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# How to Test Cultural Theory: Suggestions for Future Research

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## Abstract

This symposium highlighted the relevance of the cultural theory (CT) pioneered by anthropologists Mary Douglas, Steve Rayner, and Michael Thompson and political scientists Aaron Wildavsky and Richard Ellis for explaining political phenomena. In this concluding article, we suggest ways in which CT can be further tested and developed. First, we describe how the theory has been applied thus far and some of the achievements of these applications. Then, we examine some of the challenges revealed by this research. Finally, we discuss ways of applying CT that promise to help meet these challenges. These methods include nesting case studies and combining case study and survey research, simulations, experiments, and approaches from social neuroscience.

This symposium highlighted the relevance of the cultural theory (CT) pioneered by anthropologists Mary Douglas, Steve Rayner, and Michael Thompson and political scientists Aaron Wildavsky and Richard Ellis for explaining political phenomena. In this concluding article, we suggest ways in which CT can be further tested and developed. First, we describe how the theory has been applied thus far and some of the achievements of these applications. Then, we examine some of the challenges revealed by this research. Finally, we discuss ways of applying CT that promise to help meet these challenges. These methods include nesting case studies and combining case study and survey research, simulations, experiments, and approaches from social neuroscience.

## ACHIEVEMENTS AND CHALLENGES IN TESTING CULTURAL THEORY

To discuss the past achievements of, and remaining challenges for, tests of CT, we find it helpful to present the theory as a sequence of hypotheses to which we will refer throughout the article. CT hypothesizes the following:

There are only four viable ways of organizing social relations: hierarchy, egalitarianism, individualism, and fatalism.

These four ways of organizing are derived from assigning “high” and “low” values to two dimensions of social life: the extent to which people are incorporated into a larger social setting (“group” or collectivity) and the degree to which people are regulated and ranked (“grid” or stratification). Hierarchy combines a high degree of both stratification and collectivity; individualism is low on both stratification and collectivity; fatalism is high in stratification and low in collectivity; and egalitarianism scores high on collectivity but low on stratification.

Each way of organizing is supported by (and in turn supports) a “cultural bias,” that is, a compatible pattern of perceiving, justifying, reasoning, and feeling. The latter includes perceptions of time, space, nature, human nature, justice, risk, blame, leadership, and governance. Together, the patterns of social relations, and corresponding biases, are called cultures or “ways of life.”

These ways of life cannot exist in a pure form as they all include features that make them self-undermining and that can only be compensated for by the other ways of life.

As a result, the ways of life emerge simultaneously and—because they embody opposing organizational and normative principles—in contradistinction to each other.

Hypotheses Four and Five mean that anything that is organized—from the highest (global) level to the lowest (individual) level—is a combination of the four ways of life.

This combination is always changing due to the continuous splitting and merging, as well as waxing and waning, of the four ways of life.

Attempts to deal with social problems that are not based on a careful consideration of all four ways of life are counter-productive. Not only will these attempts fail according to the goals and values prioritized in the neglected ways of life, but these will also fail on their own terms—as each way of organizing and perceiving is complementary to, and codependent with, the other three.

More effective attempts to resolve social problems are based, therefore, on a careful consideration of all four cultural perspectives on what constitutes a problem and a solution and tend to consist of combinations of all these four ways of life.

Several of these hypotheses have been subjected to extensive empirical testing. Hypotheses Eight and Nine have been confirmed in a series of case studies, covering such diverse issue-areas as the Russian and Chinese transitions to capitalism, the post-war reconstruction of Birmingham and Munich, the attempt to prevent global warming with the Kyoto Protocol, anti-discrimination measures in Holland, the environmental restoration of the Rhine, and water policies in Nepal after independence (Hendriks 1999; Verweij 2011; Verweij and Thompson 2006). Such confirmation is promising, but the methodological weaknesses of case study research are well known, including limited generalizability due to the small number of observations (the “small n” problem). Furthermore, there is arguably more room for the analyst's biases to influence the conclusions of his or her research. One challenge for future research is to overcome these traditional shortcomings of case study research.

