ECPR Joint Sessions of Workshops 2012

Workshop Proposal

“Methodological Advances, Bridges and Limits in the Application of Qualitative Comparative Analysis”

ABSTRACT

Applications of Qualitative Comparative Analysis (QCA) have proliferated in the 25 years since Charles Ragin’s landmark publication “The Comparative Method”, testifying to the marked increase in interest among researchers in the possibilities and advantages of this method as a tool for social-scientific enquiry. However, while the basic mechanisms behind its three related variants – crisp-set QCA (csQCA), multi-value QCA (mvQCA), and fuzzy set QCA (fsQCA) – have become widely accepted, a critical juncture has now been reached. Scholars begin to not only recognize fundamental limits and limitations, but also possibilities in further developing, extending, and complementing the method to reap its full potential for advancing our understanding of social, political and economic questions. The proposed workshop thus addresses junior and senior scholars working on methodological issues relating to QCA as a technique, and applications of QCA to substantial questions, in order to improve the method and broaden its applicability.1

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25 years of Qualitative Comparative Analysis

In the quarter-century since Charles Ragin’s 1987 landmark publication “The Comparative Method: Moving beyond Qualitative and Quantitative Strategies”, interest among political scientists in the possibilities and advantages of QCA as a tool kit of social-scientific enquiry has markedly increased. At least three developments attest to this claim. Firstly, the number of articles published in social science journals that make use of this method has risen considerably. Figure 1 visualizes an analysis of the Social Sciences Citation Index (SSCI) from the ISI Web of Knowledge with the term “QCA” in only “Topic” or “Title” search fields. It shows a marked increase in the number of publications from under five per year to about twenty in the last fifteen years, and in citations from under ten per year to over sixty. Although these figures are highly likely to be a gross underestimation of the overall number of works on QCA or with QCA applications, their trend is indicative.

Secondly, the areas of political science in which the method is recognized as a legitimate tool of investigation have diversified. For many years, publications used to be concentrated in a few specific areas, such as the study of the welfare state, democratization, social movements, and party politics, while others remained largely hermetic to the method. However, the number of fields where applications of QCA have been appeared resembles the trend in the number of publications and citations per year. It now covers a large scope of topics extending from international relations (Koenig-Archibugi 2004; Maat 2011; Rubenzer 2008; Thiem 2011), over political economy (Drezner 1999; Pajunen 2008), comparative politics (Krook 2010; Pennings 2003; Vis 2009) and legal studies (Arvind and Stirton 2010) to EU integration theory (Schimmelfennig et al. 2006).
Thirdly, standard textbooks on QCA (Ragin 1987, 2000, 2008; Rihoux and Grimm 2006; Rihoux and Ragin 2009; Schneider and Wagemann 2007) have proliferated and significantly increased the level of methodological literacy of its end-users. However, none has as yet systematically covered more advanced issues. It is a timely point for such an undertaking. Instructors and users have identified fundamental limits and limitations, but also possibilities to further develop, extend and complement QCA to reap its full potential in advancing our understanding of social, political and economic questions of interest to scholars and practitioners. The conjunction of these three developments underlies this workshop proposal. The existing knowledge base on QCA stands in need of expansion in order to improve and extend the standards of good practice already promoted in various textbooks. This will result in improvements of the quality of future applications and a further broadening of the applicability of the method.

**Workshop Description**

In order to create a forum for mutual benefit, we invite two kinds of work from established and junior researchers, namely papers in which 1) QCA is used in analyses of substantial, social-scientific issues, such as welfare state reform or European integration, or 2) aspects relating to QCA as a methodological technique are addressed. Examples hereof include, but are not restricted to, *concept building, temporal dynamics, calibration, limited diversity* and *methodological interfaces*. To further develop QCA as a technique, advancing knowledge on these aspects is crucial. We briefly elaborate on each of them below.

**Concept Building**

QCA can be of great help to researchers with respect to the concepts they use in at least two respects (Quaranta 2010). Firstly, the transposition of words from natural language with vague and imprecise meaning to precise, and thus comparable, attributes is aided by Boolean and fuzzy logic. They combine two types of measurement peculiar to different traditions: a difference in terms of *kind* that comes from qualitative methods, and a difference in terms of *degree* that comes from quantitative methods. This specificity makes QCA extremely flexible, and reduces the loss of information inherent to any transposition of complex reality into formal language (Ragin 2008). Secondly, QCA can help researchers find ways of combining constitutive attributes so as to construct more inclusive concepts. By putting the focus on necessary and sufficient relationships, the method can better account for the complexity of the social world than do correlational methods (Goertz
Further research in this direction is desirable in order to develop systematic guidelines and helpful taxonomies for applied research.

**Temporal Dynamics**

One of the severest criticisms of QCA, if not the single most severe one (Meur, Rihoux, and Yamasaki 2009, 161), has been its inability to explicitly incorporate a time dimension. Including time, however, seem essential with regard to many fields of study in which QCA is applied. In order to remedy this shortcoming, scholars have suggested some promising, if still tentative, solutions. Caren and Panofsky (2005) suggest a way of combining QCA with sequence analysis, a technique they call Temporal Qualitative Comparative Analysis (TQCA). However, while TQCA as refined by Ragin and Strand (2008) represents a major advance, important issues remain to be solved. Unlike finite distributed lag models used in econometrics, for instance, QCA is not yet capable of taking into account temporal dynamics of particular orders rather than simple “before-after”-designs. Also, questions regarding the calibration of fuzzy sets from time series or panel data with trends in the underlying base variables have not yet been satisfactorily answered, despite recent attempts (Hino 2009). We thus expect the temporality issue to be one of the future main research avenues in the field.

