While the Moon et al. (submitted) response certainly does provide an understanding of the 'potential for social science methods to improve research', so does the original special issue.

We agree with their contention that there are many other social science techniques that could be used to understand conservation decision-making, including those presented in Table 1 (Moon et al., submitted). Yet, we never say that the list of articles covered in the special issue is a comprehensive list (which it obviously is not); we are unclear why anyone would think it is.

In this response, we further elaborate on social science research philosophies and comment on the treatment of objectivism, bias and data reporting by Moon et al. (submitted), which we argue suffers from significant flaws. Before doing this, we respond directly to minor areas of contention.

**Response to minor criticisms**

*Data vs methods*: We agree with the contention of Moon et al. (submitted) that the special issue ought to have described its purpose as presenting a 'how-to' guide for various *social science* methodologies in conservation science, rather than simply *qualitative* methods. Some of the methods described in the special issue, including focus groups and interviews, could produce both qualitative and quantitative data. Although mainly producing data in the forms of words, these could be used in a qualitative fashion and/or to make quantitative statements, such as how many interviewees made a particular claim.

*Use of terms "social science" and "qualitative"*: We note the problem of using the terms 'qualitative' and 'social science' misleadingly as synonyms. Amusingly, although Moon et al. (submitted) emphasise the point and criticise the special issue, the quote they issue, falls into the same trap. The quote used to make their point is actually from one of the responding authors (St. John, 2014)) but with 'qualitative' in the original quotation replacing the phrase 'social science'. This illustrates the ease of considering 'social science' and 'qualitative' as interchangeable.

## Philosophy

The aim of articles in *Methods in Ecology and Evolution* is to elaborate upon specific methods (within 5000 - 6000 words) rather than examine broad philosophical issues. The special issue throws light upon a set of articles on qualitative techniques with a strict word limit. Thus we strived to restrict our description of the techniques without trying to cover epistemological jargon (e.g. objectivism, constructionism, subjectivism). As such, the reader is expected to be aware of the epistemological and ontological rationale that have led them to consider using these techniques, as opposed to the vast majority of positivist techniques covered in the journal. We also agree with Moon *et al* (submitted) that such broader discussion could be included in the supplementary material, a point made in the original special issue (see Young *et al*, 2018).

Moon *et al.* (submitted) also observe that the unique value of social science data in understanding how and why, instead of simply 'what'". *Methods in Ecology and Evolution* is a journal on methods. Answering "why" in detail in a methods journal such as MEE was beyond the journal's scope. As Moon *et al.* (submitted) themselves state, much of social science research is about the context, it is logical to assume that the "why" will be determined by the specific research context. In addition, we have tried to capture the contexts in which the methods were used in each of the articles based on a review the best available contemporary evidence.

Moon et al, (submitted) implicitly assume a linear relationship between research philosophy and research design (line 91-94). In Crotty's (1998) own words, researchers rarely begin with identifying the ontology and epistemology first in their research design. These are often determined by the specific research context and the line of enquiry:

> "*Not too many of us embark on a piece of social research with epistemology as our starting point….We typically start with a real-life issue that needs to be addressed, a problem that needs to be solved, a question that needs to be answered. We plan our research in terms of that issue or problem or question….In this way our research question, incorporating the purposes of our research, leads us to methodology and methods".*

In fact, Crotty (1998, pg 14) explains it rather succinctly, when he states that the "great divide" between qualitative and quantitative research occurs at the level of methods and not at the higher level of epistemology and ontology. We therefore recommend researchers to reflect on the initial and implicit ontological and epistemic leanings from an early stage in their research even if it does not form the starting point. This will help clarify the epistemological issues that are often ignored or undervalued.

*Objectivism*

Moon *et al.* (submitted) criticise the set of papers for perpetuating an objectivist view of the world that suggests that the 'objective' truth can be discovered. They argue that multiple truths, or versions of reality can exist simultaneously (constructionism), and thus setting out to find the truth in a positivist fashion is often misguided in social research. On the face of it, it would be rather disconcerting for the research community if there were no social truths to discover. However, we agree with the authors that multiple versions of reality are held by different people in different places, particularly in a post-normal conservation world (Rose, 2018).

147 Indeed, this logic underpins the emphasis on fieldwork across the social sciences (which is
148 not a discipline as Moon et al. [submitted] claim), particularly in disciplines such as
149 Geography. Epistemic relativism posits that truth varies from person to person, with
150 philosophers such as Kant arguing that we can perhaps never fully understand what things are
151 like 'in themselves' (see Higgins, 2016). Higgins (2016) uses the example of reality from a
152 human perspective versus that of from the viewpoint of a fly; surely it holds true that each
153 would see the world differently. We thus agree with the need to investigate forensically how
154 views about conservation vary from place-to-place, but also how they differ across
155 communities within a specific place. Social science research methods, however, such as
156 interviews and focus groups, conducted in specific places can be good ways of exploring how
157 truths vary in different contexts. We disagree that there is not a truth, or there are not truths,
158 which can sometimes be found by social research. Indeed it would be questionable to suggest
159 that even the most extreme relativists, such as Nietzsche, would categorically reject the
160 notion that there are absolutely no truths in the world (Higgins, 2016).
161
162 We also argue that social science methodologies can, and should, sometimes be used to
163 generalise and to try, where possible, to be representative of a studied population. We cannot
164 justify the costs of conducting fieldwork in every place in order to gain the view from
165 everywhere (Sutherland *et al*., 2018). Thus, if we do not select case studies and attempt to
166 generalise in some way, we are in danger of not being able to provide the view from
167 anywhere. We did not make the claim in the special issue that social science methodologies
168 should always attempt to generalise. We would indeed support a venture to send an army of
169 anthropologists and geographers to every place on Earth in order that generalisation using
170 social data was not necessary. However, till we find an adequate funding and socially-

