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What is This?
Duck-Rabbits in Social Analysis: A Tale of Two Cultures

Colin Elman¹

Abstract

This article differentiates between three approaches to methodological diversity: monism, pluralism, and eclecticism. It suggests that in advancing a set-theoretic understanding of qualitative research, A Tale of Two Cultures makes an unusually strong argument for robust pluralism. The article anticipates three types of critiques that are likely to be made of the book: Monists will argue that pluralism is an illusion; quantitative researchers will suggest that Goertz and Mahoney inaccurately describe quantitative methods; and qualitative researchers will express doubts as to whether their tradition can be best understood using set theory. The article mainly focuses on the third of these responses, and suggests that even if A Tale of Two Cultures is not always convincing as a descriptive account of current practices, it holds considerable promise as a prescriptive agenda.

Keywords
qualitative research, multimethod research, monism, pluralism, eclecticism, process tracing

A Tale of Two Cultures is the rare book that shows its readers something new, something they might be able to see only with a little help—but which, once revealed, they wonder how they could not have noticed before. The book has the potential to make a profound contribution to how political scientists view social science methodology.

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In this short review, I make some brief observations about how the book’s pluralist approach fits with alternative views of methodological diversity and anticipate that the authors will receive a strong pushback from monists. I then discuss two other types of critiques that the authors can expect to receive: (a) that the book inaccurately describes the quantitative tradition and (b) that the authors’ account of the qualitative culture does not reflect current practice. I focus mainly on the last point and suggest that although the qualitative component of the book may not be entirely convincing as a contemporary description, it is compelling as a prescriptive methodological agenda. I close the essay with some brief observations about two items that I hope will be on that agenda: process tracing and multimethod research.

Much of this review will be trying to anticipate how the book will be received by the discipline and mentioning some likely criticisms. It is worth noting the moxie it takes to simultaneously pick a foundational fight with members of both research traditions. It also bears highlighting that the authors’ track record suggests they have the wherewithal to attempt a project on this scale. Goertz and Mahoney have prominent records of applied research, publishing widely in the comparative politics and international relations subfields. Both scholars have also written extensively on methodology. A Tale of Two Cultures is itself the culmination of several years of coauthorship between Goertz and Mahoney. The book assembles a series of essays, some of which have appeared in article form and working papers over the years, into a coherent monograph.
Methodological Diversity: Monism, Pluralism, and Eclecticism

Elsewhere (Elman, 2009) I have argued that we can usefully categorize approaches to methodological diversity into three separate camps:

- **Monism** establishes a single approach as the “right” way. This claim might be based on a variety of arguments, including an assertion of foundational logic, a declared monopoly on the ability to answer privileged types of questions, or the predicate ability to deconstruct knowledge claims.

- **Eclecticism** proposes that epistemic differences need not matter. It leapfrogs over them to a problem-driven pragmatism—use what works, in whatever combination it works.

- **Pluralism** embraces diversity as a virtue, values each episteme on its own terms, and seeks to find the limits of association and commensurability between them.

* A Tale of Two Cultures is perhaps the strongest case yet made for a pluralist approach to the quantitative and qualitative research traditions (p. 220). 3

Gary Goertz and James Mahoney argue that the two traditions are separate and distinctive and that their different orientations pervade every aspect of research design and practice (see pp. 221-225 for a summary). Although the authors argue that no single contrast serves as a root for the remainder, some are clearly more important than others (p. 13). Hence the separate foundational logics of the two traditions (probability and statistics for quantitative, set theory for qualitative), and the contrasting emphases on cross-case analysis (in quantitative work) and within-case analysis (in qualitative work), are core arguments that reappear throughout the book. To put it another way, when it comes to the quantitative and qualitative divide, Goertz and Mahoney ask us to recognize the rabbit as well as the duck in Jastrow’s famous image, reproduced in the pictorial epigraph above.

