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BOOK REVIEW

FEAR OF DEMOCRACY: A CULTURAL EVALUATION OF SUNSTEIN ON RISK

LAWS OF FEAR: BEYOND THE PRECAUTIONARY PRINCIPLE. By
Cass R. Sunstein. Cambridge, U.K.: Cambridge University Press. 2005.
Pp. xii, 234. \$23.99.

Reviewed by Dan M. Kahan, Paul Slovic,**
Donald Braman,*** and John Gastil*****

To secure the public good . . . and at the same time to preserve the spirit
and the form of popular government, is then the great object to which our
inquiries are directed.

— James Madison¹

[T]he only thing we have to fear is fear itself

— Franklin D. Roosevelt²

The effective regulation of risk poses a singular challenge to democracy. The public welfare of democratic societies depends on their capacity to abate all manner of natural and man-made hazards — from environmental catastrophe and economic collapse to domestic terrorism and the outbreak of disease. But the need to form rational responses to these and other dangers also challenges democratic societies in a more fundamental way: by threatening their commitment to genuinely deliberative policymaking. Effective risk regulation depends on highly technical forms of scientific information — epidemiological, toxicological, economic, and the like. Most citizens don't even have access to such information, much less the inclination and capacity to make sense of it. Why, then, should regulatory law afford any weight

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¹ THE FEDERALIST NO. 10, at 80 (James Madison) (Clinton Rossiter ed., 1961).

² Franklin D. Roosevelt, First Inaugural Address (Mar. 4, 1933), *in* 2 THE PUBLIC PAPERS AND ADDRESSES OF FRANKLIN D. ROOSEVELT 11, 11 (Samuel I. Rosenman ed., 1938).

to the uneducated opinions of ordinary citizens as opposed to the reasoned judgments of politically insulated risk experts?

It is the urgency of this question that makes the study of risk perception a policy science of the first order. Employing a diverse array of methods from the social sciences, the field of risk perception seeks to comprehend the diverse processes by which individuals form beliefs about the seriousness of various hazards and the efficacy of measures designed to mitigate them. Risk perception scholars are not of one mind about the prospects for making public opinion conform to the best available scientific information on risk. But no one who aspires to devise procedures that make democratic policymaking responsive to such information can hope to succeed without availing herself of the insights this field has to offer.

Cass Sunstein's *Laws of Fear: Beyond the Precautionary Principle* is a major contribution to the field of risk perception written in precisely this spirit. In Sunstein's view, the major thing proponents of democratically grounded risk regulation have to fear, in essence, is fear itself. Adroitly synthesizing a vast body of empirical literature, Sunstein catalogues the numerous social and cognitive mechanisms that drive members of the public to form wildly overstated estimates of various societal dangers. He also proposes a number of important institutional devices designed to shield "deliberative democracy" from the pernicious influence of these "[r]isk panics" (p. 1). They include, principally, a form of expert cost-benefit analysis that would separate out considered public values from irrational public fears and a set of administrative procedures that would make law responsive to the former and impervious to the latter. Few recent works in the field of risk perception rival Sunstein's in breadth, intelligence, and relevance.

But as masterful as Sunstein's account is, its persuasiveness is undercut by Sunstein's inattention to one of the most important recent advances in the science of risk perception. A growing body of work suggests that *cultural worldviews* permeate all of the mechanisms through which individuals apprehend risk, including their emotional appraisals of putatively dangerous activities, their comprehension and retention of empirical information, and their disposition to trust competing sources of risk information. As a result, individuals effectively conform their beliefs about risk to their visions of an ideal society. This phenomenon — which we propose to call "cultural cognition" — not only helps explain why members of the public so often disagree with experts about matters as diverse as global warming, gun control, the spread of HIV through casual contact, and the health consequences of obtaining an abortion; it also explains why experts themselves so often disagree about these matters and why political conflict over them is so intense.

The phenomenon of cultural cognition underwrites a strong critique of the analysis that Sunstein presents in *Laws of Fear*. Once the

influence of culture is taken into account, what Sunstein sees as public hysteria is often revealed to be a complex form of status competition between the adherents of competing cultural visions. This reformulation of public risk sensibilities, in turn, undermines much of Sunstein's normative account of how the law should respond to public risk perceptions. Because citizens' fears express their cultural visions of how society should be organized, the line between "considered values" and "irrational fears" often proves illusory. Reliance on expert cost-benefit analysis, in these circumstances, becomes less a strategy for rationally implementing public values than a device for strategically avoiding political disputes over individual virtue and collective justice.

Unfortunately, though, it's not clear that incorporating cultural cognition into the science of risk perception reduces the complexity of reconciling rational risk regulation with democratic decisionmaking. A theory of risk perception that incorporates cultural cognition is teeming with insights on how to structure risk communication; by linking risk perception to cultural values, it identifies myriad new strategies for managing public impressions of what risks are real and what risk-mitigation strategies are effective. But at the same time that such a theory makes the prescriptive dimension of risk regulation more tractable, it makes the normative dimension considerably harder to assess. If risk disputes are really disputes over the good life, then the challenge that risk regulation poses for democracy is less how to reconcile public sensibilities with science than how to accommodate diverse visions of the good within a popular system of regulation. Fear itself may indeed be what democratic societies, or at least pluralistic ones, most have to fear — not because governmental responses to risk are likely to be irrational, but because risk regulation is inherently fraught with the potential for illiberality.

We develop this response to Sunstein's *Laws of Fear* in four Parts. In Part I, we explicate Sunstein's account. Sunstein's theory is best understood within the context of a debate over two competing models of risk perception — one that sees individuals as rational weighers of risk and another that sees them as irrational weighers.

In Part II, we examine the dynamic that Sunstein's account overlooks: cultural cognition. We show how cultural cognition supports a distinct model of risk perception — one in which individuals behave neither as rational nor irrational weighers but rather as cultural evaluators of risk. In Part III, we use this model to challenge the central positive, normative, and prescriptive components of Sunstein's account.

Finally, in Part IV, we examine what the cultural-evaluator model of risk perception reveals about the tension between risk regulation and liberalism. Surprisingly, one response to this tension might be to base policymaking on an irrational-weigher theory such as Sunstein's,

precisely because that model overlooks the cultural underpinnings of public risk perceptions.

I. SUNSTEIN AND THE “IRRATIONAL-WEIGHER” MODEL

Advances in the field of risk perception have been fueled by an energetic debate between the proponents of two opposing theories. These theories, which we will call the “rational-weigher” and “irrational-weigher” models, posit competing accounts of the nature of individual judgments of risk and how the law should respond to them. Sunstein’s account is most readily understood within the context of this debate. Thus, we begin with a general overview of the points of contention between the rational-weigher and irrational-weigher models and then turn to the particulars of Sunstein’s sophisticated articulation of the latter.

A. *Two Conceptions of Individual Risk Perception: Rational Versus Irrational Weighing*

Grounded in the assumptions and methods of neoclassical economics, the rational-weigher model asserts that individuals, in aggregate and over time, form judgments toward risk that maximize expected utility. Decisions to take a hazardous job (say, as a construction worker),³ to purchase a potentially dangerous consumer good (perhaps a chainsaw),⁴ or even to engage in manifestly unhealthy forms of personal recreation (smoking cigarettes⁵ or unsafe sex⁶) — all ultimately embody a considered balancing of costs and benefits.

To be sure, people suffer from imperfect information, make mistakes, and even lack the capacity to follow through on what they correctly perceive to be in their best interests. But as a result of chance variation and market-based forms of social selection, whatever departures from utility maximization these impairments might induce in particular individuals can be expected to cancel each other out across individuals. Accordingly, even if no individual approaches risk in a perfectly rational fashion, people behave as if they were doing so in aggregate.⁷

The rational-weigher model counsels a restrained role for governmental risk regulation. If people left to their own devices generally

³ See, e.g., W. KIP VISCUSI, *RISK BY CHOICE: REGULATING HEALTH AND SAFETY IN THE WORKPLACE* 37 (1983).

⁴ See, e.g., Alan Schwartz, *Proposals for Products Liability Reform: A Theoretical Synthesis*, 97 *YALE L.J.* 353, 358 (1988).

⁵ See, e.g., W. KIP VISCUSI, *SMOKING: MAKING THE RISKY DECISION* (1992).

⁶ See, e.g., TOMAS J. PHILIPSON & RICHARD A. POSNER, *PRIVATE CHOICES AND PUBLIC HEALTH: THE AIDS EPIDEMIC IN AN ECONOMIC PERSPECTIVE* 57–83 (1993).

⁷ See, e.g., VISCUSI, *supra* note 3, at 4; Schwartz, *supra* note 4, at 374–84.

make choices that maximize their well-being, then devising legal regimes and institutions to regulate risk-taking is largely unnecessary and indeed ultimately destructive of societal wealth and individual freedom.⁸ The only circumstance in which regulatory intervention is clearly warranted is when utility-maximizing individuals are likely to expose others to risks the expected costs of which are not fully borne by those creating them. But when imposing regulation to combat externalities of this sort, regulators should not, according to proponents of the rational-weigher model, be guided by their own personal judgments of what types of risk-taking are socially desirable. Rather they should try to base regulatory standards on the preferences implicit in the behavior of persons who do fully internalize both the costs and benefits of putatively dangerous activities. In effect, regulatory responses to risk should mimic the individual responses revealed in markets and related forms of collective behavior.⁹

The irrational-weigher model, in contrast, posits that people, considered individually or collectively, approach matters of risk in a manner that systematically fails to maximize their utility. Drawing on social psychology and behavioral economics, the proponents of this position have catalogued a vast array of cognitive limitations and defects that distort popular perceptions of risk.¹⁰ Thus, individuals are disposed to wildly overestimate the magnitude of highly evocative risks (say, of a nuclear power accident) and to ignore less evocative ones (say, of developing cancer from peanut butter).¹¹ Far from canceling each other out, the types of risk-estimation errors that people make on an individual level tend to become even more exaggerated as individuals interact with one another. Various mechanisms of social influence cause popular risk perceptions to reinforce and feed on themselves, generating waves of mass incomprehension.¹²

The irrational-weigher model counsels a much more aggressive program of governmental regulation. The cognitive defects and social forces that tend to distort risk perceptions have the largest impact on members of the lay public; scientifically trained experts are less vulnerable to these influences because they routinely access and comprehend accurate sources of information, form more balanced mental

⁸ See, e.g., VISCUSI, *supra* note 3, at 4; Schwartz, *supra* note 4, at 383.

⁹ See, e.g., VISCUSI, *supra* note 3, at 114-35.

¹⁰ See, e.g., PAUL SLOVIC, THE PERCEPTION OF RISK 1-50 (2000); Roger G. Noll & James E. Krier, *Some Implications of Cognitive Psychology for Risk Regulation*, 19 J. LEGAL STUD. 747 (1990).

¹¹ See, e.g., Roger E. Kasperson, Ortwin Renn, Paul Slovic, Halina S. Brown, Jacque Emel, Robert Goble, Jeanne X. Kasperson & Samuel Ratick, *The Social Amplification of Risk: A Conceptual Framework*, 8 RISK ANALYSIS 177, 178 (1988); see also SLOVIC, *supra* note 10, at 37-38; Noll & Krier, *supra* note 10, at 754-55.

¹² See, e.g., Kasperson et al., *supra* note 11, at 179-86.

inventories of the harms and benefits associated with various putatively dangerous behaviors, and converge on consensus judgments through rigorous exchanges with other, similarly well-informed observers.¹³ It thus makes sense to entrust matters of environmental regulation, consumer protection, workplace safety, and the like to such experts, who should be insulated as much as possible from politics to avoid the distorting influence of the public's misapprehension of risk.¹⁴

We have sketched out the rational-weigher and irrational-weigher models in their purest forms. It's possible, of course, to formulate intermediate positions that include elements of both.¹⁵ Even more important, it's possible to qualify either model based on considerations external to both. Some exponents of the irrational-weigher model, for example, are careful to distinguish divergences between lay and expert risk assessments that reflect the bounded rationality of the public from those that reflect "rival rationalities": one, on the part of experts, that reduces all issues of risk to a unitary expected-utility metric; and another, on the part of the public, that includes qualitative elements of appraisal that defy such a metric.¹⁶ But the pure forms of the rational-weigher and irrational-weigher models are well represented in the study of risk perception and furnish useful reference points for making sense of any particular scholar's position.

