

## EMOTIONS, VALUES, AND THE CONSTRUCTION OF RISK

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In response to Dan M. Kahan, *Two Conceptions of Emotion in Risk Regulation*, 156 U. PA. L. REV. 741 (2008).

Are emotions subversive of reason or essential constituents of it? This is the broad question posed by Dan M. Kahan in *Two Conceptions of Emotion in Risk Regulation*,<sup>1</sup> a welcome addition to his ongoing inquiry into how emotional appraisals of value influence decision making. Much of Kahan's recent work has focused on a particular aspect of policymaking: the study of risk perception. *Two Conceptions* continues a useful exchange between Kahan and Cass Sunstein<sup>2</sup> about the differences between their prominent approaches to risk regulation: Kahan's cultural cognition approach<sup>3</sup> and Sunstein's heuristics and biases approach, which focuses on the cognitive mechanisms that shape perceptions about risk.<sup>4</sup> Kahan illuminates the issues at stake with his customary passion and clarity.

A major contribution of Kahan's work has been its insight into the pervasiveness of emotional influences on the decision-making process.

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<sup>1</sup> 156 U. PA. L. REV. 741 (2008).

<sup>2</sup> See, e.g., CASS R. SUNSTEIN, *LAWS OF FEAR: BEYOND THE PRECAUTIONARY PRINCIPLE* (2005) [hereinafter SUNSTEIN, *LAWS OF FEAR*]. The other principal texts of the Kahan/Sunstein interchange are Dan M. Kahan et al., *Fear of Democracy: A Cultural Evaluation of Sunstein on Risk*, 119 HARV. L. REV. 1071 (2006) (reviewing SUNSTEIN, *LAWS OF FEAR*, *supra*), and Cass R. Sunstein, *Misfearing: A Reply*, 119 HARV. L. REV. 1110 (2006) [hereinafter Sunstein, *Misfearing*] (replying to Kahan et al., *supra*).

<sup>3</sup> See, e.g., Dan M. Kahan & Donald Braman, *Cultural Cognition and Public Policy*, 24 YALE L. & POL'Y REV. 149 (2006); Kahan et al., *supra* note 2, at 1072.

<sup>4</sup> According to Thomas Gilovich, Dale Griffin, and Daniel Kahneman, "The core idea of the heuristics and biases program is that judgment under uncertainty is often based on a limited number of simplifying heuristics rather than more formal and extensive algorithmic processing." Thomas Gilovich et al., *Preface* to *HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT*, at xv, xv (Thomas Gilovich et al. eds., 2002) [hereinafter *HEURISTICS AND BIASES*].

The recognition that emotion pervades decision making raises a difficult normative question: how to distinguish the influences that contribute to good judgment from those that distort judgment. This normative question in turn gives rise to a difficult practical question: how to address the influences that cause distortion. In this brief Response, I argue that tackling this evaluative task requires avoiding mirror impulses: emotions should neither be privileged as inherently desirable nor marginalized as inherently irrational. They should be judged based on what they contribute to the cognitive task at hand.

The task at hand, as the Kahan/Sunstein debate defines it, is determining how government should regulate risk. In exploring the question of how this task is best approached, I will also raise a question about how it is defined. I suggest that the very act of framing issues of government policy in terms of *risk regulation* reflects certain assumptions about how issues present themselves and what sorts of cognitive processes might be required to address them.

#### I. COGNITIVE PROCESS: DISTINGUISHING THE MECHANISM FROM THE INTERFERING FACTORS

Dan Kahan's important message is that emotion operates at a much more basic and pervasive level than is commonly thought. I share this view.<sup>5</sup> Although emotions are often portrayed as bursts of feeling that intrude upon rational thought from time to time, this view is out of step with current findings across a range of disciplines. Current theorists tend to view emotions as processes rather than fixed states—as pervasive influences on the way we appraise and react to stimuli.<sup>6</sup> In this account, emotions help us to interpret, organize, and prioritize the information that bombards us. We categorize this information based on assumptions about what is to be feared, who is to be trusted, and who is within our circle of care and compassion. We organize it into a coherent account of human behavior and causality.<sup>7</sup>

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<sup>5</sup> See Susan A. Bandes, *Introduction* to THE PASSIONS OF LAW 1, 1-2 (Susan A. Bandes ed., 1999).