**Calibration**

While the question of calibration sometimes arises only partially through the selection of thresholds in csQCA and mvQCA, researchers distinguish three different methods in the construction of membership scores for fuzzy sets. Direct methods draw on expert knowledge to provide membership scores, indirect methods use expert knowledge which is additionally processed via some curve-fitting method, and transformational assignments (Verkuilen 2005). In particular, the assignment of membership scores by transformation is a key operation requiring great care (Kvist 2006, 174; Ragin 2009, 93). Transformational assignments are often used to calibrate continuous base variables such as GDP or public opinion figures, but despite the importance of this process, it has so far not received a commensurate level of attention, neither in textbook treatments nor in applied research. This practice is unfortunate, since the calibration process has not only direct consequences for the level of correspondence between **degree** and **kind** so essential to the construction of fuzzy sets, but also downstream effects on the outcome of minimization procedures, descriptive measures and, in consequence, all substantial conclusions (Thiem 2010).
**Limited Diversity**

The problem of limited diversity is inherent to political science, stemming from practical impossibilities to use randomized experiments. The only substitute for the researcher is to rely on observations (Lijphart 1971). However, the world is not infinite, but researchers may still want to compare observed cases with cases that do not exist empirically. They are then forced to make assumptions about these unobserved cases. This is a demanding exercise as the wrong set of assumptions may easily lead to erroneous conclusions.

Although the problem of limited diversity is ubiquitous, QCA can increase the level of accuracy for two reasons. Firstly, complexity can be systematically dealt with. On the one hand, this is an advantage as most theories are complex. On the other hand, the more complex the theories to be assessed, the more particular the cases needed to test them, and therefore the less likely they are to exist in social reality. Secondly, compared to other methods, QCA renders the problem of limited diversity more transparent. Throughout the whole procedure of Boolean minimization, unobserved cases – called logical remainders – are identified by the technique.

QCA procedures have been developed to tackle these problems. Some hold that there cannot be any contradictions in the assumptions made about logical remainders, and propose specific ways to avoid them (Delreux and Hesters 2010). Others argue that the plausibility of logical remainders or their coincidence in the causal chain have to be assessed by the researcher in order to find more robust solutions (Baumgartner 2009; Ragin and Sonnett 2004). While these procedures are still debated, there seems to be agreement on the fact that limited diversity should be reduced in order to lessen the odds of drawing erroneous conclusions (Schneider and Wagemann 2006).

**Methodological Interfaces**

Mixed methods research designs have received the more attention the better the disadvantages of “methodological monism” have become understood (e.g., Lieberman 2005). Perhaps the most important methodological interface exists to case research, but what Gerring (2007) has achieved in a more traditional, regression-based context has not yet been taken up in the context of QCA. Other integrative interfaces have been suggested, for example, to Social Network Analysis (Yamasaki and Spreitzer 2006) and comparative multilevel analysis (Denk 2010).

The methodological tool kit that has caused most disagreements in relation to QCA, however, is regression analysis (Achen 2005; Seawright 2005). The concept of graded
membership in fuzzy sets between 0 and 1 still stands in an awkward relationship to the
notion of probability distributions of random variables underlying inferential statistics
(Kosko 1993). While some scholars draw a clear distinction between uncertainty
associated with randomness and “uncertainty associated with imprecision rooted in
vagueness and ambiguity that has nothing to do with randomness” (Clark et al. 2008, 31),
others believe that “the combination of fuzzy-set concepts with fairly straightforward
statistical techniques” is essential (Smithson and Verkuilen 2006, 2f.), and “seek to place
fuzzy-set methodology on a firm inferential foundation” (Eliason and Stryker 2009, 104).
As this is one of the most active interfaces between QCA and another technique, we
strongly invite papers from this front of research.

Short of methodological integration, some studies have instead combined QCA and
regressions in consecutive processes as a “robustness-check” on their findings (Amenta,
Caren, and Olasky 2005; Berg-Schlosser 2008; Grofman and Schneider 2009; Katz, vom
Hau, and Mahoney 2005; Koenig-Archibugi 2004). However, it is not clear how exactly
these comparisons should give meaningful additional insights from a formal mathematical
perspective other than the conclusion that results are roughly in agreement or not.

Follow-Up

We view the workshop as a launch pad for either a special journal issue or an edited book
on advanced issues in QCA. If judged successful by the workshop organizers, the book
project may be considered within the frame of the ECPR Research Sessions. In addition,
COMPASSS provides a suitable platform for all promising workshop contributions.

Biographical Notes

Damien Bol is a PhD candidate at the Center of Political Science and Comparative Politics,
UCL, Belgium. His dissertation analyses the reasons of political parties for supporting or
opposing national electoral system reforms. In addition, he is involved in the managing
group of the COMPASSS network, is the developer of the COMPASSS resource website, and
has contributed to the textbook “Configurational Comparative Methods” (Sage, 2009).

Alrik Thiem is a PhD candidate at the Center for Comparative and International Studies,
and the Center for Security Studies, ETH Zurich and University of Zurich, Switzerland. His
dissertation seeks to explain why West European efforts to jointly develop and produce
armaments since the 1960s have succeeded or failed. Methodological work on fsQCA has
been published by COMPASSS and the Wolfram Demonstrations Project, applied work has
appeared in European Political Science Review.
Barbara Vis is an Associate Professor in Comparative Politics at the Department of Political Science, VU University Amsterdam, Netherlands. Her research focuses on the politics of welfare state reform in advanced democracies. Applied work using QCA is published in *European Journal of Political Research, European Journal of Social Policy, Policy & Politics* and *European Political Science Review*. QCA is also applied in her new book “Politics of Risk-Taking: Welfare State Reform in Advanced Democracies” (Amsterdam University Press, 2010). She is also a core member of the COMPASSS network.

References