B. Sunstein on Risk

Sunstein's position, as reflected in *Laws of Fear*, embodies the premises of the irrational-weigher model in an essentially unqualified form. Indeed, based on his systematic description of the dynamics that drive public risk perceptions and his detailed prescriptions for shielding risk regulation from the distorting influence of these forces, Sunstein's theory can be viewed as the most instructive account to date of what the irrational-weigher model entails for law.

1. *Descriptive.* — Sunstein's conception of the irrational-weigher model of risk perception contains two components. The first comprises the psychological mechanisms that dispose individuals to systematically misestimate risk. The second highlights the social forces

¹³ See HOWARD MARGOLIS, *DEALING WITH RISK: WHY THE PUBLIC AND THE EXPERTS DISAGREE ON ENVIRONMENTAL ISSUES* 71–97 (1996).

¹⁴ For an influential statement of this view, see STEPHEN BREYER, *BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK REGULATION* (1993).

¹⁵ One might characterize Kip Viscusi's more recent work, which treats market and other private behavior toward risk-taking as rational and political responses as irrational, in this way. See, e.g., W. KIP VISCUSI, *RATIONAL RISK POLICY* (1998).

¹⁶ See SLOVIC, *supra* note 10, at 137–53, 285–315. For an innovative attempt to build qualitative evaluations of risk into a framework of cost-benefit analysis that minimizes the distorting influence of various cognitive biases, see Richard L. Revesz, *Environmental Regulation, Cost-Benefit Analysis, and the Discounting of Human Lives*, 99 COLUM. L. REV. 941 (1999).

that magnify popular assessments of risk as individuals interact with one another.

Among the former is the “availability heuristic.” This dynamic refers to the tendency of individuals to “assess the magnitude of risks” based on how “easily [they can] think of . . . examples” of the misfortunes to which these risks give rise (p. 36).¹⁷ Thus, nuclear power triggers alarm because of the notoriety of the accidents at Three Mile Island and Chernobyl; the hazards of toxic waste disposal assume massive proportions because of the publicity that surrounded the Love Canal affair; arsenic levels in drinking water generate apprehension because “arsenic is [a] well known . . . poison,” in part due to the “classic movie about poisoning, *Arsenic and Old Lace*” (pp. 37–38). The influence of the availability heuristic can easily distort public judgment, insofar as calamitous misfortunes, however isolated, are much more likely to grab media attention and stick in the public memory than are the myriad instances in which risky technologies, processes, or chemicals generate benefits for society.¹⁸

Another mechanism that distorts public risk perceptions is “probability neglect.” This is Sunstein’s term for characterizing an asserted disposition of persons “to focus on the worst case, even if it is highly improbable” (p. 35). To maximize expected utility, individuals ought to discount the gain or loss associated with a course of action by the probability that such an outcome will occur.¹⁹ Experimental research shows, however, that individuals are less likely to discount in this fashion when they are evaluating outcomes that provoke strongly negative emotions such as fear; the cost individuals are willing to incur to avoid such outcomes is relatively insensitive to the diminishing probability that such outcomes will occur.²⁰ For Sunstein, this finding implies that ordinary citizens are likely to support expensive preventative measures, however remote the risks and however cost-ineffective the abatement procedures. Examples, he argues, include massive investments in toxic waste cleanup and cumbersome procedures for screening mail for anthrax (pp. 83–85).

Additional related mechanisms converge to make individuals unduly insensitive to the benefits of risky technologies. One of these mechanisms is “loss aversion.” Typically, “a loss from the status quo is

¹⁷ See generally SLOVIC, *supra* note 10, at 37–38.

¹⁸ Cf. MARGOLIS, *supra* note 13, at 94–97.

¹⁹ See generally DAVID SKLANSKY, *THE THEORY OF POKER* 9–11 (4th ed. 1999).

²⁰ See Yuval Rottenstreich & Christopher K. Hsee, *Money, Kisses, and Electric Shocks: On the Affective Psychology of Risk*, 12 *PSYCHOL. SCI.* 185 (2001).

seen as more undesirable than a gain is seen as desirable” (p. 41).²¹ Another is the “endowment effect.” Individuals value goods more once they have them than they did before they acquired them;²² as a result, they are likely to resist courses of action that require them to risk goods they have to achieve outcomes they would value even more (p. 42). Individuals also display a form of “status quo bias”²³: in appraising a potentially beneficial but also risky course of action, they fall back on the maxim “[b]etter safe than sorry” to justify inaction (p. 47).²⁴ In tandem, these dispositions generate a species of conservatism that causes individuals to seize on the potential “losses produced by any newly introduced risk, or by any aggravation of existing risks,” to block new technologies without “concern[] [for] the benefits that are forgone as a result” (p. 42).²⁵ This is the explanation, according to Sunstein, of why persons are “so concerned about the risks of nuclear power” even though “experts tend to believe that the risks are . . . lower, in fact, than the risks from competing energy sources, such as coal-fired power plants” (p. 47).

Another distorting mechanism is affect. The emotional responses that putatively dangerous activities trigger in persons have been shown to be one of the most robust predictors of how risky they perceive such activities to be.²⁶ Indeed, Sunstein plausibly depicts the impact of affect as foundational to nearly all other mechanisms of risk perception. The availability of risks is regulated by how emotionally gripping the images of misfortune they provoke are (pp. 38–39). It is “when intense emotions are engaged [that] people tend to focus on the adverse outcome, not on its likelihood” (p. 64). Persons react conservatively and display status quo bias or loss aversion because “[w]hen [they] anticipate a loss of what [they] now have, [they] can become genuinely afraid, in a way that greatly exceeds [their] feelings of pleasurable anticipation when [they] look forward to some supplement to what [they] now have” (p. 41).

²¹ This is an application of Daniel Kahneman and Amos Tversky’s famous “prospect theory.” See Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 *ECONOMETRICA* 263 (1979).

²² See, e.g., Daniel Kahneman, Jack L. Knetsch & Richard H. Thaler, *Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias*, *J. ECON. PERSP.*, Winter 1991, at 193.

²³ See *id.*

²⁴ The author here quotes MARGOLIS, *supra* note 13, at 5. Internal quotation marks have been omitted. See also *id.* at 74, 165–89.

²⁵ Emphasis has been omitted.

²⁶ See Melissa L. Finucane, Ali Alhakami, Paul Slovic & Stephen M. Johnson, *The Affect Heuristic in Judgments of Risks and Benefits*, 13 *J. BEHAV. DECISION MAKING* 1 (2000); George F. Loewenstein, Elke U. Weber, Christopher K. Hsee & Ned Welch, *Risk as Feelings*, 127 *PSYCHOL. BULL.* 267 (2001); Paul Slovic, Melissa L. Finucane, Ellen Peters & Donald G. MacGregor, *Risk as Analysis and Risk as Feelings: Some Thoughts About Affect, Reason, Risk, and Rationality*, 24 *RISK ANALYSIS* 311 (2004).

The distorting influence that these psychological mechanisms exert on individual risk perceptions is magnified, according to Sunstein, by two social forces. Sunstein calls the first of these forces “availability cascades.” For the same reason that “fear-inducing accounts” of misfortune with “high emotional valence” are likely to be noticed and recalled, they are also likely “to be repeated, leading to cascade effects, as the event becomes available to increasingly large numbers of people” (p. 96). “[A] process of this sort,” Sunstein maintains, “played a large role in the [reaction to the] Washington area sniper attacks, the Love Canal scare, [and] the debate over mad cow disease” (p. 94). Availability cascades also help explain “moral panics” in which large segments of society suddenly perceive “religious dissidents, foreigners, immigrants, homosexuals, teenage gangs, and drug users” as sources of danger (p. 98).

“Group polarization,” the second social force Sunstein discusses, magnifies the impact of individual biases when individuals engage in deliberations over risks and how to abate them.²⁷ Individuals don’t moderate their views when they engage in such discussions, Sunstein argues; on the contrary, “they typically end up accepting a more extreme version of the views with which they began” (p. 98). If one view is even slightly predominant within a group when it starts deliberation, arguments in favor of that position will predominate in discussions, fortifying the confidence of those who hold that position and making a bigger impact on the undecided. This effect will be reinforced by the subconscious desire of persons to conform their view to the apparent majority and by the reluctance of those who perceive themselves to be in the minority to take a public stance that might expose them to ridicule.

Despite his emphasis on “[r]isk panics,” Sunstein recognizes that the same dynamics that make persons “fearful when they ought not to be” can also make them “fearless when they should be frightened” (p. 1). Indeed, one state almost entails the other. This is the case partly because so many risks are offsetting. A society that pays inordinate attention to the risks of nuclear power necessarily pays too little to the risks associated with fossil fuels (for example, global warming and acid rain) (pp. 27–28). Many societies that fear the carcinogenic effects of the pesticide DDT are insufficiently mindful of the increased incidence of malaria associated with using less effective substitutes (p. 32).

Excessive fear and insufficient fear also tend to mirror each other, according to Sunstein, because of the largely hidden — and hence

²⁷ See generally Charles G. Lord, Lee Ross & Mark R. Lepper, *Biased Assimilation and Attitude Polarization: The Effects of Prior Theories on Subsequently Considered Evidence*, 37 J. PERSONALITY & SOC. PSYCHOL. 2098 (1979).

emotionally tepid — financial impact of risk-reducing regulation. Sunstein cites studies suggesting that every \$7 million to \$15 million in costs incurred to comply with governmental regulation is itself associated with the expected loss of one human life given the adverse effect of such expenditures on the economy (pp. 32–33).²⁸ Accordingly, many costly programs that only slightly reduce the magnitude of risks (such as the amount of arsenic in drinking water) actually end up costing more lives than they save (pp. 28–29).

It thus becomes impossible (practically and maybe even conceptually) to say which — excessive fear or excessive fearlessness — dominates in public risk perceptions. But one conclusion that can be drawn from Sunstein's account is that the public, impelled by emotion and waves of hysteria to fixate on some risks and wholly disregard others, can never be expected to get it right. The greatest risk to the public's health may be its own risk assessments.

2. *Normative and Prescriptive.* — Sunstein has just as much to say about what the law should do to respond to distorted public perceptions of risk as he does about the forces responsible for distorting them. Not surprisingly, he unequivocally rejects “populist systems” (p. 1) of regulation that take public risk evaluations at face value. Indeed, one of the major objectives of *Laws of Fear* is to critique the so-called “precautionary principle” as unduly responsive to public sentiments. That principle, which enjoys worldwide support among environmentalists and regulatory authorities (pp. 15–18), asserts, essentially, that “when there is scientific uncertainty as to the nature of [the] damage or the likelihood of the risk” posed by some activity, “then decisions should be made so as to prevent such activit[y] . . . unless and until scientific evidence shows that the damage will not occur” (p. 19).²⁹ When enforced by democratically responsive institutions, this approach, Sunstein maintains, yokes regulatory law to the various mechanisms — availability, probability neglect, status quo bias, and various forms of social influence — that make the public irrationally fearful of “low-probability risks” (p. 26). At the same time, because fixation on particular risks is always accompanied by inattention to offsetting risks and the adverse societal impact of regulatory expenditures, the precautionary principle inevitably forces society to forgo

²⁸ The author cites ROBERT W. HAHN, RANDALL W. LUTTER & W. KIP VISCUSI, AEI-BROOKINGS JOINT CTR. FOR REGULATORY STUDIES, DO FEDERAL REGULATIONS REDUCE MORTALITY? (2000); and Ralph Kenney, *Mortality Risks Induced by Economic Expenditures*, 10 RISK ANALYSIS 147 (1990).

²⁹ The author quotes *Cloning, 2002: Hearings Before the Subcomm. on Departments of Labor, Health and Human Servs., and Education, and Related Agencies of the S. Comm. on Appropriations*, 107th Cong. 19 (2002) (statement of Brent Blackwelder, President, Friends of the Earth). An internal quotation mark has been omitted.

“technologies and strategies that make human lives easier, more convenient, healthier, and longer” (p. 25).

Unfortunately, Sunstein concludes, public irrationality of this sort cannot be dispelled by education. The same mechanisms that cause members of the public to form exaggerated perceptions of risk will also prevent them from processing scientifically sound information in a rational way. Because “people neglect probability,” for example, even accurate disclosure of risks may induce them to “fix, or fixate, on the bad outcome,” thereby “greatly alarm[ing] people . . . without giving them any useful information at all” (p. 123). Rather than emphasize how small a risk is, a better way to dispel irrational fear, Sunstein argues, is to “[c]hange the subject” — “discuss something else and . . . let time do the rest” (p. 125).

