New Ideas in Experimental Political Science

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1 Introduction

For many observers, experiments symbolize science. Young and old alike are drawn to science by visions of women and men (often in white coats) experimenting on new ideas. In sciences such as chemistry and psychology, the image is real. Although both disciplines contain theorists and nonexperimental researchers, most of their professional norms and great accomplishments are indescribable without reference to experimental methods. In such disciplines, experiments are the leading vehicle of knowledge creation.

Experiments appeal to scientists because they facilitate stark and powerful empirical claims—statements that can change how critical target audiences think about important phenomena. The experimental method generates inferential power by inducing researchers to *exercise control* over the objects of study, to *randomly assign* subjects to various conditions and to *carefully record* observations. Researchers who design and conduct experiments carefully are often rewarded with a clear view of cause and effect.

Experiments, however, do not always captivate and enlighten target audiences. A common reason is that the control and randomization inherent in experimental designs can generate data that are perceived as artificial. This is problematic because audiences are not obliged to believe that an experiment yields lessons about anything greater than itself. As a result, an experiment's effectiveness depends on the extent to which its audience believes that its design is analogous to the phenomena that motivate the study (Lupia and McCubbins 1998, ch. 6).

Indeed, a key factor in experimental design is striking a proper balance between analytic precision and perceived realism. When a critical mass of scholars within a discipline or topic area gains sufficient skill at striking this balance, their subset of the discipline becomes known as experimental (e.g., experimental social psychology, experimental economics). This brings us to political science.

Ours is not an experimental science in the tradition of chemistry, psychology, or even economics. Yet, interest in experiments is growing (Kinder and Palfrey 1992; McGraw and Hoekstra 1994). Although most extant political science research agendas do not use

Author's note: Thanks to Ted Brader, Kathleen McGraw, Scott E. Page, Tasha S. Philpot, Gisela Sin, and Natasha Zharinova for helpful comments.

experiments, several have done so to great effect. For example, Shanto Iyengar and his colleagues (Iyengar and Kinder 1987; Ansolabehere and Iyengar 1995) used experiments to change how broad audiences view political communication and attitude change. Sniderman et al.'s (1991) innovative telephone-based experiments have had a similarly broad impact; *Reasoning and Choice: Explorations in Political Psychology*, a book filled with experiments, won the American Political Science Association's Woodrow Wilson award as the discipline's best new book.

At the same time, the method engenders many skeptics. The most frequent critiques concern "external validity." Experiments sometimes entail constraining subjects' behaviors in ways that differ from the political contexts that motivate the research. Validity questions also arise from the fact that subjects in political science experiments—like most research involving human subjects—tend to overrepresent people who live on or near college campuses. College sophomores, the prototypical experimental subjects, are effective icons for critics who doubt that the actions of experimental subjects provide reliable data on larger populations. Such questions lead some to question whether any phenomena of political importance can be sufficiently re-created in experimental settings.

Given the substantial promise of, and skepticism surrounding, experimental political science, this special edition of *Political Analysis* comes at an ideal time. It presents a wide array of experimental designs and novel substantive contributions while addressing the roots of much skepticism and critique. Collectively, it succeeds in presenting many new ideas.

The articles that constitute this special issue share important characteristics. All are motivated by political phenomena, and each pays close attention to methodological issues (with some focusing on the analytic implications of experimental design and others focusing on the role that statistics can play in evaluating experimental data). The differences among the articles are also enlightening. Some (Eckel et al.; Simon and Sulkin) describe experiments that follow economics' experimental norms. Here, global theories are the main currency of intellectual exchange, the point of the experiment is to assess a particular theory's reliability, and subjects are paid based on how they perform. Some (Gibson et al.; Lavine et al.) describe experiments that follow psychology's norms. Here, concrete empirical demonstrations are the main currency of intellectual exchange, the point of the experiment is to add new demonstrations to such exchanges, and monetary payments are not used to induce particular behaviors. Two other articles (Green and Gerber; McDermott) focus on experiments more broadly—paying particular attention to the social and scientific value of experimental endeavors.

In the following paragraphs, I summarize each of these new ideas in experimental political science. I then conclude by discussing the future of experimentation in our discipline and describing new experimental opportunities.

2 New Ideas

The first article in this issue addresses the potential of the experimental method in political science and controversies associated with its growth. Rose McDermott's "Experimental Methodology in Political Science" examines core methodological issues in experimental political science. It is instructive about basic experimental principles and provides one of the cleanest comparisons between the experimental practices of social psychologists and behavioral economists that I have seen. If you are new to the topic of experimental political science, or if you have been exposed to either the economic or psychological approach exclusively, this article is an excellent read.

McDermott is an advocate of the experimental method and writes with great passion. To her credit, she does not present "straw man" versions of opposing arguments. In many

cases, McDermott seeks critical arguments and reveals their merits. This practice makes her dismantling of several frequently heard but less constructive critiques of experimentation all the more compelling. McDermott is particularly effective in her response to broad critiques of experiments' external validity problems. In the end, her article supports greater experimentation in political science, but unlike many writings that focus on a particular form of inference, does so with uncommon grace.

