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Fear and Democracy: A Cultural Evaluation of Sunstein on Risk

119 Harv. L. Rev. (forthcoming 2006)

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Abstract

What dynamics shape public risk perceptions? What significance should public views have in the formation of risk regulation? In *Laws of Fear: Beyond the Precautionary Principle* (2005), Cass Sunstein catalogs a variety of cognitive and social mechanisms that he argues inflate public estimations of various societal risks. To counter the impact of irrational public fears, he advocates delegation of authority to politically insulated experts using economic cost-benefit analysis. Missing from Sunstein's impressive account, however, is any attention to the impact of *cultural cognition*, the tendency of individuals to adopt risk perceptions that reflect and reinforce their cultural worldviews. Relying on existing and original empirical research, we use this dynamic to develop an alternative "cultural evaluator" model, which better explains individual variation in risk perception, differences of opinions among experts, and the intensity of political conflict over risk than does Sunstein's "irrational weigher" model. Cultural cognition also complicates Sunstein's policy prescriptions. Because the public fears that Sunstein describes as "irrational" express cultural values, expert cost-benefit analysis does not merely insulate the law from "factual error," as Sunstein argues; rather, it systematically detaches law from popular understandings of the ideal society. Indeed, the best defense of Sunstein's program might be just that: by eliding the role that risk regulation plays in endorsing contested cultural visions, expert cost-benefit analysis protects the law from a divisive and deeply illiberal form of expressive politics. The difficult task for those who understand the phenomenon of cultural cognition and who favor democratic modes of policymaking is to devise procedures that assure popularly responsive risk regulations *both* rational *and* respectful of diverse cultural worldviews.

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Fear of Democracy: A Cultural Evaluation of Sunstein on Risk

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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

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¹ Federalist No. 10, at 49 (James Madison) (Clinton Rossiter, ed., 2003).

² Franklin D. Roosevelt, *First Inaugural Address (Mar. 4, 1933)*, in Richard Polenberg, *The Era of Franklin D. Roosevelt, 1933–1945: A Brief History with Documents* 40 (2000).

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 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 compatible with 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 catalogs the numerous social and cognitive mechanisms that drive members of the public to form wildly overstated estimates of various societal dangers. Sunstein identifies a number of important institutional devices designed to shield "deliberative democracy" from the pernicious influence of these "risk 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 or distrust competing risk-information purveyors. 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 to 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 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 commu-

nication; by linking risk perception to cultural values, it identifies myriad new strategies for managing public impressions (particularly affect-laden ones) of what risks are real and what risk-mitigation strategies are effective. But at the same time such a theory makes the prescriptive dimension of risk regulation more tractable, it makes the normative dimension of it 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 rather because risk regulation is inherently fraught with the potential for illiberality.

We will develop this response to Sunstein's *Laws of Fear* in four Parts. In Part I, we will 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 will 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 will show how this model calls into question the central positive, normative, and prescriptive components of Sunstein's account.

Finally, in Part IV, we will examine what the cultural evaluator model of risk reveals about the tension between risk regulation and liberalism. Surprisingly, one response to this tension might be to base public 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 vs. 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 sex)⁶ — 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 and related forms of social

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., Thomas J. Philipson & Richard A. Posner, *Private Choices and Public Health: The AIDS Epidemic in an Economic Perspective* 57 – 83 (1993).

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 generally restrained role for governmental risk regulation. If people left to their own devices can be expected to 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 can be expected 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 cataloged a vast array of cognitive limitations and defects that distort popular perceptions of risk.¹⁰ Thus, indi-

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

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 Paul Slovic, *The Perception of Risk 1–50* (2000) (cataloging various social psychological mechanisms that distort lay perceptions of risk); Roger G. Noll & James E. Krier, *Some Implications of Cognitive Psychology for Risk Regulation*, 19 J. Legal Stud. 747 (1990) (same).

viduals 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 are prone to 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 perception have the biggest 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 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- and irrational-weigher models in their purest forms. It's possible, of course, to formulate

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* at 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.

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).

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 seeks to reduce 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- and irrational-weigher models are both 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 normative prescriptions for shielding risk regulation from the distorting influence of these forces, Sunstein's theory can be viewed as the most instructive account of what the irrational-weigher model entails for law.

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

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).

social forces 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 surrounding 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, moreover, 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, chemicals, or processes 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

¹⁷ See 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 (1999).

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

support expensive 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 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 states of affairs they would value even more (p. 42). Individuals also display a form of “status quo” bias²³ (p. 42): in appraising a potentially beneficial but also risky course of action, they fall back on the maxim “[b]etter safe than sorry”²⁴ (p. 47) to justify inaction.²⁵ 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 an aggravation of existing risks,” to block new technologies without “concern[] [for] the benefits that are forgone as a result” (p. 42) (emphasis omitted). This is the explanation, according to Sunstein, of “[w]hy . . . people [are] so concerned about the risks of nuclear power” even though “experts tend to believe that [nuclear power] risks are . . . lower, in fact, than the [environmental] risks from competing energy sources, such as coal-fired power plants . . .” (p. 47).

