Cultural Cognition and Public Policy

Dan M. Kahan[†] and Donald Braman[††]

I. INTRODUCTION

Our concern in this Essay is to explain the *epistemic* origins of political conflict. Citizens who agree that the proper object of law is to secure society's material well-being are still likely to disagree—intensely—about what policies will achieve that end as an empirical matter. Does the death penalty deter homicides, or instead inure people to lethal violence? Would stricter gun control make society safer, by reducing the incidence of crime and gun accidents, or less safe, by hampering the ability of individuals to defend themselves from predation? What threatens our welfare more—environmental pollution or the economic consequences of environmental protection laws? What exacts a bigger toll on public health and productivity—the distribution of street drugs or the massive incarceration of petty drug offenders?

At first glance, it might seem that such disagreement doesn't really require much explanation. Figuring out the empirical consequences of criminal, environmental, and other regulatory laws is extremely complicated. Scientists often disagree about such matters. Moreover, even when expert consensus seems to emerge, it is based on highly technical forms of proof that most members of the public can't realistically be expected to understand, much less verify for themselves. So citizens disagree about the empirical dimensions of various public policy questions because conclusive information about the consequences of such policies is either nonexistent or inaccessible to them.

But it turns out that this explanation is as simplistic as it is intuitive. If the source of public dispute about the empirical consequences of public policy were based on the indeterminacy or inaccessibility of scientific knowledge, than we would expect beliefs about these consequences either to be randomly distributed across the population or to be correlated with education. But this is not so: Factual disagreement on matters such as the death penalty, environmental protection laws, gun control and the like is highly polarized across distinct social groups—racial, sexual, religious, regional, and

Yale Law & Policy Review   Vol. 24:147, 2006

ideological.[1] Such divisions persist even after education is controlled for; indeed, they have been shown to characterize differences of opinion even among experts who specialize in the methods necessary for establishing the empirical consequences of public policies.[2]

Moreover, were indeterminacy or inaccessibility of scientific knowledge the source of public disagreement, we would expect beliefs on discrete issues to be uncorrelated with each other. Accepting one empirical claim or another about gun control, for example, doesn't give someone more or less reason to believe one position or another about global warming. Yet in fact, factual beliefs on these and many other seemingly unrelated issues do cohere. If someone believes that gun control doesn't deter gun violence, he is very likely to believe that global warming poses no serious environmental risk, and that abortion clearly puts the health of women in danger; if she believes that gun control *does* deter crime, she's likely to think that global warming *is* a serious problem, and that abortion *isn't* dangerous to a woman's health.[3]

Patterns like these don't occur by chance. There is some phenomenon—other than the paucity or inaccessibility of scientific information—that shapes the distribution of factual beliefs about, and the existence of political conflict over, law and public policy. What is it?

The answer, we propose, is a set of processes we call *cultural cognition*. Essentially, cultural commitments are *prior* to factual beliefs on highly charged political issues. Culture is prior to facts, moreover, not just in the evaluative sense that citizens might care more about how gun control, the death penalty, environmental regulation and the like cohere with their cultural values than they care about the consequences of those policies. Rather, culture is prior to facts in the cognitive sense that what citizens believe about the empirical consequences of those policies *derives* from their cultural worldviews. Based on a variety of overlapping psychological mechanisms, individuals accept or reject empirical claims about the consequences of controversial polices based on their vision of a good society.

This account has important prescriptive as well as positive implications. If one starts with the intuitive but mistaken premise that public disagreement is an

1. On the death penalty, see Phoebe C. Ellsworth & Samuel R. Gross, *Hardening of the Attitudes: Americans' Views on the Death Penalty*, 50 J. SOC. ISSUES 19 (1994); and Samuel R. Gross, *Update: American Public Opinion on the Death Penalty—It's Getting Personal*, 83 CORNELL L. REV. 1448 (1998). On environmental risk regulation, see PAUL SLOVIC, *Trust, Emotion, Sex, Politics and Science: Surveying the Risk-Assessment Battlefield*, *in* THE PERCEPTION OF RISK 390-412 (2000). On gun control, see TOM W. SMITH, 1999 NATIONAL GUN POLICY SURVEY OF THE NATIONAL OPINION RESEARCH CENTER: RESEARCH FINDINGS (2000), http://www.norc.uchicago.edu/online/gunrpt.pdf.

2. *See, e.g.*, SLOVIC, *supra* note 1, at 396.

3. *See* Dan M. Kahan, Donald Braman, John Gastil, Paul Slovic & C. K. Mertz, *Gender, Race, and Risk Perception*: *The Influence of Cultural Status Anxiety* 15-24 (Yale Law Sch. Pub. Law & Legal Theory Research Paper Series, Working Paper No. 86, 2005), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=723762.

Cultural Cognition and Public Policy

artifact of insufficient or insufficiently accessible scientific information, the obvious strategy for dispelling disagreement, and for promoting enlightened democratic decisionmaking, is to produce and disseminate sound information as widely as possible. But the phenomenon of cultural cognition implies that this strategy will be futile. In determining whether empirical information on gun control, on the death penalty, on environmental regulation, on social deviance, and the like is *sound*, individuals will inevitably be guided by their cultural evaluations of these activities.

Our point isn't that citizens behave duplicitously when they consider and debate such issues. Rather, our argument is that cultural commitments operate as a kind of heuristic in the rational processing of information on public policy matters. Again, citizens *aren't* in a position to figure out through personal investigation whether the death penalty deters, gun control undermines public safety, commerce threatens the environment, et cetera. They have to take the word of those whom they trust on issues of what sorts of empirical claims, and what sorts of data supporting such claims, are credible. The people they trust, naturally, are the ones who share their values—and who as a result of this same dynamic and others are predisposed to a particular view. As a result, even citizens who earnestly consider empirical policy issues in an open-minded and wholly instrumental way will align themselves into warring cultural factions.

Nothing in this account implies either that there is no empirical truth of the matter on public policy issues or that citizens can't ever be expected to see it. But in order to persuade members of the public to accept empirically sound information, it *is* necessary to do more than merely make such information available to them. Like many other heuristics, the cultural cognition of public policy can impede the rational processing of information. But like at least some other heuristics, its influence can be neutralized with appropriate debiasing techniques. The key to debiasing here is to frame empirical information in terms that make assent to it compatible with, rather than antagonistic to, the commitments of individuals of diverse cultural persuasions.

The remainder of this Essay expands on these claims. In Part II, we offer a schematic overview of cultural cognition, identifying its foundations in anthropology and social psychology. In Part III, we summarize existing empirical evidence of the impact of cultural cognition. Part IV makes a short detour, assessing how the phenomenon of cultural cognition relates to the concepts of ideology and cultural political conflict. Parts V and VI examine the normative and prescriptive implications of cultural cognition. And Part VII concludes.

II. CULTURAL COGNITION: A THEORETICAL OVERVIEW

By "the cultural cognition of public policy" (or simply "cultural cognition"), we mean to refer to the psychological disposition of persons to

conform their factual beliefs about the instrumental efficacy (or perversity) of law to their cultural evaluations of the activities subject to regulation. Our hypothesis that individuals display such a disposition rests on the intersection of two bodies of social science research, one in the field of anthropology and the other in the field of social psychology.