Ultimately, though, even this strategy of distraction is unlikely to calm public anxieties, because scientists and enlightened regulators aren’t the only ones speaking (or not) to the public. “Terrorists[,] . . . environmentalists[,] and corporate executives,” among others, can all be expected to strategically “exploit probability neglect” and related dynamics (p. 65). Propelled by “economic self-interest,” the news media, too, will intensify risk hysteria by reporting “[g]ripping instances” of misfortune, “whether or not representative” of the activities that give rise to them (p. 103).

For Sunstein, there is only one credible treatment for the pathologies that afflict public risk assessments: the delegation of regulatory authority to independent expert agencies. “If the public demand for regulation is likely to be distorted by unjustified fear, a major role should be given to more insulated officials who are in a better position to judge whether risks are real” (p. 126).

Such experts, Sunstein maintains, are relatively immune from the influences that inevitably distort public risk estimations. Drawing on social psychology’s “dual-processing” model of cognition, Sunstein contrasts two forms of information processing: “System I,” which is “rapid, intuitive, and error prone” because pervaded by “[h]euristic-based thinking” of the sort responsible for exaggerated estimations of risk; and “System II,” which is “more deliberative, calculative, slower, and more likely to be error free” (p. 68).³⁰ By virtue of their training, the time they have to reflect, and their reliance on one another rather than

³⁰ For the classic statement of the “dual-processing” position, see Shelly Chaiken, *Heuristic Versus Systematic Information Processing and the Use of Source Versus Message Cues in Persuasion*, 39 J. PERSONALITY & SOC. PSYCHOL. 752 (1980). The “System I/System II” terminology comes from Daniel Kahneman & Shane Frederick, *Representativeness Revisited: Attribute Substitution in Intuitive Judgment*, in *HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT* 49, 51 (Thomas Gilovich, Dale Griffin & Daniel Kahneman eds., 2002).

misguided popular sources of information, scientific experts can be expected to use System II reasoning when appraising risks (pp. 85–87).

Investing politically independent experts with substantial authority, Sunstein insists, would not make risk assessment fundamentally undemocratic. “[W]ell-functioning governments,” he observes, “aspire to be *deliberative democracies*” (p. 1). They take account of the public’s anxieties, but their “responsiveness is complemented by a commitment to deliberation, in the form of reflection and reason giving” (p. 1). Accordingly, “if highly representative institutions, responding to public fear, are susceptible to error, then it is entirely appropriate to create institutions that will have a degree of insulation. Democratic governments should respond to people’s values, not to their blunders” (p. 126).

The principal device that expert regulators should use to distinguish public values from public misperceptions is cost-benefit analysis. Using this technique, regulators would assess the efficiency of risk-abatement measures by comparing their own calculations of the magnitude and probability of harm associated with risky technologies and substances to the value individuals (as revealed largely through market behavior) attach to life and limb (p. 131).³¹

Although he acknowledges that this methodology is far from perfect, Sunstein holds that cost-benefit analysis furnishes an indispensable tool for the rational regulation of risk in a democracy. Because it cleanses risk assessment of the contaminating influences of availability, probability neglect, affect, and the like, “[i]t is an important way of disciplining public fear — of creating a kind of System II corrective against System I heuristics and biases” (p. 130).

Sunstein allows that cost-benefit analysis “provides [only] a place to start” and “should not be taken as decisive” for the law (p. 174). On reflection, popularly accountable lawmakers might well conclude that other values, including the welfare of poor people, the protection of endangered species, or the preservation of pristine areas, are worth the cost of enduring economically inefficient regulation (p. 129).

There is one particular type of popular veto, however, that Sunstein’s conception of “deliberative democracy” can rarely if ever abide: second-guessing of the magnitude that experts assign to various risks.

³¹ Here Sunstein advocates an approach that is largely consistent with that favored by rational-weigher theorists. *See, e.g.*, VISCUSI, *supra* note 15, at 126–28. The difference, presumably, is that Sunstein would favor regulation in many contexts in which rational-weigher theorists are content to rely on markets. *See id.* (arguing that markets, when they internalize relevant costs, better neutralize various forms of individual irrationality than do government agencies, which often magnify them).

Here, as elsewhere,³² Sunstein reacts with deep skepticism toward the “rival rationality” hypothesis, which depicts many disagreements between expert and lay perceptions of risk as grounded in differences of value, not knowledge. “Often experts are aware of the facts and ordinary people are not” (p. 86). “Hence a form of irrationality, not a different set of values, often helps explain the different risk judgments of experts and ordinary people” (p. 86). It is precisely to root out public irrationality in perceptions of the “cost” of risky technologies, in particular, that cost-benefit analysis by independent agencies is essential.

II. THE CULTURAL-EVALUATOR MODEL

Sunstein’s account rests on an admirably comprehensive synthesis of the empirical literature on risk perception. This literature, however, features an important dynamic to which Sunstein is strikingly inattentive: the impact of *cultural worldviews*. To set up our assessment of how this omission detracts from Sunstein’s account, we begin with a summary of the recent work in this area, which, we argue, supports an alternative to both the rational-weigher and irrational-weigher models of risk perception.

A. Cultural Cognition: Theory and Evidence

The claim behind cultural cognition is that *culture is prior to facts* in societal disputes over risk. Normatively, culture might be prior to facts in the sense that cultural values determine what significance individuals attach to the consequences of environmental regulation, gun control, drug criminalization, and the like. But more importantly, culture is *cognitively* prior to facts in the sense that cultural values shape what individuals *believe* the consequences of such policies to be. Individuals selectively credit and dismiss factual claims in a manner that supports their preferred vision of the good society.

The priority of culture to fact is the organizing premise of the “cultural theory of risk.”³³ Associated most famously with the work of anthropologist Mary Douglas and political scientist Aaron Wildavsky,³⁴ the cultural theory of risk links disputes over environmental and technological risks to clusters of values that form competing cultural worldviews — egalitarian, individualistic, and hierarchical. Egalitarians, on this account, are naturally sensitive to environmental hazards,

³² See Cass R. Sunstein, *The Laws of Fear*, 115 HARV. L. REV. 1119, 1122–37 (2002) (reviewing SLOVIC, *supra* note 10).

³³ See generally Steve Rayner, *Cultural Theory and Risk Analysis*, in SOCIAL THEORIES OF RISK 83 (Sheldon Krinsky & Dominic Golding eds., 1992) (describing the theory and identifying its key theoretical underpinnings).

³⁴ See MARY DOUGLAS & AARON WILDAVSKY, *RISK AND CULTURE* (1982).

the abatement of which justifies regulating commercial activities that produce social inequality. Individualists, in contrast, predictably dismiss claims of environmental risk as specious, in line with their commitment to the autonomy of markets and other private orderings. Hierarchists are similarly skeptical because they perceive warnings of imminent environmental catastrophe as threatening the competence of social and governmental elites.

Although one can imagine alternative explanations for cultural variation in risk perceptions,³⁵ cultural cognition offers a distinctively psychometric one.³⁶ On this view, the impact of cultural worldviews is not an alternative to, but rather a vital component of, the various psychological and social mechanisms that determine perceptions of risk. These mechanisms, cultural cognition asserts, are *endogenous* to culture. That is, the direction in which they point risk perceptions depends on individuals' cultural values.

Consider the affect heuristic. Emotional responses to putatively dangerous activities strongly determine risk perceptions,³⁷ but what determines whether those responses are positive or negative? The answer, according to cultural cognition, is culture: persons' worldviews infuse various activities — firearm possession,³⁸ nuclear power generation,³⁹ red-meat consumption⁴⁰ — with despised or valued social meanings, which in turn determine whether individuals react with anxiety or calmness, dread or admiration, toward those activities. This account recognizes, in line with the best psychological accounts, that emotions are not thoughtless surges of affect, but rather value-laden judgments shaped by social norms.⁴¹

³⁵ Douglas and Wildavsky, for example, suggest functionalist accounts in which individuals form beliefs congenial to their ways of life precisely *because* such beliefs promote those ways of life. See MARY DOUGLAS, *HOW INSTITUTIONS THINK* 31–43 (1986); MICHAEL THOMPSON, RICHARD ELLIS & AARON WILDAVSKY, *CULTURAL THEORY* 104–07 (1990).

³⁶ See generally J.M. BALKIN, *CULTURAL SOFTWARE* 9–10, 173–74 (1998) (suggesting the need for an account of cultural influences that rests on psychological mechanisms operating at the individual level).

³⁷ See Slovic et al., *supra* note 26.

³⁸ See Cultural Cognition Project, Yale Law Sch., Gun Risk Perceptions, <http://research.yale.edu/culturalcognition/content/view/86/100/> (last visited Jan. 15, 2006).

³⁹ See Ellen M. Peters, Burt Burraston & C.K. Mertz, *An Emotion-Based Model of Risk Perception and Stigma Susceptibility: Cognitive Appraisals of Emotion, Affective Reactivity, Worldviews, and Risk Perceptions in the Generation of Technological Stigma*, 24 *RISK ANALYSIS* 1349 (2004).

⁴⁰ See Michael W. Allen & Sik Hung Ng, *Human Values, Utilitarian Benefits and Identification: The Case of Meat*, 33 *EUR. J. SOC. PSYCHOL.* 37 (2003).

⁴¹ See MARTHA C. NUSSBAUM, *UPHEAVALS OF THOUGHT: THE INTELLIGENCE OF EMOTIONS* (2001); see also Dan M. Kahan & Martha C. Nussbaum, *Two Conceptions of Emotion in Criminal Law*, 96 *COLUM. L. REV.* 269 (1996) (examining the influence of the cognitive conception of emotion in criminal law).

A similar account can be given of probability neglect. Individuals display less sensitivity to the improbability of a bad outcome when that outcome is attended by intensely negative affect. But insofar as the valence and strength of individuals' affective responses are influenced by their cultural appraisals of putatively dangerous activities (guns, nuclear power plants, drug use, casual sex, etc.), probability neglect will again be culture dependent.

Availability, too, is likely to be endogenous to culture. The magnitude of a perceived risk depends on how readily an individual can recall instances of misfortune associated with that risk. But how likely someone is to take note of such misfortunes and to recall them almost certainly depends on her values: to avoid cognitive dissonance, individuals are likely to attend selectively to information in a way that reinforces rather than undermines their commitment to the view that certain activities (say, gun possession, or economic commerce) are either noble or base.⁴²

Culture will also condition the impact of social influences on risk perceptions. Most individuals are not in a position to determine for themselves whether childhood vaccines induce autism, silicone breast implants cause immune system dysfunction, private firearm possession reduces or increases crime, and so on. Accordingly, they must trust others to tell them which risk claims, supported by which forms of highly technical empirical evidence, to believe. And the people they trust, not surprisingly, are the ones who share their cultural worldviews — and who are likely to be disposed to particular positions by virtue of affect, probability neglect, availability, and similar mechanisms. Risk perceptions are thus likely to be uniform within cultural groups and diverse across them. Accordingly, group polarization and cascades are endogenous to culture, too.

A considerable body of recent empirical research supports this account. Using a variety of methods, researchers have demonstrated the influence of cultural worldviews on perceptions of environmental risks, particularly those associated with nuclear power.⁴³

⁴² See Dan M. Kahan & Donald Braman, *More Statistics, Less Persuasion: A Cultural Theory of Gun-Risk Perceptions*, 151 U. PA. L. REV. 1291, 1313–15 (2003); see also MARY DOUGLAS, *PURITY AND DANGER: AN ANALYSIS OF CONCEPTS OF POLLUTION AND TABOO* 39–40 (1966) (suggesting that cognitive dissonance might cause persons to ignore harms by believing others are mistaken).

⁴³ See, e.g., Karl Dake, *Orienting Dispositions in the Perception of Risk: An Analysis of Contemporary Worldviews and Cultural Biases*, 22 J. CROSS-CULTURAL PSYCHOL. 61 (1991); Hank C. Jenkins-Smith, *Modeling Stigma: An Empirical Analysis of Nuclear Images of Nevada*, in *RISK, MEDIA, AND STIGMA: UNDERSTANDING PUBLIC CHALLENGES TO MODERN SCIENCE AND TECHNOLOGY* 107–11 (James Flynn, Paul Slovic & Howard Kunreuther eds., 2001); 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, 1445–51 (1996).