²¹ This is an application of Kahneman and Tversky’s famous “prospect theory.” See Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 *Econometrica* 263, 263–91 (1979).

²² See, e.g., Daniel Kahneman, Jack L. Knetsch & Richard H. Thaler, *Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias*, 5 *J. Econ. Perspect.* 193, 193–206 (1991).

²³ See *id.*

²⁴ Sunstein here quotes Margolis, *supra* note 13, at 5.

²⁵ See *id.* at 74, 165–89.

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).

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 “availability cascades” (p. 95). 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 come to perceive “religious dissidents, foreigners, immigrants, homosexuals, teenage gangs, and drug users” as sources of danger (p. 98).

²⁶ See generally 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); 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. Bulletin* 267–86 (2001).

“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 express a public stance that might expose them to ridicule.

Despite his emphasis on “[r]isk panics” (p. 1), Sunstein recognizes that the same dynamics that make “people . . . 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 partially 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 (e.g., global warming and acid rain) (pp. 27–28). Many societies that ban the pesticide DDT because they fear its carcinogenic effects are insufficiently mindful of the increased incidence of malaria associated with using less effective substitutes (p. 32).

Excessive and insufficient fear also tend to mirror each other, according to Sunstein, because of the largely hidden – and hence 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 because of the adverse effect of such expenditures on the economy (pp. 32–

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.* 2098–2109 (1979).

33). Accordingly, many costly programs that only slightly reduce the magnitude of man-made or natural 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 public 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 a “populist system[.]” (p. 1) of regulation that takes 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 th[e] damage or the likelihood of the risk” posed by some activity, “then decisions should be made so as to prevent such activi[ty] . . . unless and until scientific evidence shows that the damage will not occur” (p. 19) (internal quotation marks omitted).²⁸ 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 in-

²⁸ Quoting *Cloning: Hearing Before the Subcomm. On Labor, Health and Human Services of the S. Comm. On Appropriations*, 108th Cong. (2002) (statement of Dr. Brent Blackwelder, President, Friends of the Earth).

evitably forces society to forgo “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,” news media, too, can be expected to 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 assessment: 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).²⁹ By virtue of their training, the time they have to reflect, and their reliance on one another rather than 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 tool 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 (pp. 131).³⁰

²⁹ For the classic statement of the “dual process” 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 and Daniel Kahneman eds., 2002).

³⁰ Here Sunstein advocates an approach that is largely consistent with that favored by rational-weighter 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-weighter theorists are content to rely on markets. See *id.* (arguing that markets, when they internalize relevant costs, do better at neutralizing various forms of individual irrationality than do government agencies, which often magnify them).

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 experts assign to various risks. Here, as elsewhere,³¹ 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. However, this literature 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,

³¹ Cass R. Sunstein, *The Laws of Fear*, 115 Harv. L. Rev. 1119, 1122–37 (2002) (reviewing Slovic, *supra* note 10).

we begin with a summary of the recent work in this area, which, we will 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 a good society.

The priority of culture to fact is the organizing premise of the so-called “cultural theory of risk.”³² Associated most famously with the work of anthropologist Mary Douglas and political scientist Aaron Wildavsky,³³ the cultural theory of risk links disputes over environmental and technological risks to clusters of values that form competing cultural worldviews — hierarchic, egalitarian, and individualistic. Egalitarians, on this account, are naturally sensitive to environmental hazards, the abatement of which justifies regulating commercial activities that are productive of 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.

³² See generally Steve Rayner, *Cultural Theory and Risk Analysis*, in *Social Theories of Risk* 83 (Sheldon Krinsky and Dominic Golding eds., 1992) (describing the theory and identifying key theoretical contributions to it).

³³ See Mary Douglas & Aaron Wildavsky, *Risk and Culture* (1982).

Although one can imagine alternative explanations for cultural variation in risk perceptions,³⁴ cultural cognition offers a distinctively psychometric one.³⁵ 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 have been shown to 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,³⁶ but what determines whether those responses are positive or negative? The answer, cultural cognition asserts, is culture: persons' worldviews infuse various activities — firearm possession,³⁷ nuclear power generation,³⁸ red-meat consumption³⁹ — 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 psy-

³⁴ Douglas and Wildavsky, for example, suggest a functionalist account in which individuals are deemed to 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).

³⁵ 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).

³⁶ See Slovic et al., *supra* note 26.

³⁷ See <http://research.yale.edu/culturalcognition/content/view/86/100/> (last visited Oct. 22, 2005).

³⁸ See Ellen Peters, *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).