Monists will of course argue that qualitative research has no inferential machinery distinct from that of quantitative research. The criticism here is that the rabbit is just an illusion, and often a self-delusion. There is no separate epistemological foundation for qualitative research, just a range of tools that scholars can employ to achieve descriptive and causal inference. Monism comes in two varieties in political science, the robust and the weak. The stronger manifestation suggests that qualitative research is done best when it follows the precepts of quantitative research design. To the extent
that qualitative research cannot follow these rules, it is at best sechel, at worst snake oil, but never science.\textsuperscript{4}

The weaker version, which could be described as monism lite, understands both quantitative and qualitative research to be embedded in a single epistemological framework but allows that qualitative research methods do not need to mimic quantitative practices so closely and can provide different types of information. Lite monists are certainly more open-minded than their less tolerant cousins, but they are (at least from the pluralists’ perspective) still unable to fully appreciate the distinctive nature and virtues of qualitative research.

Goertz and Mahoney are of course by no means the only qualitative scholars who have contended that qualitative research will be misunderstood and undervalued if approached with a quantitative mind-set.\textsuperscript{5} Nevertheless, \textit{A Tale of Two Cultures} makes an unusually strong case for robust pluralism. As I note below, following a pluralist approach also involves some difficulties, not least when it comes to navigating multimethod research. But in this book the authors make a good argument that the advantages of taking a pluralist view outweigh the drawbacks.

**Description: Drawing the Duck and the Rabbit**

Separate from the probable pushback against pluralism, we are also likely to see members of both cultures arguing that Goertz and Mahoney inaccurately depict the quantitative and qualitative traditions, that is, they get the duck and/or rabbit wrong. Before considering those critiques, a few words on how the authors set up their accounts of the cultures. Goertz and Mahoney say that their goals are “mainly descriptive, not primarily normative or prescriptive” (p. 3). That is, they suggest they are offering an account of what scholars actually do, not providing a reasoned justification for a particular set of methodological rules and outlining the procedures necessary to follow them.\textsuperscript{6} Prescription is based on the belief that research carried out in accordance with a set of understandings and procedures has added value. Hence for example, a properly crafted experiment permits a causal inference to be drawn, whereas one that has design flaws does not.

In \textit{A Tale of Two Cultures} Goertz and Mahoney follow different approaches to delineating the traditions. As noted in Table 1, although quantitative research practices are demarcated by counting “explicit practices that follow well-established advice from the methodological literature” (p. 7), qualitative practices are seen as more implicit, leading the authors to “reconstruct the procedures that qualitative researchers use when doing their work” (p. 7). In other words, the quantitative culture is uncovered by observing what scholars
do, whereas the qualitative culture is understood through developing an innovative methodological framework and then using it to reinterpret the practices that constitute the qualitative tradition. This difference in approach is consequential for both cultures.

Because of the descriptive strategy Goertz and Mahoney adopt for the quantitative tradition, their depiction has a built in time lag. Although Goertz and Mahoney (p. 6) argue that they use recent methodological literature, they are also careful to say that they are describing typical and not best practices. For example, they caution that “within the field of quantitative methodology, scholars who advocate experiments hold serious reservations about most work that attempts to make causal inferences using observational data” (p. 8). By counting actual practices, however, it necessarily follows that they are measuring older (and hence perhaps not the most relevant) methodology. More recent developments will inevitably be undercounted in a procedure that looks at publication records over time (see, e.g., the table on p. 229). If the quantitative literature’s recent focus on research design carries over into a widespread change in practice, then at the very least some of the characterizations of the quantitative tradition in A Tale of Two Cultures risk having a short shelf life.

By contrast, the approach Goertz and Mahoney take in describing the qualitative tradition is likely to lead to different kinds of questions about the reconstruction of that culture. The major claim made by Goertz and Mahoney is that their framework is being used as an interpretive tool to reimagine existing practices. Although on one hand A Tale of Two Cultures is pluralist vis-à-vis the quantitative and qualitative traditions (p. 220), the authors also argue that their description (which reimagines existing practices using a set-theoretic framework) reflects the entire qualitative tradition. Hence, with regard to qualitative research they adopt a more dogmatic approach, asking us to accept that all noninterpretive qualitative research fits within a set-theoretic framework.

