

Qualitative Methods

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Qualitative versus Quantitative: What Might This Distinction Mean?

**DAVID COLLIER, JASON SEAWRIGHT, &
HENRY E. BRADY**

University of California, Berkeley
dcollier@garnet.berkeley.edu
seawrigh@socrates.Berkeley.edu
hbrady@csm.Berkeley.edu

The founding in 2003 of the APSA Organized Section on Qualitative Methods provides a fitting occasion to reflect on this branch of methodology.¹ Given that the other APSA organized section concerned with methodology² is centrally focused on quantitative methods, the additional issue arises of the relationship between the qualitative and quantitative traditions.

Adopting a pragmatic approach to choices about concepts (Collier and Adcock 1999), we believe that the task here is not to seek the "true" meaning of the qualitative-quantitative distinction. Rather, the challenge is to use this distinction to focus on similarities and contrasts in research practices that pro-

vide insights into *how* to do good research, and into different *ways* of doing good research.

We have found it useful to think about the qualitative-quantitative distinction in four ways (see Table 1), focusing on the level of measurement, size of the N, use of statistical tests, and thick versus thin analysis. Each of these approaches is associated with distinctive forms of analytic leverage.

Four Approaches to the Qualitative-Quantitative Distinction

The first approach concerns the level of measurement.³ Here one finds ambiguity regarding the cut-point between qualitative and quantitative, and also contrasting views of the leverage achieved by different levels of measurement. Some scholars label data as qualitative if it is organized at a nominal level of measurement and as quantitative if it is organized at an ordinal, interval, ratio, or other “higher” level of measurement (Vogt 1999: 230). Alternatively, scholars sometimes place the qualitative-quantitative threshold between ordinal and interval data (Porkess 1991: 179). This latter cut-point is certainly congruent with the intuition of many qualitative researchers that ordinal reasoning is central to their enterprise (Mahoney 1999: 1160-64). With either cut-point, however, quantitative research is routinely associated with higher levels of measurement.

Higher levels of measurement are frequently viewed as yielding more analytic leverage because they provide more fine-grained descriptive differentiation among cases. However, these higher levels of measurement depend on complex assumptions about logical relationships — for example, about order, units of measurement, and zero points — that are sometimes hard to meet. If these assumptions are not met, this fine-grained differentiation can be illusory, and qualitative categorization based on close knowledge of cases and context may yield far more analytic leverage.

The second approach focuses on the N, i.e., the number of observations regarding the main outcome or phenomenon of concern to the researcher. A paired comparison of Japan and Sweden, or an analysis of six military coups, would routinely be identified with the qualitative tradition. By contrast, an N involving hundreds or thousands of observations clearly falls within the quantitative approach. Although there is no well-established cut-point between qualitative and quantitative in terms of the N, such a cut-point might plausibly be located somewhere between 10 and 20 cases. Differences in

Table 1. Four Approaches to Qualitative vs. Quantitative Research

Criterion	Defining Distinction	Comment
1. Level of Measurement	Cut-point for qualitative vs. quantitative is nominal vs. ordinal scales and above; alternatively, nominal and ordinal scales vs. interval scales and above.	Lower levels of measurement require fewer assumptions about underlying logical relationships; higher levels yield sharper differentiation among cases, provided that these assumptions are met.
2. Size of the N	Cut-point between small N vs. large N might be somewhere between 10 and 20; yet this does not consistently differentiate qualitative and quantitative research.	A small N and a large N are commonly associated with distinctive sources of analytic leverage, which are summarized by the third and fourth criteria below.
3. Statistical Tests	In contrast to much qualitative research, quantitative analysis employs formal tests grounded in statistical theory.	Statistical tests provide explicit, carefully formulated criteria for descriptive and causal inference; a characteristic strength of quantitative research.
4. Thick vs. Thin Analysis¹	Central reliance on detailed knowledge of cases vs. more limited knowledge of cases.	Detailed knowledge associated with thick analysis is likewise a major source of leverage for inference; a characteristic strength of qualitative research.

¹See the note 4 below concerning related terms.

the size of the N, in turn, are directly linked to the alternative sources of leverage associated with the third and fourth approaches.