The work in anthropology on which we draw is associated with Mary Douglas. In her classic work *Purity and Danger*,[4] Douglas traced the identification of the idea of "pollution" with the "unholy" or immoral in primitive religions. "[L]aws of nature," she wrote, "are dragged in to sanction the moral code."[5] Adultery, incest, the confusion of sexual functions and roles, various acts of political disloyalty or disrespect for authority—all are viewed not merely as impious but as *dangerous*. They naturally spawn the outbreak of contagious disease within the community at large, the occurrence of devastating natural disasters, the dampening of human fertility, and the like. "[P]rimitives expect their rites to have external efficacy"[6]—they are committed to the norms that regulate social orderings as much, if not more, for "instrumental" reasons as for "expressive" ones.[7]

It is conventional to view this feature of primitive religions as a product of the role that superstition necessarily plays in lieu of natural science within premodern societies. But a second theme of *Purity and Danger* is that the equation of pollution or danger with deviancy is no less present among modern societies, a point Douglas famously established by showing how intertwined our own conceptions of "dirt," and our resulting sensibilities of revulsion and disgust, are to the "contravention" of "ordered relations":

> Shoes are not dirty in themselves, but it is dirty to place them on the dining-table; food is not dirty in itself, but it is dirty to leave cooking utensils in the bedroom, or food bespattered on clothing; similarly, bathroom equipment in the drawing room; clothing lying on chairs; out-door things in-doors; upstairs things downstairs; under-clothing appearing where over-clothing should be . . . .[8]

Our perception of what is "dirty," and what thus poses a source of potentially unhygienic and hazardous contamination, Douglas wrote, "is [a] reaction which condemns any object or idea likely to confuse or contradict cherished classifications."[9]

This theme—that modern sensibilities and perceptions of danger are artifacts of our commitment to distinctive cultural orderings—is even more systematically developed in Douglas's *Risk and Culture*,[10] co-authored with

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4. MARY DOUGLAS, PURITY AND DANGER (1966).

5. *Id*. at 3.

6. *Id*. at 58.

7. *Id*. at 3.

8. *Id*. at 35-36.

9. *Id*. at 36.

10. MARY DOUGLAS & AARON WILDAVSKY, RISK AND CULTURE (1982).

Cultural Cognition and Public Policy

political scientist Aaron Wildavsky. In that work, Douglas and Wildavsky rely on a typology of cultural worldviews (developed elsewhere by Douglas[11]) that classifies them along two dimensions, "group" and "grid."

GRID

Hierarchist

GROUP   *Individualist* ←——————————→ *Solidarist/ Communitarian*
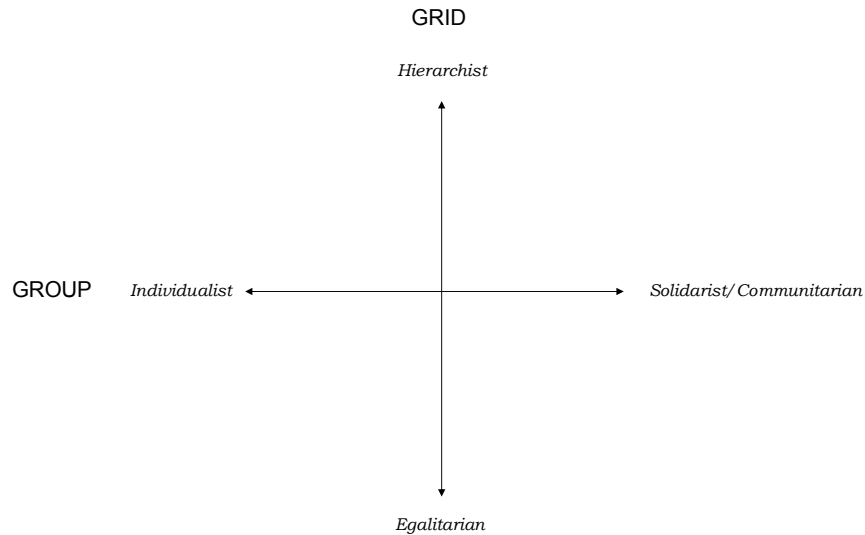
Egalitarian

Figure 1. Douglas's Culture Typology.

A "low group" worldview coheres with an *individualistic* social order, in which individuals are expected to secure their own needs without collective assistance, and in which individual interests enjoy immunity from regulation aimed at securing collective interests. A "high group" worldview, in contrast, supports a *solidaristic* or *communitarian* social order, in which collective needs trump individual initiative, and in which society is expected to secure the conditions of individual flourishing.[12] A "high grid" worldview favors a *hierarchical* society, in which resources, opportunities, duties, rights, political offices and the like are distributed on the basis of conspicuous and largely fixed social characteristics—gender, race, class, lineage. A "low grid" worldview favors an egalitarian society, one that emphatically denies that social characteristics should matter in how resources, opportunities, duties and the like are distributed.[13]

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11. MARY DOUGLAS, NATURAL SYMBOLS 54-68 (1970).

12. *See* Steve Rayner, *Cultural Theory and Risk Analysis*, *in* SOCIAL THEORIES OF RISK 83, 87 (S. Krimsky & D. Goldin eds., 1992) (stating that "low group" worldviews expect individuals to "fend for themselves and therefore tend to be competitive," whereas "high group" worldviews assume that individuals will "interact frequently . . . in a wide range of activities" in which they must "depend on one another," a condition that "promotes values of solidarity").

13. *See* JONATHAN L. GROSS & STEVE RAYNER, MEASURING CULTURE 6 (1985) (stating that the "high grid" worldview corresponds to hierarchical society in which resources, opportunities, respect and

Yale Law & Policy Review   Vol. 24:147, 2006

According to Douglas and Wildavsky, individuals select certain risks for attention and disregard others in a way that reflects and reinforces the particular worldviews to which they adhere. Egalitarians and solidarists are thus naturally sensitive to environmental risk, the reduction of which justifies regulating commercial activities that are productive of social inequality and that legitimize unconstrained self-interest. Individualists predictably dismiss claims of environmental risk as specious, in line with their commitment to the autonomy of markets and other private orderings. So do hierarchists, who perceive warnings of imminent environmental catastrophe as threatening the competence of social and governmental elites.[14] On its surface, conflict over environmental regulation focuses on competing empirical claims of threats and dangers. But because the positions people take reflect and reinforce their cultural worldviews, disputes over environmental risks are in essence "the product of an ongoing debate about the ideal society."[15]

Douglas and Wildavsky offered plausible, if impressionistic, evidence that individuals *do* form risk perceptions congenial to their cultural worldviews, but they offer no systematic account of *why*. In *Purity and Danger*, Douglas ventured a functionalist explanation: Belief that immoral behavior is also dangerous "affords a means of supporting the accepted system of morality."[16] In subsequent works, both Wildavsky[17] and Douglas[18] have more systematically pursued this line of argument, despite the low regard with which functionalism is now held in the social sciences generally.[19]

But one needn't be a functionalist to accept the relationship that Douglas and Wildavsky posited between risk perception and cultural worldviews. Even a hardcore methodological individualist—who insists that all human institutions and states of affairs be linked to the decisions of self-interested individuals—might expect to see such perceptions arrayed in a culturally skewed pattern. Self-interested individuals need to figure out *which* activities, courses of action, and states of affairs promote their interest. Social psychology—the second body of research we draw on—suggests that cultural values will play a large role in that process.[20]

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the like are "distributed on the basis of explicit public social classifications, such as sex, color, . . . holding a bureaucratic office, [or] descent in a senior clan or lineage"); Rayner, *supra* note 12, at 87 (stating that the "low grid" worldview favors "an *egalitarian* state of affairs in which no one is prevented from participating in any social role because he or she is the wrong sex, or is too old, or does not have the right family connections," and so forth).

14. *See* DOUGLAS & WILDAVSKY, *supra* note 10, at 99-101.

15. *Id*. at 36.

16. DOUGLAS, *supra* note 5, at 133.

17. MICHAEL THOMPSON, RICHARD ELLIS & AARON WILDAVSKY, CULTURAL THEORY (1990).

18. MARY DOUGLAS, HOW INSTITUTIONS THINK (1986).

19. *See, e.g.*, JON ELSTER, MAKING SENSE OF MARX 27-28 (1985).