The articles following McDermott present new ideas in the context of specific experiments and substantive topics. Howard Lavine, Milton Lodge, James Polichak, and Charles Taber's "Explicating the Black Box Through Experimentation: Studies of Individual Differences and Cognitive Processes" clarifies the conditional role of personality in attempts to explain political behavior. The topic of personality is relevant because important lines of psychological argument show personality to cause behavioral variations across experimental treatments. The point of such demonstrations, however, is typically *not* to demonstrate context-independent personality effects, and most psychologists are careful to specify domains in which their results are relevant. When such results are imported into political science, by contrast, there is a temptation to treat them as general laws that apply across a wide range of political contexts. It is against such practices that the "black box" experiments provide a constructive counterexample.

Through careful reasoning and clever designs, the authors show that the impact of personality is conditional on key situational factors. The authors' claims are based on five experiments. Each experiment shows how certain personality traits affect attention and reactions to politically relevant stimuli. The main result is that the perception of threat makes select personality types more likely to attend to biased information and more likely to perceive threat-based messages as credible. The experiments not only reveal the problems with unconditional statements about the impact of personality on political behavior, but also—by showing when such statements are more and less likely to be accurate—reveal how to use such data more effectively.

The substantive focus of James L. Gibson, Gregory A. Caldeira, and Lester Kenyatta Spence's "The Role of Theory in Experimental Design: Experiments Without Randomization" is institutional legitimacy following the legislative and judicial decisions that resolved the 2000 presidential election. Its primary focus is to counter criticisms of the authors' use of random assignment.

In the article, the authors examine how subjects come to accept decisions with which they disagree. Their experiment begins by sorting subjects by their views of the Florida recount. A random procedure then determines which of several vignettes each subject sees. The vignettes provide different justifications of post-election decisions. The design's nonrandom aspect is that the opening line of each vignette describes a point of view to which they initially objected.

In many cases, wholly random assignment boosts the credibility of a researcher's causal claims. The authors argue, however, that sometimes a problem—or a theory—induces paying special attention to nonrandom populations—such as those who oppose a particular decision. The authors admit that such designs can produce correlated errors, which makes experimental data more difficult to analyze. However, they then show how scholars can use statistical techniques to counter such effects. Theirs is a good example of how sound statistics and an effective experimental design can produce greater knowledge than either mode of inference alone.

Catherine Eckel, Martin Johnson, and Rick K. Wilson's "Fairness and Rejection in the Ultimatum Bargaining Game" shows how science and society can derive value from going beyond an experiment's original design when analyzing its data. In this article, the most

interesting findings come not from a straight comparison of treatment groups, but from interactions between the treatment and data that are often thrown away.

The substantive domain is ultimatum experiments. In these experiments, one player offers a division of resources and another player is limited to accepting or rejecting the offer. If the second player rejects the offer, both get nothing. Game theoretic analyses using the Nash equilibrium suggest that the first player should offer to keep almost all of the dollar for herself and that the second player, who lacks a better option, should accept it. Like many previous researchers, these authors reveal such outcomes as infrequent (Frohlich and Oppenheimer 2000). They explain the outcomes in their own ultimatum experiments by combining knowledge of the experimental design with data on the subjects' gender and social orientation. Among their findings is that "prosocial" males, when confronted with an opportunity to make an equal or unequal offer, are more likely than others to choose equal division. More generally, the authors show that interacting treatment, gender, and "attitudes toward" others can generate greater knowledge from experiments than would comparisons of the treatment conditions alone.

Donald P. Green and Alan S. Gerber's "The Downstream Benefits of Experimentation" also reveals often unappreciated benefits of experimentation. The impetus for their contribution is a debate about the cost effectiveness of randomized field experiments. One position in this debate, which serves as Green and Gerber's null hypothesis, is that experiments are an inefficient way to increase social scientific knowledge. Their interest in this debate arises from a field experiment (Gerber and Green 2000) in which they used random selection to determine which New Haven, Connecticut, households would receive "Get-out-the-Vote" visits, mail, or phone calls. Subsequent analysis of political participation data revealed that personal contact and direct mail increased voter turnout, whereas phone calls did not.

Field experiments can be expensive. Critics question whether the benefits justify the costs. Although it is customary to calculate the benefits on the design's success at changing a particular dependent variable, Green and Gerber argue that this approach is too narrow. They argue that such a calculation ignores experiments' "downstream" benefits—benefits that accrue from experimental manipulations that change subjects in ways that the original study does not anticipate. As an example, Green and Gerber cite a study on how random assignment of school vouchers affects education levels. They contend that "the voucher intervention provides researchers with the wherewithal to answer a largely unrelated question about how education attainment affects voting behavior. Indeed, once an exogenous shock to education has been produced, one can investigate a range of hypotheses about the consequences of education." From such arguments they conclude that the legacy of any particular field experiment can provide rich returns to enterprising, albeit careful, social scientists. They alert readers to new research opportunities by advising us to "take notice when the independent variables of interest to them are the dependent variables in another scholar's experiment, particularly if the intervention is discovered to have sizeable effects."