³⁹ See Michael W. Allen & Sik Hung Ng, *Human Values, Utilitarian Benefits and Identification: The Case of Meat*, 33 *Eur. J. Soc. Psychol.* 37 (2003).

chological accounts, that emotions are not thoughtless surges of affect, but rather value-laden judgments shaped by social norms.⁴⁰

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. How large they perceive risks to be depends on how readily individuals can recall instances of misfortune associated with those risks. But how likely someone is to take note of such a misfortune and to recall it almost certainly depends on her values: to avoid cognitive dissonance, we are likely selectively to attend to information in a way that reinforces rather than undermines our commitment to the view that certain activities (say, gun possession, or economic commerce) are either virtuous or base.⁴¹

Culture will also condition the impact of social influences on risk perception. The vast run of individuals are not in a position to determine for themselves whether childhood vaccines induce autism, silicone breast implants cause immune dysfunction, private firearm possession reduces or increases crime, and so on. Accordingly, they are obliged to 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

⁴⁰ 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 influence of cognitive conception of emotion in law).

⁴¹ 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 people to ignore harms by believing others are mistaken).

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.⁴²

We have conducted our own “National Risk and Culture Survey,” designed to establish the influence of cultural cognition on a broad scale.⁴³ The study utilized Douglas’s well-known typology, which categorizes cultural ways of life along two cross-cutting dimensions, “group” and “grid.”⁴⁴ 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.”⁴⁵ Persons who participate in a “high grid” way of life expect resources, opportunities, respect, and the like to be

⁴² 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 Waste Images of Nevada*, in *Risk, Media, and Stigma: Understanding Public Challenges to Modern Science and Technology* 107 (P.S. James Flynn, and 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).

⁴³ See *National Risk & Culture Survey*, <http://research.yale.edu/culturalcognition/content/view/45/89/> (last visited Sept. 29, 2005) (providing background explaining how the researchers conducted the survey and what the general findings were).

⁴⁴ Mary Douglas, *Natural Symbols: Explorations in Cosmology* viii (1970).

⁴⁵ Rayner, *supra* note 32, at 87–88.

“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.”⁴⁶ 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.⁴⁷ 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,” which capture the key value conflicts among persons located in different quadrants of the group/grid typology.⁴⁸

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 risk. The more egalitarian and solidaristic persons become, the more concerned they are about global warming, nuclear power, and pollution generally, whereas the more hierarchical and individualistic persons become, the less concerned they are.⁴⁹

We found a similar relationship between cultural worldviews and perceptions of gun-related risks. Relatively egalitarian and solidaristic 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, by contrast, believe that widespread *restrictions* on private gun ownership undermine public safety by rendering law-abiding persons un-

⁴⁶ Jonathan L. Gross & Steve Rayner, *Measuring Culture : A Paradigm for the Analysis of Social Organization* 6 (1985).

⁴⁷ Rayner, *supra* note 32, at 87.

⁴⁸ See Dan M. Kahan, Donald Braman, John Gastil, Paul Slovic & C.K. Mertz, *Gender, Race, and Risk Perception* 38 – 40 (Yale Law Sch. Pub. Law & Legal Theory Working Paper Group, Paper No. 86, 2005), *available at* <http://ssrn.com/abstract=723762>.

⁴⁹ See *id.* at 15.

able to defend themselves from violent predation.⁵⁰ These opposing perceptions of gun risks cohere with the negative and positive social meanings that guns bear, respectively, for persons of these cultural orientations.⁵¹

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, promiscuous sex, and the individual dangers of marijuana smoking; individualists do not.⁵² Likewise, egalitarians and individualists are not worried about the personal risks of obtaining an abortion or contracting AIDS from surgery; hierarchists worry a great deal about these risks.⁵³ 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 vs. 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 goods individuals are willing to take risks to obtain, but also which empirical claims about risk they are likely to believe.

⁵⁰ See *id.* at 18 – 21.

⁵¹ See Kahan & Braman, *supra* note 41, at 1299–1302.

⁵² The Cultural Cognition Project at Yale Law School, *Cultural and Political Attitudes*, <http://research.yale.edu/culturalcognition/content/view/91/100/> (last visited Sept. 29, 2005).

⁵³ The Cultural Cognition Project at Yale Law School, *Health Risk Perceptions*, http://research.yale.edu/culturalcognition/content/view/102/100 (last visited Nov. 17, 2005).

This label also underscores what we take to be the descriptive inappropriateness of suggesting that individual risk perceptions 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 *inversely* correlated.⁵⁴ Guided by judgment-infused emotions, and motivated by their need to preserve their fundamental ties to others, individuals naturally conform their perception of both the costs and the benefits of such activities to the positive or negative social meanings that cultural norms assign to those activities.

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 to be dangerous and which policies they view to be effective embody coherent visions of the good society and the virtuous life.