We have conducted our own National Risk and Culture Survey, designed to establish the influence of cultural cognition on a broad scale.⁴⁴ The study utilized Douglas's well-known typology, which categorizes cultural ways of life along two cross-cutting dimensions, "group" and "grid."⁴⁵ Within "high group" ways of life, individuals "interact frequently and in a wide range of activities" in which they must "depend on each other," a condition that "promotes values of solidarity"; in "low group" ways of life, in contrast, individuals are expected to "fend for themselves and therefore tend to be competitive."⁴⁶ Persons who participate in a "high grid" way of life expect resources, opportunities, respect, and the like to be "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."⁴⁷ Those who adhere to a "low grid" way of life favor a "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.⁴⁸ After conducting an extensive review of ethnographic materials, conducting our own focus group discussions, and pretesting a wide variety of survey items, we developed two highly reliable attitude scales, "Individualism-solidarism" and "Hierarchy-egalitarianism," that capture the key value conflicts among persons located in different quadrants of the group/grid typology.⁴⁹

In a random national survey of 1800 persons, we used these scales to measure the impact of cultural worldviews on a diverse array of risk perceptions. Our results confirmed Douglas and Wildavsky's (and other researchers') conclusions on the relationship between cultural worldviews and perceptions of environmental risks. The more egalitarian and solidaristic persons are, the more concern they have about global warming, nuclear power, and pollution generally, whereas the more hierarchical and individualistic persons are, the less concern they have.⁵⁰

We found a similar relationship between cultural worldviews and perceptions of gun-related risks. Relatively egalitarian and solidaristic

⁴⁴ See Cultural Cognition Project, Yale Law Sch., National Risk & Culture Survey, <http://research.yale.edu/culturalcognition/content/view/45/89/> (last visited Jan. 15, 2006) (explaining methods and general findings of the survey).

⁴⁵ MARY DOUGLAS, *NATURAL SYMBOLS*, at viii (1970).

⁴⁶ Rayner, *supra* note 33, at 87-88.

⁴⁷ JONATHAN L. GROSS & STEVE RAYNER, *MEASURING CULTURE: A PARADIGM FOR THE ANALYSIS OF SOCIAL ORGANIZATION* 6 (1985).

⁴⁸ Rayner, *supra* note 33, at 87.

⁴⁹ See Dan M. Kahan, Donald Braman, John Gastil, Paul Slovic & C.K. Mertz, *Gender, Race, and Risk Perception* app. at 38-40 (Yale Law Sch. Pub. Law & Legal Theory Research Paper Series, Paper No. 86, 2005), available at <http://ssrn.com/abstract=723762>.

⁵⁰ See *id.* at 15.

persons believe that widespread private ownership of guns undermines public safety by increasing the incidence of crime and gun accidents; relatively hierarchical and individualistic persons, in contrast, believe that widespread *restrictions* on private gun ownership undermine public safety by rendering law-abiding persons unable to defend themselves from violent predation.⁵¹ These opposing perceptions of gun risks cohere with the negative and positive social meanings that guns bear, respectively, for persons of these cultural orientations.⁵²

Whereas individualists and hierarchists square off against solidarists and egalitarians on environmental and gun risks, on other issues individualists and hierarchists part ways. Hierarchists worry, for example, about the societal dangers of drug distribution and promiscuous sex, and the individual dangers of marijuana smoking; individualists do not.⁵³ Likewise, egalitarians and individualists don't worry much about the personal risks of obtaining an abortion or contracting AIDS from surgery; hierarchists worry a great deal about these risks.⁵⁴ These patterns also conform to the logic of the worldviews in question: hierarchists morally disapprove of behavior that defies conventional norms, and thus naturally believe that deviant behavior is dangerous; egalitarians morally disapprove of norms that rigidly stratify people, and individualists disapprove of norms that constrain individual choice generally, so these types naturally believe that deviant behavior is benign.

B. Cultural Evaluation Versus Rational and Irrational Weighing

The empirical evidence supporting the phenomenon of cultural cognition generates a distinct model of risk perception. We call it the "cultural-evaluator" model to emphasize the role that cultural values play in determining not only which outcomes individuals are willing to take risks to obtain, but also which empirical claims about risk they are likely to believe.

This label also underscores our view that individual risk perceptions do not typically embody any sort of expected-utility *weighing*, rational or irrational. Indeed, for most persons, such weighing is completely unnecessary: studies show that individuals' perceptions of the benefits and risks of various putatively dangerous activities (from nuclear power to commercial aviation to handgun ownership) are

⁵¹ See *id.* at 18–21.

⁵² See Kahan & Braman, *supra* note 42, at 1299–1302.

⁵³ Cultural Cognition Project, Yale Law Sch., Culture and Political Attitudes, <http://research.yale.edu/culturalcognition/content/view/91/100/> (last visited Jan. 15, 2006).

⁵⁴ Cultural Cognition Project, Yale Law Sch., Health Risk Perceptions, <http://research.yale.edu/culturalcognition/content/view/102/100/> (last visited Jan. 15, 2006).

inversely correlated.⁵⁵ Guided by judgment-infused emotions and motivated by their need to preserve their fundamental ties to others, individuals naturally conform their perceptions of both the costs and benefits of such activities to the positive or negative social meanings with which those activities are imbued by cultural norms.

In sum, individuals adopt stances toward risks that *express* their commitment to particular ways of life. Their risk perceptions might or might not be accurate when evaluated from an actuarial standpoint; policies based on them might or might not be in the interest of society measured according to any welfarist metric. Nevertheless, which activities individuals view as dangerous and which policies they view as effective embody coherent visions of social justice and individual virtue.

III. CULTURALLY EVALUATING SUNSTEIN

We've suggested that Sunstein's conception of the irrational-weighter model is inattentive to the phenomenon of cultural cognition. We now consider how this inattention detracts from Sunstein's diagnosis of the pathologies that afflict risk perceptions and from his recommended institutional cures.

A. *Descriptive Deficiencies*

Sunstein's descriptive account of risk perception draws a sharp distinction between public risk assessments and expert ones. The former are distorted by various cognitive and social dynamics that impel lay persons to fixate obsessively on risks of high emotional salience but often minimal consequence, and to disregard more serious threats to societal well-being. The latter, in contrast, are characterized by the balance and accuracy associated with the calmer and more analytic modes of System II reasoning.

The cultural-evaluator model suggests a richer and more nuanced picture that accounts for certain phenomena that Sunstein's irrational-weighter model does not satisfactorily explain. These include systematic differences in risk perceptions among lay persons, the clustering of public risk perceptions across seemingly discrete issues, systematic differences of opinion among risk experts, and the intensity of political conflict surrounding risk regulation.

⁵⁵ See SLOVIC, *supra* note 10, at 404–05 (noting that many persons associate high-benefit actions with low risks, and vice versa); Cultural Cognition Project, Yale Law Sch., Gun Risk Attitudes, <http://research.yale.edu/culturalcognition/index.php?option=content&task=view&id=99> (last visited Jan. 15, 2006) (noting the inverse correlation between perceptions of gun risks and benefits).

1. *Individual Differences.* — Lay persons disagree not only with experts but also with *one another* about the magnitude of various risks. These disagreements, moreover, are far from random. They highly correlate with characteristics such as gender, race, political orientation, and religion, and they persist even after controlling for education and other information-related influences.⁵⁶

These systematic individual differences pose an obvious challenge to the rational-weigher model of risk perception. The idea that individuals respond to risk in a manner that maximizes their expected utility certainly allows for heterogeneity in the benefits individuals attach to risky activities. But if individuals, in aggregate and over time, are rationally processing information about risk, differences in their estimations of the *magnitude* of various risks should essentially just be noise — products of random variation that display no intelligible patterns across persons.

The irrational-weigher model also fails to explain such differences. It's implausible to think that men are more or less vulnerable than women, whites more or less vulnerable than minorities, Republicans more or less vulnerable than Democrats, or Catholics more or less vulnerable than Protestants or Jews to the distorting influence of availability, probability neglect, status quo bias, affect, and the like.⁵⁷

To his credit, Sunstein's particular emphasis on social influences does suggest a reason why risk perceptions might vary cross-culturally. Even initially "small or random" differences in the distribution of perceptions across space will predictably grow in intensity and ultimately become sharply pronounced as a result of "availability cascades" and "group polarization":

Because different social influences can be found in different communities, local variations are inevitable, with different examples becoming salient in each. Hence such variations — between, say, New York and Ohio, or England and the United States, or between Germany and France — might involve coincidence Indeed the different reactions to nuclear power in France and the United States can be explained in large part in this way. And when some groups concentrate on cases in which guns increased violence, and others on cases in which guns decreased violence, availability cascades are a large part of the reason. "Many Germans believe that drinking water after eating cherries is deadly; they also believe that

⁵⁶ See Kahan et al., *supra* note 49 (presenting data showing the influence of various individual characteristics on risk perceptions).

⁵⁷ Researchers have explicitly ruled out such differences in the case of gender. See, e.g., Charles R. Berger, Eun-Ju Lee & Joel T. Johnson, *Gender, Rationality, and Base-Rate Explanations for Increasing Trends*, 30 COMM. RES. 737, 758 (2003); Stuart J. McKelvie, *The Availability Heuristic: Effects of Fame and Gender on the Estimated Frequency of Male and Female Names*, 137 J. SOC. PSYCHOL. 63 (1997); Craig W. Trumbo, *Information Processing and Risk Perception: An Adaptation of the Heuristic-Systematic Model*, 52 J. COMM. 367, 379 (2002).

putting ice in soft drinks is unhealthy. The English, however, rather enjoy a cold drink of water after some cherries; and Americans love icy refreshments.” (p. 96)⁵⁸

But as Sunstein’s own description suggests, this type of “cultural” account predicts that group differences should be largely *geographic* in nature. If salient or gripping examples of misfortune (as well as over-represented opinions or arguments) spread from one person to another within geographic communities — in much the same way that an infectious disease does — there would be little reason to expect Jews, African Americans, and women in New York to be more like Jews, African Americans, and women in Ohio than they are like Protestants, whites, and men in New York. But in fact religious, racial, and gender effects persist even when controlling for region.

Of course, random variations within other, nongeographic communities — professional or occupational ones, for example, or perhaps Internet discussion groups comprising persons with common vocational or political interests — might also blossom into systematic differences in risk perceptions as individuals within those communities interact. But it’s necessary to resort to fairly complex and largely ad hoc conjectures to link differences of these sorts to the well-defined forms of variation actually seen across social groups.

The cultural-evaluator model, in contrast, suggests a coherent and parsimonious explanation for such variation. That model explicitly posits that risk perceptions will vary across persons in patterns that reflect and reinforce their cultural worldviews. Gender, ethnicity, religion, political orientation, and like characteristics correlate with such outlooks.⁵⁹ It follows that cultural variation in risk perceptions will manifest itself in systematic differences in risk perception across different social groups.

The results of our National Risk and Culture Survey confirm this conclusion. Consistent with previous research, we found that factors

⁵⁸ The author quotes Joseph Henrich, Wulf Albers, Robert Boyd, Gerd Gigerenzer, Kevin A. McCabe, Axel Ockenfels & H. Peyton Young, *Group Report: What Is the Role of Culture in Bounded Rationality?*, in *BOUNDED RATIONALITY* 343, 353 (G. Gigerenzer & R. Selten eds., 2001).

⁵⁹ See Kahan et al., *supra* note 49, at 6–7. For this reason, these and similar demographic characteristics are commonly used as proxies for distinctive cultural norms. See, e.g., RAYMOND D. GASTIL, *CULTURAL REGIONS OF THE UNITED STATES* (1975) (charting regional correlations with cultural values); CAROL GILLIGAN, IN *A DIFFERENT VOICE: PSYCHOLOGICAL THEORY AND WOMEN’S DEVELOPMENT* (1982) (using gender as an indicator of commitment to certain moral sensibilities); RICHARD E. NISBETT & DOV COHEN, *CULTURE OF HONOR: THE PSYCHOLOGY OF VIOLENCE IN THE SOUTH* 1–2 (1996) (using region of residence as representative of a shared cultural and psychological background); Gary Kleck, *Crime, Culture Conflict and the Sources of Support for Gun Control: A Multilevel Application of the General Social Surveys*, 39 *AM. BEHAV. SCIENTIST* 387 (1996) (using race, class, gender, and region as proxies for cultural norms).

such as income, education, community type (rural or urban), political ideology, and personality type do predict various risk perceptions. But we also found that cultural worldviews exert significantly and substantially *more* predictive power than these characteristics. Seemingly significant gender and race variances in risk perceptions also turn out to be artifacts of culture-specific differences in risk perceptions related to gender and race differences in social roles within hierarchical and (to a lesser extent) individualistic ways of life.⁶⁰

Indeed, even the sorts of geographic variations that Sunstein focuses on are best understood as reflecting variance in cultural commitments over space. The difference between French and U.S. attitudes toward nuclear power, and the resulting differences in the regulations of the two nations, are hardly a matter of “coincidence” or chance. In contrast to members of the public in the United States, those in France are much more likely to hold a hierarchical worldview.⁶¹ This difference not only disposes the French to be more accepting of nuclear power risks, but also to be more confident in the ability of technical and governmental elites to manage any such risks.⁶²

In other words, membership in various social groups (including sometimes entire nations) predicts risk perceptions only because those groups are proxies for culture. Moreover, because they are only proxies, their unique influence fades to insignificance in a model that directly accounts for cultural worldviews.

