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How Not to Criticize Rational Choice Theory Pathologies of "Common Sense"

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Donald Green and Ian Shapiro, *Pathologies of Rational Choice Theory: A Critique of Applications in Political Science*. Yale University Press, New Haven, CT, 1994. Pp. xi, 239. \$25.00 (cloth).

Rational choice theory consists primarily of formal, deductive models of interactions among strategically rational agents. It is among the most firmly established research traditions in contemporary political science (e.g., Lalman, Oppenheimer, and Swistak 1993). Donald Green and Ian Shapiro are unimpressed. They identify and bemoan a "curious disjunction" between the high level of "theoretical elaboration" and the paucity of "successful empirical applications" in this body of research (ix). They attribute this disjunction most immediately to a "syndrome of fundamental and recurrent methodological failings" that puts rational choice theory "at odds with the basic requirements of sound empirical research" (33). They insist that this syndrome consists not only of "pedestrian methodological defects" but also of "pathologies," to which they refer in their title, such as post hoc theory development, poorly formulated empirical tests, and arbitrary domain restrictions (33-46).

Green and Shapiro complain that, in the work of rational choice theorists, these methodological defects "manifest themselves at each stage of theory elaboration and empirical testing." As a result, "Hypotheses are formulated in empirically intractable ways; evidence is selected and tested in biased fashion; conclusions are drawn without serious attention to competing explanations; empirical anomalies and

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discordant facts are often either ignored or circumvented by way of post hoc alterations to deductive arguments" (6). What they find especially disturbing is that these pathologies seemingly compromise whole areas of substantive research where, rightly, they assert that rational choice is regarded as being most sophisticated and productive—studies of voter turnout, collective action, legislative politics, and electoral competition in American politics (e.g., Lalman et al. 1993). Rational choice theory, according to Green and Shapiro, tells precious little, if anything, about "how politics works in the real world" (6).

These charges surely are serious; moreover, there is a kernel of truth to them. Rational choice theorists do not pay sufficient attention to the complex relations among theory, models, and empirical evidence in their ongoing research. More particularly, as they have for some time rightly been aware, there is a troubling disparity between theoretical sophistication and systematic empirical testing in their work (e.g., Ordeshook 1976, 298). This kernel of truth, however, hardly seems to warrant either the sweeping indictment that Green and Shapiro issue or the fervor with which they press their case. *This* curious disjunction arises because, in the end, Green and Shapiro are *not* narrowly concerned with either the gap between the theoretical and the empirical aspects of rational choice research or the methodological "pathologies" from which it allegedly arises. A singular focus on that theme misses the main thrust of their argument.

Green and Shapiro instead make a case about what counts as good social science and, in particular, about the very circumscribed role that one should accord to theory in that enterprise. They repeatedly insist that the systematic methodological failings of rational choice theory "are rooted in the ambition to come up with a universal theory of politics and the belief that anything less cannot aspire to be genuine science" (x, 33, 202). They thus see the various pathologies as symptoms of the "universalist ambitions that rational choice theorists *mistakenly* regard as the hallmark of good scientific practice." Against such ill-advised aspirations, they advocate "the *commonsense* enterprise of building middle-level theoretical generalizations" (6, 188, emphasis added). Unfortunately, like so many purportedly commonsense commitments, Green and Shapiro's view proves on closer inspection to be seriously flawed.

TWO PRELIMINARIES

First, there are at least two ways to approach this book. I examine general difficulties with Green and Shapiro's argument. One also might proceed in a more piecemeal fashion and question the way that they characterize and interpret both particular studies and whole areas of rational choice research. Green and Shapiro rest their critical case, in large measure, on their claim to have read widely and deeply in the relevant rational choice literature, but there is good reason to suspect their reading of that work.

Consider a short, seemingly unobjectionable, paragraph from early on in the book (29). In it, Green and Shapiro assert that rational choice theorists especially covet "thin-rational accounts that produce counter-intuitive results regardless of agents' tastes and preferences or their knowledge about one another's likely behavior." They offer Kenneth Arrow's impossibility theorem as an example. Because, however, "results such as his are few and far between," Green and Shapiro claim that rational choice theorists such as Mancur Olson offer less satisfying "thick-rational accounts" that specify the interests and goals of relevant actors. When such accounts fail, according to Green and Shapiro, the next "line of defense" that rational choice theorists adopt is to "move to imperfect information models" of political interaction.

