THE POLITICAL ECONOMIST

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Co-Editors:
Michael Hiscox, Harvard University
Brian Burgoon, University of Amesterdam

Feature *Essay*

Adapting Methodology to Ontology in Comparative Politics

Peter A. Hall

A curious gap has opened up in comparative politics and comparative political economy between the methodologies the field embraces and the ontologies that underlie its theories. If a 'methodology' consists of the techniques a scholar uses to make observations and draw causal inferences about the world, the term 'ontology' refers to the fundamental assumptions about the nature of causal relationships in the world on which scholarly theories are premised. Comparative politics is a river with many currents but, as Lijphart (1975: 165) noted some years ago, there has been "a postwar trend in comparative politics" toward statistical methods, based preeminently on the 'standard regression model' (cf. Abbott 1988). Influential texts now give priority to such approaches, and many scholars have become critical of other methods (Geddes 1990; King, Keohane and Verba 1994; Goldthorpe 1997).

Such methods were especially appropriate for the age of modernization theory, when political outcomes were often seen as the product of socioeconomic developments that could be conceptualized as a few key independent variables. In recent years, however, the theories of comparative politics have moved in a different direction, toward views that see political outcomes as the result of processes of path dependence

or strategic interaction, which imply a very different ontology, one that sees the fundamental causal relations of the political world in quite different terms (eg. Pierson 2000; Bates *et al.* 1998).. And this is important because each methodology assumes that causal relations in the cases being studied take a particular form. As a result, the ontologies underlying many contemporary theories of politics are at odds with the assumptions about causal structure that must be true if standard regression techniques or the comparative method conventionally-construed are to provide valid causal inferences. The ontologies of comparative politics have substantially outrun its methodologies.

In this essay, I examine the contemporary divergence between ontology and methodology in more detail and consider what might be done about it. In the face of this dilemma, I argue for reconsidering the value of small-n research designs, based on a version of process tracing that I term 'systematic process analysis' that can be used to revise our understanding both of case-studies and of the comparative method.

The Contemporary Dilemma

Standard regression analysis and the comparative method understood in the traditional terms in which Lijphart

(1971) and others defined it provide strong bases for causal inferences only when the causal structures in the world to which they are applied conform to an exacting set of assumptions. Both methods imply specific ontologies. Those for the comparative method are especially demanding. It provides effective tests only where the world conforms to a Humean ontology that sees causation as constant conjunction or where the causal variables being sought are necessary causes of an outcome, i.e. so important that they must be present for that outcome to occur (see Braumoeller 2000).

Regression analysis is more flexible. It is well-adapted to an ontology that envisions probabalistic causation and, given enough cases, it can cope with some interaction effects (cf. Jackson 1996). However, the types of regression analyses most commonly used in the study of comparative politics provide valid support for causal inferences only if the causal relations they are examining meet a rigorous set of assumptions (Wallerstein 2000). In general, this method assumes unit homogeneity, which is to say that, other things being equal, a change in the value of a causal variable x will produce a corresponding change in the value of the outcome variable y of the same magnitude across all

continued from page 1

the cases. It assumes no systematic correlation between the causal variables included in the analysis and other causal variables omitted from it. It assumes that all the interaction effects among the causal variables have been captured by interaction terms in the regression. It assumes that the cases are fully independent, such that the values of the causal variables in one case are unaffected by the value of the causal variables or outcomes in others. Although instrumental variables can sometimes be used, most regression analyses assume no reciprocal causation, i.e. that the causal variables are unaffected by the dependent variable.

The problem is that the world may not have this causal structure. Some argued that it did not even when the standard regression model was on the rise (Macridis 1968; Wolin 1969; Richter 1970). In recent years, however, more of the models embraced by comparative politics or comparative political economy violate the assumptions about causal structures that I have just outlined. Consider how different the complex models now advanced to explain transitions to democracy are from the parsimonious generalizations of an older literature that saw socioeconomic conditions as the basis for stable democracy (cf. O'Donnell and Schmitter 1986; Lipset 1959).