The third approach to the qualitative-quantitative distinction concerns statistical tests. An analysis is routinely considered quantitative if it employs statistical tests in reaching its descriptive and explanatory conclusions. By contrast, qualitative research does not explicitly or directly employ such tests. While the use of statistical tests is generally identified with higher levels of measurement, the two do not necessarily go together. Quantitative researchers frequently apply statistical tests to nominal variables. Conversely, qualitative researchers often analyze data at higher levels of measurement without utilizing statistical tests. For example, in the area studies tradition, a qualitative country study may make extensive reference to ratio-level economic data.

Statistical tests are a powerful analytic tool for evaluating the strength of relationships and important aspects of the uncertainty of findings in a way that is more difficult in qualitative research. Yet, as with higher levels of measurement, statistical tests are only meaningful if complex underlying assumptions are met. If the assumptions are not met, alternative

sources of analytic leverage employed by qualitative researchers may in fact be more powerful.

Fourth, we distinguish between thick and thin analysis.⁴ Qualitative research routinely utilizes thick analysis, in the sense that researchers place great reliance on a detailed knowledge of cases. Indeed, some scholars consider thick analysis the single most important tool of the qualitative tradition. One type of thick analysis is what Geertz (1973) calls “thick description,” i.e., interpretive work that focuses on the meaning of human behavior to the actors involved. In addition to thick description, many forms of detailed knowledge, if utilized effectively, can greatly strengthen description and causal assessment. By contrast, quantitative researchers routinely rely on thin analysis, in that their knowledge of each case is typically far less complete. However, to the extent that this thin analysis permits them to focus on a much larger N, they may benefit from a broader comparative perspective, as well as from the possibility of using statistical tests.

Specializing and Bridging

Much valuable research fits squarely within either the qualitative or quantitative tradition, reflecting a specialization in one approach or the other. At the same time, other scholars fruitfully bridge these traditions.

Specialization *vis-à-vis* the qualitative-quantitative distinction is easy to identify. On the qualitative side, such research places central reliance on nominal categories, focuses on relatively few observations, makes little or no use of statistical tests, and places substantial reliance on thick analysis. On the quantitative side, such research is based primarily on interval-level or ratio-level measures, a large N, statistical tests, and a predominant use of thin analysis. Both types of study are common, and both represent a coherent mode of research. Correspondingly, it makes sense, for many purposes, to maintain the overall qualitative-quantitative distinction.

In addition to substantive studies, research on methodology often fits clearly in one tradition or the other. From the standpoint of the new APSA Qualitative Methods Section, it is particularly relevant that one can identify coherent traditions of research on qualitative methods.⁵ For example, work influenced by Giovanni Sartori (1970, 1984) remains a strong intellectual current in political science.⁶ This research places central emphasis on nominal categorization and offers systematic procedures for adjusting concepts as they are adapted to different historical and analytic contexts. Constructivist methods for learning about the constitution of meaning and of concepts now play a major role in the field of international relations (Wendt 1999; Finnemore and Sikkink 2001). In comparative politics, Schaffer’s (1998) book on *Democracy in Translation* is an exemplar of the closely related interpretive tradition of research, and interpretive work is also a well-defined methodological alternative in public policy analysis focused centrally on the United States (e.g., Yanow 2000, 2003). These various lines of research explore the contribution of thick analysis; the idea that adequate description is sometimes a daunting task that merits sustained attention in its own right;

and the possibility that the relation between description and explanation may potentially need to be reconceptualized. The strong commitment to continuing these lines of careful work on description, concepts, categories, and interpretation is a foundation of qualitative methods.

At the same time, an adequate discussion of the relation between qualitative and quantitative methods requires careful consideration not only of these polar types, but also of the intermediate alternatives based on bridging. For example, strong leverage may be gained by employing both thick analysis and statistical tests. This kind of “nested analysis” combines some of the characteristic strengths of both traditions.

An interesting example of bridging is found in new research — partially methodological, partially substantive — on necessary and sufficient causes. With this type of causation, both the explanation and the outcome to be explained are usually framed in terms of nominal variables. Yet the discussion of how to select cases and test hypotheses about necessary causation has drawn heavily on statistical reasoning. Thus, a tool identified with the quantitative tradition, i.e., statistical reasoning, serves as a valuable source of ideas for research design in testing hypotheses about nominal variables, which are obviously identified with the qualitative approach.⁸

Other areas of bridging include research based on a larger N, but that in other respects is qualitative; as well as research based on a relatively small N, but that in other respects is quantitative. For example, some non-statistical work in the qualitative comparative-historical tradition employs a relatively large N: Rueschemeyer, Stephens, and Stephens (1992; N=36), Tilly (1993; hundreds of cases), R. Collier (1999; N=27), and Wickham-Crowley (1992; N=26). Comparative-historical analysis has become a well-developed tradition of inquiry,⁹ and the methodological option of qualitative comparison based on a larger N is now institutionalized as a viable alternative for scholars exploring a broad range of substantive questions.