171 justifiable, sustainable model to underpin this, generalisation seems to be the most sensible
172 approach where appropriate.
173
174 ## Bias
175 The context of bias in the entire special issue is that of cognitive bias (**psychological bias**)
176 (see section 3.3, page 60, as well as Table 2 in Mukherjee et al, 2018). Moon *et al.*
177 (submitted) arguments are actually based on **researcher bias**, particularly in their discussion
178 of the inherent subjectivity (or better 'bias') in many social science methods. As a direct
179 response to our articles, this criticism is not valid. While it provides an eloquent description
180 of researcher bias in social science research (with which we agree), the authors have missed
181 the point about cognitive biases that we were trying to make. Nowhere in the special issue
182 have we tried to downplay the significance of researcher bias, which is indeed a very critical
183 aspect of social science research.
184
185 While we accept the challenges of dealing with error and bias, and appreciate that these
186 cannot be completely eliminated, we are dismayed by the philosophical approach of
187 accepting that the research is biased, and reflecting on why that is, rather than attempting to
188 improve the rigour of the research to get a better answer. Subjectivity and bias may be
189 'inevitable' as Moon et al. (submitted) describe, but we should not treat it in a blasé way
190 without considering how it can be reduced as much as possible.
191
192 ## Depth of reporting
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194 The response by Moon *et al.* (submitted) note that social science methodologies should be
195 reported on in detail, a point made in several places in the special issue (e.g. Young et al.,

2018). Like the special issue, they state that it is important to report on all methodological decisions made so that the credibility and robustness of the research can be judged, and elements replicated (which we sincerely agree with). Rather than include these crucial methodological choices in the supplementary section, which are often not indexed (as suggested by Moon *et al* [submitted]), we recommend that adequate emphasis is given in the main text so that the research reporting is robust. As Crotty (1998, page 13) argued:

> "*We need, of course, to justify our chosen methodology and methods. In the end, we want outcomes that merit respect.... Our conclusions need to stand up. On some understandings of research (and of truth), this will mean that we are after objective, valid and generalisable conclusions as the outcome of our research.*"

The process used by conservation researchers thus needs to be reported on carefully to allow others to judge the robustness of their study. As the special issue noted, particularly by the interview paper by Young *et al.* (2018), articles in the conservation literature often fail to adequately report on the use of methods, missing key details such as sample size, whether an interview was piloted, how the data were analysed, and how conclusions were reached. Although social science data collection cannot always be replicated in the same form as laboratory-based scientific experiments, this should not provide an excuse for lack of robust reporting.

Moon et al. also criticise one of the papers in the special issue for describing qualitative data as 'overwhelming', but this is a fact that has been noted in several social science methodology guides. Bryman (2008, 538), for example, writes that one of the main difficulties with qualitative research 'is that it very rapidly generates a large, cumbersome database because of its reliance on prose'. The fact that qualitative data can produce such a

cumbersome database has led social scientists themselves (Miles, 1979, in Bryman, 2008, 538) to describe qualitative data as an 'attractive nuisance'. We do not believe that pointing out the fact that qualitative data as overwhelming makes qualitative methods less attractive to researchers, but rather provides a statement of fact about some of the challenges associated with carrying out the methodology. This is a caveat that Moon et al. (submitted) would presumably support us in making.

## Concluding remarks

Research, whether in the social or natural sciences is complex, is essential if we are to make progress with the world's pressing problems. With our unapologetic emphasis on looking for useful information, we call for more rigorous adoption of methods and for further research on identifying the nature of conservation problems. Applying interventions, such as the logging interventions in Moon *et al.* (submitted), can be introduced in a wide range of ways (e.g. introduced by local or outsider, starting with a group discussion or talking to key players, providing funding to individuals or the community). The testing and collation of the effectiveness of different approaches applied under different conditions would greatly improve practice.

At a local scale we need toolkits for practitioners to identify the intricacies of the problem (e.g. who benefits from the illegal logging, why are those empowered to prosecute transgressions not doing so, who would undermine the proposed anti-logging interventions and what could be done to make them support them) and collations of the generalities of the problem to minimise the need for each programme to start investigating from scratch.

In order to improve decision making, which is known to often be seriously flawed (Sutherland and Burgman, 2015), we need to understand the human values as the underlying drivers that shape the decisions. The methods covered in the special issue were targeted towards this aim of understanding these crucial value positions. We hope the readers find the review of the application of the techniques useful in guiding their choice of methods. Though the list is not comprehensive in any way (do see Moon et al. for some additional methods), it provides a first glance into the social science approaches that could be used for decision making and for understanding human value positions. Through a deeper understanding of these value positions, we will be able to arrive at better solutions to address the pressing needs of both conservation research and practice in the coming decades.

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Author contributions: NM, DCR and WJS wrote the manuscript. ME and DG edited the draft. All authors contributed critically to the drafts and gave final approval for publication.

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