2. *Belief Clustering.* — Risk perceptions not only vary systematically across social groups; they also *cohere* across seemingly *discrete* issues. How likely one is to perceive global warming to be a threat, for example, predicts how much one worries about gun accidents, which in turn tells us whether one regards abortion as a dangerous medical procedure and marijuana as a dangerous drug.⁶³

This feature of public risk perceptions also defies the conventional models. Because as an empirical matter nothing about the size of any one of these risks entails anything about the size of any other, we wouldn't expect persons behaving like rational weighers to divide into opposing groups on these matters. Nor is it at all clear why persons behaving like irrational weighers would form these particular packages of risk perceptions. Nothing in the relative salience, familiarity, or

⁶⁰ See Kahan et al., *supra* note 49, at 16–18.

⁶¹ See Paul Slovic, James Flynn, C.K. Mertz, Marc Poumadère & Claire Mays, *Nuclear Power and the Public: A Comparative Study of Risk Perception in France and the United States*, in *CROSS-CULTURAL RISK PERCEPTION: A SURVEY OF EMPIRICAL STUDIES* 55, 93–94 (Ortwin Renn & Bernd Rohrman eds., 2000).

⁶² See *id.* at 87–90, 93–94, 98.

⁶³ See Kahan et al., *supra* note 49, at 24–28.

evocative imagery of any one of these risks connects in any logical or practical way to those features of the others. There's also nothing intrinsic to Sunstein's irrational-weigher model that should lead us to expect those who do or don't take seriously one of these risks (say, of global warming or of marijuana use) to be any more likely to exchange information with others who do or don't take seriously some other risk (say, of gun accidents or of health complications from abortion).

The cultural-evaluator model, however, readily explains belief clustering. The *meanings* of these diverse risks — the values expressed by the activities that give rise to the risks, and by governmental regulation of the same — cohere in intelligible ways. The idea that guns are dangerous and worthy of regulation, for example, threatens hierarchical roles and denigrates individualistic virtues; the threat of global warming impugns the competence of hierarchical elites and invites interference with markets and other forms of private orderings that individualists prize. It is therefore perfectly sensible to expect hierarchists and individualists to believe both that guns are not dangerous and global warming is not a serious threat, and for egalitarians and solidarists to believe otherwise. Our data found this very pattern, and others that reflect the expressive coherence of these opposing worldviews.⁶⁴

3. *Expert Variation.* — Sunstein's account seeks to identify the mechanisms that impel members of the public to wildly overestimate the importance of risks that experts view with much less concern. But experts themselves are hardly of one mind about societal risks. Nearly every public belief cited by Sunstein as a product of some public "risk panic" — that nuclear power is dangerous,⁶⁵ that arsenic in drinking water poses a health threat,⁶⁶ that mad cow disease is a serious concern⁶⁷ — is shared by some scientists and rejected by others.

⁶⁴ See *supra* pp. 1086–87.

⁶⁵ See NUCLEAR POWER: BOTH SIDES (Michio Kaku & Jennifer Trainer eds., 1982).

⁶⁶ Compare COMM. ON TOXICOLOGY, NAT'L RESEARCH COUNCIL, ARSENIC IN DRINKING WATER: 2001 UPDATE 214 (2001) (concluding, based on epidemiological studies, that arsenic exposure within existing regulatory standards might significantly increase cancer risk), with Michael N. Bates, Allan H. Smith & Kenneth P. Cantor, *Case-Control Study of Bladder Cancer and Arsenic in Drinking Water*, 141 AM. J. EPIDEMIOLOGY 523 (1995) (concluding that cities with levels of arsenic in drinking water below existing standards do not significantly differ in the incidence of bladder cancer from those with levels above the standards).

⁶⁷ Compare Jerry Hagstrom, *Expert: U.S. Should Follow Japanese on Mad Cow Testing*, CONGRESS DAILY, Mar. 17, 2004, 2004 WLNR 17658586 (reporting the view of a Nobel Prize-winning scientist who discovered the mad cow infectious agent that the disease is "the greatest threat to the safety of the human food supply in modern times" (quoting Stanley Prusiner, Professor, Univ. of Cal., S.F.) (internal quotation marks omitted)), with Joshua T. Cohen, Keith Duggar, George M. Gray, Silvia Kreindel, Hatim Abdelrahman, Tsegaye HabteMariam, David Oryang & Berhanu Tameru, Evaluation of the Potential for Bovine Spongiform Encephalopathy 112 (Oct. 2003) (unpublished manuscript, on file with the Harvard Law School Library), available at <http://www.hcra.harvard.edu/pdf/madcow.pdf> ("[E]ven if BSE were somehow to arise in the U.S.,

Expert disagreement per se does not necessarily defy Sunstein's account. The empirical evidence surrounding many important societal risks is often conflicting and in some instances scant. Employing the methodical and dispassionate forms of analysis associated with System II reasoning, experts could well come to different conclusions in these circumstances.

The problem, however, is that the nature of expert disagreement belies this account of its causes. As is true of disagreements among members of the public generally, disagreements among risk experts are distributed in patterns that cannot plausibly be linked either to access to information or capacity to understand it. Gender, for example, predicts systematic differences in risk perceptions among experts,⁶⁸ as do political ideology and institutional affiliation (academic or industrial).⁶⁹ Because these sorts of characteristics are all plausible proxies for cultural orientation, variance along these lines suggests that cultural cognition is figuring in expert judgments of risk, too. Research that one of us has conducted (independent of the National Risk and Culture Survey) supports exactly this conclusion.⁷⁰

There are at least two possible ways in which cultural cognition could exert this impact on expert risk assessments. One is that cultural worldviews might induce experts, like members of the public generally, to engage in heuristic-driven System I forms of reasoning pervaded by biases such as availability and probability neglect.

But a second and even more plausible explanation is that cultural worldviews are biasing the more reflective System II forms of reasoning associated with expert judgment. Sunstein maintains that System II reasoning is "more likely to be error free" because it is "more deliberative [and] calculative" (p. 68). But a wealth of research on dual-process reasoning suggests that the truth is much more complicated. System II reasoning often furnishes less reliable guidance than

few additional animals would become infected, little infectivity would be available for potential human exposure, and the disease would be eradicated. In short, the U.S. appears very resistant to a BSE challenge . . .").

⁶⁸ See, e.g., Richard P. Barke, Hank Jenkins-Smith & Paul Slovic, *Risk Perceptions of Men and Women Scientists*, 78 SOC. SCI. Q. 167, 172-75 (1997).

⁶⁹ See SLOVIC, *supra* note 10, at 286, 311-12.

⁷⁰ See *id.* at 406-09 (describing studies in which cultural worldviews explained variance among scientists). Douglas Kysar and James Salzman convincingly attribute expert, as well as public, disagreement over risk to conflicting worldviews. See Douglas A. Kysar & James Salzman, *Environmental Tribalism*, 87 MINN. L. REV. 1099, 1111-16 (2003).

System I.⁷¹ Among the reasons this is so is the vulnerability of even System II reasoning to various biasing influences.⁷²

One such influence is known as “defense motivation.”⁷³ Information that challenges beliefs essential to one’s group identity poses a threat to one’s perception of one’s status. To repel that threat, individuals (subconsciously) screen arguments and evidence to protect their existing beliefs. Such screening operates whether individuals are engaged in *either* heuristic reasoning *or* more reflective reasoning.⁷⁴ In effect, defense motivation biases individuals’ use of System II reasoning, causing them to use deliberate, calculating, and methodical analysis to support beliefs dominant within their group and to debunk challenges to those beliefs.⁷⁵

This is most likely the dynamic that generates group-based disagreement among risk experts. Like members of the general public, experts are inclined to form attitudes toward risk that best express their cultural vision. The only difference, if any, is that experts are more likely to use System II reasoning to do so.

4. *Political Conflict.* — Highly charged disputes about risk occupy a conspicuous position in American political life. How (if at all) to respond to global warming, whether to enact or repeal gun control laws, what sorts of policies to adopt to combat domestic terrorism, and like issues generate intense public conflict. The power to explain the prevalence of intense conflict over risk regulation is another advantage of the cultural-evaluator model over Sunstein’s irrational-weighter model.

To be sure, the centrality of risk regulation in democratic politics is perfectly compatible with Sunstein’s position. Many risk regulation issues are of obvious consequence to the well-being of society. Moreover, because such issues usually involve highly gripping and evocative instances of harm, they predictably trigger a self-reinforcing wave of

⁷¹ See, e.g., Slovic et al., *supra* note 26, at 320 (noting that expert chess players and mathematicians perform better when relying on tacit or heuristic rather than purely analytic reasoning, and arguing that “risk as feeling may outperform risk as analysis” in settings such as security screening at airports).

⁷² See, e.g., Shelly Chaiken & Durairaj Maheswaran, *Heuristic Processing Can Bias Systematic Processing: Effects of Source Credibility, Argument Ambiguity, and Task Importance on Attitude Judgment*, 66 J. PERSONALITY & SOC. PSYCHOL. 460 (1994); Serena Chen, Kimberly Duckworth & Shelly Chaiken, *Motivated Heuristic and Systematic Processing*, 10 PSYCHOL. INQUIRY 44 (1999).

⁷³ See Roger Giner-Sorolla & Shelly Chaiken, *Selective Use of Heuristic and Systematic Processing Under Defense Motivation*, 23 PERSONALITY & SOC. PSYCHOL. BULL. 84, 85 (1997).

⁷⁴ See *id.* at 85–86; see also Geoffrey L. Cohen, *Party over Policy: The Dominating Impact of Group Influence on Political Beliefs*, 85 J. PERSONALITY & SOC. PSYCHOL. 808 (2003) (finding that experimental subjects using systematic reasoning are still disposed to credit arguments conditional on sharing a group allegiance with the source of the arguments).

⁷⁵ See Chen et al., *supra* note 72, at 45.

public anxiety to which democratically accountable institutions inevitably react (indeed, overreact).⁷⁶

What confounds Sunstein's account, however, is the *highly conflictual* nature of risk regulation politics. If public attention were being driven solely by mechanisms like availability, probability neglect, cascades, and group polarization, we would expect members of the public and democratically accountable government officials to be uniformly impelled toward increasingly restrictive forms of regulation of the sort counseled by the precautionary principle. This is the story that Stephen Breyer, Sunstein's irrational-weigher comrade in arms, tells about the regulatory process.⁷⁷ But the truth is that risk regulation politics are not nearly so one-sided. Public demand for regulatory responses to global warming, gun accidents, terrorism, and similar sources of risk generates equally intense public opposition to the same.

This is exactly the state of affairs one would predict under the cultural-evaluator model. As a result of cultural cognition, individuals of diverse cultural persuasions are endowed with *competing* affective responses toward putatively dangerous activities, and are thus impelled toward opposing stances on risk issues.

The cultural-evaluator model not only explains why risk regulation politics are conflictual, but also why those on both sides advance their positions with such intensity. Sociologist Joseph Gusfield describes as symbolic "status conflicts" political disputes in which the adherents of opposing cultural styles compete for esteem.⁷⁸ In such struggles, opposing cultural groups mobilize to enact legislation that "glorifies the values of one group and demeans those of another," thereby "enhanc[ing] the social status of . . . the affirmed culture" at the expense of the one "condemned as deviant."⁷⁹ Because individuals care as much about their status as they do about their material welfare, "[t]he struggle to control the symbolic actions of government is often as bitter and as fateful as the struggle to control its tangible effects."⁸⁰ Important historical examples include battles over temperance and civil rights;⁸¹

⁷⁶ See *supra* pp. 1078–79.

⁷⁷ See BREYER, *supra* note 14, at 33–51.

⁷⁸ JOSEPH R. GUSFIELD, *SYMBOLIC CRUSADE: STATUS POLITICS AND THE AMERICAN TEMPERANCE MOVEMENT* 21 (2d ed. 1986); Joseph R. Gusfield, *On Legislating Morals: The Symbolic Process of Designating Deviance*, 56 CAL. L. REV. 54 (1968).

