Check for updates

ESSAY

REVISED Positionality statements in science

[version 2; peer review: 2 approved]

Veli-Matti Karhulahti

University of Jyväskylä, Jyväskylä, Finland

v2 **First published:** 27 Mar 2024, **4**:62
https://doi.org/10.12688/openreseurope.17058.1
Latest published: 21 Jun 2024, **4**:62
https://doi.org/10.12688/openreseurope.17058.2

Abstract

The goal of this essay is to clarify positionality as an epistemological scientific concept and address related misunderstandings to help researchers assess whether statements thereof contribute to their work. Positionality statements can be useful for various research designs across scientific fields, when they are used knowingly.

Keywords

Bias. Epistemology, Interdisciplinary, Knowledge, Methodology, Objectivity, Philosophy of Science, Subjectivity

This article is included in the Philosophy, Ethics and Religion gateway.

This article is included in the European Research Council (ERC) gateway.

This article is included in the Horizon Europe gateway.

Open Peer Review

Approval Status ✓ ✓

	1	2
version 2 (revision) 21 Jun 2024	✓ view	
version 1 27 Mar 2024	? view	✓ view

1. **Ingo Rohlfing**, University of Passau, Passau, Germany

2. **Nicki Lisa Cole**, Know-Center GmbH, Graz, Austria

Any reports and responses or comments on the article can be found at the end of the article.

Corresponding author: Veli-Matti Karhulahti (veli-matti.m.karhulahti@jyu.fi)

Author roles: Karhulahti VM: Writing – Original Draft Preparation, Writing – Review & Editing

Competing interests: No competing interests were disclosed.

Grant information: This project has received funding from the European Research Council (ERC) under the European Union's Horizon Europe research and innovation programme (Grant agreement No. 101042052). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Council. Neither the European Union nor the granting authority can be held responsible for them.
The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Copyright: © 2024 Karhulahti VM. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

How to cite this article: Karhulahti VM. **Positionality statements in science [version 2; peer review: 2 approved]** Open Research Europe 2024, **4**:62 https://doi.org/10.12688/openreseurope.17058.2

First published: 27 Mar 2024, **4**:62 https://doi.org/10.12688/openreseurope.17058.1

REVISED **Amendments from Version 1**

The new version makes it even clearer that positionality statements can be useful across different sciences, and a section that previously referred to imperfect information games has been removed to avoid confusion. Several typos have been fixed and minor clarifications added.

Any further responses from the reviewers can be found at the end of the article

Introduction

Different branches of science are sometimes compared to games that are played by slightly different rules[1]. In interdisciplinary research and multidisciplinary journals, it can be difficult for editors, reviewers, and readers to assess whether scientists have correctly followed the rules because multiple games are played simultaneously. One of the rules that has recently confused the scientific world concerns *positionality statements,* which refer to disclosing the scientist's position in relation to the conducted research. While positionality has historically and pragmatically established functions in certain methodological traditions[2–4], in the past few years, an increasing number of scientists across disciplines have started disclosing their positions[5–7]. This essay aims to clarify positionality as an epistemological concept and research tool to help scientists in all fields decide whether such statements can contribute to their work.

What positionality does

Some methodologies operate with data and analyses that are mostly visible, whereas others do not reach transparency to the same degree. The epistemological treatise of positionality originates mainly from the latter, such as qualitative research traditions, where both producing and analyzing data depend heavily on the tacit interactions of individual researchers[3,4]. A statement of the researcher's position can serve as metadata that sheds light on both data generation and analysis.

Reflecting on the scientist's position has long been a central part of anthropological and other interpretively oriented research paradigms[2,3]. Although positionality can be related to biases, it is not a matter of bias *per se* but a much larger question of calibrating the research process. When the scientist itself is part of the toolset that is used to generate primary research data—for instance, ethnographic fieldnotes—the details of that "tool" are relevant to acknowledge, not unlike recognizing and transparently reporting materials in biology, physics, or psychology. Because engaging in fieldwork is a process where only a small part of interactions and observations can be documented, it matters *who* engaged and selected the fieldnote data. In these cases, reflecting on the relevant aspects of the scientist is part of the research process and also makes the scientific community, including meta-analysts, better equipped to assess the study and its components.

Compared to quantitative analytic traditions, qualitative research methods often depend heavily on the scientist's interpretive effort and are thus even more flexible when it comes to researcher degrees of freedom[8]. Positionality statements can provide contextualizing information that explains some of the differences between two or more interpreters. For example, a non-Korean scientist who manually codes medical interview data from South Korea may be unable to identify signals that are evident to Korean scientists. Meanwhile, the same non-Korean scientist, as an "outsider," may be positioned to see other meanings more clearly. Reflecting on such positions can serve as a helpful analytic tool, especially in proactive use. As in preregistration more generally[9], stating pre-study assumptions can help making useful analytic calibrations before it is too late. In registered reports, positionality statements may also help inform early peer feedback[10].