Other studies have been statistical in nature and have mainly concerned Hypothesis Three. With the help of surveys, these applications have sought to predict people's policy preferences, risk attitudes, or political views from their cultural biases. Some of the best work in this regard is exemplified by the other contributions to this symposium (i.e., Gastil et al. 2011, this issue; Jones 2011, this issue; Ripberger, Jenkins-Smith, and Herron 2011, this issue). Results have been generally positive. Typically, survey-based tests have found significant correlations between people's preferences and their biases. Furthermore, they have shown that CT is frequently a more powerful predictor than alternative

approaches (e.g., Coughlin and Lockhart 1998; Ellis and Thompson 1997; Grendstad and Selle 1997; Olli 2011). Still, challenges for future research surface here as well. In particular, note that although CT is often a better predictor of people's political views than other frameworks, the absolute degree of variance explained remains somewhat limited in view of the theory's ambitious claims (Grendstad 1999, 465; Kahan 2008, 4; Rippl 2002). This finding need not be a cause for great concern, however, as CT includes several features that make it more difficult to fairly test the approach through surveys (Rayner 1992). This argument is explained in the next four paragraphs. In a nutshell, we argue that—because of various features of the theory—it is hard to test the theory with the help of surveys. In other words, in our eyes, surveys (as they have thus far been undertaken) do not represent fair tests of the theory, and should be improved. Moreover, we believe that future survey research can be designed to reduce the confounding influence of these features. To show how this might be done, we need to identify which traits of CT make it difficult to subject the approach to survey-based tests.

One such trait is the hypothesized presence of fatalism. The distrust that is a hallmark of this way of life may fuel respondents' unwillingness to answer, or honestly answer, survey questions. Fatalists' "don't care" attitude toward public issues may fuel rather erratic, or contradictory, answers to survey queries. This attitude makes it more difficult to identify fatalism through surveys, and also prevents one from getting a clear glimpse of the other ways of life.

Another problem flows from CT's assumption that people have "multiple selves" (Thompson, Ellis, and Wildavsky 1990, 265–67). That is to say, the way(s) of life to which an individual adheres can vary with the social domain in which he or she participates. For example, a person may be more of an individualist at work, prefer more egalitarian relations in a classroom setting, switch to deep fatalism when supporting the Chicago Cubs baseball team or the Feyenoord Rotterdam football club, and act in a more hierarchical fashion with his or her children. This feature of the theory makes it vital to be aware of the social context in which survey respondents are approached as well as how the social context is reshaped by the arrival of researchers bearing surveys.

A final hurdle is thrown up by the dynamic nature of CT (Thompson 2008). The theory posits that four ways of life tend to be present—forever waxing and waning, splitting and merging—in any social setting, be that a family, political party, university, or international regime. These dynamics are driven by the enduring efforts of actors, in specific social settings, to promote their preferred ways of life. These dynamics then spur them on to constantly update, improve, and revise the concrete arguments actors use to justify their preferred ways of life—in light of past experiences and the counter-claims of those favoring other ways of life (Douglas 1999). In other words, actors never cease to adapt their concrete arguments and policy preferences, although their fundamental assumptions regarding nature, human nature, risk, justice, and so remain unchanged. As a consequence, overly general survey questions will not always effectively tap into people's cultural biases as manifested in concrete social settings. Unfortunately, the survey questions that Karl Dake, Michael Thompson, and Aaron Wildavsky developed in the early 1990s, which were widely used in subsequent research, display such generality (Dake 1992; Wildavsky and Dake 1990).