III. Culturally Evaluating Sunstein

We've suggested that Sunstein's conception of the irrational-weigher 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 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

⁵⁴ See Slovic, *supra* note 10, at 404–05 (noting that many people associate high benefit actions with low risks, and vice versa); The Cultural Cognition Project at Yale Law School, Gun Risk Attitudes, <http://research.yale.edu/culturalcognition/index.php?option=content&task=view&id=99> (last visited Sept. 24, 2005) (noting the same inverse correlation with perceptions of gun risks).

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-weigher 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.

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.⁵⁵

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 risky activities 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

⁵⁵ See Kahan, Braman, Gastil, Slovic & Mertz, *supra* note 48 (presenting data showing influence of various individual characteristics on risk perceptions).

influence of “availability,” “probability neglect,” “status quo bias,” “affect,” and the like.⁵⁶

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” (p. 96):

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 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)⁵⁷

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 overrepresented 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

⁵⁶ 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. Psych.* 63 (1997); Craig W. Trumbo, *Information Processing and Risk Perception: An Adaptation of the Heuristic-Systematic Model*, 52 *J. Comm.* 367, 379 (2002).

⁵⁷ The author quotes Joseph Heinrich et al., *Group Report: What is the Role of Culture in Bounded Rationality?*, in *Bounded Rationality: The Adaptive Toolbox* 343, 353 (G. Gigerenzer & R. Selten eds., 2001).

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 region is controlled for.

Of course, random variations within other, non-geographic 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 perception 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 we actually see 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.⁵⁸ It follows that cultural variation in risk perception will manifest itself in systematic differences in risk perception across different social groups.

The results of our own National Risk and Culture Survey confirm this conclusion. Consistent with previous research, we found that factors such as income, education, community type (rural or

⁵⁸ See Kahan, Braman, Gastil, Slovic & Mertz, *supra* note 48, 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 correlates with cultural values); Carol Gilligan, *In a Different Voice: Psychological Theory and Women’s Development* (1982) (using gender as indicator of commitment to compatible moral sensibilities); Richard E. Nisbett & Dov Cohen, *Culture of Honor 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).

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 perception also turn out to be an artifact of culture-specific differences in risk perception related to gender and race differences in social roles relating to putatively dangerous activities within hierarchic and (to a lesser extent) individualist ways of life.⁵⁹

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 regulatory postures of the two nations, are hardly a matter of “coincidence” or chance. In contrast to members of the public in the United States, members of the public in France are much more likely to hold a hierarchical worldview.⁶⁰ 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.⁶¹

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 acci-*

⁵⁹ See Kahan, Braman, Gastil, Slovic & Mertz, *supra* note 48, at 16–18.

⁶⁰ See Paul Slovic, James Flynn, C.K. Mertz, Marc Poumadere & 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 93-94* (O. Renn and B. Rohrman eds., 2000).

⁶¹ See *id.* at 87–89, 90, 93–94, 98.

dents, which in turn tells us whether one regards *abortion* as a dangerous medical procedure, and *marijuana* as a dangerous drug.⁶²

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 evocative imagery of any one of these risks is connected 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, in contrast, readily explains belief clustering. The *meanings* of these diverse risks — the values expressed by the activities that give rise to the risks, and by government regulation of the same — might cohere in perfectly sensible ways. The idea that guns are dangerous and worthy of regulation, for example, threatens hierarchical roles and denigrates individualist 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.⁶³

⁶² See Kahan, Braman, Gastil, Slovic & Mertz, *supra* note 48, at 24–28..

⁶³ See *supra* text at notes 49–52. See generally Dan M. Kahan & Donald Braman, *The Cultural Cognition of Public Policy* Yale L. & Pub. Policy Rev. (forthcoming 2005).

3. *Experts.* — Sunstein’s account seeks to identify the mechanisms that impel members of the public wildly to 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, that arsenic in drinking water poses a health threat, that “mad cow” disease is a serious concern — is shared by some scientists and rejected by others.⁶⁴

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 very 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 disagreement 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. Gen-

⁶⁴ On nuclear power, see *Nuclear Power: Both Sides* (Michio Kaku & Jennifer Trainer, eds., 1992). On arsenic, compare National Research Council Committee on Toxicology, *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 M.N. Bates, A.H. Smith, & K.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 drinking water arsenic below and above existing standards do not differ in incidence of cancer). On mad cow disease, compare *Top Scientist: Test All Cows for Mad Cow Disease*, UPI Newsire, Mar. 17, 2004 (reporting view of Nobel Prize-winning scientist who discovered mad cow infectious agent that the disease is “the greatest threat to the safety of the human food supply in modern times”) with Joshua T. Cohen et al., *Evaluation of the Potential for Bovine Spongiform Encephalopathy* (October 2003), available at <http://www.hcra.harvard.edu/pdf/madcow.pdf> (“[E]ven if BSE were somehow to arise in the U.S., 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 . . .”).

