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How Can a Family Resemblances Approach Help to Typify Qualitative Research? Exploring the Complexity of Simplicity

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Abstract

The term *qualitative research* still gives meaning to a diverse array of approaches. Attributes typical of these approaches are easily oversimplified. Recognition that qualitative research requires no essential set of *predefining* attributes can minimize this problem. This article suggests how to typify qualitative research outputs on the basis of *overlapping similarities* in the uses of this research. It discusses these similarities within and across five domains of qualitative research—philosophy and theory, purpose, approach to reasoning, data collection, and use of numbers. Across these domains, qualitative research is typified as research that, without taking a unified stance on epistemological issues, can produce rich data by selecting and engaging purposefully with small samples, and analyzing these data using iterative processes of induction, abduction, and deduction. Within this network of family resemblances, no attributes of qualitative research are individually necessary or sufficient. Together, they attend simply to the complexity of coinciding attributes of this research.

Keywords

qualitative research, typification, methodology, methods

Introduction

The term *qualitative research* covers a diverse, even disorderly, array of approaches—a “carnavalesque profusion of methods, perspectives, and theoretical justifications” (Atkinson et al., 2001, p. 2). This panoply of approaches can appear foreign, challenging, and impenetrable, especially to inexperienced qualitative researchers. As a category label, qualitative research lends some stability to this quasi-chaotic situation. However, differences between the approaches can still make qualitative research amorphous. Qualitative researchers tend therefore to struggle to typify its attributes without resorting to oversimplifications. Some authors (e.g., Sale, Lohfeld, & Brazil, 2002) do not acknowledge this problem. Others such as Punch (2005) argue for starting with simplified definitions of qualitative research, including statements, in introductory research textbooks, about what qualitative research is not. For example, Punch (2005) states that “qualitative research is empirical research where the data are not in the form of numbers” (p. 3) and other authors suggest that qualitative research is “a not so-descriptive adjective” (Schwandt, 2001) of research that “produces findings not arrived at by statistical procedures or other means of quantification” (Strauss & Corbin, 1998; pp. 10-11). In contrast, there are textbooks that speak to the variety of approaches and traditions on which qualitative research draws in

disciplines such as health care (Grbich, 1999). Alternatively, authors may typify this research loosely—for example, as natural, inductive, and people-centered (e.g., Bogdan & Biklen, 2007)—which further risks distorting its inherent complexity. The result can be to confuse novice qualitative researchers or generate broadly held misunderstandings. Critics may rejoin that this stereotyping of textbook accounts of qualitative research exacerbates continuing misunderstanding and mistrust of qualitative research. However, I believe that it highlights an unmet need to typify this research in nuanced ways, a need exposing confusion over the meaning of “typical.”

To answer this confusion, I wish to draw on ideas of the German philosopher Ludwig Wittgenstein (1953) and suggest that qualitative research has no essential nature—no clear set of one or more *predefining* attributes that individually must always be present. Instead, qualitative research derives meaning from its *use* to convey attributes whose

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relatedness to each other—and to past research that has been called qualitative—brings them together (as in the intersection of a Venn diagram). As Wittgenstein (1953) explains, “The [meaning and] strength of the thread [signifying here the categorization of qualitative research] does not reside in the fact that some one fiber runs through its whole length, but in the overlapping of many fibers” (p. 32a). No feature, therefore, needs to be common to all qualitative research. Instead, we require only a “network of similarities overlapping and criss-crossing” (Wittgenstein, 1953, p. 66). “Typical” fibers are those that suffice for the fabric of qualitative research to hold. Rosch’s (1981) prototype theory further recognizes that some fibers or family resemblances may be better than others at serving this function.

This article draws on these ideas to typify qualitative research on the basis of overlapping attributes in five related domains: philosophy and theory, purpose, approach to reasoning, data collection, and use of numbers. In each domain, an italicized typification of qualitative research highlights prototypical features for the sake of being simple and clear without over-sacrificing complexity (Mosenthal, 1986). This typification dwells within a larger discussion of domain features that are overlapping but not necessarily universal—features that the current approach to defining qualitative research can miss by assuming “that there are universal features of all forms of qualitative research,” not merely specific ones (Dixon-Woods, Shaw, Argarwal, & Smith, 2004, p. 224).