<sup>6</sup> There is no single overarching definition of emotion. As the philosopher Robert Solomon observed, "Emotion" is a heterogeneous category that encompasses a wide variety of significant psychological phenomena." Robert C. Solomon, *What Is an Emotion?*, EMOTION RESEARCHER (Int'l Soc'y for Res. on Emotion, Poughkeepsie, N.Y.), Spring 2007, at 5.

<sup>7</sup> See, e.g., Joseph P. Forgas et al., *Responding to the Social World: Explicit and Implicit Processes in Social Judgments*, in SOCIAL JUDGMENTS: IMPLICIT AND EXPLICIT PROCESSES 1,

We cannot function without creating markers of saliency and value, and our emotions aid us in identifying which information is especially salient,<sup>8</sup> valuable, or urgent—or indeed, worthy of notice or action at all.<sup>9</sup> In short, emotions help shape the heuristics and other cognitive tools that are essential to the continuing task of information processing.<sup>10</sup> These devices may steer us wrong, they may transmute into biases, but they are an essential part of our cognitive apparatus.

Whether a cognitive tool steers us wrong depends on the purpose it is meant to serve. For example, in much simpler times, crude categories based on fear of strangers or tribal loyalty might have adequately identified who we should avoid or who we should trust. Such heuristics in a complex, heterogeneous world easily transmute into unhelpful and even pernicious biases. In order to consider what role individual emotions—and the judgments they help shape—ought to play in governmental policymaking,<sup>11</sup> we need a normative theory of how government ought to govern and what role individual citizens ought to play in governance.

Kahan and Sunstein are in substantial agreement that the ultimate goal is a deliberative democracy that advances the ideals of transparency, autonomy, and robust debate among those with diverse perspectives; enables the conditions for informed choice; and respects the considered values of the citizenry.<sup>12</sup> Their disagreements center on determining how those values should be evaluated and what weight they should be accorded in the formation of policy. More specifically, Kahan and Sunstein part company on how laypeople understand and

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7-8 (Joseph P. Forgas et al. eds., 2003) [hereinafter SOCIAL JUDGMENTS] (discussing various theories about the dynamics of social judgment).

<sup>8</sup> For a discussion of recent neuroscientific studies of how the brain selectively processes portions of its inputs based on measures of saliency, see Shih-Cheng Yen & Leif H. Finkel, *Salience*, in 4 ENCYCLOPEDIA OF THE HUMAN BRAIN 237 (V.S. Ramachandran ed., 2002).

<sup>9</sup> See ANTONIO R. DAMASIO, DESCARTES' ERROR: EMOTION, REASON, AND THE HUMAN BRAIN 173-75 (1994) (describing the "somatic marker" theory, one influential explanation of how the brain highlights and prioritizes information).

<sup>10</sup> See, e.g., Joseph P. Forgas & Rebekah East, *Affective Influences on Social Judgments and Decisions: Implicit and Explicit Processes*, in SOCIAL JUDGMENTS, *supra* note 7, at 198-221.

<sup>11</sup> As Kahan and Sunstein both recognize, the question of how people would address risk individually differs from the question of how they would like their government to address collective risks. The latter question is the relevant one for the topic at hand. See CASS R. SUNSTEIN, FREE MARKETS AND SOCIAL JUSTICE 261 (1997) (distinguishing the preferences people hold as private consumers from their collective political judgments); Kahan et al., *supra* note 2, at 1106 (identifying ambiguity between measures of individual preferences and individual visions of a good society).

<sup>12</sup> See, e.g., SUNSTEIN, *supra* note 11, at 13-14; Kahan et al., *supra* note 2, at 1072.

weigh risks, and on the deference government should accord their perceptions. I will consider the implications of both scholars' conceptions of emotion for the questions at hand.