der, for example, predicts systematic differences in risk perception among experts,⁶⁵ as do political ideology and institutional affiliation (academic vs. industrial).⁶⁶ 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.⁶⁷

There are at least two possible ways in which cultural cognition could be exerting this impact on expert risk assessments. One is that cultural worldviews might induce experts, like members of the public generally, to engage in heuristic or 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 often furnishes less reliable guidance than heuristic-driven System I reasoning.⁶⁸ Among the reasons this

⁶⁵ See, e.g., Richard P. Barke, Hank Jenkins-Smith, & Paul Slovic, *Risk Perceptions of Men and Women Scientists*, 78 *Social Science Quarterly* 167, 172–75 (1997).

⁶⁶ See Slovic, *supra* note 10, at 286, 311–12.

⁶⁷ 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 in *Environmental Tribalism*, 87 *Minn. L. Rev.* 1099, 1111 – 16 (2003).

⁶⁸ 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).

is so is the vulnerability of even System II reasoning to various biasing influences.⁶⁹

One such influence is known as *defense motivation*.⁷⁰ Information that challenges beliefs essential to one's group identity is known to pose a threat to individuals' perceptions of their status. To repel that threat, individuals (subconsciously) screen arguments and evidence in a way protective of their existing beliefs. Such screening, it has been shown, operates whether individuals are engaged in *either* heuristic reasoning *or* more reflective reasoning.⁷¹ 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.⁷²

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 visions. The only difference, if any, is that experts are more likely to use System II reasoning to do so.

4. *Politics*. — Highly charged disputes occupy a conspicuous position in our society's political life. How (if at all) to respond to global warming, whether to enact or repeal gun control laws, what

⁶⁹ 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. Psych.* 460 (1994); Serena Chen, Kimberly Duckworth & Shelly Chaiken, *Motivated Heuristic and Systematic Processing*, 10 *Psychol. Inquiry* 44 (1999).

⁷⁰ See Roger Giner-Sorolla & Shelly Chaiken, *Selective Use of Heuristic and Systematic Processing Under Defense Motivation*, 23 *Personality & Soc. Psychol. Bull.* 84, 85 (1997).

⁷¹ 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).

⁷² See Serena Chen, Kimberly Duckworth & Shelly Chaiken, *Motivated Heuristic and Systematic Processing*, 10 *Psychol. Inq.* 44, 45 (1999).

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 weigher 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 public anxiety to which democratically accountable institutions inevitably react (indeed, overreact).⁷³

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 exactly the sort of story, in fact, that Stephen Breyer, Sunstein's irrational-weigher comrade in arms, tells about the regulatory process.⁷⁴ 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 to adopt 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 ad-

⁷³ See text at notes 26–27.

⁷⁴ See Breyer, *supra* note 14, at 33 – 51.

vance 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.⁷⁵ 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.”⁷⁶ 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 fateful as the struggle to control its tangible effects.”⁷⁷ Important historical examples include battles over temperance and civil rights;⁷⁸ contemporary examples include the ongoing battles over capital punishment,⁷⁹ gay rights,⁸⁰ and hate crime laws.⁸¹

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

⁷⁵ Joseph R. Gusfield, *Symbolic Crusade: Status Politics and the American Temperance Movement*, 21 (2d ed. 1986) [hereinafter *Gusfield, Symbolic Crusade*]; Joseph R. Gusfield, *On Legislating Morals: The Symbolic Process of Designating Deviance*, 56 *Cal. L. Rev.* 54 (1968) [hereinafter *Gusfield, Designating Deviance*].

⁷⁶ Gusfield, *Designating Deviance*, *supra* note 75, at 57–59.

⁷⁷ Gusfield, *Symbolic Crusade*, *supra* note 75, at 167.

⁷⁸ See Gusfield, *Symbolic Crusade*, *supra* note 75, at 22–24.

⁷⁹ See, e.g., Barbara Ann Stolz, *Congress and Capital Punishment: An Exercise in Symbolic Politics*, 5 *L. & Pol. Q.* 157 (1983).

⁸⁰ 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).

⁸¹ See Dan M. Kahan, *The Secret Ambition of Deterrence*, 113 *Harv. L. Rev.* 413, 463–67 (1999).

the public because they are in truth the “the product of an ongoing debate about the ideal society.”⁸²

B. Normative/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” (p. 125) in order to divert public attention away from “facts that will predictably cause high levels of alarm” (p. 123). The cultural evaluator model 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.⁸³ 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 that make System II 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 denigrating of their cultural values.⁸⁴ It follows that individuals can be made more

⁸² Douglas & Wildavsky, *supra* note 33, at 36.

⁸³ See text at notes 68–72.

⁸⁴ See Kahan, Braman, Gastil, Slovic & Mertz, *supra* note 48.