Most qualitative research textbooks similarly start by describing standard features of qualitative research within specific methodological design options (e.g., Creswell, 2003), research perspectives (e.g., Flick, Von Kardorff, & Steinke, 2004), or paradigmatic approaches (e.g., Lincoln & Guba, 1985). In contrast, a family resemblances approach can typify qualitative research by producing a *single* clear image of sufficient overlapping features that typify this research *more* comprehensively than does the requirement for all features to be present within the individual domains. Family resemblances still privilege common features—and therefore a post-positivist conceptualization of qualitative research—and can overlook differences that question salient patterns and facilitate theory building. However, reference to prototypes gives weight to the importance of features of the typification. And, like a wide-brim umbrella, the typification gives shelter to diverse features, can be constantly checked, and can oversee an evolving pedagogy and curriculum for teaching qualitative research.

Philosophy and Theory

Some researchers mix qualitative (and quantitative) methods to address their research question (Creswell, 2003)—which may seek to solve a problem in the real world or widen insights into, and understanding of, a complex issue—and increase confidence in their research findings (O’Cathain,

Murphy, & Nicholl, 2007; Patton, 2002). I respect this approach to bridging differences that can be important in practice, but want to suggest that philosophical differences, even between quantitative research and qualitative research, are frequently overstated in degree and importance. Overlapping the different types of qualitative research (and quantitative research) are important similarities in philosophy and theory, which too often go unrecognized.

I contend that the different types of qualitative research are similar and their underlying philosophical differences tend to be unimportant or exaggerated. Qualitative research draws on highly abstract, global, and non-testable theories called meta-theories, such as post-positivism, social constructionism, and pragmatism, which are much more similar to each other than is typically acknowledged. Post-positivist researchers believe in the existence of an objective, material reality beyond the mind and language. However, as Burr (2003) admits, so too do most of the relativists among the pragmatists and social constructionists, just as “most realists acknowledge the power of language to construct the world in some respects” (p. 88). The differences between these groups can be subtle. A key difference between their respective approaches is that social constructionists and pragmatists, unlike post-positivists, tend to avoid or at least de-emphasize the question of reality *per se*.

Pragmatists replace the distinction between appearance and reality with one between more and less useful descriptions. The value of these descriptions derives from their usefulness not as mirrors but as tools for producing things that people want. For pragmatists such as Putnam, the tools are (usefully) answerable to an objective reality, whereas other pragmatists, such as Rorty, reduce reality to agreement within a community (Horner, 2004; Rorty et al., 2004). They resemble social constructionists, who, doubting that the reality of an external world can be directly known, do not concern themselves with its nature. Instead, they seek consensus on what can be apprehended through discourse—as language-in-use—in a given, historical and cultural context. In common with the pragmatists, they acknowledge that “language can be used to refer to reality for practical purposes” (Burr, 2003, p. 93). For example, most social constructionists accept that high blood pressure exists, but point out that once we discuss it, it becomes the social construct of hypertension, which is useful as well as real on the basis of the context-bound, arbitrary thresholds delimiting hypertension from normotensive blood pressure. Post-positivists agree that the world is open to interpretation, that incomplete understanding of this world varies between people, and that language contributes to this variation. Yet, for them, knowledge of the world and its positive use depend less on how discourse constructs the world than on how reality is tentatively understood. They reject any pragmatist premise that truth necessarily depends on “what works.”

The notion that qualitative research is more value-laden and subjective than “objective” quantitative research is

similarly too simple. Values permeate both types of research at all stages, including the assumptions made, questions posed, methods used, what the research expects to find, and how findings are recognized and then interpreted for meaning, explanation, publication, and other use. All qualitative research and quantitative research therefore incorporate subjective acts. Qualitative researchers, however, most openly acknowledge this fact; distrust claims that objectivity makes them passive recipients of external information; and reflect on how their values influence their research and its objectivity. However, this self-awareness and self-reflection, among other things, can *enhance* their objective comprehension of, and ability to manage, the influence of their own subjective experience (Ratner, 2002). For all these reasons, I de-emphasize philosophical differences between types of qualitative research (and even between quantitative research and qualitative research).