There are several misrepresentations here. First, Arrow's work and the literature it has generated are not explanatory. That work examines the possible limits of our normative commitments by demonstrating the compatibility or otherwise of some set of those commitments. Green and Shapiro notwithstanding, Arrow and Olson are not obviously involved in the same explanatory enterprise. Second, it is misleading to depict rational choice theorists, like Olson, who are engaged in an explanatory project as retreating from "thin" to "thicker" concepts of rationality. They have no choice but to work with a conception of rationality that provides a substantive interpretation of the thin concept. I return to this point below. Third, it is important to note that, contrary to Green and Shapiro, the "move" among rational choice theorists to models of imperfect information is not a defensive maneuver but an attempt to capture accurately the informational structure that prevails in the particular situations they seek to model. In this paragraph, then, Green and Shapiro are able to

depict rational choice theorists in full, dishonorable retreat from the exigencies of empirical testing only by compounding category mistakes with misinterpretations. Similarly tendentious passages abound in this book. My point is not to rehearse them but to suggest that readers unfamiliar with rational choice research are unwise to rely on the way that Green and Shapiro characterize the literature that they survey.

Second, Green and Shapiro, despite their conspicuous protestations, have written a hostile book. This is not simply because they are unsparingly critical of rational choice theory, though they are that. They devote roughly twenty pages to constructive proposals, and they confine themselves there largely to suggesting that rational choice theorists practice what they, Green and Shapiro, preach. They further compound this substantive failing by repeatedly partaking in the sort of gratuitous, dismissive rhetoric that is bound to inflame rather than enlighten. This is clearest in the title Green and Shapiro chose, but their disdain marks the text in numerous places. For example, they compare rational choice research to Marxist debates over the declining rate of profit (40), to deceptive advertising practices (43), and, disparagingly, to psychoanalysis (194). Indeed, they go so far as to wonder "whether rational choice scholarship can properly be regarded as social science" (9). None of this seems especially well designed to "initiate a conversation" or to sustain a "continuing discussion" with rational choice theorists (x). It does accomplish two other things: It invites reviewers to focus on the failings of Green and Shapiro's own argument and raises questions about the criteria that Green and Shapiro deploy as self-appointed arbiters of good social science.

RATIONAL CHOICE AS A RESEARCH TRADITION

Although they never explicitly articulate or defend it, Green and Shapiro hold a particular, partial view of what constitutes good social science. They are preoccupied with challenging "the empirical power of rational choice theory" (6). This reflects their more general, single-minded fixation on empirical performance as the sole criterion of good scientific practice.

Green and Shapiro state without hesitation or qualification that "however analytically tight and parsimonious a theory might be, its

scientific value depends on how well it explains the relevant data" (10). They seek to justify their preoccupation by establishing that rational choice theorists necessarily too are committed to viewing empirical performance as the exclusive mark of good social science. They insist that, judging by the philosophical positions that rational choice theorists regularly embrace, the latter must be either Hempelian realists or Friedmanite instrumentalists (10, 30-32). They conclude that, on either account, "empirical testing cannot be escaped . . . a theory of politics has *no payoff* if its hypotheses do not survive empirical scrutiny" (32, emphasis added).

This argument is simplistic and betrays deeper confusions about the nature of social science. Green and Shapiro's allegiance to empirical testing, for example, has a curious quality. They deny that they are "naive falsificationists" (180-83), but throughout the text they ask what "data," "evidence," or "empirical observations" would falsify or be inconsistent with this or that rational choice explanation (e.g., 36, 69, 108, 146). The obvious retort is that an explanation can be only falsified by or be inconsistent with a competing, more adequate explanation. Thus, as Green and Shapiro (182) note, but seem not fully to comprehend, *no datum, evidence, or observation can, by itself, falsify any explanation.*

There are several ways to distance oneself from naive falsificationism. I consider one. Ball (1987) recommends interpreting rational choice theory as a research tradition (Laudan 1977, 1981). A research tradition consists of a set of general assumptions that loosely unite various component theories, specifies the sorts of problems that these theories can be expected to solve, and designates the methods appropriate for so doing (Laudan 1977, 82, 97). Viewing rational choice theory in this way has implications that Green and Shapiro should find discomfiting.