Two common misunderstandings

A common misunderstanding is that scientific positionality statements must pick a set of group identities, as from a 'shopping list'[11]. Nonetheless, there are no reasons to expect all group identities to be relevant for the generation and analysis of all research questions. Each positionality statement should fit the methods and topics of a specific study: What are the scientists' backgrounds, beliefs, and other aspects that are likely to affect the generation or analysis of these *particular* data? In a psychiatric interview study, the scientist's (lack of) clinical background is likely to be relevant, whereas an ethnographic study of gender interactions may benefit from reflecting on the scientist's gender[4]. Because it can never be perfectly known what aspects of a position meaningfully affect the data and analyses, pre-study reflections on positionality serve essentially as auxiliary hypotheses: explicit assumptions about how a scientist's subjectivity can affect upcoming findings.

The second enduring misunderstanding is that positionality rests on standpoint epistemology or postmodernism, which may sometimes even challenge the possibility of scientific knowledge[2,6]. Reflections of positionality do not demand a specific epistemology, yet epistemological (and ontological) assumptions can belong to a stated position. As the earlier examples illustrate, positionality statements can contribute to values that align with objectivity and traditional philosophies of science, such as those based on falsification[12]. Nonetheless, positionality statements should always be used *knowingly* with a function that serves the study in question. For example, multi-author studies that operate with numerous experts may benefit more from closed-ended position surveys than from hundreds of statements. For research designs that deal with thematic political analyses by one or two authors, detailed statements of positionality can be advantageous. Because positionality does not equally benefit (or harm) all studies, journals should not mandate positionality statements but treat them like other research tools: encourage them to be used wisely when fitting with the methodology and philosophy of a study.

To position or not

How should scientists decide when to use a positionality statement? The first step is to reflect on one's own role within the chosen study and its topic: the more weight a research design has on individual scientists and their implicit decisions or interactions, the more likely a position is to impact the results,

especially if the research question has significant subjective relevance. Although the role of individual scientists, for example, in controlled statistical designs may be minor, positionality statements can contribute to such research too. The increasing number of adversarial collaborations and unresolved disputes over meaningful effect sizes demonstrate how positionsmay also link to statistical decisions as well as inference[13]. Positionality is not a bias, but can turn into one if a scientist fails to acknowledge its true effects.

Second, the relevance of positionality does not differ from that of setting other assumptions for a study. Reflexive self-assessments will sometimes produce false negatives and positives, as do other assumptions, but the very act of transparent reflection already contributes to useful critical positioning. Openly reflecting on one's own role in the research process subjects it to the same scrutiny as other research materials[14]. In the same way as it is impossible to guarantee that reported data exclusions, manipulations, and other research decisions correspond to reality[15], the degree to which positionality statements echo actual positions can never be fully known. Nonetheless, spelling out positionalities and their (lack of) relevance remains one of the tools that can help scientists across fields not fool themselves, as long as the tool is used knowingly.

Acknowledgements

I do not consider a positionality statement to serve any meaningful function in this non-empirical essay. However, it may be worth disclosing that I have both used and omitted positionality statements in my previous work. Someone might consider this a competing interest, as the present essay potentially questions the coherence of my earlier work.

References

1. Kuhn T: **The structure of scientific revolutions.** University of Chicago Press, 1962.
Reference Source
2. Salzman PC: **On reflexivity.** *Am Anthropol.* 2002; **104**(3): 805–811.
Publisher Full Text
3. Malterud K: **Qualitative research: standards, challenges, and guidelines.** *Lancet.* 2001; **358**(9280): 483–8.
PubMed Abstract | **Publisher Full Text**
4. Knott E, Rao AH, Summers K, *et al.*: **Interviews in the social sciences.** *Nat Rev Methods Primers.* 2022; **2**: 73.
Publisher Full Text
5. Zamzow R: **Scientists clash over 'positionality statements'.** *Science.* 2023; **382**(6670): 501.
PubMed Abstract | **Publisher Full Text**
6. Savolainen J, Casey PJ, McBrayer JP, *et al.*: **Positionality and its problems: questioning the value of reflexivity statements in research.** *Perspect Psychol Sci.* 2023; **18**(6): 1331–1338.
PubMed Abstract | **Publisher Full Text**
7. McKerracher L, Núñez-de la Mora A: **More voices are always better: tackling power differentials in knowledge production and access in human biology.** *Am J Hum Biol.* 2022; **34**(Suppl 1): e23712.
PubMed Abstract | **Publisher Full Text**
8. Simmons JP, Nelson LD, Simonsohn U: **False-positive psychology: undisclosed flexibility in data collection and analysis allows presenting anything as significant.** *Psychol Sci.* 2011; **22**(11): 1359–1366.
PubMed Abstract | **Publisher Full Text**
9. Hardwicke TE, Wagenmakers EJ: **Reducing bias, increasing transparency and calibrating confidence with preregistration.** *Nat Hum Behav.* 2023; **7**(1): 15–26.
PubMed Abstract | **Publisher Full Text**
10. Karhulahti VM, Branney P, Siutila M, *et al.*: **A primer for choosing, designing and evaluating registered reports for qualitative methods [version 2; peer review: 2 approved].** *Open Res Eur.* 2023; **3**: 22.
PubMed Abstract | **Publisher Full Text** | **Free Full Text**
11. Folkes L: **Moving beyond 'shopping list' positionality: using kitchen table reflexivity and in/visible tools to develop reflexive qualitative research.** *Qual Res.* 2023; **23**(5): 1301–1318.
Publisher Full Text
12. Popper K: **Conjectures and refutations: rhe growth of scientific knowledge.** (Routledge), 1963.
13. Corcoran AW, Hohwy J, Friston KJ: **Accelerating scientific progress through Bayesian adversarial collaboration.** *Neuron.* 2023; **111**(22): 3505–3516.
PubMed Abstract | **Publisher Full Text**
14. Mason J: **Qualitative researching.** (Sage), 2002.
15. Bishop D: **How Sscientists can stop fooling themselves over statistics.** *Nature.* 2020; **584**(7819): 9.
PubMed Abstract | **Publisher Full Text**