Purpose

From recognizing all research as value-laden, and de-stabilizing the opposition in qualitative research between what is socially constructed and what is real, I now wish to suggest that qualitative research seeks most importantly to generate rich data, typically from small samples. This research tends to be exploratory, although it can also test, seek to confirm, and generate ideas. Reasons for qualitative research seeking to produce rich data include, but do not depend on, a search for in-depth understanding of lived experiences and beliefs, ideally in a natural setting (Lincoln & Guba, 1985). However, most qualitative research is not naturalistic—the formal qualitative interview, the most common method of qualitative data collecting, produces non-naturally occurring talk (Murphy & Dingwall, 2003)—and understanding is not always the key purpose of qualitative research. Just as important may be instrumental, emancipatory, and symbolic uses of findings (Rossman & Rallis, 2012).

All these uses depend on qualitative data whose richness derives from their contextual depth, is feasible to achieve in small samples, and speaks to the value of generalizations beyond specific settings (Payne & Williams, 2005). Given the smallness and selected nature of these samples, some social constructionists minimize or deny the need to generalize from one set of circumstances in qualitative research to another (Payne & Williams, 2005). Indeed, a challenge has been mounted to “the possibility of generalizability in any type of research, be it qualitative or quantitative . . . because findings are always embedded within a context” (Polit & Beck, 2010, p. 1452). Other scholars have suggested that generalization is overrated as a source of scientific progress (Flyvbjerg, 2006). However, increasing demand for generalizable and useful knowledge comes from qualitative researchers who view the generalization of qualitative research as both possible and important. From the perspective that “generalization is a matter of degree, rather than a

binary decision” (Kennedy, 1979, p. 665), they believe that knowledge can be generalized from one or a small number of cases, to all instances similar to those studied (Ayres, Kavanagh, & Knafl, 2013). A family resemblances approach accommodates the capability of qualitative research to have a purpose of generating data that may be generalizable.

Three modes of generalization elaborate on this purpose (Lewis & Ritchie, 2003). First, “representational generalization” addresses in qualitative research the question of whether sample findings can represent the phenomenon of interest and on that basis be generalized to a target population. The second mode is the “theoretical generalization” of general principles and conditions that make different experiences possible. It can include a need to revise or reject a proposition when even one observation does not fit the developing schema. The third mode is “inferential generalization” of sets of patterns; sometimes also referred to as naturalistic generalization (Stake, 1995), transferability (Lincoln & Guba, 1985), case-to-case translation (Firestone, 1993), or reader generalizability (Misco, 2007). It aims to enable readers to have the detailed descriptions they need to assess whether empirical findings can be generalized beyond the sample setting. In summary, unifying the different types of qualitative research is the aim of constructing rich data, typically from small samples, which often can be generalized in different ways.

Approach to Reasoning

The source of all three of the modes of generalization from qualitative research is analysis rather than probability, and logical inference rather than statistical inference (Mitchell, 1983). Purposefully selected qualitative samples are appropriately typified as not amenable to generalization on a statistical basis, yet even quantitative research seldom meets the assumptions of the statistical inference procedures it nevertheless over-applies; many quantitative studies start from the sample rather than the population and do not sample randomly or achieve random or representative samples (Polit & Beck, 2010). Logical inference for generalization entails a form of induction. However, inductive reasoning can also contribute to analogy and concept formation outside the domain of generalization (Tsang & Williams, 2013).

Widely typified as being mainly inductive, qualitative research includes bottom-up reasoning from specific observations to identify patterns and generate concepts, hypotheses, and theory. This typification is clearest when approaches to qualitative data analysis (QDA) are explicitly labeled as *inductive*, for example, by Thomas (2006). However, although mainly inductive, the practice of qualitative research typically demonstrates a recursive cycle of analogical, inductive, and deductive reasoning (Bendassolli, 2013). This cycle lessens differences between qualitative research and quantitative research, the latter being typically misrepresented as merely deductive.

Analogical reasoning involves the logic of comparison and contrast. For example, inferential generalization requires researchers to generate thick descriptions of local particulars to give readers of their research sufficient information to compare the similarity of their own case setting against the setting described by the research. This comparison involves readers in reasoning whether, on balance, these situations are alike enough on a large number of relevant attributes to warrant an empirical, intuitive type of inferential generalization. Theoretical generalization may similarly invoke analogical reasoning, but here the researcher explicates a theory, which is likely supported by analogy (Rossman & Yore, 2009). Analogical reasoning may draw on inductive reasoning or generate arguments that are deductively valid.