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 when they are first exposed to self-affirming information, such as their high performance on a test or their possession of some desirable personal attribute.⁸⁵ 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.⁸⁶

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 emission permits — a *market* solution to the problem of air pollution — was devised during the highly individualist Bush I Administration,⁸⁷ pro-market

⁸⁵ 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).

⁸⁶ See *id.* See generally David K. Sherman & Geoffrey L. Cohen, *Accepting Threatening Information: Self-Affirmation and the Reduction of Defensive Biases*, 11 *Current Directions in Psychol. Sci.* 119 (2002). 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), available at http://research.yale.edu/culturalcognition/documents/cohen_self_affirmation_draft.pdf.

⁸⁷ See Project 88, *Harnessing Market Forces to Protect Our Environment: Initiatives for the New President* 26 – 29 (Timothy E. Wirth & John

forces in the Republican Party stopped resisting. 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. 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.⁸⁸

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 its very existence). But recently, groups of 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.⁸⁹ 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 threat. Shown a solution that affirms their identities, individualists and hierarchists can be expected to

Heinz sponsors) (1988); Robert N. Stavins, *What Can We Learn from the Grand Policy Experiment? Lessons from SO₂ Allowance Trading*, 12 J. Econ. Persp. 69, 76 (1998).

⁸⁸ 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 Ackerman & Richard Stewart, *Reforming Environmental Law: The Democratic Case for Market Incentives*, 13 Colum. J. Envtl. L. 171, 178 – 88 (1988), 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).

⁸⁹ See Nicholas D. Kristof, Op-Ed, *Nukes Are Green*, N.Y. Times, Apr. 9, 2005, at A19; Craig Gilbert, *Cheney argues case for nuclear plants*, Milwaukee Journal Sentinel, June 14, 2001, at 16A.

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 that both 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 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.⁹⁰ 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.⁹¹

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 increase the incidence of gun accidents and crimes, hierarchists and individualists on the risk that *too much* will render law-abiding persons unable to defend themselves from criminal predation.⁹² We will assume that the

⁹⁰ See Mary Ann Glendon, *Abortion and Divorce in Western Law* 15 (1987).

⁹¹ See *id.* at 15 – 20.

⁹² See Kahan, Braman, Gastil, Slovic & Mertz, *supra* note 48.

state of the empirical evidence — which is voluminous and conflicting⁹³ — does not now support a confident conclusion either way. 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 solidarist sensibilities, control supporters can thus envision the bounty as a means of 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 acknowledgement of the virtuous willingness of gun owners to promote the common good.⁹⁴

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 affirms the identities of

⁹³ Compare, e.g., John R. Lott Jr., *More Guns, Less Crime: Understanding Crime and Gun-Control Laws* (2d ed. 2000), with Ian Ayres & John J. Donohue III, *Shooting Down the “More Guns, Less Crime” Hypothesis*, 55 *Stan. L. Rev.* 1193 (2003).

⁹⁴ For an elaboration of this proposal and others aimed at resolving the cultural impasse over guns in American society, see Donald Braman & Dan M. Kahan, *Overcoming the Fear of Guns, the Fear of Gun Control, and the Fear of Cultural Politics: Constructing a Better Gun Debate*, Emory L.J. (forthcoming 2006).

culturally diverse citizens simultaneously makes *all* of them more receptive to information that they might otherwise have found lacking in credibility. Accordingly, 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 such public discussions would lead inexorably to mass polarization, with preexisting biases amplifying themselves in the echo chamber of mass media or even the confines of a face-to-face discussion. Such a result might occur, but to say it is inevitable underestimates people's discursive capacities, and as a result misses the potential they 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 also shows that deliberation at least sometimes generates convergence and moderation of opinion.⁹⁵ Group-communication researchers have cataloged various procedures that help to ameliorate polarization.⁹⁶ In many political decisionmaking

⁹⁵ 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*, 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, and Kwok-Kee Wei, *Group Polarization and Computer-Mediated Communication: Effects of Communication Cues, Social Presence, and Anonymity*, 13 Info. Sys. Res. 70 (2002).

⁹⁶ For detailed descriptions of such procedures, see Ned Crosby & Doug Nethercut, *Citizens Juries: Creating a Trustworthy Voice of the People*, in *The Deliberative Democracy Handbook* 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 72–75; Carolyn M. Hendriks, *Consensus Conferences and Planning Cells: Lay Citizen Deliberations*, in *The Deliberative Democracy Handbook*, *supra*, at 83–89; Carolyn J. Lukensmeyer, Joe Goldman & Steven Brigham, *A Town Meeting for the Twenty-First Century*, in *The Deliberative Democracy Handbook*, *supra*, at

contexts, such procedures have been used to promote successful deliberative solutions on many issues that are culturally fraught.⁹⁷

These procedures work, in part, because they help to 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.⁹⁸ 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.⁹⁹ The Twenty-First Century Town Meeting, a deliberative format designed by Carolyn Lukensmeyer, uses similar techniques and has generated similar results.¹⁰⁰

Deliberation might also sometimes improve public information processing by forging a shared *civic identity* alternative to individu-

157–60; Harris Sokoloff, Harris M. Steinberg & Steven N. Pyser, *Deliberative City Planning on the Philadelphia Waterfront*, in *The Deliberative Democracy Handbook*, *supra*, at 187–91. See generally John Gastil, *By Popular Demand* 165–71 (2000) (proposing techniques for counteracting conformity pressure, low motivation, and information deficits).