First, rational choice theorists can, from this perspective, deflate the premise upon which Green and Shapiro construct their entire argument. The merit of any theory is determined by how well, relative to competitors, it solves a range of empirical *and* conceptual problems that "are of equal importance in theory testing" (Laudan 1981, 147). Green and Shapiro, like many critics of economic models more generally, simply overstate the role of empirical performance in judging the worth of social science (Hausman 1989). For example, they leave themselves no way to assess the insight into the nature and limits of strategic rationality that the "folk theorem" for repeated games provides (e.g., Fudenberg and Maskin 1986). Similarly, their view of good social

science accords no place for the process by which game theorists discovered how to transform intractable games of incomplete information into analytically manageable games of complete but imperfect information (Harsanyi 1967, 1968a, 1968b). Absent that advance, however, much subsequent work in political science on models of imperfect information (e.g., Calvert 1986) and nearly all the work on communication in games (e.g., Banks 1991) would have been inconceivable. Without *that* work, those few rational choice theorists whose research, Green and Shapiro grudgingly admit, conveys "a great deal of information about Congress, parties and committees," (202) could not have undertaken their studies (Krehbiel 1991; Kiewiet and McCubbins 1991; Cox and McCubbins 1993).

Second, interpreting their enterprise as a research tradition in no way compels rational choice theorists to "embrace the more extreme critiques of falsificationism" (181). Such an interpretation shows, however, that the task of assessing the empirical performance of rational choice theories is considerably more complicated than Green and Shapiro allow. For example, Green and Shapiro complain that, because they proceed from different assumptions regarding the goals, levels of risk aversion, time preferences, and so on, of political actors, "rational choice models may generate diametrically opposing predictions" (36, 149-50) and that it thus is difficult to assess their empirical performance. The rational choice research tradition, however, is committed only to a "thin" concept of rationality—one that presumes the consistent (defined in terms of transitivity, completeness, etc.) and efficient pursuit of instrumental goals. It should come as no surprise that its various component theories, operating with differing conceptions of rationality that provide substantive renderings of the common, thin concept, yield different, perhaps conflicting, results. The component theories of a research tradition, viewed either over time or across domains of application, need not be mutually consistent in either their particular assumptions or their results (Laudan 1981, 151). Thus, the explanatory failure of a particular theory, while troubling, need not directly discredit either the larger research tradition of which it is a part or the other component theories of that tradition.

Third, research traditions and their component theories can be assessed only comparatively (Laudan 1977, 120). Green and Shapiro fail to grasp this basic point. Throughout the text, they resolutely resist offering anything like a theoretical alternative to the rational choice

theories they criticize. They plausibly recommend that rational choice theorists embrace a relatively modest "partial universalism," one that claims only that rational pursuit of individual advantage explains part, but by no means all, of what occurs in every domain of politics (69). They presume that scaling back on the universalist aspirations of rational choice theory in this way absolves critics of the need to elaborate and defend an alternative theoretical standpoint (192). Likewise, they claim that "the criticism that we offer no alternative theory must be interpreted to mean that we offer no theory of comparable generality or range" (184). This line of argument is thoroughly unpersuasive. Interpreting the aims of rational choice theory in terms of partial universalism, though plausible, in no way eliminates the pressure on its critics to identify competing explanatory mechanisms and to embed those mechanisms in rival, more general, theoretical structures. Otherwise such critics, Green and Shapiro included, lack any basis from which to circumscribe the reach of rational choice accounts or to explain that portion of the political world that those accounts fail to capture.

Consider the practical implications of Green and Shapiro's posture. These emerge when we consider a study that, presumably, they deem methodologically sound. Green and another collaborator canvass studies of opposition by whites in the United States to court-ordered busing for purposes of racially desegregating public schools (Green and Cowden 1992). Survey research, according to Green, suggests that self-interest plays little or no role in the formation of attitudes on this policy issue. By contrast, self-interest is a significant causal factor in determining who actually participates in protests against such policies. Here is a circumstance, if ever there was one, that should illustrate the merits of "middle-level theoretical generalizations" of the sort that Green and Shapiro advocate.