⁷⁹ Gusfield, *supra* note 78, at 57–58.

⁸⁰ GUSFIELD, *supra* note 78, at 167.

⁸¹ See *id.* at 22–24.

contemporary examples include the battles over capital punishment,⁸² gay rights,⁸³ and hate crime laws.⁸⁴

Disputes over risk regulation fit this pattern. Because they evocatively symbolize the worldviews of hierarchists and egalitarians, individualists and solidarists, regulations of drugs, guns, sexual promiscuity, and other putatively dangerous activities inevitably come to signify whose stock is up and whose down in the incessant competition for social esteem. What seem like highly technical and often highly uncertain empirical disputes among experts galvanize the public because these controversies are in truth “the product of an ongoing political debate about the ideal society.”⁸⁵

B. Normative and Prescriptive Deficiencies

Although Sunstein purports to be reconciling risk regulation with “deliberative democracy,” his proposed regulatory reforms are neither particularly deliberative nor particularly democratic. Sunstein’s central prescription is to redirect risk regulation from “highly representative institutions” to “more insulated” experts (p. 126). Rather than try to inject scientifically sound information into public discourse, government officials should endeavor to “[c]hange the subject” — “to discuss something else” in order to divert public attention away from “facts that will predictably cause high levels of alarm” (pp. 123–25). The cultural-evaluator model, in contrast, supports an approach to risk regulation that is much more consistent with participatory and deliberative visions of democracy.

1. *Information and Cultural-Identity Affirmation.* — To start, Sunstein is likely far too pessimistic about the possibility of public education. Sunstein’s preference for distracting rather than educating the public reflects his assumption that ordinary citizens lack the time and capacity to process information through reflective System II forms of reasoning as opposed to heuristic-driven System I ones. As we have emphasized, Sunstein overstates the accuracy of System II reasoning relative to System I.⁸⁶ But even more important, because he fails to perceive the endogeneity of risk perception mechanisms to culture, Sunstein overlooks the possibility of risk communication techniques

⁸² See, e.g., Barbara Ann Stolz, *Congress and Capital Punishment: An Exercise in Symbolic Politics*, 5 LAW & POL’Y Q. 157 (1983).

⁸³ See, e.g., William N. Eskridge, Jr., *Pluralism and Distrust: How Courts Can Support Democracy by Lowering the Stakes of Politics*, 114 YALE L.J. 1279, 1289–92 (2005).

⁸⁴ See, e.g., Dan M. Kahan, *The Secret Ambition of Deterrence*, 113 HARV. L. REV. 413, 463–67 (1999).

⁸⁵ DOUGLAS & WILDAVSKY, *supra* note 34, at 36.

⁸⁶ See *supra* pp. 1093–94.

that make System I reasoning itself responsive to scientifically sound information.

The best work in dual-process reasoning supports the conclusion that individuals are motivated by a form of status anxiety to resist information that portends regulatory action that would denigrate their cultural values.⁸⁷ It follows that individuals can be made more receptive to such information when it is communicated to them in forms that affirm their status. Research by social psychologists Geoffrey Cohen, Joshua Aronson, and Claude Steele, for example, shows that individuals are much more willing to change their minds on charged issues like the death penalty and abortion immediately after exposure to self-affirming information, such as their high performance on a test or their possession of some desirable personal attribute.⁸⁸ Self-affirmation of this sort buffers the threat to self that otherwise motivates individuals to resist acceptance of information at odds with beliefs dominant within their identity-defining group.⁸⁹

There is a political analog of this self-affirmation effect. It involves affirming the selves of those who might resist information about a societal danger by tying that information to a proposed policy solution that itself affirms the resisters' cultural commitments.

For a plausible historical example, consider the softening of conservative opposition to air pollution regulation in the late 1980s and early 1990s. Individualists tend to resist the idea that commerce threatens the environment, because that conclusion implies that society ought to constrain market behavior and like forms of private ordering. Yet when the idea of tradable emissions permits — a *market* solution to the problem of air pollution — was devised during the highly individualistic first Bush Administration, pro-market forces in the Republican Party stopped resisting.⁹⁰ Shown a solution that affirmed their cultural values, it became easier, cognitively, for individualists to accept the idea that there was a problem to be dealt with after all.

⁸⁷ See *supra* p. 1094; see also Kahan et al., *supra* note 49.

⁸⁸ See Geoffrey L. Cohen, Joshua Aronson & Claude M. Steele, *When Beliefs Yield to Evidence: Reducing Biased Evaluation by Affirming the Self*, 26 PERSONALITY & SOC. PSYCHOL. BULL. 1151 (2000).

⁸⁹ See *id.*; see also Geoffrey L. Cohen, David K. Sherman, Michelle McGoey, Lillian Hsu, Anthony Bastardi & Lee Ross, *Bridging the Partisan Divide: Self-Affirmation Reduces Ideological Closed-Mindedness and Inflexibility* (Sept. 10, 2005) (unpublished manuscript, on file with the Harvard Law School Library), available at http://research.yale.edu/culturalcognition/documents/cohen_self_affirmation_draft.pdf. See generally David K. Sherman & Geoffrey L. Cohen, *Accepting Threatening Information: Self-Affirmation and the Reduction of Defensive Biases*, 11 CURRENT DIRECTIONS PSYCHOL. SCI. 119 (2002) (summarizing self-affirmation research).

⁹⁰ See PROJECT 88, HARNESING MARKET FORCES TO PROTECT OUR ENVIRONMENT: INITIATIVES FOR THE NEW PRESIDENT 26–29 (1988); Robert N. Stavins, *What Can We Learn from the Grand Policy Experiment? Lessons from SO₂ Allowance Trading*, J. ECON. PERSP., Summer 1998, at 69, 76.

Hierarchists, who tend to resist claims of environmental danger as implicit criticisms of social elites, also likely felt affirmed by a policy that promised to improve air quality by empowering rather than constraining commercial firms.⁹¹

For a contemporary example, consider the global warming controversy. The assertion of this risk is also seen by individualists as threatening the autonomy of markets and by hierarchists as impugning the competence of social and governmental elites. Consequently, both downplay the threat posed by global warming (or deny its very existence). But recently, groups with varying ideologies have started to tout renewed investment in nuclear power as a way to reduce the fossil fuel emissions primarily responsible for global warming.⁹² The self-affirmation effect described by Cohen and his collaborators suggests why this strategy might work. 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 risk. Shown a solution that affirms their identities, individualists and hierarchists can be expected to display less resistance — not just politically, but cognitively — to the proposition that global warming is a problem after all.

Indeed, when egalitarians and solidarists are exposed to the message that nuclear power can reduce global warming, they are likely to perceive nuclear power to be less dangerous. The affirmation of their identity associated with recognition of the global warming threat reduces a cognitive impediment to accepting information that they have long resisted about nuclear safety.

In these examples, we have assumed scientific consensus both that air pollution and global warming are serious environmental threats and that nuclear power is reasonably safe. But in conditions of scientific uncertainty, the same strategy of cultural-identity affirmation could be used to make a culturally diverse public receptive to whatever empirical information might eventually emerge in support of policies that advance society's shared interests. Comparative law scholar

⁹¹ Although the policy was initially proposed by environmentalists who broke with the conventional egalitarian and solidaristic fear of using market mechanisms to induce risk abatement, see, e.g., Bruce A. Ackerman & Richard B. Stewart, *Reforming Environmental Law: The Democratic Case for Market Incentives*, 13 COLUM. J. ENVTL. L. 171, 178–88 (1988), President Bush seized on this approach to deflect Democratic Party attacks on his commitment to the environment without alienating his conservative, pro-business base, see Robert W. Hahn & Robert N. Stavins, *Incentive-Based Environmental Regulation: A New Era from an Old Idea?*, 18 ECOLOGY L.Q. 1, 28 (1991); Jeffrey M. Hirsch, Student Article, *Emissions Allowance Trading Under the Clean Air Act: A Model for Future Environmental Regulations?*, 7 N.Y.U. ENVTL. L.J. 352, 363–64 (1999).

⁹² See Craig Gilbert, *Cheney Argues Case for Nuclear Plants*, MILWAUKEE J. SENTINEL, June 14, 2001, at 16A; Nicholas D. Kristof, Op-Ed., *Nukes Are Green*, N.Y. TIMES, Apr. 9, 2005, at A19.

Mary Ann Glendon, for example, discusses an abortion law in France that simultaneously affirmed the identity of hierarchists, by permitting abortion not on demand but only in circumstances of “personal emergency,” and the identity of egalitarians and individualists, by treating an individual woman’s declaration of personal emergency as effectively unreviewable by government officials.⁹³ According to Glendon, this legislation dissipated cultural conflict and created a climate in which both sides came to accept previously disputed factual information about the efficacy of certain social welfare policies in reducing demand for abortion.⁹⁴

We can imagine a similar strategy to promote receptivity to sound information on gun risks. Egalitarians and solidarists focus on the risk that *too little* gun control will lead to more gun accidents and crimes, hierarchists and individualists on the risk that *too much* will leave persons helpless when facing criminal predation.⁹⁵ We will assume that existing empirical evidence — which is voluminous and conflicting — does not now support a confident conclusion either way.⁹⁶ Nevertheless, a policy those on both sides might accept is a “bounty,” in the form of a tax rebate or other monetary reward, for individuals who register handguns.

A registration bounty would affirm the cultural identities of both control supporters and control opponents simultaneously because both could see it as an effective and fair solution to a collective action problem, albeit a different one for each group. For control supporters, the relevant public good is the reduction of gun crime; registration contributes to that good by making it easier to trace the ownership of weapons used to commit crimes. Consistent with egalitarian and solidaristic sensibilities, control supporters can thus envision the bounty as equitably compensating individuals for being made to bear a burden that benefits society at large. For 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 do not believe individuals should be expected to endure disproportionate burdens to benefit society at large, individualists will think it is 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

⁹³ See MARY ANN GLENDON, *ABORTION AND DIVORCE IN WESTERN LAW* 15 (1987).

⁹⁴ See *id.* at 15–20.

⁹⁵ See Kahan et al., *supra* note 49, at 18–21.

⁹⁶ See COMM. TO IMPROVE RESEARCH INFO. & DATA ON FIREARMS, NAT’L RESEARCH COUNCIL, *FIREARMS AND VIOLENCE: A CRITICAL REVIEW* 120–50 (Charles F. Wellford, John V. Pepper & Carol V. Petrie eds., 2004) (summarizing studies and determining that evidence is inconclusive).

acknowledgement of the virtuous willingness of gun owners to promote the common good.⁹⁷

Agreement of any sort might be viewed as a step forward in the American gun policy stalemate. But the real payoff is opening the public's mind to facts. Any policy that simultaneously affirms the identities of culturally diverse citizens makes *all* of them more receptive to information that they might otherwise have found lacking in credibility. The lesson for risk communicators isn't that they have to "change the subject" so much as change the discourse to make new empirical findings compatible with a plurality of worldviews.

2. *Cultural Cognition and Deliberative Debiasing.* — In Sunstein's view, any attempt to undertake public discussions would lead inexorably to mass polarization, with preexisting biases amplifying themselves in the echo chamber of mass media or even in the confines of a face-to-face discussion. Such a result might occur, but to say it is inevitable underestimates persons' discursive capacities and the potential those capacities have to *counteract* the biasing effects of cultural cognition.

Research on the polarizing effect of deliberation on political decisionmaking is actually quite mixed. Indeed, a formidable body of empirical research shows that deliberation at least sometimes generates convergence and moderation of opinion.⁹⁸ Group-communication researchers have catalogued various procedures that help ameliorate polarization.⁹⁹ In many political decisionmaking contexts, such

⁹⁷ For an elaboration of this proposal and others aimed at resolving the cultural impasse over guns in American society, see Dan M. Kahan & Donald Braman, *Overcoming the Fear of Guns, the Fear of Gun Control, and the Fear of Cultural Politics: Constructing a Better Gun Debate*, 55 EMORY L.J. (forthcoming 2006) (manuscript on file with the Harvard Law School Library), available at http://research.yale.edu/culturalcognition/documents/Overcoming_fear_cultural_politics.pdf.

⁹⁸ See John Gastil, Laura Black & Kara Moscovitz, *Group and Individual Differences in Deliberative Experience: A Study of Ideology, Attitude Change, and Deliberation in Small Face-to-Face Groups*, 23 POL. COMM. (forthcoming 2006); Alan Gerber & Donald Green, *Misperceptions About Perceptual Bias*, 2 ANN. REV. POL. SCI. 189 (1999); Norbert L. Kerr, Robert J. MacCoun & Geoffrey P. Kramer, *Bias in Judgment: Comparing Individuals and Groups*, 103 PSYCHOL. REV. 687 (1996); Choon-Ling Sia, Bernard C.Y. Tan & Kwok-Kee Wei, *Group Polarization and Computer-Mediated Communication: Effects of Communication Cues, Social Presence, and Anonymity*, 13 INFO. SYS. RES. 70 (2002).