20. *See* J.M. BALKIN, CULTURAL SOFTWARE: A THEORY OF IDEOLOGY 176-80 (1998) (suggesting "ideological" explanations of individual behavior can avoid functionalism through reliance on social

Cultural Cognition and Public Policy

Several overlapping psychological mechanisms are likely to induce individuals to conform their beliefs about putatively dangerous activities to their cultural evaluations of those activities. One is *cognitive-dissonance avoidance*.[21] It's comforting to believe that what's noble is also benign, and what's base dangerous.[22] It's *not* comforting—indeed, it's psychically disabling—to entertain beliefs about what's harmless and what's harmful that force one to renounce commitments and affiliations essential to one's identity.[23]

Affect is another mechanism that harnesses factual belief to cultural value. Emotions play as large a role in individuals' perceptions as any other faculty of sensation or judgment.[24] Perceptions of how harmful activities are, in particular, are informed by the visceral reactions those activities trigger. And whether those reactions are positive or negative is determined largely by cultural values.[25]

Finally and most importantly, cultural orientations condition individuals' beliefs about risk through a set of in-group/out-group dynamics. When faced with conflicting claims and data, individuals usually aren't in a position to determine for themselves how large particular risks—leukemia from contaminated groundwater, domestic attacks by terrorists, transmission of AIDS from casual contact with infected gay men—really are. Instead, they must rely on those whom they *trust* to tell them which risk claims are serious and which specious. The people they trust, naturally enough, tend to be the ones who share their worldviews—and who for that reason are likely biased toward one conclusion or another by virtue of forces such as cognitive-

psychological mechanisms); Raymond Boudon, *Social Mechanisms Without Black Boxes, in* SOCIAL MECHANISMS: AN ANALYTICAL APPROACH TO SOCIAL THEORY 172 (P. Hedström & R. Swedberg eds., 1998) (suggesting that social psychological mechanisms make ideological explanations of human behavior compatible with "methodological individualism").

21. *See* LEON FESTINGER, A THEORY OF COGNITIVE DISSONANCE (1957).

22. Slovic, for example, has shown that perceptions of risk and benefit for risky technologies are always inversely correlated, a finding suggesting that risk perceptions are influenced by cognitive dissonance. *See, e.g.,* SLOVIC, *supra* note 1, at 404-05; *see also* George A. Akerlof & William T. Dickens, *The Economic Consequences of Cognitive Dissonance*, 72 AM. ECON. REV. 307 (1982) (suggesting that cognitive dissonance deflates demand of workers to be compensated for accepting occupational risks).

23. *See* David K. Sherman & Geoffrey L. Cohen, *Accepting Threatening Information: Self-Affirmation and the Reduction of Defensive Biases*, 4 CURRENT DIRECTIONS IN PSYCHOL. SCI. 119, 120 (2002) ("To the extent that information threatens self-worth, or is presented in a manner that threatens self-worth, people may dismiss, deny, or distort in a fashion that serves to sustain their personal feelings of adaptiveness and integrity."); *see also* Roy F. Baumeister & Mark R. Leary, *The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation*, 117 PSYCHOL. BULL. 497, 504 (1995) ("[B]elongingness can affect how people process information about nearly all categories of stimuli in the social world").

24. *See generally* ANTONIO R. DAMASIO, DESCARTES' ERROR: EMOTION, REASON, AND THE HUMAN BRAIN (1994) (showing that emotions are integral to reasoning, not opposed to it); MARTHA C. NUSSBAUM, UPHEAVALS OF THOUGHT: THE INTELLIGENCE OF EMOTIONS (2001) (defending a cognitive conception that links emotions to cognitive appraisals of different goods and states of affairs).

25. *See* SLOVIC, *supra* note 1, at 405-09.

dissonance avoidance and affect.[26]

The tendency of individuals to trust only those who share their orientation makes the belief-generative power of culture feed on itself. If a particular factual position starts out with even slightly more adherents than a competing one, arguments in support of that position will necessarily predominate in group discussions, making that position more likely to persuade.[27] To gain the approval of others in the group, moreover, members who even weakly support what appears to be the dominant view are likely to express unequivocal support for it, while those who disagree will tend to mute their opposition in order to avoid censure. This form of "preference falsification"[28] will in turn reinforce the skewed distribution of arguments, making it even more likely that members of the group will be persuaded that the dominant position is correct—indeed, indisputably so.

The phenomenon of *group polarization* refers to the power of these deliberative dynamics to generate homogeneous beliefs within insular groups.[29] The same dynamics necessarily generate *conflicting* states of opinion *across* insular groups that start out with even weakly opposed states of belief.[30]

Our theory of cultural cognition synthesizes these two bodies of research and generalizes them. We propose that the various mechanisms of belief formation identified by contemporary social psychology are likely to generate risk perceptions skewed along cultural lines in the manner posited by Douglas and Wildavsky. But we see nothing distinctive about attitudes toward environmental protection in this regard. Criminal laws, economic regulation, and public health policies all regulate activities that are ripe with culturally infused social meanings. The same mechanisms of belief formation—from cognitive dissonance avoidance to affect to biased assimilation to group polarization—should thus induce individuals to conform their beliefs about the empirical efficacy of such policies to their cultural evaluations. As a result,

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26. *See* Geoffrey L. Cohen, *Party over Policy: The Dominating Impact of Group Influence on Political Beliefs*, 85 J. PERSONALITY & SOC. PSYCHOL. 808 (2003); Robert J. Robinson et al., *Actual Versus Assumed Differences in Construal: "Naive Realism" in Intergroup Perception and Conflict*, 68 J. PERSONALITY & SOC. PSYCHOL. 404, 405, 415 (1995). We emphasize the understandable tendency of ordinary individuals to substitute deference to their cultural peers for personal investigation when facts are disputed. But the same tendency also characterizes the decisionmaking of individuals who *are* in a position to investigate facts for themselves. Slovic, for example, shows that cultural orientation explains variation in the attitudes of trained toxicologists on whether animal studies reliably generate conclusions of carcinogen risk. SLOVIC, *supra* note 1, at 406-09.

27. *See* Cass R. Sunstein, *Deliberative Trouble? Why Groups Go to Extremes*, 110 YALE L.J. 71, 89-90 (2000).

28. *See* TIMUR KURAN, PRIVATE TRUTHS, PUBLIC LIES: THE SOCIAL CONSEQUENCES OF PREFERENCE FALSIFICATION (1996).

29. *See* Sunstein, *supra* note 27, at 90, 92.

30. *See* Donald Braman, Dan M. Kahan & James Grimmelman, *Modeling Facts, Culture, and Cognition in the Gun Debate*, 18 SOC. JUST. RES. (forthcoming 2005), *manuscript available at* http://research.yale.edu/culturalcognition/documents/modeling_cultural_cognition.pdf.

Cultural Cognition and Public Policy

seemingly empirical debates over all manner of public policy will be guided by the invisible hands of conflicting cultural worldviews: hierarchic and egalitarian, individualistic and solidaristic.

That in any case, is our theory. We turn next to our evidence.

III.   CULTURAL COGNITION: EVIDENCE

There are various ways one might test the hypothesis that cultural worldviews govern individuals' beliefs about the efficacy of various policies. One fairly straightforward way is to examine the correlations between cultural worldviews and such beliefs. There is no reason to believe that empirical information is unevenly distributed among hierarchists, egalitarians, individualists and solidarists, or that persons of one or another orientation are better able to understand such information. Accordingly, if there is a large correlation between cultural worldviews and instrumental policy beliefs, and that correlation persists even after controlling for other influences, then there is strong reason to conclude that individuals are selectively attending to and crediting empirical information depending on its congeniality to their worldviews.

Numerous scholars have furnished exactly this sort of proof in connection with environmental and technological risk perceptions. From environmental pollution[31] to nuclear power[32] to genetically modified crops[33] to ecological management techniques[34] to drilling in the Arctic National Wildlife Refuge,[35] hierarchists and individualists were predictably dismissive of risk claims, and egalitarians predictably receptive toward them.

