
Mixed Methodology or Mixing Up Methodology?

Lene Pettersen

Westerdals Oslo School of Arts,
Communication and Technology
Oslo, Norway
lene.pettersen@westerdals.no

License: The author(s) retain copyright, but ACM receives an exclusive publication license.

Abstract

This paper concerns some personal experiences and reflections on interdisciplinarity in cases when scholars have different research methods and traditions. Generalizability, for example, is typically regarded as being established by large samples rather than by any of the logics of qualitative research. I argue that qualitative work has a tendency to be viewed through a quantitative lens and thus risk mixing up qualitative and quantitative research logics, which in turn might lead to research flaws. To avoid methodological pitfalls, I argue that we need to have a more extensive understanding of key characteristics of qualitative and

quantitative methodology, and of the methods' respective potentials and limitations.

Author Keywords

Interdisciplinarity; methodology; generalizability; qualitative research; quantitative research.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous;

Introduction

I am a social anthropologist with an interdisciplinary heart working in the intercept of HCI, strategy, communication and organizational research. Today we study phenomena that overlap greatly across academic silos, and research methods from anthropology and other ethnographic methods are embraced by disciplines outside the social sciences. For example, the HCI-field and other ICT-disciplines are inspired by anthropology and ethnographic methods, as shown, for example, by Orr [8] and Suchman [13].

The French philosopher and linguist Roland Barthes once said,

Interdisciplinary work, so much discussed these days, is not about confronting already constituted disciplines (none of which, in fact, is willing to let itself go). To do something interdisciplinary it's not enough to choose a 'subject' (a theme) and gather around it two or three sciences. Interdisciplinarity consists in creating a new object that belongs to no one [4].

Even if "interdisciplinarity" does not have one definition to gather around, it concerns different research streams, schools and scholars working together yet with different, and thus diverse, often contrasting, perspectives. Diversity is found to play a key role in creating new and innovative ideas [3]. However, it is also well-known that with diversity conflict easily arise [2]. I have experienced the way in which the collision of different research traditions with respect to methodology and epistemology can easily be a party-stopper for interdisciplinarity. There seems to be an underlying assumption that, even if using qualitative methods, the work is to be viewed through a quantitative lens. For example, a prominent editor in a top journal explained in a publishing workshop that "The rule number one to get published in top journals is not to be interdisciplinary". The editor further recommended that qualitative scholars should submit their data (transcripts, field notes, or whatever types of data they had collected) along with their articles so that the reviewers could evaluate the raw data and form their own opinions about the analysis and conclusions reached in the articles. There are a number of alarming issues related to attitudes like this (e.g. privacy, research ethics), but perhaps most alarming are the attitudes related to well-known methodological debates between the qualitative and the quantitative traditions. The editor's view can also often be recognized among researchers who typically work with "hard data". Most importantly, the recurrent discussions center on qualitative studies' generalizability and their potential for being replicated. The methodological debate turns on the ability of qualitative methods' customary small samples to support generalizations from the micro to the macro level [1, 6, 7]. This long-standing discussion is problematic because it challenges the great potential

that lies in interdisciplinary work in a time where mixed methods research is trending in the Academia [10].

Generalizability – A Question of Small or Large N's?

Numerous scholars claim it is difficult to generalize findings that derive from case studies. This view concerns the difficulty of testing hypotheses with a small N - only a few entities -, a hypothetic-deductive approach typical of quantitative studies that seek to test causal effects by confirming or rejecting already-established hypotheses. Inductive-deductive inferences, however, do the opposite, by asking different questions that produce non-statistical answers rather than confirming or rejecting already-established knowledge claims. Yet there is a common prejudice of mistakenly equating the generalizability of data with its volume. However, generalizability concerns logical and analytical inferences [1, 14]. Without generalizing "anthropology is nothing more than a hobby, what Edmund Leach called 'butterfly collecting'" [11]. While quantitative research concerns the systematic investigation of phenomena via statistical and mathematical models answering what, where, and when questions, qualitative methodology provides an understanding of why and how elements are interrelated. Thus, a large N enables statistical generalizability. A qualitative methodology provides a certain set of categorical assumptions that, in turn, need to be approached by analytical logic. Yin [14] uses the term 'analytical generalization' to clarify the contrast with 'statistical generalization'. Quantitative and qualitative approaches reach different types of conclusions on basis of different types of data, and one cannot draw inferences from one of them to the other; they must be interpreted within their respective logical

frameworks [1, 12]. Views that equate representativity with numbers of observations draws attention away from logic and analytical inferences, and thus also theory development [1]. For example, the classic exploratory case study of Penrose's [9] Hercules Powder Company on the growth of firms, re-interpreted earlier studies, and established new concepts (e.g. slack, internal resources) that are valid independently of the Hercules Powder Company. The study therefore assists theory development and analytical generalizability. However, all these differences is poorly communicated in much research [1].

