On Concepts and Paradigms in Mixed Methods Research

Manfred Max Bergman¹,²

Concepts as a Research Opportunity for Mixed Methods Research

Concepts, also known as conceptions or constructs, play various important roles in empirical research and, by extension, could be the subject of more explicit inquiry in mono and mixed methods research. For empirical researchers, a concept can be understood as an abstract object, abstractum, or a mental representation. Well-being, depression, poverty, achievement, family, class, illness, democracy, power, gender, and ethnicity are examples of concepts. Concepts occupy an interesting position in that they refer either directly or indirectly to something inferred from a specific set of occurrences in conjunction with the mental formation of a notion associated with these. In 1936, Albert Einstein argued that

“the first step in setting a ‘real external world’ is the formation of the concept of bodily objects of various kinds. Out of the multitude of our sense experiences we take, mentally and arbitrarily, certain repeatedly occurring complexes of senses impressions (partly in conjunction with sense impressions which are interpreted as signs of sense experiences of others), and we attribute to them a meaning—the meaning of the bodily object. Considered logically, this concept is not identical with the totality of sense impressions referred to; but it is an arbitrary creation of the human (or animal) mind. On the other hand, the concept owes its meaning and its justification exclusively to the totality of the sense impressions which we associate with it” (pp. 59-60).

Although it is no longer fashionable, especially in the social and related sciences, to speak of a “real and external world” or “bodily objects,” a translation of these complex constructs into contemporary verbiage, such as “social representations,” “social constructions,” “cognitive constructs,” “objects of thought,” and so on, renders this citation even more relevant for a wide range of empirical research. One could easily extend these reflections to include an internal or mental world, and to emphasize the social, cultural, historical, and psychological processes associated with the formation, maintenance, and change of concepts (e.g., Durkheim, 1898; Fiske & Taylor, 2008; Moscovici, 1984).

One of the main reasons why concepts are so interesting in empirical research is that they are not only the building blocks of theory, but they also form the link between theory and empirical research. Operational definitions (also known as operationalizations), for example, are attempts

¹University of Basel, Switzerland
²Visiting Professor at the University of Johannesburg

Corresponding Author:
Manfred Max Bergman, University of Basel, Petersgraben 27, Basel 4051, Switzerland
Email: max.bergman@unibas.ch
to translate components of a research question or hypothesis into variables and, thus, to create a bridge from the theoretical and conceptual to the measurement level. In this sense, concepts are transformed into measurable entities, usually via logical argumentation and authority claims and, embedded therein, the use of further concepts. “Altruism,” for instance, may include “help” and “behavior” as part of its operationalization, even though “help” and “behavior” are still merely concepts. Even in qualitative research, where operationalization is usually not part of the research process, researchers nevertheless have to at least provide definitions that make the concepts they use in their research more intelligible.

Empirical research is inundated with concepts on different levels: First, any research theme, question, theory, or hypothesis is composed of concepts as well as an indication of the relationship between them. Second, any communication and instruction between researchers and the researched, and any instrument or procedure to collect data in interview, focus group, survey, and experimental research, includes concepts that are decoded, possibly quite differently, by the interviewees, participants, respondents, and subjects. Third, as individuals decode the researchers’ concepts and encode their response in relation to the tools of these data collection methods, they use their own or the researchers’ concepts. Fourth, researchers analyze and interpret patterns and structures of the thus provided data using field-specific and theory-derived concepts. Even though concepts play an indispensable role in theory and empiricism, they are rarely the subject of inquiry themselves. Instead they are usually taken for granted as researchers focus primarily on theory and analysis.

Mixed methods research is eminently suited for exploring variations in the construction of meaning of concepts in relation to how respondents, for instance, make sense of their experiences or report on attitudes in interviews or questionnaires, respectively. An systematic inquiry into the variations of social constructions of meaning among interview and survey respondents may not only help in validating research instruments and scales, but may go further in that they could produce complementary subsets of results, which would enrich overall findings. Instead of merely comparing response frequency between social groups or national samples, a qualitative research component may explore variations in the meaning structure and boundaries of the constructs embedded in the survey question. Dimensional analyses could also be used to understand variations in human encoding and decoding of concepts. A systematic analysis of key concepts, either as embedded in the research literature, or among respondents or interviewees, will not only help in designing better questions but may also guide analysis and interpretation. Finally, systematic conceptual analyses within a mixed methods framework could also be used in meta-analyses and meta-evaluation.