⁹⁹ See Ned Crosby & Doug Nethercut, *Citizens Juries: Creating a Trustworthy Voice of the People*, in THE DELIBERATIVE DEMOCRACY HANDBOOK 111, 112–15 (John Gastil & Peter Levine eds., 2005); James Fishkin & Cynthia Farrar, *Deliberative Polling: From Experiment to Community Resource*, in THE DELIBERATIVE DEMOCRACY HANDBOOK, *supra*, at 68, 72–75; Carolyn M. Hendriks, *Consensus Conferences and Planning Cells: Lay Citizen Deliberations*, in THE DELIBERATIVE DEMOCRACY HANDBOOK, *supra*, at 80, 83–89; Carolyn J. Lukensmeyer, Joe Goldman & Steven Brigham, *A Town Meeting for the Twenty-First Century*, in THE DELIBERATIVE DEMOCRACY HANDBOOK, *supra*, at 154, 157–60; Harris Sokoloff, Harris M. Steinberg & Steven N. Pyser, *Deliberative City Planning on the Philadelphia Waterfront*, in THE DELIBERATIVE DEMOCRACY HANDBOOK, *supra*, at 185, 187–91. See generally JOHN

procedures have been used to promote successful deliberative solutions on many issues that are culturally fraught.¹⁰⁰

These procedures work, in part, because they help dissipate the potential of cultural cognition to generate conflict. First, carefully structured deliberation does sometimes appear to enable individuals to engage in a culturally debiased form of System II reasoning.¹⁰¹ Political scientist James Fishkin has developed deliberative processes, such as the Deliberative Poll, that use expert moderators whose intervention appears at least sometimes to induce citizens to change their minds on contested issues of fact.¹⁰² The Twenty-First Century Town Meeting, a deliberative format designed by Carolyn Lukensmeyer, uses similar techniques and has generated similar results.¹⁰³

Deliberation can also improve public information-processing by forging a shared *civic identity* alternative to individuals' cultural affiliations.¹⁰⁴ Individuals tend to find the members of any in-group more credible than the members of any out-group.¹⁰⁵ The evidence we have collected on culture and risk suggests that cultural affinity is the dominant in-group when individuals appraise risk. But as they engage one another in earnest face-to-face deliberation, individuals committed to resolving an important common problem typically form strong emotional bonds.¹⁰⁶ It's plausible to imagine that these connections

GASTIL, BY POPULAR DEMAND 165–71 (2000) (proposing techniques for counteracting conformity pressure, low motivation, and information deficits).

¹⁰⁰ See W. BARNETT PEARCE & STEPHEN W. LITTLEJOHN, *MORAL CONFLICT: WHEN SOCIAL WORLDS COLLIDE* (1997); Norman Dale, *Cross-Cultural Community-Based Planning: Negotiating the Future of Haida Gwaii (British Columbia)*, in *THE CONSENSUS BUILDING HANDBOOK* 923 (Lawrence Susskind, Sarah McKernan & Jennifer Thomas-Larmer eds., 1999); John Forester, *Dealing with Deep Value Differences*, in *THE CONSENSUS BUILDING HANDBOOK*, *supra*, at 463; Christopher Winship, *Policy Analysis as Puzzle-Solving*, in *THE OXFORD HANDBOOK OF PUBLIC POLICY* (Michael Moran, Martin Rein & Robert E. Goodin eds., forthcoming Mar. 2006).

¹⁰¹ See John Gastil & James P. Dillard, *Increasing Political Sophistication Through Public Deliberation*, 16 *POL. COMM.* 3, 19–21 (1999).

¹⁰² See Fishkin & Farrar, *supra* note 99, at 72–75; see also BRUCE ACKERMAN & JAMES S. FISHKIN, *DELIBERATION DAY* 44–59 (2004); JAMES S. FISHKIN, *DEMOCRACY AND DELIBERATION* (1991).

¹⁰³ See Lukensmeyer et al., *supra* note 99, at 157–60.

¹⁰⁴ See Stephanie Burkhalter, John Gastil & Todd Kelshaw, *A Conceptual Definition and Theoretical Model of Public Deliberation in Small Face-to-Face Groups*, 12 *COMM. THEORY* 398, 415–16 (2002).

¹⁰⁵ See, e.g., Russell D. Clark, III & Anne Maass, *The Role of Social Categorization and Perceived Source Credibility in Minority Influence*, 18 *EUR. J. SOC. PSYCHOL.* 381, 388–92 (1988); Diane M. Mackie, Leila T. Worth & Arlene G. Asuncion, *Processing of Persuasive In-Group Messages*, 58 *J. PERSONALITY & SOC. PSYCHOL.* 812, 820–21 (1990).

¹⁰⁶ See, e.g., PEARCE & LITTLEJOHN, *supra* note 100, at 151–67; Fishkin & Farrar, *supra* note 99, at 68–70; Keith Melville, Taylor L. Willingham & John R. Dedrick, *National Issues Forums: A Network of Communities Promoting Public Deliberation*, in *THE DELIBERATIVE DEMOCRACY HANDBOOK*, *supra* note 99, at 37, 37–39, 45–51.

generate a group identity that, for the period of deliberation at least, displaces cultural affiliations as individuals' dominant reference point. If so, individuals, while they are deliberating together, might experience relief from the sense of threat to self that makes them resist information at odds with their culturally grounded prior beliefs. This effect could explain the consensus that some researchers and practitioners report among deliberation participants.¹⁰⁷

Finally, deliberation can alter individuals' understandings of the relationship between their cultural affiliations and particular beliefs. On this view, what individuals learn in the course of deliberation isn't so much new information about the facts being debated but rather new information about the identities of those who hold particular factual beliefs. If participants come to see either that a particular belief is less dominant among their cultural peers than they had imagined or that cultural peers who deviate from the dominant belief are not censured as severely as they had anticipated, participants are likely to revise their view about the social cost — or more accurately the social meaning¹⁰⁸ — of changing their mind.

This conjecture is supported by a number of other recognized psychological processes. One is the “false consensus effect,” which refers to the tendency of individuals to form an exaggerated sense of the degree to which members of their referent group hold a particular position.¹⁰⁹ This bias is likely to generate a self-sustaining condition of “pluralistic ignorance” to the extent that individuals are motivated to represent their adherence of this belief to others, who will in turn feel constrained to represent that they hold the belief, notwithstanding widespread reservations.¹¹⁰ Deliberation might conceivably break this cycle of shared misunderstanding if, contrary to expectations, individuals discover that others who share their group identity do not in fact uniformly hold the belief in question.¹¹¹ As they revise downward

¹⁰⁷ Consider one real-world experiment: the British Columbia Citizens' Assembly on Electoral Reform. The Assembly was made up of 160 randomly selected citizens, one man and one woman from each electoral district, and two at-large Aboriginal members. Despite its diverse membership, the Assembly voted by an overwhelming 146–7 margin to replace the existing electoral system with a single transferable vote model. The Assembly's plan emerged from months of face-to-face deliberation and hearings, which are accessible online. See Citizens' Assembly on Electoral Reform, <http://www.citizensassembly.bc.ca> (last visited Jan. 15, 2006).

¹⁰⁸ See Cohen, *supra* note 74.

¹⁰⁹ See, e.g., George A. Quattrone & Edward E. Jones, *The Perception of Variability Within In-Groups and Out-Groups: Implications for the Law of Small Numbers*, 38 J. PERSONALITY & SOC. PSYCHOL. 141, 149–51 (1980).

¹¹⁰ See, e.g., Deborah A. Prentice & Dale T. Miller, *Pluralistic Ignorance and Alcohol Use on Campus: Some Consequences of Misperceiving the Social Norm*, 64 J. PERSONALITY & SOC. PSYCHOL. 243, 244 (1993).

¹¹¹ Cf. DAVID MATZA, *DELINQUENCY AND DRIFT* 52–55 (1964) (suggesting this process as one of the mechanisms that steers delinquent youths toward law-abiding behavior over time).

their estimation of the prevalence of the view within their group, individuals will feel less threatened by, and thus become more receptive to, information at odds with their culturally grounded prior beliefs.¹¹²

Although it is admittedly speculative, this account of how deliberation can ameliorate the distorting influence of cultural cognition is nonetheless supported by one real-world approach to risk management. Social psychologist Robin Gregory has devised deliberative procedures aimed at generating “science-based, community-supported” environmental risk policies.¹¹³ In what he calls “structured, value-focused” decisionmaking, interested parties from the affected community first deliberate on ends in a manner that exposes rather than suppresses their underlying values. Expert risk analysts and trained facilitators then join the discussion to help the stakeholders identify courses of action that reconcile various values and evaluate the costs (fiscal and environmental) of those options.¹¹⁴ Gregory presents empirical evidence showing that this approach generates outcomes that are more consensual and more defensible from a scientific standpoint than either unguided bottom-up approaches to regulation or highly centralized and insulated top-down ones.¹¹⁵

Structured, value-focused deliberation of this sort is likely to engage all of the cultural cognition “debiasing” mechanisms we have identified. Having been candidly exposed to the values of their fellow citizens, participating individuals are likely to form a more realistic and less antagonistic picture of how positions are distributed among their neighbors. Armed with expert information and assisted by mediators, they are likely to engage in more sophisticated appraisals of the costs and benefits of the regulatory options available. And because

¹¹² See Cohen, *supra* note 74.

¹¹³ Robin Gregory & Katharine Wellman, *Bringing Stakeholder Values into Environmental Policy Choices: A Community-Based Estuary Case Study*, 39 *ECOLOGICAL ECON.* 37, 38 (2001).

¹¹⁴ See Robin Gregory, Tim McDaniels & Daryl Fields, *Decision Aiding, Not Dispute Resolution: Creating Insights Through Structured Environmental Decisions*, 20 *J. POL'Y ANALYSIS & MGMT.* 415, 419–26 (2001); Robin Gregory & Timothy McDaniels, *Improving Environmental Decision Processes*, in *COMM. ON THE HUMAN DIMENSIONS OF GLOBAL CHANGE, NAT'L RESEARCH COUNCIL, DECISION MAKING FOR THE ENVIRONMENT: SOCIAL AND BEHAVIORAL SCIENCE RESEARCH PRIORITIES* 175, 187–91 (Garry D. Brewer & Paul C. Stern eds., 2005); Robin S. Gregory, *Incorporating Value Trade-Offs into Community-Based Environmental Risk Decisions*, 11 *ENVTL. VALUES* 461, 472–84 (2002); Robin Gregory & Lee Failing, *Using Decision Analysis To Encourage Sound Deliberation: Water Use Planning in British Columbia, Canada*, 21 *J. POL'Y ANALYSIS & MGMT.* 492, 493–96 (2002); Robin Gregory, Joseph Arvai & Tim McDaniels, *Value-Focused Thinking for Environmental Risk Consultations*, in *ENVIRONMENTAL RISKS: PERCEPTION, EVALUATION AND MANAGEMENT* 249, 255–62 (Gisela Böhm, Josef Nerb, Timothy McDaniels & Hans Spada eds., 2001).

¹¹⁵ See, e.g., Gregory & Wellman, *supra* note 113, at 43–51 (describing an experiment using structured, value-focused deliberation for planning the development of a local estuary); Gregory, Arvai & McDaniels, *supra* note 114, at 263–71 (describing an experiment involving deliberation over risks associated with a hydroelectric power plant).

the matter is being resolved not by remote agencies or administrators, but *by them* in a context in which experts engage them face-to-face, participants are likely to form trust-inducing emotional bonds that free them from the need to rely entirely on cultural affinities in assessing the credibility of information sources.

Indeed, the generation of culture-independent forms of trust, particularly between lay persons and risk experts, may be the most valuable feature of genuinely democratic policymaking. The design and implementation of policies for managing toxic waste disposal, nuclear power generation, and other societal risks inevitably demand substantial reliance on remote expert regulators. Because members of the public know that their fate is in the experts' hands, risk experts can count on enduring political support for their decisions only if members of the public trust them. And one of the most important conditions of such trust, research shows, is the perception that officials have consulted and are responsive to affected members of the public.¹¹⁶

The relationship between trust and deliberation ought to make even those who share Sunstein's confidence in experts wary of granting them the political insulation he and other irrational-weighter theorists advocate. Just as consultation breeds trust in expert risk regulators, the perception that such officials are remote and unaccountable erodes it.¹¹⁷ Ironically, then, the greater the degree of political insulation the law affords to expert regulators, the less likely popularly responsive institutions of government are to invest those regulators with power to begin with or to respect their decisions as final.