To test our hypothesis that the phenomenon of cultural cognition generalizes to factual conflicts over public policies, we, along with John Gastil and Paul Slovic, conducted our own study.[36] The sample consisted of a broadly

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31. *See* Karl Dake, *Orienting Dispositions in the Perception of Risk: An Analysis of Contemporary Worldviews and Cultural Biases*, 22 J. CROSS-CULTURAL PSYCHOL. 61 (1991).

32. *See* Hank C. Jenkins-Smith, *Modeling Stigma: An Empirical Analysis of Nuclear Waste Images of Nevada*, *in* RISK, MEDIA, AND STIGMA: UNDERSTANDING PUBLIC CHALLENGES TO MODERN SCIENCE AND TECHNOLOGY 107 (James Flynn et al. eds., 2001); Claire Marris et al., *A Quantitative Test of the Cultural Theory of Risk Perceptions: Comparison with the Psychometric Paradigm*, 18 RISK ANALYSIS 635 (1998); Ellen Peters & Paul Slovic, *The Role of Affect and Worldviews as Orienting Dispositions in the Perception and Acceptance of Nuclear Power*, 26 J. APPLIED SOC. PSYCHOL. 1427 (1996).

33. *See* Melissa Finucane et al., *Gender, Race, and Perceived Risk: The "White Male" Effect*, 2 HEALTH, RISK & SOC'Y 159 (2000).

34. *See* Dipak Gyawali, *Institutional Forces Behind Water Conflict in the Ganga Plains*, 47 GEOJOURNAL 443 (1999); Wouter Poortinga et al., *Environmental Risk Concern and Preferences for Energy-Saving Measures*, 34 ENV'T & BEHAV. 455 (2002); Linda Steg & Inge Sievers, *Cultural Theory and Individual Perceptions of Environmental Risks*, 32 ENV'T & BEHAV. 250 (2000).

35. *See* Eric R.A.N. Smith et al., *Trust During an Energy Crisis* (Univ. Cal. Energy Inst. Energy Policy & Economics Working Paper Series, Working Paper No. 006, 2003), http://www.ucei.berkeley.edu/ucei/Working_Papers/EPE_006.pdf.

36. The Cultural Cognition Project at Yale Law School, National Risk & Culture Survey,

representative, nationwide sample of 1800 individuals. Survey questions were designed to determine the respondents' cultural worldviews along the group-grid dimensions as well as their factual beliefs about a wide range of policy issues. We also collected information on pertinent demographic characteristics, political attitudes, and personality traits that might plausibly explain variance in such beliefs.

Our results furnished powerful confirmation of the generality of cultural cognition. To begin, we were able to replicate the findings of other studies investigating the influence of cultural worldviews on environmental and technological risks. The more egalitarian and solidaristic individuals were, the more concerned they were about global warming, nuclear power, and environmental pollution generally; the more hierarchical and individualistic they were, the less concerned they were about these asserted dangers. Indeed, cultural worldviews predicted individual beliefs about the seriousness of these risks more powerfully than any other factor, including gender, race, income, education, and political ideology.[37]

Even more important, we found the same pattern for a wide range of other instrumental policy beliefs. One set related to gun control. Gun-control proponents argue that greater restrictions will promote public safety by reducing gun violence and accidents,[38] while gun-control opponents argue that such restrictions will diminish public safety on net by rendering innocent persons unable to defend themselves from violent criminals.[39] We hypothesized that individuals' cultural worldviews would determine which of these empirical claims they accept. Persons of hierarchical and individualistic orientations, we surmised, would conclude that gun control has perverse consequences, a belief congenial to the association of guns with hierarchical social roles (hunter, protector, father) and with hierarchical and individualistic virtues (courage, honor, chivalry, self-reliance, prowess). Relatively egalitarian and solidaristic individuals, we anticipated, would believe that gun control enhances safety because of their association of guns with patriarchy and racism, and with distrust and indifference to the well-being of strangers.[40] Our results again strongly bore out these conclusions. Not only did cultural worldviews have the predicted influence on beliefs, they also explained such beliefs more powerfully than any other individual characteristic—including whether a person was male or female, white or black, urban- or country-dwelling, liberal

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http://research.yale.edu/culturalcognition/index.php?option=content&task=view&id=45 (last visited Nov. 10, 2005).

37. *See* Kahan, Braman, Gastil, Slovic & Mertz, *supra* note 3, at 16-18 & tbl.6.

38. *See, e.g.*, PHILIP J. COOK & JENS LUDWIG, GUN VIOLENCE: THE REAL COSTS (2000).

39. *See, e.g.*, JOHN R. LOTT, JR., MORE GUNS, LESS CRIME: UNDERSTANDING CRIME AND GUN-CONTROL LAWS (2d ed. 2000).

40. *See* Dan M. Kahan & Donald Braman, *More Statistics, Less Persuasion: A Cultural Theory of Gun-Risk Perceptions*, 151 U. PA. L. REV. 1291, 1299-1302 (2003).

Cultural Cognition and Public Policy

or conservative.[41]

   We also established the impact of cultural worldviews on attitudes toward the death penalty. Previous studies have found that beliefs in the deterrent efficacy of the death penalty are highly correlated with evaluative, largely symbolic attitudes toward it.[42] We hypothesized that the "group-grid" worldviews would capture these divisions. Hierarchists and individualists, we anticipated, would believe in the efficacy of the death penalty, the former because they see capital punishment as symbolic of deference to authority and opposition to social deviance, and the latter because they see it as symbolic of the law's commitment to individual responsibility. Egalitarians and solidarists, we predicted, would doubt the efficacy of capital punishment, the former because of its association with racial inequality, and the latter because of its perceived denigration of society's responsibility to ameliorate the social conditions that generate crime.[43] Again, our results strongly confirmed these hypotheses.[44]

   Another set of beliefs concerned the impact of business regulation. Unsurprisingly, egalitarians and solidarists perceived business regulation to be conducive to economic prosperity, hierarchists and individualists destructive of it.[45]

   We also looked at a number of policy issues on which we expected hierarchists to disagree with individualists, and egalitarians to disagree with solidarists. One is drug criminalization. Hierarchists and solidarists, we predicted, would see street drugs as a serious danger to the well-being of society, the former because drugs are emblematic of deviancy, and the latter because drug use is associated with irresponsibility and neglect of social obligation. Because drug criminalization is likely to symbolize interference with individual autonomy for individualists, and racism for egalitarians, we surmised that persons of those persuasions would believe that street drugs are relatively harmless for society. These predictions, too, were strongly supported by our survey data.[46]

   We also anticipated that hierarchists would square off against individualists

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   41. *See* Kahan, Braman, Gastil, Slovic & Mertz *supra* note 3, at 19-21 & tbl.9.

   42. *See* Phoebe C. Ellsworth & Lee Ross, *Public Opinion and Capital Punishment: A Close Examination of the Views of Abolitionists and Retentionists*, 29 CRIME & DELINQ. 116 (1983); Barbara Ann Stolz, *Congress and Capital Punishment: An Exercise in Symbolic Politics*, 5 LAW & POL'Y Q. 157 (1983); Tom R. Tyler & Renee Weber, *Support for the Death Penalty: Instrumental Response to Crime, or Symbolic Attitude?*, 17 LAW & SOC'Y REV. 21 (1982).

   43. *See* Dan M. Kahan, *The Secret Ambition of Deterrence*, 113 HARV. L. REV. 413, 439-42 (1999).

   44. *See* John Gastil, Don Braman, Dan Kahan & Paul Slovic, The "Wildavsky Heuristic": The Cultural Orientation of Mass Political Opinion 19-21 & tbls. 1-3 (Oct. 15, 2005) (unpublished article), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=834264.

   45. *See* The Cultural Cognition Project at Yale Law School, Culture and Political Attitudes, http://research.yale.edu/culturalcognition/content/view/91/100/ (last visited Nov. 10, 2005).