The following example may make this point clear: One of the five survey questions that measure people's preference for hierarchy is "The best way to provide for future generations is to preserve the customs and practices of our past." Respondents are asked to reveal their degree of agreement on a five-point Likert scale; a high level of concurrence indicates a preference for hierarchy. The problem is that, depending on the specifics of time and place, adherents to other ways of life may concur as well. When a country has low taxes, a pluralist democracy, flourishing civil society, vibrant private sector, and night watchman state, then those respondents favoring individualism will agree with the question. When a country has lots

of consensual, local decision making, high income equality, little private property, and a widely shared environmental ethic, then those individuals upholding egalitarianism will be in accord, too. Indeed, in both these situations individuals who are drawn to hierarchy will disagree with the question. Therefore, it is vital that survey questions take into account, and exploit, the specifics of time and space (Gross and Rayner 1985).

We offer a third and final challenge: Thus far, the bulk of empirical tests of CT has concerned Hypotheses Three, Eight, and Nine. In our count, this means that six of the theory's hypotheses have received relatively scant attention. This lacuna presents a major opportunity for researchers who would like to apply CT in innovative ways.

In the next section we suggest which research methods could be useful for efforts to meet the challenges that we have just identified (namely, to overcome the traditional shortcomings of case studies, to improve surveys, and to test hitherto neglected parts of CT). The symposium contributions already rise to these challenges. Still more can be done, as we argue in the next section.

## **MEETING THE CHALLENGES OF TESTING CULTURAL THEORY**

### **Nesting of Case Studies**

To overcome the drawbacks of case study research, it is important to increase the number of these studies. This increase would overcome the “small n” objection, as well as reduce the influence of any one analyst's personal views. It would be helpful if more research were undertaken collaboratively and used the same operationalization of the theory and ensured inter-rater reliability. An accumulation of case studies would be especially effective if it followed the strategy of comparative nested analysis proposed by Evan Lieberman (2005). This mixed-method approach “combines the statistical analysis of a large sample of cases with the indepth investigation of one or more cases contained in the large sample” (Lieberman 2005, 435–36). By moving back and forth between the large sample of cases about which relatively little need to be known and the deep investigation of “model-testing” and “model-building” cases in the sample, comparative nested analysis of cases offsets the weaknesses and leverages the strengths of both qualitative and quantitative research methods. Taking Lieberman's advice, Brendon Swedlow and his collaborators (Swedlow et al. 2009) have constructed a research platform for collaborative nested analysis of cases that can be used to test all CT hypotheses.

### **Combining Survey and Case Study Research**

Another mixed-method approach might combine survey-based tests of CT with pilot case studies to generate questionnaires that take into account the specific manifestations of the ways of life in a particular social domain at a certain time. Such preparatory field research might also reveal how to keep constant the social setting in which respondents perceive themselves to be. An interesting example has been provided by Dave Ingram (2010), a “pracademic” (McDonald and Mooney 2011) in the field of risk insurance. Relying on his professional experience, and interviews with a number of executives in the insurance sector, Ingram designed survey questions capable of capturing the cultural biases of insurance executives as they go about their daily business. He has made sure that the respondents complete these surveys in their offices as part of their work routine. Thus, Ingram has been able to fairly assess the extent

to which managers' cultural biases influence their financial decision making. His approach of using qualitative research methods to generate locally and temporarily valid questionnaires could be used in political science as well.

## **Simulation**

Hypothesis Seven holds that social and political domains are characterized by the continuous splitting and merging, and waxing and waning, of four ways of life. This feature can be tested for consistency and illustrated through simulation, that is, building a mathematical model of the system that is under investigation and then running tests on that model. Thus, Don Braman, Dan Kahan, and James Grimmelmann (2005) contributed to resolving a long-standing problem in CT: given that social and political domains are supposed to be mixes of all ways of life, why is it still possible to distinguish between (more) egalitarian, individualistic, hierarchical, and fatalistic actors and systems? They resolve this issue by building a dynamic model that incorporates insights from social psychology about human cognition. Their model shows that, after an initial differentiation of opinions occurs, a rapid polarization of viewpoints follows. The waxing and waning of the four ways of life has also been simulated. Dave Ingram, Paul Tayler, and Michael Thompson (forthcoming) built an artificial life model in which companies choose between four behavioral strategies (derived from CT) on the basis of the business environment in which they are located. The sum of their choices then changes that environment, which in turn influences the companies' strategies. This model displays life-like features, such as the booms and busts that are typical of financial and other markets. It also captures the continuous waxing and waning of the four ways of life. A task awaiting cultural theorists is to build similar models capturing political processes. Mercedes Bleda and Simon Shackley (forthcoming) present a first attempt at this task in their article that describes a simulation model that analyzes the dynamics of public perceptions of risk and uses Bovine Spongiform Encephalopathy ("mad cow disease") in the United Kingdom as a case study.