⁹⁷ 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*, *supra*, at 923; John Forester, *Dealing with Deep Value Differences*, in *The Consensus Building Handbook: A Comprehensive Guide to Reaching Agreement* 463 (Lawrence Susskind, Sarah McKernan & Jennifer Thomas-Larmer eds., 1999); Christopher Winship, *Policy Analysis as Puzzle-Solving*, in *Oxford Handbook of Public Policy* (Michael Moran, Robert E. Goodin and Martin Rein eds., 2006).

⁹⁸ See John Gastil & James P. Dillard, *Increasing Political Sophistication Through Public Deliberation*, 16 *Pol. Comm.* 3, 19–21 (1999).

⁹⁹ See Fishkin & Farrar, *supra* note 96, at 72–75. See generally Bruce Ackerman & James S. Fishkin, *Deliberation Day* 44–59 (2004); James S. Fishkin, *Democracy and Deliberation: New Directions for Democratic Reform* (1991).

¹⁰⁰ See Lukensmeyer, Goldman & Brigham, *supra* note 96, at 157–60.

als' cultural affiliations.¹⁰¹ Individuals tend to find the members of any in-group more credible than the members of any out-group.¹⁰² 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.¹⁰³ It's plausible to imagine that these connections generate a group identity that, for the period of deliberation at least, displaces cultural affiliations as individuals' dominant reference point. If so, we might expect individuals, while they are deliberating together, to 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 participants in deliberation experiments.¹⁰⁴

¹⁰¹ 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).

¹⁰² 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).

¹⁰³ See, e.g., Pearce & Littlejohn, *supra* note 97, at 151 – 67; Fishkin & Farrar, *supra* note 96, 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 96, at 37, 37–39, 45–51.

¹⁰⁴ Consider one real-world experiment, the British Columbia Citizens' Assembly on Electoral Reform, which resulted in a 146 – 7 final vote. The Citizens' Assembly was made up of 160 randomly-selected citizens, one man and one woman from each electoral district plus two at-large Aboriginal members. The Assembly voted to replace the existing electoral system with a Single Transferable Vote model, which lets voters rank candidates. The Assembly's plan emerged from months of face-to-face deliberation and hearings, which are accessible online. Citizens' Assembly on Electoral Reform, <http://www.citizensassembly.bc.ca> (last visited Sept. 29, 2005).

Finally, deliberation has the potential to 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 meaning¹⁰⁵ — 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.¹⁰⁶ 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.¹⁰⁷ 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.¹⁰⁸ As they revise downward their estimation of how prevalent the view is within their group, individuals will feel less threatened

¹⁰⁵ See Cohen, *supra* note 71.

¹⁰⁶ 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).

¹⁰⁷ 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).

¹⁰⁸ 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).

by, and thus become more receptive to, information at odds with their prior culturally grounded belief.¹⁰⁹

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.¹¹⁰ 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 to identify courses of action that reconcile various combinations of values and to evaluate the costs (fiscal and environmental) of those options.¹¹¹ 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.¹¹²

¹⁰⁹ See Cohen, *supra* note 71.

¹¹⁰ Robin Gregory & Katharine Wellman, *Bringing Stakeholder Values into Environmental Policy Choices: A Community-Based Estuary Case Study*, 39 *Ecological Econ.* 37, 38 (2001).

¹¹¹ 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 Nat’l Research Council, *Decision Making for the Environment: Social and Behavioral Science Research Priorities* 175, 187–91 (2005); Robin S. Gregory, *Incorporating Value Trade-Offs into Community-Based Environmental Risk Decisions*, 11 *Env’tl. 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*, 9 *Soc. Probs. & Pub. Pol’y* 249, 255–62 (2001).

¹¹² See, e.g., Gregory & Wellman, *supra* note 110, at 43–51 (describing an experiment using structured, value-focused deliberation on the impact of development on a local estuary); Gregory, Arvai & McDaniels, *supra* note 111, at

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 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, is likely 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 demands substantial reliance on remote expert regulators. Because members of the public know that their fate is in the experts’ hands, as it were, 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.¹¹³

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, so too the perception that such officials are remote and unaccountable erodes it.¹¹⁴ Ironically, then, the greater

263–71 (describing an experiment involving deliberation over risks associated with a hydroelectric power plant).