Using Qualitative Methods in Quantitative Terms

When working as a minority it can be difficult to enter the majority's dancing floor. However, the converse can be equally difficult, where the quantitative researcher ends up using qualitative methods yet within the framework of quantitative methodology. The result is thus an unfortunate mismatch of different research logics. For example, there seems to be a tendency for some scholars to try to respond to the prejudice of generalizability by using qualitative tools such as interviews and observations as means of data collection, yet with quantitative techniques as sampling large numbers of participants, conducting a high number of interviews and/or observations, asking a high number of questions, and coding a large number of categories, all for the sake of analysis that may provide statistical answers with a focus on frequency, variance, and variables, typically using constructs as 'evidence', 'variables', and 'effect'. With a focus on large data samples rather than "data-depth", attention is drawn away from how key elements interplay in

meaningful ways that can give rise to logical and analytical inferences.

Closing

What can be done to avoid these methodological pitfalls? Some key steps could serve as a starting point; Firstly, we need to gain a more profound understanding of epistemology and methodology, the key differences in quantitative and qualitative research traditions, and their potentials and limitations. Secondly, different ways of doing things needs to be articulated explicitly when working closely and interdisciplinary, where a trustful and respectful work-environment should be aimed. Finally, qualitative methods needs to be better taught to students. All too often qualitative methods are spoken of in general terms without stressing the key points mentioned in this paper. With more insights of each other's' research traditions, misunderstandings, prejudices and conflicts that typically occur when people that hold different perspectives come together [2] are likely to be downplayed [5]. Then we might build "a new object that belongs to no one" as suggested by Roland Barthes [4].

References

1. Svein S. Andersen. 1997. *Case-studier og generalisering*. Oslo, Norway: Fagbokforlaget.
2. Nigel Bassett-Jones. 2005. The paradox of diversity management, creativity and innovation. *Creativity and innovation management*, 14(2), 169-175.
3. Roland S. Burt. 2004. Structural holes and good ideas. *American journal of sociology*, 110(2), 349-399.
4. James Clifford and George E. Marcus. 1986. *Writing culture: The poetics and politics of ethnography*. University of California Press.
5. Thomas Hylland Eriksen. 1991. *Veien til et mer eksotisk Norge: En bok om nordmenn og andre underlige folkeslag* (English: Towards a more exotic Norway: A book about Norwegians and other weird peoples) (1 ed.). Oslo, Norway: Gyldendal Norsk Forlag.
6. John Gerring. 2004. What is a case study and what is it good for? *American political science review*, 98(2), 341-354.
7. Stanley Lieberman. 1991. Small N's and big conclusions: an examination of the reasoning in comparative studies based on a small number of cases. *Social Forces*, 70(2), 307-320.
8. Julian E. Orr. 1996. *Talking about machines: An ethnography of a modern job*. Cornell University Press.
9. Edith Penrose. 2009. *The Theory of the Growth of the Firm*. Oxford University Press. Fourth edition.
10. Mario Luis Small. 2011. How to Conduct a Mixed Methods Study: Recent Trends in a Rapidly Growing Literature. *Annual Review Sociology*, 37:57-86.
11. Phillip Carl Salzman. 2009. What is "essentialism," and how should we avoid it? Retrieved May 30th, 2014, from <http://openanthcoop.ning.com/group/theoryinanthropology/forum/topics/what-is-essentialism-and-how>
12. William R. Shadish, Thomas Cook and Donald T. Campbell. 2002. *Experimental and quasi-experimental designs for generalized causal inference*. Boston: Houghton Mifflin Company.
13. Lucy Suchman. 2007. *Human-machine reconfigurations: Plans and situated actions*. Cambridge University Press.
14. Robert K. Yin. 2012. *Applications of case study research*. 3rd ed. Thousand Oaks, CA: SAGE Publications.