Table 1. Summary of Description and Prescription in A Tale of Two Cultures

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantitative tradition</th>
<th>Qualitative tradition</th>
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<tbody>
<tr>
<td>Characterized by explicit typical practices</td>
<td>Characterized by implicit typical practices, teased out by applying Goertz and Mahoney’s framework . . .</td>
<td></td>
</tr>
<tr>
<td>Prescription</td>
<td>Methodological literature supplies the vocabulary for description, but the book’s focus is on what scholars do, not what they ought to do</td>
<td>. . . which if it does not reflect current practice, may be advancing a prescriptive argument</td>
</tr>
</tbody>
</table>
By saying they are simply showing qualitative scholars that set-theoretic logic has underpinned their practices all along, Goertz and Mahoney adopt a brilliant rhetorical strategy (p. 11). Since they are just rigorously reconstructing existing practices, they skip over the need to sell their account as a methodological innovation. At the same time, all of the qualitative tradition’s reinterpreted research practices become evidence of the phenomena they are describing.

Notice that this leads to an entirely different type of critique from qualitative scholars than that anticipated from members of the quantitative tradition. The full weight of Goertz and Mahoney’s account of the quantitative culture is firmly in the top-left cell of Table 1, delineating what scholars actually do, not what they ought to do; their use of methodological literature is mostly to provide terms of art. Quantitative scholars may complain that *A Tale of Two Cultures* is dated or incomplete, but they are unlikely to argue that it is taking them into new territory.

With regard to the qualitative tradition, however, it is unclear—and I would argue is in fact the key question for Goertz and Mahoney—whether they are really operating in the top-right quadrant of Table 1, that is, are engaging in what we might call “framework-assisted description,” or in the bottom-right cell, offering and advocating a radically new way to think about qualitative research. Again, looking at Jastrow’s duck-rabbit is instructive here: The critical element of the second image is that it is something the viewer would have recognized before he or she was nudged. It has to evoke the feeling of “Oh yes, that’s right, now I see it.” This will be the response if Goertz and Mahoney’s account resonates deeply with qualitative scholars. If it does not, then it is not a description at all, but a novel and controversial prescription of what qualitative research should be.

So how recognizable is their framework going to be to qualitative researchers? To be sure, there is much in this volume that many qualitative researchers will readily agree with and admire. For example, the clear explanation of the causes-of-effects approach (pp. 41-49), the explicit recognition of the importance of explaining outcomes, and the focus on within-case and small-N comparisons (pp. 87-93) will all deeply resonate with many qualitative scholars. Other aspects of the book—and in particular those related to the asserted ubiquity of the set-theoretic framework—may be less readily accepted by some mainstream qualitative scholars.

For instance, Goertz and Mahoney view set theory as providing the underlying logic for drawing inferences based on necessary and sufficient conditions (see, e.g., pp. 19-21 and 33-36). This is not something that most qualitative scholars will find intuitive. It is not immediately obvious that (or how) the language of sets applies to single cases or to analyses with only a few cases. To
be clear, I am not suggesting that Goertz and Mahoney’s set-theoretic approach is wrong or that it does not usefully apply to within-case or small-N research. The point is that the authors’ claim to be making a descriptive and not prescriptive argument rests on their ability to convince qualitative researchers that their framework encompasses existing qualitative practices, and some qualitative scholars may have a hard time envisioning the tight connection the authors posit between set theory and necessary and sufficient conditions.

Similarly, Goertz and Mahoney argue that process tracing in within-case and small-N analyses can best be understood through set theory (and necessary and sufficient conditions). They suggest that to make causal inferences within the confines of a single case or a small number of cases, researchers use hoop tests (necessary conditions) and smoking guns (sufficient conditions; pp. 93-96). Yet as Goertz and Mahoney themselves note on page 97, they are not the only scholars to build on Van Evera’s (1997) formulation. Van Evera’s $2 \times 2$ is becoming a nexus for the discussion of process tracing—for example, Bennett (2008) and Collier (2011) have also revisited his tests. Significantly, these scholars all approach Van Evera’s formulation from different points of departure. Bennett, for example, takes an explicitly Bayesian approach. Accordingly, Goertz and Mahoney cannot simply assume that the common use of hoop tests and smoking guns implies agreement on epistemology or that one logic subsumes the others.