   46. *See id.*

and egalitarians on certain public health issues. These included the dangers to society of promiscuous sexual behavior. Summoning "[t]he laws of nature . . . to sanction the moral code,"[47] hierarchists, we imagined, would see deviance of this sort as dangerous and worthy of regulatory amelioration. But precisely because restrictions on personal sexual behavior tend to connote patriarchal norms, we expected egalitarians to view such behavior as relatively harmless. We expected the same would be true of individualists, for whom regulation of sexual behavior is symbolic of societal interference with individual prerogatives generally. Beliefs among our respondents turned out to be distributed in exactly this pattern.[48]

We also studied beliefs about the health impact of abortion. In her classic study, *Abortion and the Politics of Motherhood*, Kristin Luker depicted the abortion controversy as a conflict between persons who subscribe to hierarchical norms, which confer status upon women who occupy domestic roles, and persons who subscribe to egalitarian and individualist norms, which confer status upon women and men alike for success in civil society.[49] Consistent with this account, the phenomenon of cultural cognition implies that hierarchical women should see abortion as not just morally wrong but *dangerous* to the health of women, a belief that individualist and egalitarian women should emphatically reject. This turns out to be true as well, even after various other influences—including religion and ideology, race and class—are taken into account.[50]

However divided Americans might be on the nature of an ideal society, there is widespread consensus that securing the material well-being of citizens is a proper object of law. Accordingly, reframing culturally fraught issues in purely consequentialist terms—ones that avoid explicitly siding with any partisan vision of the good—is a familiar impulse for those intent on dissipating conflict.[51]

The phenomenon of cultural cognition, however, explains why this strategy so often fails. Even when citizens of diverse worldviews agree that environmental, criminal, economic, and public health policies should all be judged by a purely consequentialist standard, their worldviews prevent them from agreeing about which policies have the best consequences.

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47. DOUGLAS, *supra* note 5, at 3.

48. *See* The Cultural Cognition Project at Yale Law School, Culture and Political Attitudes, http://research.yale.edu/culturalcognition/content/view/91/100/ (last visited Nov. 10, 2005).

49. KRISTIN LUKER, ABORTION AND THE POLITICS OF MOTHERHOOD (1984).

50. *See* Kahan, Braman, Gastil, Slovic & Mertz, *supra* note 3, at 23-24 & tbl.12.

51. *See* Kahan, *supra* note 43, at 432-35, 445-48; Martin Rein & Christopher Winship, *The Dangers of "Strong" Causal Reasoning in Social Policy*, 36 SOCIETY 38, 39-40 (1999).

Cultural Cognition and Public Policy

IV. CULTURAL COGNITION, CULTURE WARS, AND THE END OF IDEOLOGY

The role of culture in politics is a topic of immense current interest. In sponsoring a host of state referenda to ban gay marriage and announcing its support for a federal constitutional amendment to do the same, the Bush campaign sought to mobilize its conservative base by pushing cultural issues to the forefront in the 2004 presidential election.[52] Commentators continue to debate how large a role this strategy played in securing Bush's victory, and what the outcome of the 2004 presidential race signifies about the importance of cultural values in American politics generally.[53] The phenomenon of cultural cognition suggests distinctive answers to these questions.[54]

Two positions dominate the academic debate over cultural conflict in American politics. The "culture war" thesis asserts that such conflict is of decisive importance. The prominence of symbolic issues like gay marriage, abortion, capital punishment, and gun control reflects the struggle of opposing cultural groups to impose a moral orthodoxy through law.[55] On this view, "culture outweighs economics as a matter of public concern."[56] Indeed, it is by deftly aligning themselves with the cultural values of lower middle class Americans that Republicans manage to win the support of this constituency notwithstanding the party's support for economic policies that are clearly inimical to the interests of these voters.[57]

The "end of ideology" thesis, in contrast, treats the appearance of cultural conflict in American politics as largely an illusion. "The simple truth," writes Morris Fiorina, "is that there is no culture war in the United States—no battle for the soul of America rages, at least none that most Americans are aware of."[58] The vast majority of voters hold relatively moderate views on contested cultural issues. What's more, the views they hold are not particularly intense; the performance of the economy and other matters that affect their material welfare are their main focus.[59] The position of the major parties on cultural

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52. *See, e.g.*, Adam Nagourney, *"Moral Values" Carried Bush, Rove Says*, N.Y. TIMES, Nov. 11, 2004, at A20.

53. *See, e.g.*, Symposium, *Culture War in America: Myth or Reality?*, 3 FORUM: J. APPLIED RES. CONTEMP. POL. (2005), http://www.bepress.com/forum/vol3/iss2/.

54. Gastil, Braman, Kahan & Slovic, *supra* note 44, at 27-28.

55. *See, e.g.*, JAMES DAVISON HUNTER, CULTURE WARS: THE STRUGGLE TO DEFINE AMERICA (1991).

56. THOMAS FRANK, WHAT'S THE MATTER WITH KANSAS? 6 (2004)

57. *See generally id*. (developing this thesis to explain the appeal of the Republican Party in economically disadvantaged regions of the United States).

58. MORRIS P. FIORINA, CULTURE WAR? THE MYTH OF A POLARIZED AMERICA 7-8 (2005).

59. Many news media outlets identified "moral values" as the primary concern of voters in the 2004 election. However, a Pew Research Center poll of 1209 such voters found that the disposition of voters to identify moral values as the most important factor in their decision was extremely sensitive to question wording, and that in fact 57% of voters identified either "Iraq" (22%), "Economy/Jobs" (21%), or "Terrorism" (14%) as the most important factor when those choices were offered as alternatives to "moral values" (27%). *See* Pew Research Ctr. for the People & the Press, *Voters Liked Campaign 2004,*

159

issues is of consequence to only a relatively small group of intensely partisan and highly sophisticated voters. The concerns of these more zealous constituencies assume a misleadingly central appearance in electoral politics as a whole only because such groups are disproportionately vocal, and because the material-minded, non-ideological masses are evenly split in their party allegiances.[60]

The phenomenon of cultural cognition suggests that both of these positions are wrong. The "end of ideology" thesis grossly understates the role that culture plays in organizing mass, and not just fringe, political opinion in the United States. But the "culture war" thesis just as decisively misunderstands the *way* in which cultural values figure in mass politics.

To make these points concrete, is useful to start with a broader puzzle in political science: How do ordinary citizens *form* their political opinions?[61] For most citizens, the intricacies of national policy are far less important, and occupy far less of their time, than the day-to-day goings on of their jobs, the details of their social and family lives, and even the current performance of their local professional sports teams.[62] Not surprisingly, a considerable body of political science research shows that neither party affiliation nor ideology predict mass opinion very well; those characteristics are strong predictors only for highly sophisticated individuals who devote relatively large amounts of time to collecting information on political issues.[63] These findings are in fact central to the case of those who espouse the "end of ideology" thesis. But it's clearly not the case that policy positions and candidate preferences are randomly distributed across the mass of citizens. If ideology and party affiliation aren't imposing a coherent shape on mass opinion, what is?

The answer, we suggest, is cultural cognition. Here we draw again on Wildavsky, who hypothesized that "group-grid" worldviews are substantially more productive fonts of mass opinion than conventional political ideologies.[64] Most citizens, he recognized, don't have the capacity to derive concrete positions from the abstractions comprised by "liberalism" and "conservativism." Nor do they have the time to identify, and attend to the leadership of, more politically sophisticated and ideologically attuned elites. But most citizens *do* have a vivid sense of the values that inhere in hierarchy,

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but Too Much "Mud-Slinging," Nov. 11, 2004, http://people-press.org/reports/display.php3?-ReportID=233.

    60. FIORINA, *supra* note 58, at 37-38, 114.

    61. *See* PAUL M. SNIDERMAN ET AL., REASONING AND CHOICE: EXPLORATIONS IN POLITICAL PSYCHOLOGY 15-16 (1991).

    62. *See* JOHN R. ZALLER, THE NATURE AND ORIGINS OF MASS OPINION 6-7, 16 (1992).

    63. *See id*. 84-89; MICHAEL X. DELLI CARPINI & SCOTT KEETER, WHAT AMERICANS KNOW ABOUT POLITICS AND WHY IT MATTERS 254-61 (1996).