Ragin's (1987) pioneering work identifies many of these causal complexities under the rubric of 'multiple conjunctural causation' (see also Lieberson 1985). Traditional methods focused on identifying a set of independent variables $(x_1 \ldots x_n)$ that exert consistent causal effects on an outcome (y) tend to miss the following types of causal relationships:

i. We find instances in which an increase in x (level of economic development) causes an increase in y (movement toward democracy) in some cases but does not have this effect in others, where y is caused by an entirely different set of variables, w.

ii. We find cases in which an increase in x (social democratic governance) is associated with an increase in y (social spending) at one point in time, t_1, but not at another point in time, t_2.

iii. We find instances in which an increase in x (social protest) causes an outcome y (government turnover) in some cases but an entirely different outcome (repression) in other cases.

iv. We find instances in which an outcome y (successful wage coordination) depends on the value of many other variables, v (union density) w (social democratic governance), and x (social policy regime), whose values are in turn jointly dependent on each other.

v. We find cases in which increases in x (support for democracy) increase y (the stability of democracy) and in which increases in y also tend to increase x.

In most such cases, the problems arise from *interaction effects* among causal or contextual variables that could be modeled if we knew of them or had

In sum, our ontologies have outrun our methodologies and traditional conceptions of explanation. Many substantive problems now seem to involve reciprocal causation that makes it difficult to separate dependent from independent variables.

sufficient degrees of freedom but that standard analyses tend to assume away and that few regressions could fully capture. If causal structures of this sort were unusual, it might be feasible to relegate them to the realm of the unknowable in order to concentrate on simpler relationships that can be assessed. But growing numbers of scholars have concluded that these causal structures are common features of the political world. Two prominent lines of theorizing point with special force in this direction.

The first regards political outcomes as the result of strategic interaction among actors, of a sort that can often be modeled by non-cooperative game theory. Now applied to an increasing range of issues, this perspective sees political outcomes as the result of chains of choices that the actors make in response to each other through iterated rounds of interaction. At each point in time, the choices of the actors may be influenced by the presence of specific types of institutions, but the latter rarely

specify a unique equilibrium. As a result, the outcome usually depends on a further set of conditions—social, economic or cultural—that can be complex or evanescent. In the tree diagrams of games presented in extensive-form, there are many branches. A shift in the conditions underpinning strategic choice at one juncture can have radical effects on later outcomes. As a result, although some elements of these theories can be tested using standard comparative analysis, it is difficult to reduce the chains of causation envisioned by such theories to a simple set of independent variables (cf. Knight and Sened 1995; Milner 1998; Bates *et al.* 1998).

The second line of theory is advanced by an influential literature about path dependence (Collier and Collier 1991; Thelen 1999, 2000; Pierson 2000; Mahoney 2000a;). Although their views about how path dependence should be defined and what propels a unit along a path vary, analysts taking this perspective tend to agree on two points. First, they argue that causal developments of great import for an ultimate outcome often occur early in the long causal chain leading to it, perhaps in the distant past. If subsequent developments in all the relevant cases were homogenous, this observation would not be a major problem for conventional methods: variables representing early developments could be incorporated into a standard regression analysis. However, path dependent approaches usually advance a second contention. They suggest that fateful choices or crucial events occurring in the distant past can affect a case so deeply that they alter the impact of subsequent developments, which in turn alter those following them, vitiating the assumption that a new developments x can be expected to have the same impact across cases. In effect, this implies that interaction effects cumulate over time, carrying cases down such different paths that it becomes unreasonable to suppose that an x occurring today has the same effect, y, across all settings.

In short, theories of strategic inter-

From the *Editors*

Dear Readers:

We hope you enjoy this new edition of the Section newsletter. The feature essay this time around is a provocative piece by Peter Hall on the methodologies used in comparative political economy. Hall assesses changes in methodologies in recent history and makes a case for the continued importance of "small-n" comparative studies. We welcome your comments on the essay.

As Chuck Shipan mentions in his comments "From the Chair," this is the final issue of the newsletter that will be mailed out in paper form. All future issues will be emailed in electronic format and published (after a short delay) on the new Section web page <http://www.apsanet.org/~polecon>. Any members who wish to continue receiving the newsletter in hard copy should contact Stacie Williams (stacierh@ umich.edu) before March 1, 2003.