Open Peer Review

Current Peer Review Status: ✔ ✔

Version 2

Reviewer Report 25 June 2024

https://doi.org/10.21956/openreseurope.19542.r41568

© **2024 Rohlfing I.** This is an open access peer review report distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

✔ **Ingo Rohlfing**
University of Passau, Passau, Germany

I appreciate the author's feedback. The revisions are fine to me. The article is in good shape now.

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: social science research methods; meta science; open science

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Version 1

Reviewer Report 30 May 2024

https://doi.org/10.21956/openreseurope.18432.r40176

© **2024 Cole N.** This is an open access peer review report distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

✔ **Nicki Lisa Cole**
[1] Know-Center GmbH, Graz, Austria
[2] Know-Center GmbH, Graz, Austria

This essay discusses the concept of positionality, the practice of writing and publishing positionality statements, and what ends this practice serves. The essay is well situated in relevant literature, clearly and persuasively written and backed by evidence, and offers a valuable

contribution to the methodological cannon for interpretive research traditions, and for scientific methodology more broadly. My only critique, is that it could be explicitly stated that reflecting on positionality is not only useful and important within interpretive/qualitative positions, but can also be for scientific research, generally speaking.

Is the topic of the essay discussed accurately in the context of the current literature?
Yes

Is the work clearly and cogently presented?
Yes

Is the argument persuasive and supported by appropriate evidence?
Yes

Does the essay contribute to the cultural, historical, social understanding of the field?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Qualitative research methodologies, open and reproducible research

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Author Response 16 Jun 2024

Veli-Matti Karhulahti

Thank you for making time to review the essay. I appreciate the kind feedback and agree it would be valuable to explicitly state that positionality statements can be useful across sciences in general. For the second version, I have added this information both to the abstract and at the end of the essay.

Competing Interests: No competing interests were disclosed.

Reviewer Report 13 May 2024

https://doi.org/10.21956/openreseurope.18432.r40170

© 2024 Rohlfing I. This is an open access peer review report distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

?

Ingo Rohlfing
[1] University of Passau, Passau, Germany

[2] University of Passau, Passau, Germany

The submission is situated in work on positionality statements and the role of assumptions for empirical research. I see the main contribution as three-fold. The first and second contribution is the clarification of two misunderstandings. One is the belief that positionality is tied to set of group identities. The second misunderstanding relates to the idea that positionality statements have to be rooted in interpretivist or radical postmodern epistemologies and philosophies of science. The third contribution, which is related to the other two, is the argument that positionality statements involve assumptions about how the own experiences, knowledge etc. influence the empirical analysis.

I find the submission valuable because it argues convincingly that the scope of positionality statements is larger than some or many researchers may think. I like the argument that preregistered research and many-analysts studies, which are primarily quantitative, would also benefit from positionality statements. They may help in explaining why researchers who try to answer the same research question with the same data arrive at different, sometimes contradictory results.

The only point I am not convinced of is the analogy to games with imperfect information. I understand why information about an empirical analysis may be imperfect when a positionality statement is missing. However, I am not sure what the game is that is played. Who are the players? What are their utility functions? What are the players' strategies? As I read it, the reference to games is not central to the paper. I suggest it is dropped, or elaborated on in more detail.

Is the topic of the essay discussed accurately in the context of the current literature?
Yes

Is the work clearly and cogently presented?
Yes

Is the argument persuasive and supported by appropriate evidence?
Yes

Does the essay contribute to the cultural, historical, social understanding of the field?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: social science research methods; meta science; open science

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 16 Jun 2024

Veli-Matti Karhulahti

Thank you for making time to review the essay. I appreciate the kind feedback and agree that the reference to imperfect information games was confusing and unnecessary. For the second version, I have simply omitted this part and added small clarifications about the qualitative-quantitative relationship in other parts of the essay.

Competing Interests: No competing interests were disclosed.