Deliberation is the substantive focus of the issue's final article, Adam F. Simon and Tracy Sulkin's "Discussion's Impact on Political Allocations: An Experimental Approach." Inside and outside the academy, there is increasing interest in—and advocacy of—more deliberative forms of social decision making (Fishkin 1995; Gutman and Thompson 1996). Among the factors driving this movement is the belief that forcing people to justify their actions publicly—as deliberative decision making institutions do—produces collective decisions that are more equitable and, from participants' perspectives, more legitimate.

As more people advocate and implement a wider range of deliberative decision making mechanisms, claims about the benefits of deliberation are drawing greater empirical and theoretical scrutiny (Heath 2001; Neblo 2001; Lupia 2002). The critical question is, "Under

what conditions are advocates' claims true?" Simon and Sulkin address this topic directly by conducting a laboratory experiment of the economics variety. The design is simple and clever. The experimenters offer groups of five subjects an opportunity to divide $60. The authors then vary how much subjects can communicate before making this decision, and whether subjects must allocate funds to predetermined teams or whether they can give dollars to individuals directly. Although Simon and Sulkin find that discussion can prompt equity and perceptions of legitimacy, their experiments reveal that such happy outcomes are not automatic. Results such as these clarify the conditions under which deliberation works as its advocates advertise. They also provide people who want to implement deliberative institutions with easy-to-interpret data on the likely effectiveness of such plans.

3 New Opportunities

This special issue of *Political Analysis* presents many new ideas in experimental political science. I hope that these ideas stimulate readers to consider how experiments can make their own research agendas more effective. Such considerations are particularly important in an age when the number of opportunities to run innovative experiments is growing.

Consider, for example, the opportunities arising from the evolution of communication technologies. As this evolution proceeds, people can interact with others in a wider range of cost-effective ways—many of which provide new avenues for experimentation. In the recent past, the falling costs of televisions, videocassette players, and video recorders made it cost effective for Shanto Iyengar and collaborators to run innovative experiments on how particular aspects of news, presidential debates, and campaign advertisements affect citizens. Falling long-distance telephone rates and advances in computer networking and software allowed Paul Sniderman and colleagues to run large-scale experiments on the causes of political persuasion. The advent of Internet-based technologies such as e-mail makes it just as easy to communicate with someone 1000 miles away as it does with someone who is 10 feet away. Firms such as Knowledge Networks allow scholars to run experiments on large national random samples over the Internet. Enterprising researchers are using their tools to craft innovative new studies that employ manipulations of both words and images (Lerner et al. 2002; Prior 2002).

A National Science Foundation–sponsored project called TESS makes such opportunities easier for innovative scholars to use. TESS (Time-shared Experiments for the Social Sciences) is designed to provide new data collection opportunities for scholars whose research agendas can benefit from large-scale experiments on random samples of hundreds or thousands of subjects. Any faculty member or graduate student from any social science department anywhere in the world is eligible to submit a short, five-page proposal. Members of the proposer's discipline review each proposal. Successful proposals are pretested, administered, and paid for by the project. TESS, which began accepting proposals in 2002, has sufficient funding to run innovative experiments for 200–250 research teams over its first four years. TESS provides a great opportunity for researchers who want to demonstrate the robustness of their claims in populations beyond those seen in more conventional experimental settings (see also http://experimentcentral.org).

As communication technologies continue to evolve, new experimental opportunities and challenges will appear. One of the more exciting opportunities comes from devices that combine beneficial features of televisions, computers, and telephones. When such devices are paired with advances in wireless technology (i.e., Internet access will no longer require sitting in front a stationary computer terminal), better quality replications of face-to-face interactions will be possible and will allow scholars to generate dynamic virtual laboratories.

Of course, the same technologies will bring new challenges to experimenters—particularly those who must deal with human subjects. The example of telephone surveys is instructive; evolving technologies make it easier for people to have multiple phone numbers and screen calls, each of which contributes to plummeting response rates. Because such examples are likely to be repeated, the relationship between experimentally observed populations and populations of interest may become more complex. Therefore, the success of experimental political science will require serious and sustained attention to questions of inference, such as occurs on a regular basis in this journal.

Political science best serves the public when its findings help it solve important problems through a better understanding of their environs. When such findings require stark and powerful claims about cause and effect, the discipline should encourage experimental methods. It is when these experiments are designed in a way that target audiences accept, experiments can enlighten, bring value to society, and fulfill the hopes for science that are held by young and old alike.

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