The next issue of the newsletter will be devoted to general questions about the future of the Section, the challenges it faces, and various proposals for how best to tackle those challenges. Former Section Chair Liz Gerber has agreed to write an essay addressing these questions and we invite contributions from any Section members who would like to contribute to the debate.

As always, we encourage contributions to the newsletter (ranging from feature essays to curt letters) and suggestions for the Section webpage.

Sincerely,
Michael J. Hiscox
hiscox@fas.harvard.edu
Brian Burgoon
burgoon@pcsw.uva.nl

From the *Chair*

Greetings, and Happy New Year! I'm pleased to welcome you to another fine edition of *The Political Economist*. I'd like to thank Michael Hiscox, Brian Burgoon, Amanda Harris, and the contributors for once again putting together an informative and interesting issue. While I'm thanking people, I'd also like to thank Liz Gerber for her service as chair during the past two years. Liz did a terrific job in running things and the section benefited greatly from her leadership.

There are a number of items that I'd like to bring to your attention. First, this is the last edition of the *The Political Economist* that we will be sending out as a hardcopy. Starting with the next issue, we will be sending the newsletter out to each member via email. In addition, you'll be able to access the newsletter on the section's website <http://www.apsanet.org/~polecon/>. For those of you who are unable to receive or print the .pdf versions that we will be sending out, or who cannot access the website, please contact us and we can mail a hardcopy to you.

Second, information about the section's awards is listed elsewhere in this newsletter, but I thought it was worth highlighting one change: the dissertation award is now named in honor of Mancur Olson. Thus, it joins the William H. Riker Award, given to the best book, in honoring two of the most important figures in the development of political economy. When submitting a book or dissertation for these awards, please be sure to send one to each of the committee members by March 1. You can find the addresses for each committee member through APSA's webpage at http://www.apsanet.org/about/awards/sections.cfm.

Third, I'm pleased to announce that the section has decided to create another major award, a best paper award that will start next year. All papers presented during Political Economy panels at APSA will be eligible for this award. We're still working out the details of this award; I'll provide them to you in the next issue of the newsletter.

Finally, one of the main topics of conversation at the section meeting in September was how the section can increase participation at annual meetings. In the next issue of the newsletter we'll touch on this topic in a couple of articles that address the future of the section. In the meantime, the executive committee has been considering a number of possibilities, and it is always helpful to hear ideas from the rest of you. Please feel free to email me about this or any other topics at Charles-Shipan@ uiowa.edu.

Best wishes for an enjoyable and productive semester,

Chuck Shipan

2002 Section Awards

Dissertation Award: Rod Alence, Stanford Univ.
"World Markets and the Politics of African Open Economies: Domestic Policy Responses to External Volatility in Ghana, 1937-84"

William H. Riker Award: TIE
Evelyne Huber & John Stephens, Univ. of Chicago
"Development and Crisis of the Welfare State"
and
Gene M. Grossman and Elhanan Helpman, MIT
"Special Interest Politics"

action and of path dependence both see the world, not as a terrain marked by the operation of timeless causal regularities, but as a branching tree whose tips represent the outcomes of events that unfold over time (cf. Sewell 1996). If this is true, the timing of a development can matter a great deal to its effect. The sequence in which developments occur becomes important to the effects that they generate (Pierson 2000; Thelen 2000; cf. Binder et al. 1971). One prototypical contention is that the impact of x will depend on whether it occurs before or after w. The effect of industrialization depends on whether it occurs in the late 18th or 19th centuries (Gerschenkron 1966). The overarching premise is that context matters: the impact of x will rarely be independent of the value of other variables (u, v, w), and contextual heterogeneity is a function of events unfolding over time. Theories of path dependence and strategic interaction, thus, militate against analyses into which past developments are simply imported as independent variables because the causal impact of such developments may depend on where they are located within the historical chain.