    64. *See* Aaron Wildavsky, *Choosing Preferences by Constructing Institutions: A Cultural Theory of Preference Formation*, 81 AM. POL. SCI. REV. 1 (1987).

Cultural Cognition and Public Policy

egalitarianism, individualism and solidarism, which are woven into ordinary citizens' everyday life activities. It often will be possible, Wildavsky argued, for citizens to chart which policy positions cohere with, and which candidates adhere to, their cultural worldviews. But even more important, worldviews furnish ordinary citizens with a surfeit of readily accessible cues to guide their political preferences: the advice of culturally like-minded associates, the directives of leadership figures clearly invested with cultural authority, the line espoused by culturally-affiliated organs of mass opinion. In effect, worldview-congeniality operates as a powerful heuristic for identifying which positions to espouse or denounce, and which candidates to endorse or oppose.[65]

The data from our cultural worldview study again furnishes support for this position. Our cultural worldview scales were much stronger predictors of opinions on environmental issues, crime control issues, and economic regulatory issues than were ideological and party affiliation measures. In fact, on most of these matters—consistent with existing political science literature—ideology and party affiliation predicted the opinion only of respondents who possessed a relatively high degree of political sophistication. In contrast, cultural worldviews were able to predict policy positions for *all* respondents, including the most politically *unsophisticated* ones.[66] Consistent with Wildavsky's hypothesis, cultural worldview does indeed appear to systematize political opinions for the mass of citizens.

This conclusion spells trouble for the "end of ideology" thesis. Cultural values clearly *do* generate major divisions of opinion on a range of issues—not just among partisans or elites, but also among moderate citizens of meager political sophistication. The "end of ideology" thesis relies heavily on evidence that the vast majority of citizens are not strongly ideological in their opinions. But that just shows that the ideologies, as conventionally measured, are a bad proxy for cultural worldviews, not that cultural worldviews are politically inert.

At the same time, cultural cognition does little to vindicate the "culture war" thesis. That position sees American politics as dominated by illiberal jockeying among opposing cultural groups bent on capturing the expressive capital of law. Nothing in the cultural cognition theory entails that picture of American politics. Instead, the phenomenon of cultural cognition explains how citizens whose *only* concern is their material well-being, narrowly understood, are still likely to array themselves into opposing cultural factions on political maters. Again, citizens aren't in a position to figure out for themselves what economic, crime-control, environmental or national security policies advance their material interests. Accordingly, citizens must defer to the opinion of persons whom they believe are knowledgeable and share their interests to tell

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65. *See id.* at 6-13.
66. Gastil, Braman, Kahan & Slovic, *supra* note 44, at 20-21 & tbl.4.

Yale Law & Policy Review   Vol. 24:147, 2006

them which policies and candidates to support.[67] And the persons to whom citizens attribute these attributes, unsurprisingly, are the ones who share their cultural worldviews, and who, as a result of the various mechanisms of cultural cognition, are likely to be slanted toward one particular policy position or candidate.

In sum, cultural values don't *motivate* mass political opinion, as the "culture war" thesis imagines. They merely *orient* it through a complex set of interrelated social and cognitive mechanisms. The paradoxical result is the cultural polarization of even relatively nonpartisan and tolerant citizens whose most pressing political concern is to identify which policies and which party will best help them make ends meet.

So did Bush win in 2004 because he was the candidate who shared most citizens' cultural values or because he was the candidate whom citizens thought would best promote their material interests? The answer is both: The vast majority of citizens who voted for Bush perceived that doing so would advance their interests; and they believed this *because* they imputed competence, shared interest, and trustworthiness to Bush as a result of his (and the Republican Party's) stances on cultural issues. Yet insofar as cultural values only orient rather than motivate citizens, most of his supporters probably won't care if Bush now pushes culture to the back burner (as he already has on gay marriage),[68] and attends only to economics and national security—so long as those policies also cohere with his supporters' cultural worldviews.

V. FROM HEURISTIC TO BIAS

Public disagreement about the consequences of law is not just a puzzle to be explained but a problem to be solved. The prospects for enlightened democratic decisionmaking obviously depend on some reliable mechanism for resolving such disputes and resolving them accurately. Because such disagreements turn on empirical claims that admit of scientific investigation, the conventional prescription is the pursuit and dissemination of scientifically sound information.[69]

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67. *See* Arthur Lupia, *Who Can Persuade Whom? Implications from the Nexus of Psychology and Rational Choice Theory*, *in* THINKING ABOUT POLITICAL PSYCHOLOGY 51 (James H. Kuklinski ed., 2002).

68. Jim VandeHei & Michael A. Fletcher, *Bush Says Election Ratified Iraq Policy*, WASH. POST, Jan. 16, 2005, at A1 ("Bush said he will not press senators to pass a constitutional amendment banning same-sex marriage, the top priority for many social conservative groups.").

69. *See, e.g.*, Ian Ayres & John J. Donohue III, *Shooting Down the "More Guns, Less Crime" Hypothesis*, 55 STAN. L. REV. 1193, 1296 (2003) ("Over time, a body of empirical research can disentangle thorny issues of causation and lead toward consensus."); Philip J. Cook & Jens Ludwig, *Fact-Free Gun Policy?*, 151 U. PA. L. REV. 1329, 1337 (2003) ("[C]ulture clearly matters for public opinion about gun policy in America, but there is also room for empirical analysis to affect policy development, not only through its influence on public opinion, but also through its direct influence on judges, regulatory agencies, and legislators.").

Cultural Cognition and Public Policy

The hope that democracy can be enlightened in such a straightforward manner, however, turns out to be an idle one. Like most heuristics, cultural cognition is also a bias. By virtue of the power that cultural cognition exerts over belief formation, public dispute can be expected to persist on questions like the deterrent effect of capital punishment, the danger posed by global warming, the utility or futility of gun control, and the like, even after the truth of the matter has been conclusively established.

Imagine—very counterfactually[70]—that all citizens are perfect Bayesians. That is, whenever they are apprised of reliable information, they readily update their prior factual beliefs in a manner that appropriately integrates this new information with all existing information at their disposal.[71] Even under these circumstances, conclusive discovery of the truth is no guarantee that citizens will converge on true beliefs about the consequences of contested public policies. For while Bayesianism tells individuals *what to do* with relevant and reliable information, it doesn't tell them *when* they should regard information as relevant and reliable. Individuals can be expected to give dispositive empirical information the weight that it is due in a rational-decisionmaking calculus *only* if they recognize sound information when they see it.

The phenomenon of cultural cognition suggests they *won't*. The same psychological and social processes that induce individuals to form factual beliefs consistent with their cultural orientation will also prevent them from perceiving contrary empirical data to be credible. Cognitive-dissonance avoidance will steel individuals to resist empirical data that either threatens practices they revere or bolsters ones they despise, particularly when accepting such data would force them to disagree with individuals they respect. The cultural judgments embedded in affect will speak more authoritatively than contrary data as individuals gauge what practices are dangerous and what practices are not. And the culturally partisan foundation of trust will make them dismiss contrary data as unreliable if they perceive that it originates from persons who don't harbor their own cultural commitments.

This picture is borne out by additional well-established psychological and social mechanisms. One constraint on the disposition of individuals to accept empirical evidence that contradicts their culturally conditioned beliefs is the phenomenon of *biased assimilation*.[72] This phenomenon refers to the tendency of individuals to condition their acceptance of new information as reliable based on its conformity to their prior beliefs. This disposition to reject

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70. *See generally* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES (Daniel Kahneman et al. eds., 1982) (documenting numerous departures from rationality in human decisionmaking).

71. *See generally* HOWARD RAIFFA, DECISION ANALYSIS (1968) (developing the Bayesian model for how to integrate information and probabilistic judgments in making decisions under conditions of uncertainty).