In sum, although I welcome the robustly pluralist approach to the discussion of qualitative and quantitative research methods, I think we need to take Goertz and Mahoney’s claim to be following a descriptive strategy with regard to qualitative methods, at least, with a pinch of salt. Accordingly, I read the book as offering a program for further work as much as providing a picture of current practice. Indeed, the volume has many of the virtues we would want to find in such an agenda-setting account. It has an admirably clear structure, and the authors’ accessible prose is a compelling demonstration that complex arguments do not require impenetrable jargon. Goertz and Mahoney assess the consequences of the contrast in the traditions across a broad spectrum of research practice. These include different approaches to causation, counterfactuals, comparison, concepts, and typologies. Each chapter has the potential in turn to serve as the jumping-off point for a much longer conversation.

Some Questions to Include in Follow-on Discussion

With that future dialogue in mind, let me close with a few observations about chapter 7, “Within-Case Versus Cross-Case Causal Analysis,” and chapter 17, the conclusion. As noted above, Goertz and Mahoney’s discussion of
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process tracing (p. 93) focuses on hoop tests and smoking guns. We should recall that these are only two of the four possible criteria originally proposed by Van Evera (1997). The doubly decisive, that is, necessary and sufficient, category is the less interesting deletion since it simply represents a combination of the two tests, that is, necessary and sufficient. A more consequential omission is Van Evera’s (1997, p. 32) straw-in-the-wind test, based on weakly probative information that is neither necessary nor sufficient (also see Mahoney, 2012, p. 3). Goertz and Mahoney do discuss the possibility that several pieces of key evidence can be combined into a smoking gun (p. 96) but provide no clear description of the types of evidence and procedures for making inferences with less than decisive tests. To be fair, the authors are fully aware of the lacuna, and indeed in recent work Mahoney (2012) has begun to sketch out what that inferential machinery might look like.

Nevertheless, the qualitative research methods subfield is nowhere close to having a full inventory of alternative ways to build inferences from causal process observations. Qualitative researchers should warmly welcome developments that lead process tracing to be more rigorous. But they should be sensitive to the unintended consequence of defining it so narrowly that the method becomes rarely usable. There is a parallel to be drawn here with ongoing developments in the quantitative tradition to place greater emphasis on research design—and in particular the increasing prevalence among quantitative scholars of the view that strong causal inference requires either an experiment or observational data from circumstances that mimic an experiment. If in the qualitative domain, the necessary and sufficient conditions framework wins the day in process tracing, a qualitative analog to the “only experiments or experiment-like observations” argument could emerge: that we should value only instances of process tracing that provide an opportunity for a decisive hoop or smoking gun test. That would be very hard advice for qualitative scholars because, unlike quantitative scholars, they are often trying to explain a particular outcome and thus do not have the luxury of simply moving on to other observations that match prescriptive research design requirements.

The take-home point is that if we are going to use the necessary and sufficient conditions framework as the basis for process tracing, we urgently need to develop a more nuanced inventory of when inferences can be drawn. For example, can we combine observations, which if taken one by one would be less than decisive, to produce a strong inference? The more extensive the list of types of inferences we can draw, the more opportunities scholars will have to leverage observational data to make strong arguments through process tracing. If we are going to make process tracing more rigorous (and we should), and if the route to doing that is by using simple or “constructed” (i.e., multipart) smoking gun and hoop tests, we should get on with building the machinery for doing so.13
Finally, and still on the topic of future agendas, the book’s conclusion includes a short discussion of some of the ways that multimethod research might be pursued in the context of Goertz and Mahoney’s pluralist approach to methodology. Figuring out how to integrate different styles of research is a much tougher question for pluralists than for monists. We can imagine a range of possible levels of fit, running from full fungibility to total incommensurability. Monists of course have a built-in advantage on this question: When everyone is a duck, everybody quacks. But pluralists would argue that monism achieves that easy fit by sacrificing the differences that make qualitative research worth doing in the first place. Hence, Goertz and Mahoney are rightly willing to take on the harder question of asking how those combinations will work with a pluralist understanding of methodology, which will allow each tradition to make its strongest contribution to the research enterprise. The trick is then figuring out how best to juxtapose and combine them.

Conclusion

By convincing us to make room for rabbits as well as ducks, *A Tale of Two Cultures* is the most coherent, internally consistent, and confident rendition of robust pluralism yet presented. Goertz and Mahoney provide a principled ground for treating qualitative and quantitative methods differently, while simultaneously laying out a set of core understandings that have the capacity to unify qualitative research methods. Like other ambitious projects of this type, including *Designing Social Inquiry* (King, Keohane, & Verba, 1994), the current volume might be a success in at least two ways.