"Why," asks Green, "does self-interest, which has little or no effect on antibusing attitudes, manifest itself in antibusing behavior?" This question raises the suspicion that data generated by survey techniques that, as Green and Shapiro recognize, "were developed by social psychologists for very different purposes" (70), are largely irrelevant to the assessment of rational choice theories. It also underscores how meager a vision of social research Green and Shapiro offer. Green makes the startling inference that people simply think differently when settling on attitudes from how they do when weighing reasons for action (Green and Cowden 1992, 476, 491-2). What he

offers is not so much generalization as abdication—no appraisal of the relative importance of the competing mechanisms that seemingly explain opposition to busing; no assessment of which mode of opposition, opinion or action, is of greater political import; no judgment about which mechanism is more important to understanding the larger political world and to which, consequently, we should grant presumptive priority in our research; and, failing that, no criteria for delineating the domain in which we might expect each to have purchase.¹

This conclusion and the strategy of social research that sustains it may indeed have virtues. In my case, it elicited memories of classic episodes of the television show *Saturday Night Live*; at bottom, Green echoes the refrain of Gilda Radner playing Roseanne Roseannadanna: "It's always something! If it's not this, it's that! If it's not one thing, it's another!" My fondness for Roseanne notwithstanding, this hardly is an inspiring vision of social science. Worse yet, it is not a defensible one.

THE EXPLANATORY AMBITIONS OF RATIONAL CHOICE THEORY

As Green and Shapiro recognize, numerous rational choice theorists in fact defend their enterprise in terms of "partial universalism" (192, 26-27). In that sense, the doors they claim to be brazenly breaking down in fact have been open for some time. Rational choice theorists are not committed to the "universalist ambitions" about which Green and Shapiro are so apprehensive, but neither must they thereby resign themselves to the posture of abdication to which Green and Shapiro apparently are driven by their apprehensions. To see why, consider a plausible defense of rational choice explanation in social science.

Green and Shapiro recognize that explanation involves the search for causal mechanisms underlying the phenomenon to be explained. They acknowledge that "rational choice theorists do not deny this" (187). This view of explanation, however, in no way entails that the central task of social science is to uncover lawlike generalizations that can ground predictions (Little 1993). Green and Shapiro therefore are misguided both when they intimate that the aim of social science is to discover governing laws (184) and when they allege that constructing formal models for purposes of equilibrium analysis somehow entails

a commitment to a deductive-nomological model of explanation (30-32, 188). This is the case even if rational choice theorists sometimes mistakenly depict their enterprise in this way. Deductive, formal models allow rational choice theorists to specify and explore the causal mechanisms that explain a given event or class of events. The equilibria that such models generate, when they do so, represent the sort of regularities that, *ceteris paribus*, we can expect those causal mechanisms to sustain. Rational choice models, in this interpretation, are a type of causal analysis that identifies phenomenal rather than governing regularities (Little 1993).

Rational choice theorists, following Davidson (1980), commonly depict individuals as acting for reasons and, in turn, interpret reasons, under appropriate conditions, as causes of action (Elster 1986; Satz and Ferejohn 1994; Hausman 1995). Green and Shapiro (20-23) worry that this view imposes "enormous burdens" on empirical research. They also complain that it is unpersuasive insofar as psychological studies of choice routinely reveal cognitive processes (and flaws in those processes) at some variance with the simple Davidsonian model of intentional action. They then try, once again, to force rational choice theorists into the procrustean bed of realism or instrumentalism. Once again, their argument is untenable. It reveals a limited understanding of the role mechanisms play in social scientific explanation. The value of a mechanism quite plausibly depends neither on its being true nor on the predictions it sustains, but on the suppleness—both empirical and conceptual—that it lends to explanations generated by the higher-level theory in which it is embedded (Stinchcombe 1991). Green and Shapiro do not simply neglect this possibility; their single-minded and unfounded preoccupation with empirical testing altogether prevents them from recognizing it.