¹¹³ See Slovic, *supra* note 10, at 316–19, 322.

¹¹⁴ See *id.* at 322–23, 409–10.

the degree of political insulation the law affords to expert regulators, the less likely it is that popularly responsive institutions of government will invest those regulators with power to begin with or 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.

As we have noted, Sunstein advocates delegating a sizeable amount of discretion to politically insulated risk specialists. The basis for this prescription is his normative assumption that the differences between lay assessments of risk and expert ones are the product not of "rival rationalities" but 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 (p. 1), 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 market 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 their preferred way of life are both worthless and dangerous.¹¹⁵ Moreover, unlike attitudes that reflect overgen-

¹¹⁵ See *supra* text at notes 54; see also Douglas A. Kysar, *The Expectations of Consumers*, 103 Colum. L. Rev. 1700, 1740–41 (2003) (noting difficulty posed to risk utility analysis by inverse relationship between costs and benefits in public risk perceptions). Although we focus here on the challenge cultural cognition

eralization, disregard for small probabilities, inattention to base rates, and similar manifestations of bounded rationality,¹¹⁶ 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 induced them to attend in a biased fashion to 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.¹¹⁷

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 world-views, so 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."¹¹⁸ Experts might have a more accurate sense of the magnitude of various risks (although their conclusions, too, are hardly immune from cultural partisanship),¹¹⁹ but they have no special competence to identify what vision of society —

presents to cost-benefit analysis, we note that others have suggested additional telling criticisms. See, e.g., Frank Ackerman & Lisa Heinzerling, *Priceless: On Knowing the Cost of Everything and the Value of Nothing* (2004); Thomas O. McGarity, *Professor Sunstein's Fuzzy Math*, 90 *Geo. L.J.* 2341 (2002).

¹¹⁶ See Slovic, *supra* note 10, at 21–22, 35–39.

¹¹⁷ This is certainly true for firearms. See *What Matters More? Consequences or Meanings*, <http://research.yale.edu/culturalcognition/index.php?option=content&task=view&id=104>.

¹¹⁸ Douglas & Wildavsky, *supra* note 33, at 36.

¹¹⁹ See *supra* text at notes 68–69.

hierarchical or egalitarian, individualist or solidarist — 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 dispute, 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 perception 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, effectively, 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,¹²⁰ it is questionable whether risk regulation policy should be responsive to such demands.

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.¹²¹ 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.¹²² 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 ac-

¹²⁰ See, e.g., *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 . . .”). See generally Bruce A. Ackerman, *Social Justice in the Liberal State* 8–12 (1980) (arguing against invocation of partisan view of the good to justify policy); John Rawls, *Political Liberalism* 212 (1993) (same).

¹²¹ See Phillip L. McIntosh, *When the Surgeon Has HIV: What to Tell Patients About the Risk of Transmission*, 44 *U. Kan. L. Rev.* 315 (1996).

¹²² See The Cultural Cognition Project, <http://research.yale.edu/culturalcognition/content/view/102/100/> (last visited Oct. 22, 2005).

ceptable desire for personal safety,¹²³ but from an illiberal desire to erect an egalitarian or solidarist orthodoxy in law. 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 of risk perception. Normative legal theories do more than justify particular doctrines and institutional arrangements. They also furnish vocabularies that determine how citizens and legal decisionmakers 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.¹²⁴ In this respect, the irrational-weigher theory's analytical deficiencies can be seen as conflict-abating, discourse virtues: precisely because the theory 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 can be seen as implementing 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.¹²⁵

¹²³ Most citizens who support gun control, it turns out, say they would favor it even if private possession of handguns reduced crime. See *What Matters More? Consequences or Meanings*, <http://research.yale.edu/culturalcognition/index.php?option=content&task=view&id=104>.

¹²⁴ See Dan M. Kahan, *supra* note 81, 113 Harv. L. Rev. 413, 419 (1999).

¹²⁵ See Cass R. Sunstein, *Legal Reasoning and Political Conflict* 35 – 61 (1996).

Still, this is a defense of Sunstein's program that demurs to, rather than acquits it of, the charge that it is fundamentally anti-democratic. 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 make it possible for citizens of diverse worldviews to agree on risk without having to assent to law that denigrates anyone's cultural identity.¹²⁶

The prospects for such a program, particularly carried out in the formation of national policymaking, 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 of risk 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.

At the same time, *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 account supported by this work 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

¹²⁶ See Braman & Kahan, *supra* note 94, at 33–41 (defending an expressively pluralistic approach to resolving the American gun debate); *see also supra* text at notes 94–113 (describing the use of deliberation to generate consensus in favor of sound empirical information on risk).

to politically 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 near 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 deflects 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 perception can hope to achieve them either.