By contrast, some studies that rely on statistical tests employ a smaller N than the comparative-historical studies just noted and introduce a great deal of information about context and cases. Examples are found in quantitative research on U.S. presidential and congressional elections, which routinely employs an N of 11 to 13 (e.g., Lewis-Beck and Rice 1992; J. Campbell 2000; Bartels and Zaller 2001). Other examples are seen in the literature on advanced industrial countries, for example: the study by Hibbs (1987) on the impact of partisan control of government on labor conflict (N=11); and the many articles (see note 10 below) that grew out of the research by Lange and Garrett (1985; N=15) on the influence of corporatism and partisan control on economic growth.

This literature on advanced industrial countries has stimulated interesting lines of discussion about the intersection of qualitative and quantitative research. On the qualitative side, Tilly (1984: 79), in his provocative statement on “No Safety in Numbers,” has praised some of this work for taking a major step beyond an earlier phase of what he saw as overly sweeping cross-national comparisons, based on a very large N. In some of this literature on advanced industrial countries he sees instead the emergence of a far more careful, historically

grounded analysis of a smaller N — thus in effect combining the virtues of thick analysis and statistical tests. On the quantitative side, the Lange and Garrett article has triggered a long debate on the appropriate statistical tools for dealing with a relatively small N.¹⁰ Finally, Lange and Garrett's article has been a model within this literature for the innovative use of an interaction term in regression analysis. This step helps to overcome a presumed limitation of quantitative research by taking into account contextual effects. In the intervening years, the use of interaction terms in regression has become more common, and Franzese (2003: 21) reports that between 1996 and 2001, such terms were employed in 25 percent of quantitative articles in major political science journals. In sum, this literature points to diverse avenues for cross-fertilization.

Conclusion

We are committed both to specialization and to bridging. With regard to specialization, one of the rationales for forming a Qualitative Methods Section is to provide coherent support for new research on qualitative methods. Such support is needed within political science, and the discipline will benefit from the emergence of a more vigorous research tradition focused on qualitative tools.

At the same time, bridging is valuable. The different components of qualitative and quantitative methods provide distinct forms of analytic leverage, and when they are combined in creative ways, innovative research can result. Bridging and specialization are therefore both central to the goals of the new section.

Endnotes

¹We draw here on Chapter 13 in Brady and Collier (2003, forthcoming).

²The APSA Organized Section for Political Methodology was officially constituted in 1986.

³The four traditional levels of measurement (nominal, ordinal, interval, and ratio) suffice for present purposes; we recognize that far more complex categorizations are available.

⁴This distinction draws on Coppedge's (1999) discussion of thick versus thin concepts; it is also closely related to Ragin's (1987) discussion of case-oriented versus variable-oriented research.

⁵Well-developed traditions of research on methods are of course found within the quantitative tradition as well.

⁶For example, Levitsky (1998); Gerring (1999, 2001); Kurtz (2000). For a related line of analysis, see Johnson (2002, 2003).

⁷This term is adapted from Coppedge's (2001) "nested induction" and from Lieberman's "nested analysis" (2003).

⁸Goertz (2003) has provided a strong demonstration of the substantive importance of necessary causes. Braumoeller and Goertz (2000: 846–47) have suggested that if hypotheses about necessary causes are treated within a standard regression framework, incorrect estimates of causal effects will result, and that alternative tests are needed. On case selection for testing necessary causes, see Ragin (2000); Seawright (2002a, b); Braumoeller and Goertz (2002); Clarke (2002); Goertz and Starr (2003).

⁹For a new synthesis and assessment of comparative-historical research, see Mahoney and Rueschemeyer (2003).

¹⁰Among many articles in this debate, see Jackman (1987), Alvarez, Garrett, and Lange (1991), Beck et al. (1993) Beck and Katz (1995), Kittel (1999), and Beck (2001).

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