## II. EMOTION, VALUE, BELIEF

Dan Kahan has long argued that emotion plays an important role in the way people arrive at their beliefs<sup>13</sup> (for example, their positions on gun control, capital punishment, or abortion). He argues, as a normative matter, that emotions reflect values, that governmental policy should to some extent reflect the values of the citizenry, and that therefore the emotions of individuals are entitled to some weight in policymaking. He argues, as a practical matter, that in order to communicate with and perhaps even persuade people of disparate beliefs, it is necessary to address the emotions that animate those beliefs.<sup>14</sup>

Like Kahan, I believe that emotional influences cannot be easily cabined and, moreover, that while they do not always help produce the optimal answer, they cannot be dismissed as mere impediments to fruitful thought. As a practical matter, it also follows, as Kahan argues, that if we want to channel or regulate emotions, we first must acknowledge them. In Antonio Damasio's words, "taking stock of the pervasive role of feelings may give us a chance of enhancing their positive effects and reducing their potential harm."<sup>15</sup>

But Kahan's claim that values reflect emotions and are therefore entitled to normative weight bears further scrutiny. Emotion is an integral part of normative judgment, but emotions are not entitled to a priori normative weight in determining the shape of policy. Kahan's work sheds much light on the social dynamics of belief formation, but

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<sup>13</sup> The definitional issues posed by interdisciplinary discourse on these issues are daunting. Many of the relevant terms describing feeling, attitude, and belief are used interchangeably, or have contested meanings. See, e.g., Bertram Gawronski, *Editorial: Attitudes Can Be Measured! But What Is an Attitude?*, 25 SOC. COGNITION 573, 574 (2007). The terms "emotion" and "affect" are sometimes used interchangeably and sometimes to connote different concepts. Neither has a single accepted meaning. In this Response, I will use them interchangeably. As to the term "values," Kahan tends to use this term, like the phrase "cultural worldview," to connote a general orientation, such as an egalitarian or individualistic ethic. See, e.g., Kahan & Braman, *supra* note 3, at 150. But cf. Sunstein, *Misfearing*, *supra* note 2, at 1112. The meaning of the term "values" will be a central focus of this Response. As to the term "beliefs," Kahan uses it to describe positions on issues, such as gun control and the death penalty. Kahan & Braman, *supra* note 3, at 150.

<sup>14</sup> Kahan, *supra* note 1, at 761-66.

<sup>15</sup> DAMASIO, *supra* note 9, at 246.

it tends to treat values as inherently good rather than interrogating their content or their susceptibility to change. Kahan views emotion “as a perceptive faculty uniquely suited to discerning what stance toward risk best coheres with a person’s values.”<sup>16</sup> The values (or cultural worldviews) themselves, in this account, are stable and reflective, rather than context sensitive. They are trait-like attributes<sup>17</sup> like an “egalitarian” ethic or “individualistic” values.<sup>18</sup>

I suggest that value and fact have a more fluid and mutually constitutive relationship. We construct the world in light of assumptions about how it ought to work, but what we perceive helps shape what we feel and what we value. Neither emotion nor value is inert; both shape and are shaped by social milieu. For example, the ongoing national debate in the wake of the September 11 terrorist attacks has caused many people to reevaluate not just their beliefs about issues like racial profiling and torture, but also their underlying values about the balance between civil liberty and security. Our fears may influence us to condone indefinite detention or harsh interrogation; our capacity for empathy and compassion might lead us to be concerned about the fate of those detained or outraged about our government’s role in the abuse of prisoners. People interpret factual data in light of their values, but ideally their values also evolve in response to understandings of the data that emerge as part of the social process of deliberation.<sup>19</sup>

### III. THE CHALLENGES OF EMPIRICAL AND NORMATIVE COMPLEXITY

Cass Sunstein’s risk regulation scholarship is centrally concerned with evaluating perceptions of risk and the weight those perceptions should be accorded in policymaking. His work within the field of heuristics and biases has made a major contribution to our understanding of the challenges posed by the vast gap between information about risk and the individual’s ability to process it. As Sunstein’s scholarship amply demonstrates, people often fear things that are not

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<sup>16</sup> Kahan, *supra* note 1, at 744.

<sup>17</sup> Of course, for purposes of empirical research, any proxy for difficult-to-measure attributes like “values” or “attitudes” will involve some tradeoffs between complexity and workability.

<sup>18</sup> See, e.g., Kahan & Braman, *supra* note 3, at 153-54 (discussing work by Mary Douglas and Aaron Wildavsky).