Green and Shapiro might dismiss most of what I have written as tangential to what they present as "the central contention of this book, namely that little of what is claimed for rational choice theory is backed up by empirical results" (196). I hope to have shown that this "central contention" trades on a view of social science that is by turns muddled and contentious and so is, at best, poorly grounded. The implications of all this become clearer when we turn to the alleged methodological "pathologies" that Green and Shapiro attribute to rational choice theory. I consider the two of their complaints that, if persuasive, would be most damaging to rational choice theory.

POST-HOC THEORIZING AND THE TASK OF CONSTRUCTING FORMAL MODELS

Green and Shapiro rightly recognize that perhaps the most distinctive feature of rational choice approaches is that they are formal, deductive, and often, but not necessarily, mathematical. Ironically, then, they barely address the problems of model building, let alone the multiple relations among a theory, the models it generates, and empirical evidence (e.g., Little 1993, 200-2). If we focus on the distinctive feature of rational choice approaches—that they consist largely of formal models of social and political interaction—Green and Shapiro's charges of post hoc theorizing largely collapse.

As an exemplar of post hoc theorizing, Green and Shapiro offer what they take to be the tendency of rational choice theorists to "exploit the ambiguity in the meaning of rationality in order to transform successive disconfirming instances into data consistent with a newly recast theory" (36). They complain, as noted earlier, that rational choice theorists elaborate the thin concept of rationality by attributing different objectives, utility functions, information, levels of risk aversion, discount rates, and so on, to the actors who populate their models.

A thin concept of rationality is nearly empty and, hence, nearly useless for empirical research. If we wish to deploy rational choice models in empirical studies, we must work from some conception of rationality that provides a substantive interpretation of the thin concept. In other words, when constructing a rational choice model, it is necessary to specify the goals, risk aversion, discount rates, and so on that are characteristic of actors as well as the informational structure and institutional constraints at work in the situation under consideration. This can be accomplished properly only when theorists and empirical investigators engage in "a modelling dialogue" aimed at "the difficult task of finding tractable models that capture and clarify the important aspects of real situations" (Myerson 1992, 63-66). If the model produced through such a dialogue generates specific explanations at odds with the best available evidence, then we reformulate the model; we do not jettison the rationality assumption upon which the more encompassing research tradition is premised. No plausible version of falsification claims that a failed explanation falsifies the rationality assumptions that sustain rational choice models (e.g., Popper 1968). Instead, we assume that we somehow

have misspecified the situation—including the goals, levels of risk aversion, discount rates, and so on, of relevant actors—that we wish to explain and restart the modeling dialogue.

Even if we set aside the problems involved in constructing formal models, Green and Shapiro encounter further difficulties here. Post hoc theorizing is a bad thing, they tell us, because it makes empirical testing difficult. Specifically, they complain that because "assumptions" differ across models "it is not obvious what sorts of behaviors, in principle, could fail to be explained by some variant of rational choice theory" (34, 69). They assert that the best way to eradicate this pathology would be to specify in advance a clear, credible null hypothesis, one that identifies an alternative explanatory mechanism and that, on that basis, would specify when a rational choice model is disconfirmed (38). They explain that "we should accord explanatory power to rational choice theories in proportion to the credibility of the null hypotheses over which they triumph" (37).

Green and Shapiro are entirely too sanguine here. They presuppose, in ways that they systematically refuse to examine, that critics of rational choice theory possess a catalog of plausible alternative mechanisms—prospective candidates include "normative, cultural, psychological and institutional" factors (184)—that are embedded in theories well founded enough empirically and conceptually to sustain such competing hypotheses. This is simply wishful thinking. To take only one prominent example, those who advocate a "renaissance" in survey-based "political culture" research as an alternative to rational choice approaches themselves raise serious doubts about whether their explanatory claims are well founded in either conceptual or empirical terms (Eckstein 1988, 790; Inglehart 1988, 1204-5). Further examples are available, but this leads into my final topic.

ARBITRARY DOMAIN RESTRICTIONS AND THE NECESSITY OF THEORY

Green and Shapiro claim that rational choice theorists consistently engage in what they call arbitrary domain restriction. They suggest that this amounts to retreat from some domain of inquiry in the face of empirical anomalies and without a theoretical rationale for so doing (44-46). The problem is that this complaint is inconsistent with the tacit constructive position that Green and Shapiro adopt.

