Review of Charles Ragin's "Fuzzy-Set Social Science"

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Book Review


In 1987, Charles Ragin published The Comparative Method, a remarkable book that forcefully insisted on the legitimacy of case-oriented research as well as on the fundamental commonalities of qualitative and quantitative social research. While the divide between the two research traditions has by no means disappeared, this claim has come to be more and more widely accepted. Thus, in their attempt to draw lessons for qualitative research from the methodological practices and standards of quantitative social inquiry King, Keohane, and Verba state that “the differences between the quantitative and qualitative traditions are only stylistic and are methodologically and substantively unimportant. All good research can be understood—and is indeed best understood—to derive from the same underlying logic of inference” (1994, p. 4).1

At the same time, Ragin sought to move, as the subtitle of his 1987 book put it, “beyond qualitative and quantitative strategies” by advocating Qualitative Comparative Analysis (QCA)—a formalization of comparative case studies that treats cases and their configuration of features as members of multiple sets. QCA systematizes the representation of similarities and differences across cases and provides for the examination of complex patterns of causation. Rejecting as too limiting the (often unrecognized) assumptions underlying variable-oriented quantitative research, it uses set-theoretic techniques that are compatible with diversity-oriented comparative case research.

Fuzzy-Set Social Science is devoted to the same two broad themes. It constitutes a major restatement of his views on qualitative and quantitative research and a significant advance of the QCA project as a “third way” of social analysis.

political liberalization but with an absence of investment dependence and economic hardship (p. 282).

The intent of these critical considerations is not, however, a rejection of conventional quantitative analysis and an endorsement of conventional small-N, qualitative comparative research. Ragin’s concern is, rather, first, that quantitative research practice should take the strengths of the best qualitative work as a challenge to improve its procedures and, second, that qualitative comparative research should capitalize on these strengths and adopt the systematically rationalized form that he develops under the banner of “fuzzy-set social science.”

The central achievement of the mode of analysis he proposes is the identification of necessary and sufficient causal conditions. Critical for this achievement are two methodological innovations that complement the use of fuzzy rather than binary sets. First, he develops a probabilistic way of assessing sufficiency and necessity. Given the many sources of error that make it difficult to assess causal conditions, he develops benchmarks for less than perfect causal relations. These convert verbal formulations of common discourse into numerical values—for instance .8 for causal factors that are “almost always” necessary or sufficient, .65 for causal conditions that are “usually” necessary or sufficient, or .5 when causal conditions are only “more often than not” necessary or sufficient. He then shows that it is possible to calculate the number of consistent cases required to reach statistical significance for any of these judgments. Many will be surprised that only a relatively small number of cases is needed to reach conventionally acceptable levels of confidence. This is due to the fact that no case is allowed to be at odds with the pattern indicating necessity or sufficiency (though a minor adjustment to account for measurement and assessment error may be made). Thus, the findings about causal conditions sufficient to bring about IMF protests were based on fewer than 30 cases; yet they were judged “almost always sufficient” (.80) with a significance level of .01.

It would be a mistake to see fuzzy-set classification as just a simplified version of an interval scale. It not only has a meaningful zero and end (full membership) point; the different points in between, including the mid- or crossover point, constitute qualitative judgements based on an intimate knowledge of the cases as well as relevant theory. In the study of IMF protests, the analyst had “to transform relatively unsystematic qualitative evidence into a fuzzy set with seven levels of membership:

1.00 fully in
.83 mostly but not fully in
.67 more or less in
.50 neither in nor out
.33 more or less out
in fuzzy-set measurement it sets higher standards even for those modes of research that do not employ this technique.

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REFERENCES