The Use of the Term Paradigm in the Social and Related Sciences Literature

A paradigm is a special form of concept, which has gained in importance not only in the social and related sciences but also in the philosophy of science, from where the influence on contemporary empirical research stems. With his seminal book *The Structure of Scientific Revolutions*, Kuhn (1962) popularized the use of the concept “paradigm” in science. According to Kuhn, scientific paradigms determine the kind of questions researchers ask, how these questions are to be understood, what data to collect, and how to interpret research results to derive answers to these questions. Accordingly, a paradigm is

An organizing framework that contains the concepts, theories, assumptions, beliefs, values, and principles that inform a discipline on how to interpret subject matter of concern.
The paradigm also contains the research methods considered best to generate knowledge and suggests that which is open and not open to inquiry at the time. (Powers & Knapp, 1990, p. 103)

In the literature on mixed methods research, the term **paradigm** is used in a number of ways. Most often, it is used when authors attempt to differentiate qualitative from quantitative research. At first glance, it appears that they are indeed different paradigms as most authors in this vein even provide tables, which classify the differences between qualitative and quantitative methods on epistemological, ontological, and axiological grounds (e.g., Creswell & Plano Clark, 2007; Denzin & Lincoln, 1994; Silverman, 2000; Tashakkori & Teddlie, 1998). On closer inspection, however, it is difficult to sustain these differences because qualitative and quantitative analysis techniques do not necessitate a particular view of the nature of reality, privilege a specific research theme and how to research it, or determine the truth value of data or the relationship between researchers and their research subject (Bergman, 2008). Thus, many research questions can be answered using different theories, data sets, and analytic strategies. Although the mixed methods research community has taken on board many of the orthodoxies that have been developed in the 1980s and 1990s, it could be argued that these orthodoxies were established in part to create order where there is none, or at least very little. Indeed, the order between the so-called paradigms in the literature has often created inconsistencies in relation to what qualitative and quantitative methods can or cannot do, as well as inconsistencies in relation to what is claimed about the methods in the method section of an article and its proposed aims and results. Strictly speaking, if we were indeed faced with two competing paradigms, then it would not be possible to combine qualitative and quantitative elements within one research question because, as Kuhn already recognized, competing paradigms are incommensurable. Accordingly, it is difficult to sustain the argument that mixed methods research in itself can be seen as a new or alternative paradigm as even here, concepts, principles, theories, methods, and so on are not predetermined in a particular way (for an extensive alternative discussion, refer to Morgan, 2007), and as it is not likely that mixed methods research will replace mono method research across the social and related sciences.

There is a second, weaker form, in which the term **paradigm** is used in the literature. In its weaker form, the term is roughly synonymous with a “worldview” (e.g., Denzin & Lincoln, 1994). Given that most grand or middle range theories could be considered a worldview, the use of the term paradigm would lose its specific significance. In this weaker form, the term paradigm has been applied to mean “approach” or “framework,” including Western and ecological paradigms (Catton & Dunlap, 1980); Afrocentric versus Western or Eurocentric paradigms (Mazama, 2001); scientific versus radical ethnomethodological paradigms (Arminen, 2008); structural realism vs. constructivism paradigms (Goddard & Nexon, 2005); cause and effect versus culture in law paradigms (Saguy & Stuart, 2008); the new public management paradigm (Gow & Dufour, 2000); humanist, structuralist, interpretive, and functionalist paradigms (Hassard, 1991); pragmatic, transformative, and indigenous paradigms (Mertens, 2010); prevention, cure, and inoculation paradigms (Holland, 1990); and so forth. So how many paradigms are there in the social and related sciences? In the sense of the strong meaning, probably none (Phillips, 1973). In the weak sense, where the term paradigm signifies an approach or framework, there are as many paradigms as there are authors who feel the need to distinguish a meta, grand, and middle-range theoretical approach from alternatives.

Associating qualitative and quantitative research with the notion of paradigms only works in the weak sense. In contrast, this association cannot be sustained in the strong sense and neither can the idea of paradigm wars or the incompatibility thesis in a Kuhnian sense. There is indeed
a field of theorization and empirical research, which has demonstrated that the strong sense of paradigm is inappropriate for the two sets of methods: Mixed Methods Research. As the grand theory constructed around the notion of qualitative and quantitative paradigms cannot explain the theoretical or empirical work in this field, the notion of paradigm in this sense may just have to evolve. Maybe a paradigm shift is in order?

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