By extension, a nonarbitrary domain restriction would, on Green and Shapiro's account, require a theory that specifies, in advance, when and where a particular explanatory mechanism will apply. It also would presuppose some catalog of plausible alternative mechanisms of the sort that those engaged in "middle-level" theorizing might deploy. Each of these competing mechanisms would, in turn, require a way of specifying, theoretically and in advance, the conditions under which it might be expected to apply. Once a catalog of plausible explanatory mechanisms exists, we will want a theory describing which items of the catalog apply under what circumstances; this will include a research strategy that tells us where, in our catalog, we might most profitably begin. In brief, we will want a theoretical rationale that specifies to which of the plausible mechanisms we will regularly accord analytical priority. We thus seem inexorably to be approaching precisely the sort of more general theory that Green and Shapiro repudiate (185, 192).

Rational choice theorists, because they proceed upon a presumption of rationality (Davidson 1980, 237; Elster 1986), are well placed to meet this challenge. When, for example, Green and Shapiro (21) wonder how, as social scientists, we can discriminate between the errors of rational agents and the "normal" activity of irrational ones, rational choice theorists offer a simple answer. Unless we presume that we can do so, social inquiry (to say nothing of most daily interactions) cannot get off the ground. There are good reasons to believe that social science cannot help but operate on a principle of charity (or some variant thereof) that identifies subjects of inquiry as intentional, rational agents. Unless we attribute to them consistent beliefs and desires, we have no hope of making sense of their actions (Lukes 1982). Even if, as Green and Shapiro plausibly suggest, we restrict rational choice to a "partial universalism," social science cannot justifiably begin with just any of the plausible alternative mechanisms. Rationality has presumptive priority in the absence of some argument to the contrary. Green and Shapiro provide no such argument.

The point here is that Green and Shapiro cannot discriminate between arbitrary and nonarbitrary domain restrictions in the absence of a reasonably general theory. Although they "do not deny that, other things being equal, generality is desirable" (185), what they call common sense leads them to dismiss any move in the direction of greater generality as a highly dubious if not entirely futile exercise (184). Absent some argument to reconcile their methodological

criticism and their theoretical posture, one of the two must go. Their position, as it stands, is simply incoherent.

CONCLUSION

Green and Shapiro might appear to be the envy of many readers of this journal. They have written a book centrally concerned with the philosophy and methodology of social science that has generated unusually wide and largely positive notice in press accounts of the allegedly baleful influence of rational choice theory in political science.² Once we set the promotion and self-promotion aside and assess their case on its merits, appearances, like the "common sense" views that Green and Shapiro peddle, prove deceptive.

NOTES

1. Here I aim only to illustrate the general type of "explanation" to which Green and Shapiro apparently are drawn by their aversion to theory. In order to contest the particular account that Green and Cowden provide in a way consistent with my own claims in this review, I would need to advance an alternative, more compelling solution to their puzzle. Although I think that such an account, grounded in rational choice theory, is plausible, I can offer only a sketch of one here. This explanation sketch is sustained by the portrait of rational choice explanation that I provide below.

If we presume that political actors are rational, it is unsurprising that, other things equal, those who are most immediately, tangibly, and adversely affected by court-imposed busing are more likely to participate in oppositional protests. What, then, accounts for the antibusing opinion that individuals who are largely unaffected by particular policies express in response to surveys? A plausible answer might build on three factors. First, the costs to an individual of expressing opinions, oppositional or otherwise, on surveys is relatively low. Second, the potential utility gains from voicing opposition in such a context might be substantial. So, for example, reputation effects are available to those who, having responded to a survey, then proceed to report their responses to family and friends. Finally, oppositional opinions might well reflect informational considerations. A respondent might view a particular busing policy as an example of the sort of intrusive government action that she would like to avoid in her own life. She might therefore take any particular policy as a signal from which to conclude that her family might be next. That is, she could reason that in the future her family might be directly subject to busing or that government might impose some other sort of policy (e.g., taxation) in order to promote desegregation.

2. See, for example, Cushman (1994) and Coughlin (1994).

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