First, it may very well triumph on its own terms. *A Tale of Two Cultures* is a major step forward in the authors’ larger project to reimagine the qualitative tradition in terms of set theory. As I note above, the volume contains many of the elements we would look for in a prescriptive methodology, and I confidently expect that Goertz and Mahoney will continue to round out that framework. Although it is too early to say whether it will become a standard account, it will surely be a strong contender for that role.

Second, if scholars take this book as seriously as they should, *A Tale of Two Cultures* is going to spark a series of important debates that will clarify and improve methodology in political science. Regardless of whether the book persuades political scientists (and remember that *Designing Social Inquiry* often did not), the discipline will be stronger for engaging and debating its views. In this review I have laid out what I believe the contours of a few of those debates are likely to be. If it seems that I have spent too much time on anticipating negative responses, it is not because I question the book’s value. To the contrary, I view catalyzing a series of conversations that
carry the field forward to be at least as important as convincing readers. *A Tale of Two Cultures* is a book worth celebrating for its content, but it will also be a major force in helping methodologists to clarify and strengthen their own positions, whether in opposition to or filling the gaps left by Goertz and Mahoney.

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**Notes**

1. For example, both authors have received the APSA Qualitative and Multi-Method Research section’s Giovanni Sartori Award for the best book and Alexander L. George award for the best article on qualitative and multimethod research.

2. Goertz and Mahoney’s first version of the two cultures argument appeared in a 2006 article in *Political Analysis*. In August 2012, it is listed by *Political Analysis* as the seventh most cited and the fifth most read article published by the journal, which in turn is the top ranked out of 148 political science journals as measured by its 5-year impact factor (http://www.oxfordjournals.org/our_journals/polana/impactfactor.html).

3. In this short essay, I follow Goertz and Mahoney’s (pp. 4-5, n. 2) usage and refer to noninterpretive qualitative research.

4. The best-known statement of the strong monistic position is of course King, Keohane, and Verba (1994). For non–New Yorkers, an exact translation for *sechel* is difficult, but perhaps *wisdom* is a reasonably close fit. Its use here is meant to capture the kindly meant observation by quantitative scholars that qualitative folks “know stuff” in the same way that historians or journalists do.

5. These include George and Bennett (2005) and several of the contributors to both editions of Brady and Collier (2004, 2010).

6. This is of course an old distinction in epistemology, with various arguments for the different roles played by (and the relationship between) the history and philosophy of science. See, for example, Lakatos (1970, 1971a, 1971b).
7. The flipside of that argument, however, is that Goertz and Mahoney are also demonstrating how much substantive quantitative research lags behind the methodologists’ advice.

8. See Dunning (2012) and Seawright (in press). Of course, we should also anticipate that quantitative methodologists will question the characterization of their tradition on its own terms, echoing Achen’s (2005, pp. 28-30) critique of Ragin’s discussion of large-N research.

9. Goertz and Mahoney liken qualitative researchers’ relationship with set theory to Monsieur Jourdain’s surprise about speaking prose (p. 11).

10. To be fair, even if the argument had been framed as an explicit prescription with examples, some degree of reconstruction would have been inevitable, not least because qualitative researchers either underwrite their research designs or use polysemic terms of art that are open to multiple interpretations.

11. It should also be noted that in this respect, Goertz and Mahoney’s position stands in contrast to the most prominent set theory approach in the social sciences, Charles Ragin’s (1987, 2000, 2008) qualitative comparative analysis (QCA), in both its crisp and fuzzy variants. Although Ragin’s position has influenced how Goertz and Mahoney conceive of set theory, QCA was framed in contrast to both small-N and large-N research, that is, as being a third way. Indeed, one of the standard critiques of QCA was squaring its requirement for detailed case knowledge with the need to include more than a few cases.

12. For Goertz and Mahoney, small-N comparisons do not get their leverage from comparisons per se, but from the juxtaposition of multiple within-case observations (p. 87).

13. Mahoney (2012) makes a good start on this.

References


**Bio**

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