> *Faced with the need to assess explanations for phenomena whose causal structure includes a long or complex causal chain, analysts can usefully turn to small-n comparison.*

Although claims of this sort pose profound challenges to mainstream analysis, they have a great deal of intuitive plausibility. Six years of social democratic governance in the 1930s had a lasting impact on policy regimes, but it almost certainly did not have the same impact as six years of social democratic governance in the 1980s. Moreover, because the impact of social democratic governance can be conditioned by other factors, it may not be the same across cases even at one of point in time. Winch (1989) suggests, for instance, that the economic policies of the Swedish social democrats were deeply conditioned by the conclusions they drew from watching the efforts of a preceding British Labour government. When the effects of a few variables are very strong and

measurable in a substantial number of cases, regression analyses can assess some of these types of interaction effects. In practice, however, the interaction effects are often so complex and the data so limited that regression analysis cannot test the relevant propositions. Many analysts simply assume them away.

The new theories based on strategic interaction or path dependence also carry implications for what can be said to constitute adequate explanations. Many scholars view explanation as a matter of attaching weights to a small set of causal variables seen as consistent predictors of a given outcome. Ontologies that saw the political world as a sphere governed by a few immutable causal forces, often socioeconomic in nature, were conducive to such views. Methods based on regression analysis and conventional forms of comparison reinforce this stance because they produce this type of result. However, if important political outcomes cannot be explained by reference to a few socioeconomic conditions but depend on complex chains of strategic interaction, they cannot be explained except by reference to that chain. If current outcomes depend on a branching tree of historical developments, allusions to one or two causal variables will hardly constitute an adequate explanation for them. Accordingly, parsimony has lost some of its luster as a criterion for judging explanations, and views about what constitutes an acceptable mode of explanation have shifted (cf. Shiveley 1974; King *et al.* 1994; Bates *et al.* 1998)).

In sum, our ontologies have outrun our methodologies and traditional conceptions of explanation. Many substantive problems now seem to involve reciprocal causation that makes it difficult to separate dependent from independent variables. Scholars are positing interaction effects too complex to model fully in regressions. Some argue that the impact of causal variables is often so

context-dependent that it makes little sense to assume unit homogeneity and multicausality so important that analysis should not be focused on effects of individual variables (cf. Ragin 1987; 2000).

Some Recent Proposals

In recent years, scholars have reacted to these dilemmas with a variety of proposals.

Some have proposed a shift in the locus of inquiry, away from the search for direct explanations of macro-political outcomes, once the objects of "grand theory" (e.g. revolutions, regime change, etc.), toward a more modest search for the micro-level processes that help to generate such outcomes and recur across them (Tilly 1995). They argue that analysts should concentrate on finding 'social mechanisms' construed as recurrent forms of individual or collective action that are constitutive components of the causal chains leading to major political outcomes (Elster 1998; Hedstrom and Swedberg 1998; cf. Mahoney 2001). The premise is that such mechanisms appear with sufficient frequency to be feasible objects of generalization and carry enough causal significance to merit the interest shown in them. This new focus promises useful analyses of collective action, but it is difficult to greet a retreat from the search for direct explanations of the most important political outcomes without regret (cf. McAdam et al. 2001; Katznelson 1997).

Others are advocating the use of more sophisticated statistical techniques to cope with the problems afflicting standard regression procedures. For instance, some explore new ways in which to estimate interaction effects, using structural equation models to overcome problems of endogeneity (Jackson 1997; Franzese 2001). Others recommend drawing from a wider statistical repertoire, making more use of techniques such as discriminant analysis or agent-based modeling (Braumoeller 2000; Cederman 2000). Some argue that statistical analysis should invariably be combined with in-depth investigation of the cases, care-

Feature Essay cont.

continued from page 4

ful attention to how cases distribute themselves across the relevant cells in a tabular analysis, and greater efforts to account for the residuals (Shalev 1998). Statistical analyses that are attentive to such matters certainly have a role to play in understanding causal complexities.