Deductive reasoning—from a pre-existing framework that entails its conclusions—is actually common in qualitative research. It is evident in several ways. Pre-existing research and orienting concepts or theory are likely to sensitize the researcher to a problem requiring investigation. It can also give focus to the study objectives. Qualitative research seldom realizes Scriven's (1991) "goal free" ideal of evaluating only actual effects against demonstrated needs (p. 56). Indeed, the so-called framework approach to QDA was developed for policy-relevant research in which the study objectives are structured explicitly and transparently in advance to satisfy funding requirements (Ritchie & Spencer, 1993).

Conspicuously here, but also in qualitative research in general, the study objectives stated and any existing framework will guide the collection and analysis of data, a priori by informing the identification of relevant study domains and incipient coding categories (MacFarlane & O'Reilly-de Brún, 2012). Although typically noted to generate rather than test prior hypotheses (Thomas, 2006), most qualitative research is iterative, non-linear and seeks deductively to refine and confirm the early ideas and patterns that it identifies (inductively) from the study data. Because induction can lead to false conclusions, these processes include looking for disconfirming (or deviant) cases that do not fit the patterns that the researcher finds. Disconfirming cases that are found are drawn upon analogically to hone meanings of the patterns and themes in the context of rival explanations. Themes and new theoretical ideas are also checked against pre-existing knowledge (Rudnick, 2014). Less generally, deductive reasoning is apparent in qualitative approaches such as Yin's (1994) case study method and pattern-matching (Hyde, 2000). These approaches state theoretical propositions before data gathering commences or, in the case of analytic induction, from the first case or early cases. They then test the propositions, their premises, or both. This testing involves deducing expected consequences and comparing them with what the data show. When the data describe one observed case, a general rule may be reasoned to best account for that case. This (abductive) reasoning from a single case is a special form of induction. Meanwhile, other approaches, such as

replication case study designs and "hold-out" samples, further formalize the use of deductive testing procedures. Hold-out samples denote data archived to test propositions developed through early data analysis (Hyde, 2000).

Deduction is even evident in highly inductive approaches such as classic grounded theory, where "deduction and verification are the servants of emergence" (Heath & Crowley, 2004, p. 144). Despite recognizing that this theory overplays its inductive elements, Strauss and Corbin perpetuate the myth in their own version of grounded theory—QDA—that theory can "emerge from the data" (Strauss & Corbin, 1998, p. 12). Seldom can researchers initially and temporarily put aside their prior knowledge, beliefs, and full range of everyday, conscious experience; keep an open mind; and let data speak for themselves. Indeed, QDA emphasizes deductive reasoning by using predetermined categories (such as conditions, context, and consequences) to cluster open codes (that can be integrated with a core category to produce a theory). Over time, however, QDA has become more inductive by requiring ongoing data comparisons to facilitate the development of theory.

Data Collection

Having suggested why qualitative research is mainly inductive but also tends to involve analogical and deductive reasoning, I now want to consider the collection of data around which such reasoning takes place. There is a tendency to typify qualitative data collection as involving *naturalistic* observation and semi-structured or unstructured interviews that pose *open* questions as part of a *dialogue*. This dialogue is more than "a tool of inquiry . . . [and signifies] a wholly engaged encounter" that aims to be caring, democratic, and—by giving voice to interviewees—emancipatory (Kuntz & Presnall, 2012, p. 733). Students are generally further taught to avoid "problematic" interviewing practices such as asking closed—and, in particular, leading—questions (Ezzy, 2010).

However, these generalizations oversimplify qualitative interviewing. Qualitative interviews are not power-free meetings of equals. They are hierarchical interactions that have latent potential for manipulation and exploitation (Kvale, 2006). Like a "Trojan horse," they can be used to create trust, get behind interviewees' defense walls, and control the interview. In these terms, qualitative interviews are conversations, rather than open dialogues, purposefully conducted to satisfy the research interest of the interviewer in uncovering or constructing how the interviewee understands and makes sense of their private life world. How the interview data are collected, interpreted, and reported remains largely outside the control of the interviewee (Kvale, 2006).