<sup>19</sup> See generally Jonathan Haidt & Fredrik Bjorklund, *Social Intuitionists Answer Six Questions About Moral Psychology*, in 2 MORAL PSYCHOLOGY (W. Sinnott-Armstrong ed.) (forthcoming), available at <http://ssrn.com/abstract=855164> (arguing that moral judgment is a social process).

particularly likely to happen and minimize much more likely hazards. They may fear nuclear power and embrace sunbathing, without paying careful attention to the actual risks posed by either one.<sup>20</sup> Although Sunstein's work tends to focus on fear,<sup>21</sup> this point can be made regarding other emotions and emotional capacities as well. For example, empathy may also drive people to take measures that seem disproportionate to the harm caused. It has been twenty years since the toddler Jessica McClure fell into a well in her backyard and was trapped there for fifty-eight hours. The nation was transfixed by the rescue effort and an outpouring of support followed; there are reports that on her twenty-fifth birthday McClure will come into a million-dollar trust fund contributed by "well-wishers."<sup>22</sup> Also in 1987, however, one thousand people died in an earthquake in Ecuador—an event that elicited far less attention and emotion in the United States at the time and is likely less remembered today than the McClure incident.

Empathy is an essential capacity for social beings,<sup>23</sup> and an essential part of effective moral judgment—the kind that leads us to be concerned not only about a little girl in Texas, but also about the loss of life in countries far away. By itself, empathy provides no metric for making difficult allocational decisions<sup>24</sup>—and it may pull us in directions that do not reflect our best collective judgment.<sup>25</sup> Thus it is certainly right that government should not simply reflect individual fears and empathies; that it needs expert advice; that its role is to take a broader view of the common welfare; and that sometimes it needs to

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<sup>20</sup> SUNSTEIN, LAWS OF FEAR, *supra* note 2, at 86.

<sup>21</sup> And more recently, indignation. See generally Daniel Kahneman & Cass R. Sunstein, *Indignation: Psychology, Politics, Law* (Univ. of Chi. Law Sch. John M. Olin Law & Econ. Working Paper No. 346, 2007), available at [http://ssrn.com/abstract\\_id=1002707](http://ssrn.com/abstract_id=1002707).

<sup>22</sup> David Randall, *From Girl Trapped in a Well to Millionaire: The Remarkable Jessica McClure*, INDEPENDENT, Oct. 14, 2007, <http://www.independent.co.uk/news/world/americas/from-girl-trapped-in-a-well-to-millionaire-the-remarkable-jessica-mcclure-396850.html>.

<sup>23</sup> See Sandra Blakeslee, *Cells That Read Minds*, N.Y. TIMES, Jan. 10, 2006, at F1 (discussing the discovery of "mirror neurons," which allow us to understand the "actions, intentions and emotions of others . . . [b]y feeling, not by thinking" (internal quotation marks omitted)).

<sup>24</sup> See Susan A. Bandes, *Empathy, Narrative, and Victim Impact Statements*, 63 U. CHI. L. REV. 361, 379-82 (1996) (arguing that empathy is a capacity that does not necessarily lead to normatively desirable actions).

<sup>25</sup> See, e.g., EurekaAlert, *How Do We Stop Genocide When We Begin To Lose Interest After the First Victim?* (Feb. 15, 2007), [http://www.eurekaalert.org/pub\\_releases/2007-02/uoo-hdw021207.php](http://www.eurekaalert.org/pub_releases/2007-02/uoo-hdw021207.php) (reporting on Paul Slovic's study of moral intuition and its limitations in motivating responses to genocide).

model and encourage values, not merely reflect them. Nevertheless, although empathy cannot provide a metric, it is one of a range of emotions that are always part of the calculus. There is no “correct” metric for governmental obligation, and there exists no rational calculus uninfluenced by loyalty, compassion, and affect-based judgments of need and desert.

Government policy should not *simply* reflect emotion, but emotion per se is not the problem. The challenge is to encourage the helpful emotions, and discourage, educate, or cabin the unhelpful ones. Sunstein believes that individual values should carry some weight in government policy. However, he assumes a clearly discernible line between values and facts and argues that mistakes of fact are entitled to no deference.<sup>26</sup> He suggests that one solution to the prevalent problem of factual error is to delegate certain risk regulation issues to experts. But as Kahan persuasively argues, values and facts are not easily disentangled—by either ordinary citizens or experts. Therefore it is not easy—and not necessarily desirable—to give weight to judgments about the former and not the latter. This debate about the value/fact distinction is critical to the question of risk regulation.