72. *See* Charles G. Lord et al., *Biased Assimilation and Attitude Polarization: The Effects of Prior Theories on Subsequently Considered Evidence*, 37 J. PERSONALITY & SOC. PSYCHOL. 2098 (1979).

empirical data that *contradict* one's prior belief (for example, that the death penalty does or doesn't deter crime) is likely to be especially pronounced when that belief is strongly connected to an individual's cultural identity, for then the forces of cognitive dissonance avoidance that explain biased assimilation are likely to be most strongly aroused.[73]

Two additional mechanisms reinforce the tendency to see new information as unreliable when it challenges a culturally congenial belief. The first is *naïve realism*. This phenomenon refers to the disposition of individuals to view the factual beliefs that predominate in their own cultural group as the product of "objective" assessment, and to attribute the contrary factual beliefs of their cultural and ideological adversaries to the biasing influence of their worldviews. Under these conditions, evidence of the truth will never travel across the boundary line that separates a factually enlightened cultural group from a factually benighted one. Indeed, far from being admitted entry, the truth will be held up at the border precisely *because* it originates from an alien cultural destination. The second mechanism that constrains societal transmission of truth—*reactive devaluation*—is the tendency of individuals who belong to a group to dismiss the persuasiveness of evidence proffered by their adversaries in settings of intergroup conflict.[74]

We have been focusing on the impact of cultural cognition as a bias in the public's recognition of empirically sound information. But it would be a mistake to infer that the immunity of social and natural scientists to such bias improves the prospects for truth, once discovered, to penetrate public debate.

This would be a mistake, first, because scientists *aren't* immune to the dynamics we have identified.[75] Like everyone else, scientists (quite understandably, even rationally) rely heavily on their priors when evaluating the reliability of new information. In one ingenious study, for example, scientists were asked to judge the experimental and statistical methods of what was represented to be a real study of the phenomenon of ESP. Those who received the version of the fictitious study that found evidence of ESP rated the methods to be low in quality, whereas those who received the version that found no evidence of ESP rated the methods to be high in quality, even though the methods were in fact independent of the conclusion.[76] Other studies showing that cultural worldviews explain variance in risk perceptions not just

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73. *See id.* at 2108 ("If our study demonstrates anything, it surely demonstrates that social scientists can not expect rationality, enlightenment, and consensus about policy to emerge from their attempts to furnish 'objective' data about burning social issues.").

74. *See* Lee Ross, *Reactive Devaluation in Negotiation and Conflict Resolution*, in BARRIERS TO CONFLICT RESOLUTION 27 (Kenneth J. Arrow et al. eds., 1995).

75. *See* Robert J. MacCoun, *Biases in the Interpretation and Use of Research Results*, 49 ANN. REV. PSYCHOL. 259 (1998).

76. *See* Jonathan J. Kohler, *The Influence of Prior Beliefs on Scientific Judgments*, 56 ORG. BEHAV. & HUM. DECISION PROCESSES 28 (1993).

Cultural Cognition and Public Policy

among lay persons but also among scientists who specialize in risk evaluation[77] fortify the conclusion that for scientists, too, cultural cognition operates as an information-processing filter.

But second and more important, any special resistance scientists might have to the biasing effect of cultural cognition is beside the point. The issue is whether the discovery and dissemination of empirically sound information can, on its own, be expected to protect democratic policymaking from the distorting effect of culturally polarized beliefs among *citizens* and their representatives.

Again (for the umpteenth time), ordinary citizens aren't in a position to determine for themselves whether this or that scientific study of the impact of gun control laws, of the deterrent effect of the death penalty, of the threat posed by global warming, et cetera, is sound. Scientific consensus, when it exists, determines beliefs in society at large only by virtue of social norms and practices that endow scientists with deference-compelling authority on the issues to which they speak. When they address matters that have no particular cultural valence within the group-grid matrix—What are the relative water-repellant qualities of different synthetic fabrics? Has Fermat's Last Theorem been solved?—the operation of these norms and practices is unremarkable and essentially invisible.

But when scientists speak to policy issues that *are* culturally disputed, then their truth-certifying credentials are necessarily put on trial. For many citizens, men and women in white lab coats speak with less authority than (mostly) men and women in black frocks. And even those who believe the scientists will still have to choose *which* scientists to believe. The laws of probability, not to mention the professional incentives toward contrarianism,[78] assure that even in the face of widespread professional consensus there will be outliers.[79] Citizens (again!) lack the capacity to decide for themselves whose work has more merit. They have no choice but to defer to those whom they trust to tell them which scientists to believe. And the people they trust are inevitably the ones whose *cultural values* they share, and who are inclined to credit or dismiss scientific evidence based on its conformity to their cultural priors.

These arguments are necessarily interpretative and conjectural.[80] But in the spirit of (casual) empirical verification, we invite those who are skeptical to perform this thought experiment. Ask *yourself* whether you think there *is* any credible scientific ground for believing that global warming is/isn't a serious threat; that the death penalty does/doesn't deter; that gun control does/doesn't

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77. *See, e.g.*, SLOVIC, *supra* note 1, at 406.
78. *See* ROBERT K. MERTON, *Priorities in Scientific Discovery, in* THE SOCIOLOGY OF SCIENCE 283-324 (1973).
79. *See* DOUGLAS & WILDAVSKY, *supra* note 10, at 49-66.
80. They are developed more systematically, with the aid of computer simulations, in Braman, Kahan & Grimmelman, *supra* note 30.

reduce violent crime; that abortion is/isn't safer than childbirth. If you believe the truth *has* been established on any one of these issues, ask yourself *why* it hasn't dispelled public disagreement. If you catch yourself speculating about the possible hidden cognitive motivations the disbelievers might have by virtue of their cultural commitments, you may proceed to the next Part of this Essay (although not until you've reflected on why you think *you* know the truth and whether *your* cultural commitments might have anything to do with that belief).[81] If, in contrast, you are tempted to answer, "Because the information isn't accessible to members of the public," then please go back to the beginning of this Essay and start over.

VI. OVERCOMING CULTURAL BIAS: IDENTITY AFFIRMATION

Nothing in our account implies either that there *is* no truth of the matter on disputed empirical policy issues or that the public cannot be made receptive to that truth. Like at least some other cognitive biases, cultural cognition can be counteracted.

As we've argued, factual disputes over gun control, the death penalty, environmental regulation and like issues derive from individuals' resistance to accepting information that threatens their cultural commitments. It follows that individuals are likely to resist factual information less if it can be presented in forms that affirm rather than denigrate their values. Experimental research shows that where individuals feel self-affirmed they are indeed more open to reconsidering their beliefs on culturally contested issues, including the death penalty and abortion.[82] Policymakers can harness this identity-affirmation effect by designing policies that are sufficiently rich in their social meanings to affirm the values of persons of diverse cultural worldviews simultaneously.

Consider two historical examples. The first concerns the success of abortion reform in France. Decades-long conflict on that issue was quieted by a policy that conditioned abortion on an unreviewable certification of personal "distress."[83] That policy made it possible for both religious traditionalists, who interpreted certification as symbolizing the sanctity of life, and egalitarians and individualists, who interpreted unreviewability as affirming the autonomy of women, to see their commitments affirmed by the law.[84]

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81. *Cf.* Robinson et al., *supra* note 26, at 405 (suggesting that individuals more readily recognize rationalization and group influence on beliefs of others than on their own beliefs).

82. *See* Geoffrey L. Cohen et al., *When Beliefs Yield to Evidence: Reducing Biased Evaluation by Affirming the Self*, 26 PERSONALITY & SOC. PSYCHOL. BULL. 1151 (2000); Sherman & Cohen, *supra* note 23; Geoffrey L. Cohen et al., Bridging the Partisan Divide: Self-Affirmation Reduces Ideological Closed-Mindedness and Inflexibility (Oct. 16, 2005) (unpublished article), http://research.yale.edu/culturalcognition/documents/cohen_self_affirmation_draft.pdf.