A third approach to the type of ontological issues identified here has been devised by Ragin (1987) who is especially concerned about "multiple conjunctural causation," namely, the possibility that an outcome may be caused, not by the same one or two variables operating in all cases independently of other variables, but by diverse combinations of factors, each operative in some of the cases. Noting that the parameter estimates of regression models do not normally identify such effects, he has sought techniques that specify the combinations of factors constituting necessary and/or sufficient conditions for the occurrence of a particular outcome. Ragin divides cases into sets according to their values on the outcome of interest and on potential explanatory variables and identifies the frequency with which particular combinations of explanatory variables are associated with a given outcome, using a Boolean algebra to reduce these comparisons to manageable summaries. A recent advance increases the level of information included in such analyses by adopting a "fuzzy set" approach to the construction of categories that accommodates variables with continuous values (Ragin 2000). This approach is especially effective for revealing which combinations of factors constitute necessary or sufficient conditions for an outcome. Standing between the conventional comparative method and regression analysis, Ragin's approach draws strengths from each.

Ragin's approach can be interpreted in radical terms as one that rejects the concept of causal *variables* in favor of seeing social science as an enterprise that compares *cases* by building up accounts of cases whose generality lies in the grouping of these cases into sets that represent distinctive causal trajectories. Movement in this direction takes the field

back toward the "disciplined, configurative analysis" characteristic of the 1960s. Those who criticized the studies of this era for being "merely descriptive" missed the generalizing power of analyses that identify new types of political phenomena and create concepts that can be applied across nations.

Some scholars go even farther, of course, to press fundamental critiques of positivism that view the search for variables with consistent causal force across national settings as a futile enterprise. Influenced by "critical realism" or "constructivist" approaches to the social world, many scholars have become skeptical about the categories used in many political analyses, conscious of how the analytical objectives influence them, and more interested in explanations that focus on the interpretations actors develop of their own world (cf. Abbott 2001; Wendt 1999; Archer et al. 1998; Somers 1996). There is much to be learned from such views.

Even this brief survey shows that there is no easy consensus about methods available to comparative politics today. Issues long below the surface of the field have become prominent again, partly because new ontologies have come to the fore. Rather than conclude with a statement about dilemmas, however, I want to take some steps in the direction of solutions.

Beyond the Traditional Comparative Method

Faced with the need to assess explanations for phenomena whose causal structure includes a long or complex causal chain, analysts can usefully turn to small-n comparison. To see the usefulness of such research designs, however, we have to move beyond classic conceptions of the 'comparative method' which see it in purely correlational terms as a 'weak' version of the statistical method, namely as a method in which the only important observations to be drawn from the cases are taken on the values of the dependent variable and a few explanatory variables (cf. Lijphart 1971, 1975). Seen in these terms, small-n

comparison yields few pertinent observations; the analyst lacks the degrees of freedom to consider more than a few explanatory variables; and the value of the method for causal inference seems distinctly limited relative to statistical analysis.

Scholars who approach the single 'case-study' from such a perspective also claim that it can play no significant role in causal inference. After all, if a single case yields only a single observation on the outcome and explanatory variables, it provides little basis for such inferences. Eckstein (1975) argued that a single case could be used to falsify a theory, by identifying a 'crucial case' in which a theory is 'most likely' to hold if it is valid anywhere and showing that it does not hold there, but others have pointed out that this approach is viable only when causes are deterministic, rather than probabalistic, or when the claims to be tested are about 'necessary' causes (Lieberson 1992: 117). Many advocates of case-studies retreated to the claim that, by virtue of their inductive richness, they are useful mainly for generating new hy-

Feature Essay cont.

continued from page 5

potheses or refining theories. The result has been pervasive skepticism about the value of single case studies, despite a revival of interest in them (cf. Ragin and Becker 1992).

However, we need not see single case-studies, small-n comparison or the 'comparative method' exclusively in these terms. Let us draw a distinction between the concept of a *case* understood as a single unit where the outcome being-investigated varies at the unit-level and the concept of an *observation* understood as a piece of data drawn from that unit pertinent to a causal theory (cf. King et al. 1994). A single unit may provide only one observation on the principal outcome of interest, but it can yield a diverse array of other observations pertinent to the testing of a causal theory,

In short, if we see the central enterprise of social science, not as one of finding correlations between an outcome and a few independent variables, but as the more central one of devising and testing causal theories, small-n comparison and single case-studies constitute viable research designs with important roles to play in causal inference.