## **Interactive Experiments**

A great affinity exists between CT and the analysis of social interaction systems as developed by social psychologist Robert Bales and associates over more than fifty years (Bales 2002). This social interaction systems-analysis was built in an inductive fashion through observing and analyzing the interactions of small groups of people, both in the laboratory and in the field. Bales' analysis shares many features with CT. His social world is dynamic (through clustering and polarizing), fractal, relational, and filled with multiple selves. In this world, value conflicts are inevitable, even in small groups (Bales 2002, 34).

Bales measures these conflicting values, which also manifest themselves in behavior, with three bipolar dimensions, two of which appear close to the dimensions underlying CT's ways of life. According to Bales, whenever people interact, their behavior varies along the following lines: friendly versus unfriendly (corresponding to high and low group); rejection of authority versus acceptance of authority (resembling low and high grid); and dominant versus passive (conceptualized as personality traits not featured in CT). Through clustering within, and polarization between, sub-groups, different types of behavior (expressive of alternative values) emerge that approximate the four ways of life of CT. The utility of Bales' research for experimental tests of CT lies in its tried-and-tested tools for observing and measuring the values and behavior of people interacting. These tools need to be recalibrated for CT, but then could prove useful. Experiments could focus on CT's prediction that people think and reason by disagreeing (i.e., Hypothesis Five). They would test, in natural and/or artificial environments, whether the

four opposing ways of organizing, reasoning, justifying, and behaving emerged over time. Although not based in Bales' research, studies of the role of culture in public goods, bargaining, and trust experiments (Chai et al. 2011, this issue) further suggest the value of constructing interactive experiments to test CT hypotheses.

## **Social Neuroscience**

Rose McDermott (2004) has highlighted the importance that social neuroscience can have for the study of politics. For CT, brain research may provide additional ways to test Hypotheses One, Two, and Three, among others. Like cultural theorists, neuroscientist Antonio Damasio argues that patterns of organizing are the basis of ways of reasoning (Damasio 1994, 190–91); there is a limited set of such patterns (Damasio 2010, 251); people make decisions based on little information (Damasio 2003, 146–47; cf. Wildavsky 1987); major mismatches are needed between people's expectations and their perceptions of reality for people to change their core beliefs (Bechara and Damasio 2005, 365); and good governance requires a balance of types of social conventions (Damasio 2003, 168–69). Building on this, neurophysicists Robert Turner and Charles Whitehead (2008, 54) speculated that CT's ways of life may activate different neural networks. If so, these should show up in functional magnetic resonance imaging. Here, the challenge would be to craft brain scan experiments that would keep social context constant and the influence of the observer limited.

## **CONCLUSION**

If “good theory should be productive—[i.e., if] it should raise new questions and presume those questions can be answered without giving up its problem-solving strategies” (Kitcher 1982, 48)—then CT is in excellent shape. In other words, CT has proven itself to be fertile in the way it raises new questions and helps formulate new answers, as we hope you agree the contributions to this symposium attest. Yet, as we have argued here, much significant work remains to be done to test the many CT hypotheses listed at the outset of our article. We have outlined some of the achievements and challenges in testing CT hypotheses, as well as some promising methods for meeting remaining challenges. We hope that these methods provide useful guidance for political scientists who are interested in testing and developing CT in their areas of interest and expertise.

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