3. *Culture and Expert Cost-Benefit Analysis.* — We have suggested that Sunstein overstates the intractability of error in public risk perceptions. But even if we are wrong, the cultural-evaluator model strongly critiques the antidemocratic nature of Sunstein's program. Bringing the role of cultural cognition into view severely undermines the foundation for Sunstein's refusal to afford normative significance to public risk evaluations generally.¹¹⁸

As we have noted, Sunstein advocates delegating a sizeable amount of discretion to politically insulated risk specialists. The basis for this prescription is his assumption that the differences between lay assessments of risk and expert ones are the product not of "rival

¹¹⁶ See SLOVIC, *supra* note 10, at 316–19, 322.

¹¹⁷ See *id.* at 322–23, 409–10.

¹¹⁸ Although we focus here on the challenge cultural cognition presents to cost-benefit analysis, others have suggested additional telling criticisms of such analysis. See, e.g., FRANK ACKERMAN & LISA HEINZERLING, *PRICELESS: ON KNOWING THE COST OF EVERYTHING AND THE VALUE OF NOTHING* (2004); Gregory N. Mandel & James Thuo Gathii, *Cost-Benefit Analysis Versus the Precautionary Principle: Beyond Cass Sunstein's Laws of Fear*, 2006 U. ILL. L. REV. (forthcoming) (book review); Thomas O. McGarity, *Professor Sunstein's Fuzzy Math*, 90 GEO. L.J. 2341 (2002).

rationalities” but of simple *errors* on the part of the public, generated by myriad social psychological pathologies (p. 86). Accordingly, even in a democracy, or at least in the best “deliberative” conception of one, such public sensibilities are entitled to no respect: “Democratic governments should respond to people’s values, not to their blunders” (p. 126). Sunstein advocates expert cost-benefit analysis as the principal device for making the law responsive to the former (as reflected primarily in markets and other forms of private behavior) and not the latter.

The cultural-evaluator model suggests that this strategy borders on incoherence. In the public consciousness, there is no genuine distinction between the “costs” and “benefits” of putatively dangerous activities. Adopting the stance that best expresses their cultural values, citizens invariably conclude that activities that affirm their preferred way of life are both beneficial and safe, and those that denigrate it are both worthless and dangerous.¹¹⁹ Moreover, unlike attitudes that reflect overgeneralization, disregard for small probabilities, inattention to base rates, and similar manifestations of bounded rationality,¹²⁰ risk perceptions originating in cultural evaluation are not ones individuals are likely to disown once their errors are revealed to them. Even if individuals could be made to see that their cultural commitments had biased their review of factual information about the dangers of, say, nuclear power, guns, or abortion, they would likely view those same commitments as justifying their policy preferences regardless of the facts.

As a result, the idea that expert cost-benefit analysis respects citizens’ “values” but not their “blunders” is fundamentally misleading. When expert regulators reject as irrational public assessments of the risks associated with putatively dangerous activities — whether nuclear power or handguns, drug use or toxic waste dumping — they are in fact overriding public *values*. For just as citizens’ perceptions of the benefits of these activities express their worldviews, so too do their perceptions of the risks they pose.

As Douglas and Wildavsky argue, public risk disputes, however much they are dominated by technical analyses of empirical data, are in essence “the product of an ongoing political debate about the ideal society.”¹²¹ Experts might have a more accurate sense of the magnitude of various risks (although their conclusions, too, are hardly

¹¹⁹ See *supra* pp. 1087–88; see also Douglas A. Kysar, *The Expectations of Consumers*, 103 COLUM. L. REV. 1700, 1740–41 (2003) (noting the difficulty posed to risk-utility analysis by the inverse relationship between costs and benefits in public risk perceptions).

¹²⁰ See SLOVIC, *supra* note 10, at 21–22, 35–39.

¹²¹ DOUGLAS & WILDAVSKY, *supra* note 34, at 36.

immune from cultural partisanship¹²²), but they have no special competence to identify what vision of society — hierarchical or egalitarian, individualistic or solidaristic — the law should endorse. That should be a matter of public deliberation.

Or at least that is the conclusion likely to be reached by anyone who genuinely favors democratic deliberation. Sunstein doesn't. His is *not* a program for those who want to reconcile democracy with a rational response to public fears; it is a program for those who *fear democracy* and seek to exclude the regulation of risk from its ambit.

IV. CULTURE, FEAR, AND LIBERALISM

But the hard question for anyone who accepts the cultural-evaluator model as a descriptive matter is whether Sunstein's fear of democracy might indeed be warranted. The cultural-evaluator model, precisely because it exposes the clash of cultural visions that inevitably animates public risk disputes, reveals the potentially deep tension between democratically responsive risk regulation and *liberalism*.

The rational-weigher and irrational-weigher models disagree about the competence of lay persons to assess the costs and benefits of various risks. But both accept that the optimal balance is one that maximizes satisfaction of individual preferences — or at least (in the case of the irrational-weigher model) the preferences individuals *would* have were they accurately to perceive the costs and benefits of putatively dangerous activities. This position flows naturally from the assumption that the purpose of risk regulation is to induce an efficient level of safety. It also, conveniently, implements a form of liberal neutrality by treating all persons' valuation of safety relative to other goals as entitled to equal weight.

But once the connection between risk perceptions and cultural worldviews is exposed, the justification for this ecumenical stance becomes less obvious. In selecting some risks for attention and dismissing others as unimportant, individuals are, in effect, advancing their culturally partisan visions of the ideal society. At least for anyone who accepts the liberal injunction that the law steer clear of endorsing a moral or cultural orthodoxy,¹²³ it is questionable whether risk regulation policy should be responsive to such demands.

¹²² See *supra* pp. 1093–94.

¹²³ See, e.g., *W. Va. State Bd. of Educ. v. Barnette*, 319 U.S. 624, 642 (1943) (“If there is any fixed star in our constitutional constellation, it is that no official, high or petty, can prescribe what shall be orthodox in politics, nationalism, religion, or other matters of opinion”); BRUCE A. ACKERMAN, *SOCIAL JUSTICE IN THE LIBERAL STATE* 8–12 (1980) (arguing against invocation of a partisan view of the good to justify policy); JOHN RAWLS, *POLITICAL LIBERALISM* 217 (1993).

As a practical example, consider whether hospitals should have an obligation under the informed consent doctrine to inform patients of the HIV-positive status of medical personnel. The answer might be “of course” if we understand informed consent doctrine as enabling individual patients to secure treatment consistent with their own medical welfare preferences.¹²⁴ But the cultural-evaluator model suggests that the demand for such information probably is not linked to “medical welfare” preferences in any straightforward sense. Our own study suggests that hierarchists, but not egalitarians, individualists, or solidarists, rate the risk of infection from an HIV-positive surgeon as a serious one.¹²⁵ If what makes hierarchists attend to this risk — while shrugging off many more serious ones — is their preference to see the law reflect their contested worldview, why should the law credit that preference at the expense of those who hold competing worldviews that would be denigrated by such a position, not to mention medical personnel and other patients who would be adversely affected by it?

But risk regulation sensibilities animated by the hierarchical worldview are hardly the only ones susceptible to these sorts of concerns. For example, one might oppose the demand for stricter forms of gun control on the ground that it derives not from an acceptable desire for personal safety, but from an illiberal desire to erect an egalitarian or solidaristic orthodoxy in law.¹²⁶ At the same time that it extinguishes one ground for interfering with market and political evaluations of risk — that lay sensibilities are irrational — the cultural-evaluator model arguably creates another: that those sensibilities sometimes reflect an unjust desire to use the expressive capital of the law to advance culturally imperialist ends.

Ironically, if one were convinced that illiberal cultural conflicts of this sort were intractable, one solution might be Sunstein’s version of the irrational-weigher theory. Normative legal theories do more than justify particular doctrines and institutional arrangements. They also furnish vocabularies that determine how citizens and legal decision-makers talk to each other about what the law should be. Those vocabularies, by accentuating or obfuscating conflicts of value, can themselves influence how likely such actors are to reach agreement and how easily they’ll be able to get along with each other if they don’t.¹²⁷

¹²⁴ See Phillip L. McIntosh, *When the Surgeon Has HIV: What To Tell Patients About the Risk of Exposure and the Risk of Transmission*, 44 U. KAN. L. REV. 315 (1996).

¹²⁵ See Cultural Cognition Project, *supra* note 54.

¹²⁶ Most citizens who support gun control, in fact, say they would favor it even if private possession of handguns reduced crime. See Cultural Cognition Project, Yale Law Sch., *What Matters More — Consequences or Meanings?*, <http://research.yale.edu/culturalcognition/index.php?option=content&task=view&id=104> (last visited Jan. 15, 2006).

¹²⁷ See Kahan, *supra* note 84, at 419.

In this respect, the irrational-weigher theory's analytic deficiencies can be seen as conflict-abating discourse virtues: precisely because it *ignores* the decisive role that cultural values play in shaping competing perceptions of risk, that theory mutes the function that risk regulation plays in adjudicating between competing worldviews. So defended, the irrational-weigher theory implements in the risk regulation field Sunstein's preference for "incompletely theorized agreements" — his distinctive strategy for conforming the law to the liberal injunction to avoid endorsement of partisan visions of the good.¹²⁸

Still, this is a defense of Sunstein's program that demurs to, rather than acquits it of, the charge that it is fundamentally antidemocratic. A genuinely democratic response to the liberal dilemma implicit in risk regulation might be possible, too. Deliberation with a form of expressively pluralistic politics might enable citizens of diverse worldviews to agree on risk without having to assent to law that denigrates anyone's cultural identity.¹²⁹

The prospects for such a program, particularly on a national level, are admittedly uncertain. But we are certain that if there is a democratic solution to the liberal dilemma inherent in risk regulation, it can be formulated only on the basis of the knowledge that the cultural-evaluator model furnishes.

V. CONCLUSION

Laws of Fear is a masterful work. No book so comprehensively and imaginatively synthesizes and extends existing empirical works on risk perception. None more systematically develops these insights into a program for guiding risk regulation.

Nevertheless, *Laws of Fear's* inattention to the impact of *cultural worldviews* constrains both the descriptive and normative power of Sunstein's irrational-weigher model of risk perception. A growing body of research demonstrates that conflicts in perceptions of risk — not only between lay persons and experts but also among the members of both groups — reflect individuals' adherence to competing visions of how society should be organized. The cultural-evaluator model of risk perceptions supported by this research furnishes a much more complete account of why risk regulation is a matter of such deep and intense conflict. It also undermines both the defense Sunstein offers for delegating significant risk-regulatory responsibilities to politically

¹²⁸ See CASS R. SUNSTEIN, *LEGAL REASONING AND POLITICAL CONFLICT* 35–61 (1996).

¹²⁹ See Kahan & Braman, *supra* note 97 (manuscript at 33–41) (defending an expressively pluralistic approach to resolving the American gun debate); see also *supra* pp. 1100–04 (describing the use of deliberation to generate consensus consistent with sound empirical information on risk).

insulated experts and his claim that such a regime is “deliberatively democratic.”

Ironically, though, the inattention of Sunstein’s account to culture might itself be viewed by some as a strength. The cultural-evaluator model of risk perception ruthlessly exposes the inescapable role that risk regulation plays in adjudicating disputes between competing cultural groups over whose worldview the law will proclaim orthodox. Sunstein’s irrational-weigher account strategically obscures this function and thus offers one possible technique for countering the inherently illiberal tendency of regulatory law.

The challenge that risk regulation poses to democracy is more profound than it appears not only upon first inspection but upon second inspection as well. The material well-being of a democratic society depends on its ability to rationally manage a nearly limitless variety of often competing risks. The integrity of such a society’s commitment to self-governance depends on its ability to fashion procedures that are *genuinely* deliberative, open, and democratic. And its obligation to reconcile popular rule with respect for individual dignity and freedom requires it to find a mode of regulation and a strategy of regulatory discourse that deflect the ambitions of competing cultural groups to claim the law as theirs and theirs alone.

No account that unqualifiedly celebrates the culturally expressive nature of risk perceptions and risk regulation can hope to achieve all of these critical ends. But none that ignores the impact of culture on risk perceptions can hope to achieve them either.