Although this point is often neglected, Campbell (1975) made it some years ago, noting that detailed examination of one or two case-studies can often be superior to statistical methods for testing causal inferences, because it allows for more careful measurement and the tracing of causal processes. Instead of viewing small-n comparison primarily as an exercise in correlating a few independent variables with a dependent variable, we should understand the comparative method as a technique that allow for close inspection of causal processes in a small set of cases from which a diverse range of observations are drawn to assess the adequacy of a causal theory designed to explain those processes and their outcomes. Reconceptualized in these terms, the comparative method emerges, not as a poor substitute for statistical analysis, but as a distinctive approach offering a much richer set of observations than most statistical studies allow. Seen in these terms, it is a method

especially appropriate to the ontologies of comparative politics in recent years.

Systematic Process Analysis

From this perspective, the value of single case studies and small-n research designs is that they provide the terrain for the application of a method that I call 'systematic process analysis'. It bears a strong resemblance to methods described by Campbell (1975) as "pattern matching" and by George and McKeown (1985) as "process tracing" (Collier 1991: 23; Mahoney 2000; Bennett and George forthcoming). It is far from new and has long been practiced, in proximate if rarely exact form, by many scholars (cf. Moore 1969; Skocpol 1979; Collier and Collier 1991). But this method is undervalued by a field mesmerized by a standard regression model whose limitations are now becoming clear.

Systemic process analysis is a positivist form of inquiry that sees the principal object of social science as the testing of causal theories about the social or political world. But nothing in mainstream positivism implies that the only observations relevant to testing a causal theory are ones drawn on the values of the outcome (or 'dependent' variable) and on a small set of variables designated the ultimate 'causes' of that outcome (often termed 'independent' variables). Observations of this type are valuable, but a viable theory specifies a set of causal processes associated with the operation of these variables; and, from this image of the causal process, a wide range of predictions can be drawn about what the cases should display if that theory is true or false. Those predictions can then be compared to observations about many facets of the cases at hand, including observations about what kind of intermediate events occur, the sequence of those events, the behavior of the actors, and the public and private statements they make.

The basic point should be clear. Systematic process analysis entails the development of a causal theory, extracting predictions from it about what should be observed if the causal processes it

posits are present in the cases, and examination of a diverse set of observations drawn from those cases with a view to assessing whether those predictions are born out or not. Observations bearing on the shape of the causal processes present in the case provide a test of the theory that is at least as stringent and relevant as do observations about the correspondence between the values taken by a small set of causal variables and the dependent variable, even when the main object is to identify such a small set of 'causal variables'. Given the movement in comparative politics toward causal theories that envision multiple interaction effects, however, this method has become especially useful. The validity of arguments about path dependence or strategic interaction can often be assessed only by comparing predictions about causal processes to observations of such processes in the cases at hand.

Bates *et al.* (1998) make a similar point, but systematic process analysis, as I construe it, places more emphasis than they do on the importance of assessing the relative merits of several theories simultaneously. Since the relevance of any piece of data, as Kuhn (1969) reminded us, is always specified partly by the theory at hand, we do not secure as rigorous a test of a theory when we examine only one of them. Since the object here is to test a theory (and not simply to find a few causal variables) and the viability of a theory can only be evaluated relative to other theories, this method asks us to compare theories against the observations drawn from the cases. This approach provides checks against the temptation to declare a theory valid when limited evidence has been found for it and a standard, rooted in alternative theories, against which to form a judgment about any one of those theories.

In sum, systematic process analysis examines the processes unfolding in the cases at hand as well as the outcomes in those cases. The causal theories to be tested are interrogated for the predictions they contain about how events will un-

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fold. The point is to compare these predictions with observations drawn from the cases at hand. The theory should be rendered as 'brittle' as possible, against observations and other theories, i.e. it should yield predictions that could be shown to be false by available data and that are distinguishable from the predictions of rival theories. As usual, the analyst should seek as many and as diverse a range of predictions as possible, including ones about the specific actions expected from various types of actors, statements that might reveal their motivation, and the sequences in which actions occur.