83. MARY ANN GLENDON, ABORTION AND DIVORCE IN WESTERN LAW 15 (1987).

84. *See id.* at 15-20; *see also* RONALD DWORKIN, LIFE'S DOMINION: AN ARGUMENT ABOUT ABORTION, EUTHANASIA, AND INDIVIDUAL FREEDOM 63-64 (1993).

Cultural Cognition and Public Policy

Thereafter, France enacted a set of policies involving counseling and enhanced social support for single mothers, measures that in fact reduce the abortion rate.[85] The evidence that such policies would work in exactly this way existed *before* adoption of France's abortion reform law. But it was not until after the law succeeded in achieving a measure of expressive convergence that the two sides trusted one another to believe the evidence and give this consequentialist solution a try.[86]

The second example concerns the emergence of political consensus in favor of tradeable emissions permits as a means of regulating air pollution in the late 1980s and early 1990s.[87] Because such permits involve a market mechanism for controlling pollution, this regulatory strategy vindicated individualists' belief that private orderings conduce to societal well-being. Hierarchists could also feel affirmed by a policy that promised to empower rather than constrain powerful commercial firms. Shown a solution that affirmed rather than threatened their identities, it thus became easier for persons of these persuasions to accept that air pollution was a problem to begin with. At the same time, because this policy was aimed at improving air quality, egalitarians and solidarists could see its adoption as recognizing their view of the dangers of unconstrained commerce and industry. The affirmation of their values thus made it easier for them to accept evidence that uniform, centrally enforced air quality standards don't work.[88]

Now consider two prospective applications of identity affirmation for neutralizing cultural bias. Recently, certain ideologically diverse groups have started to tout renewed investment in nuclear power as a way to reduce the greenhouse gas emissions primarily responsible for global warming.[89] The self-affirmation effect suggests why this proposal might actually change minds, both about the dangers of global climate change and about the risks of nuclear energy. Individualists and hierarchists both support nuclear power, which is emblematic of the very cultural values that are threatened by society's recognition of the global warming threat. Shown a solution that affirms their identities, individualists and hierarchists, as in the case of tradeable emission permits, can be expected to display less resistance—not just politically, but cognitively—to the proposition that global warming is a problem after all.

85. *See* GLENDON, *supra* note 83, at 18, 53-55.

86. *See id.*

87. *See* A. DENNY ELLERMAN ET AL., MARKETS FOR CLEAN AIR: THE U.S. ACID RAIN PROGRAM 13-30 (2000) (recounting emergence of consensus in response to efforts of the first Bush Administration to deflect charges of insufficient commitment to the environment).

88. *See* BRUCE A. ACKERMAN & WILLIAM T. HASSLER, CLEAN COAL/DIRTY AIR: OR HOW THE CLEAN AIR ACT BECAME A MULTIBILLION-DOLLAR BAIL-OUT FOR HIGH-SULFUR COAL PRODUCERS AND WHAT SHOULD BE DONE ABOUT IT (1981).

89. *See* Craig Gilbert, *Vice President Calls for Support of Nuclear Power Plants as Way to Reduce Global Warming*, MILWAUKEE J.-SENT., June 14, 2001, at 16A; Nicholas D. Kristof, *Nukes Are Green*, N.Y. TIMES, Apr. 9, 2005, at A19.

Yale Law & Policy Review   Vol. 24:147, 2006

Likewise, when egalitarians and solidarists are exposed to the same information, they are likely to perceive nuclear power to be less dangerous: The affirmation of their identity associated with the recognition of global warming threat lowers the cultural status cost of accepting information about nuclear safety that they have long resisted.

A second of use of identity affirmation involves gun control. We propose that states offer a "bounty," in the form of a tax rebate or other monetary reward, for individuals who register handguns. A bounty of this sort would affirm the cultural identities of both gun-control supporters and gun-control opponents simultaneously because both could see it as an effective and fair solution to a collective action problem—even without agreeing what that problem is! For gun-control supporters, the relevant collective good is public safety, which registration promotes by making it easier to trace the ownership of weapons used to commit crimes. In line with egalitarian and solidarist sensibilities, control supporters can thus envision the bounty as a means of equitably compensating individuals for contributing to society's collective welfare. For gun-control opponents, in contrast, the relevant public good is the reduction of violent crime in a community in which a relatively high proportion of individuals own guns. Because they don't believe individuals should be expected to endure disproportionate burdens to benefit society at large, individualists will think it's perfectly appropriate to compensate individual gun owners for the contribution they are making to public safety generally. So will hierarchists, who can see the bounty as a fitting public acknowledgement of the virtuous willingness of gun owners to promote the common good.[90]

Again, the benefit of such a policy consists less in the effect it has on risky behavior than the impact it has in removing cultural impediments to the acceptance of facts about risk. Any policy that affirms the identities of culturally diverse citizens simultaneously should make all of them more receptive to information that they might otherwise have found to be lacking in credibility. We don't know (be honest: do you?) whether more guns lead to more crime or less. But we are certain that members of the American public won't converge on the truth of the matter on this or other culturally contested issues unless policymakers succeed in framing their proposals in terms congenial to citizens of diverse cultural persuasions.

VII. CONCLUSION

In this Essay, we have attempted to solve a puzzle: What explains public

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90. For an elaboration of this proposal and others aimed at resolving the cultural impasse over guns in American society, see Donald Braman & Dan M. Kahan, *Overcoming the Fear of Guns, the Fear of Gun Control, and the Fear of Cultural Politics: Constructing a Better Gun Debate*, 54 EMORY L.J. (forthcoming 2006), *manuscript available at* http://research.yale.edu/culturalcognition/documents/ Overcoming_fear_cultural_politics.pdf.

Cultural Cognition and Public Policy

disagreement over the consequences of law? The answer, we have suggested, has less to do with differences in knowledge than differences in values. The phenomenon of cultural cognition refers to a series of interlocking social and psychological mechanisms that induce individuals to conform their factual beliefs about contested policies to their cultural evaluations of the activities subject to regulation. As a result, individuals of diverse cultural worldviews form highly divergent factual beliefs about which policies will ameliorate sources of societal distress and which will merely compound them. Moreover, because cultural cognition determines what sorts of information individuals find reliable, culturally polarized beliefs of this sort stubbornly persist in the face of scientific advances in understanding.

This solution to the puzzle of empirical policy disagreement generates a paradox. The prospects for democracy are obviously dim among a society of individuals zealously intent on securing political endorsement of their own partisan view of the good. But it turns out that the prospects are not inestimably brighter in a society whose members' only political concern is to secure their collective material well-being. For even if such individuals renounce the ambition to impose their own worldviews on one another, their conflicting values will continue to drive them into persistent and bitter opposition as they attend in common to their most mundane needs.

This paradox gives rise to a dilemma. If the alliance of modern science and liberal political ideals can't assure effective and pluralistic self-government, what can?

Our prescription, counterintuitively, is a more unabashedly cultural style of democratic policymaking. Those interested in helping citizens to converge in support of empirically sound policies—on guns, on the environment, on crime control, on national security—should focus less on facts and more on social meaning. It's only when they perceive that a policy bears a social meaning congenial to their cultural values that citizens become receptive to sound empirical evidence about what consequences that policy will have. It's therefore essential to devise policies that can bear acceptable social meanings to citizens of diverse cultural persuasions simultaneously. Because culture is cognitive prior to facts in the policy disputes, culture must be politically prior to facts too.

While the strategies we've described for counteracting cultural cognition as bias are based on the best research available, our account of how to work *through* rather than *against* cultural cognition is admittedly ad hoc. The psychological mechanisms that we've described merit more detailed evaluation, and the counter-biasing strategies we've advanced call for additional empirical testing in both the lab and the field. But we believe that what we've already discovered about the relationship between cultural values and political preferences makes one conclusion abundantly clear: that

169

democracy needs scientific knowledge of what laws *say* every bit as much as it needs scientific knowledge of what laws *do*.