Researchers should not appropriate knowledge without giving value back to participants—for example, by asking them questions they want to be asked and listening actively to the answers. Nevertheless, closed questions can fit the

purpose of qualitative interviews. Even though formal qualitative interviews are not naturalistic, the use of closed questions mirrors habitual aspects of everyday social interaction. As detail-oriented probes, these questions can follow up, and focus, responses from interviewees by requesting and facilitating further, specific information from them. The questions can also check or clarify the understanding of the interviewer (Roulston, 2011), require interviewees to justify their statements (Brinkmann, 2007; Curato, 2012), and help to control interviews. Such control is important when time is scarce and interviewees dwell on material that does not answer the question posed, are loquacious, or appear to withhold information. Likewise, leading questions can appropriately characterize interviews because “the decisive issue . . . is not whether to lead or not to lead, but where the questions do lead” (Kvale, 1996, p. 89)). More important therefore than stipulating the use of open and non-leading questions is providing a framework wherein questions can lead participants to provide answers that accurately represent their world and point of view and are relevant to serving the research aims of the interviewer (Patton, 2002). In other words, the quality of formal interviews depends less on the types of questions posed than their ability to achieve the purposes of the research (Kvale, 1996).

Use of Numbers

Compared with quantitative research, qualitative research continues to be typified as de-emphasizing the use of numbers (Adler & Adler, 2012). Numbers are not, of course, a key characteristic overlapping other features of qualitative research. However, a family resemblances approach allows recognition of their relevance to different stages of, and approaches to, conducting qualitative research. Numbers can be used to establish the rationale for qualitative research, be important to consider and describe in sampling for qualitative research, and characterize some forms of QDA.

Small samples typify, but are not unique to, qualitative research; they can also characterize quantitative research, most notably single-subject trials of treatment safety and effectiveness. Moreover, the size of qualitative samples varies. Diversity within the study group is likely to increase the sample size needed. Qualitative samples that are too small for the purpose of a particular study can miss a key perspective. Overlarge qualitative samples introduce redundancy and thus contribute inefficiently to the developing understanding of the researcher.

In turn, researchers may seek to analyze the content of qualitative data by enumerating in context the frequency of keywords or ideas within analyzed text. The generated frequencies may be reported as numbers explicitly or implicitly through verbal language such as “most” or “usually.” This approach can represent “an attempt not to infer meaning but, rather, to explore usage” (Hsieh & Shannon, 2005, p. 1283) and it can appropriately facilitate and display pattern recognition.

However, as a point of difference from quantitative research, the use of simple counts in non-probability samples cannot give precision to statements about “the frequency, typicality or even intensity of an event” (Sandelowksi, 2001, p. 231). Counts of how many participants report something are also difficult to interpret or use to validate a viewpoint in these samples. Participants’ stories “defy the anonymity of a number” (Seidman, 2006, p. 9) because “it is the quality of the insight that is important, rather than the number of respondents that share it” (Wainwright, 1997, p. 11). Bradley, Curry, and Devers (2007) nevertheless exemplify the misnomer that “themes are recurrent unifying concepts or statements about the subject of inquiry” (p. 1760) even though recurrence cannot suffice to identify themes because it is not the same as importance (Buetow, 2010). Because codes can be infrequent but important, and because inductive reasoning does not confer likelihood or probability (Rudnick, 2014), the number of instances is also irrelevant to the ability to generalize findings on the basis of logic. My key point, however, is that the relevance of numbers to qualitative research can be easily overlooked in the absence of looking for family resemblances.

Conclusion

This discussion has sought to offer a more nuanced understanding of qualitative research. It has used a family resemblances approach to typify qualitative research as a unified collection of overlapping similarities, none of which is individually necessary or sufficient. This approach typifies qualitative research more comprehensively than does requiring predefining features. My approach also helps to circumvent the current plethora of competing definitions of, and approaches to, qualitative research. Instead, it yields a single clear image of qualitative research as producing rich data by selecting and engaging purposefully with small samples, and analyzing them using iterative processes of abduction, induction, and deduction—without taking an overtly unified stance on epistemological issues. These family resemblances reflect a loose kind of structure that still reduces the complexity of qualitative research to similarities and common features, a characteristic typical of post-positivist epistemology and methodology. However, the focus now is on what some features—not necessarily all—have in common. The use of prototypes minimizes this limitation by qualitatively highlighting features that appear functionally most important. A further problem is that for observable features of qualitative research to resemble one another (and so share a family resemblance) is different from them forming a natural family; thus, there is likely to be a “gray zone” in which some examples of qualitative research—such as applications of a summative content analysis—do not look like qualitative research, whereas other non-qualitative research—such as a case report—looks qualitative. However, family resemblances usefully approximate truth in terms of coherence within a system of consistent propositions. I invite readers

therefore to consider developing this approach, and my application of it, to attend as simply as possible to the complex challenge of defining qualitative research.

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