The systematic process analyst then draws observations from the empirical cases, not only about the value of the principal causal variables, but about the processes linking these variables to the outcomes. A theory that survives tests against more and different kinds of observations is more likely to be valid than one tested on a smaller or more homogenous set of observations (King *et al.* 1994). Because each theory is being tested against others, the investigator should focus special attention on phenomena about which the predictions of the theories diverge. This is not simply a search for "intervening" variables. The point is to see if the multiple actions and statements of the actors at each stage of the causal process are consistent with the image of the world implied by each theory.

In the final stages of the investigation, the observations drawn from the cases are compared with the predictions of the theories and a judgment about the superiority of one theory over the others is made, largely on the basis of congruence between predictions and observations. If there are reasons to doubt the adequacy of the data or to attach high value to a theory that seems contra-indicated, further observations can be made in existing cases or new cases examined to improve the judgment.

Conclusion

Many will see in this account a method they have been using for years.

What I hope to have done is to explain why it is a valid and valuable method for drawing causal inferences, with some distinct advantages over standard statistical methods especially when causal processes are complex or the variables difficult to summarize in quantitative measures. My point is not to denigrate statistical analysis but to suggest that research based on small-n comparison can be substantially more useful than many acknowledge.

In this respect, social science is not different from natural science. Few biologists would consider their theories adequately tested if they examined only the macro-level correlation between an ultimate outcome and a few causal factors. When they cannot apply experimental methods, natural scientists normally seek many kinds of observations pertinent to the causal processes they are studying. So should social scientists.

When should scholars apply systematic process analysis and when should they use regression analysis? Much will depend on the character of the theories to be tested and the ontologies they imply. Standard regression methods will be especially useful when the cases available are large in number and genuinely independent of each other, the relevant outcomes heavily dependent enough on a small set of causal variables highly-independent of each other and so powerful that their impact shows up consistently across cases, and the relevant interaction effects limited enough that they can be modeled with the available degrees of freedom. In many studies, statistical techniques may be useful for assessing some aspects of the causal relations specified by a theory, while systematic process analysis is employed to test other aspects of those relations.

As Abbott (1988) observes, however, the conditions required for effective regression analysis are often not met. In such contexts, systematic process analysis can have distinctive value. It allows scholars to assess more complex causal processes and to move beyond explanations rooted in statistically-significant coefficients but relatively-thin

causal theories toward ones that contain the more realistic specifications of the causal processes that move the social, economic and political world (cf. Archer et al. 1998; Mahoney 2001). In these respects among others, small-n comparison based on systematic process analysis offers substantial potential for resolving the methodological dilemmas that emerge from the new ontologies now common in political science.

Announcements

Award Nominations

Nominations for the section's 2003 book and dissertation awards are due March 1, 2002. One copy of the book or dissertation should be sent to each of the following committee members.

William H. Riker Award for the Best Book in Political Economy:

Brian Sala, Department of Political Science, Univ. of California, Davis, *Chair*

Isabela Mares, Department of Political Science, Stanford Univ.

Randy Stevenson, Department of Political Science, Rice Univ.

Mancur Olson Award for the Best Dissertation in Political Economy:

Wendy Hansen, Department of Political Science, Univ. of New Mexico, *Chair*

David Kang, Department of Government, Dartmouth College

Andrew Martin, Department of Political Science, Washington Univ.

Call for Papers

The Political Economy section of the European Consortium on Political Research (ECPR) invites paper proposals for the 2003 ECPR conference, to be held in Marburg, Germany, 18-21 September. Those interested should consult the section's website for details on panels and submission deadlines <http://www.essex.ac.uk/ecpr/general_conference/show_section.asp?secID=4>.

The Political Economist
Ford School of Public Policy
440 Lorch Hall, 611 Tappan Street
University of Michigan
Ann Arbor, MI 48109-1220