#### IV. JUDGMENTS OF VALUE AND JUDGMENTS OF FACT

The heuristics and biases model on which Sunstein relies regards heuristics as a compromise—a substitute (albeit one that usually works quite well) for a more deliberative, accurate, and reliable reasoning process. If this view is correct, it makes sense to be very cautious about according normative weight to beliefs that are the product of—or are unduly influenced by—these substitute processes and to prefer the conclusions reached by those with more time and better information. However, this view appears to derive from the heuristics and biases model’s origins as a corrective to (*not* a challenge to) the rational actor model of economic behavior,<sup>27</sup> and has mainly been tested in situations requiring judgments about quantifiable, measurable phenomena—such as judgments that rely solely on a calculation of probabilities.<sup>28</sup> But current heuristics and biases scholarship has

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<sup>26</sup> See Sunstein, *Misfearing*, *supra* note 2, at 1123-25.

<sup>27</sup> See Thomas Gilovich & Dale Griffin, *Introduction—Heuristics and Biases: Then and Now*, in HEURISTICS AND BIASES, *supra* note 4, at 1-3 (offering a historical overview).

<sup>28</sup> See *id.* at 17 (referring to the “computations of similarity and availability that were the basis of the original research in this tradition”). See also the summaries of research in Steven A. Sloman, *Two Systems of Reasoning*, in HEURISTICS AND BIASES, *supra* note 4, at 379-96, and Keith E. Stanovich & Richard F. West, *Individual Differences in*

moved beyond the study of computational processes to address questions about governmental policy that are both empirically and normatively complex<sup>29</sup> and that have no definitive, value-neutral answers. Distinguishing helpful heuristics from unhelpful biases requires examining particular emotional influences on particular judgmental tasks and making a normative decision about whether they advance or distort judgment. These evaluations may differ depending on whether the reasoning is purely computational or involves more complex social judgments.<sup>30</sup>

Although Sunstein and other scholars writing about these issues address the role of values and other factors complicating the rational actor model, the heuristics and biases model on which they rely still regards affect-free rationality as the normative baseline and emotion-influenced judgments as products of normative bias.<sup>31</sup> As Kahan describes, in this model, affect is treated as a heuristic rather than a general property of cognition<sup>32</sup>—at best a shortcut to rational judgment, at worst an interference with it.<sup>33</sup> This baseline assumption is problematic. It approaches emotion as a suspect category, rather than assessing particular emotions and their suitability in context.

Current research on emotion and cognition supports a very different view. It views emotion as a source of information in its own right, not just as a second-best substitute for deliberation. Emotion gives rise to irrationality in some circumstances but performs an im-

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*Reasoning: Implications for the Rationality Debate?*, in HEURISTICS AND BIASES, *supra* note 4, at 421-40.

<sup>29</sup> See Forgas et al., *supra* note 7, at 9-10 (“[J]udgmental heuristics or shortcuts do serve a functional purpose, even if their operation can sometimes produce normatively questionable outcomes, especially in . . . highly manipulated and impoverished experimental situations . . .”).

<sup>30</sup> Current research suggests that emotions may play a far smaller role in arriving at “[j]udgments that do not rely on memory-based information,” and instead rely on “abstract and uninvolved stimulus materials, such as the word lists typically preferred by cognitive researchers.” Emotions play a larger role in constructive judgment situations that require “active elaboration and transformation of the available stimulus information.” Forgas & East, *supra* note 10, at 204; see also William D. Casebeer & Patricia S. Churchland, *The Neural Mechanisms of Moral Cognition: A Multiple-Aspect Approach to Moral Judgment and Decision-Making*, 18 *BIOLOGY & PHIL.* 169, 188 (2003) (“Moral judgments tell us what we ought to think so that we know what to do. Isolating the doing from the knowing via an artificial experimental regimen can remove the directedness of moral cognition.”).

<sup>31</sup> See, e.g., Sunstein, *Misfearing*, *supra* note 2, at 1119.

<sup>32</sup> See Kahan, *supra* note 1, at 743; Paul Slovic et al., *The Affect Heuristic*, in HEURISTICS AND BIASES, *supra* note 4, at 397-420.

<sup>33</sup> See, e.g., Sunstein, *Misfearing*, *supra* note 2, at 1119 n.42.

portant role in others. For social and moral judgment, it is an essential source of information—one that enables us to perceive and attend to the emotions of others and to predict the consequences of our actions for others.<sup>34</sup> Damasio and other researchers have observed that subjects with impaired access to their emotions may lose the ability to make decisions beneficial to their well-being or the welfare of others.<sup>35</sup> In addition, emotion helps us determine what we value, and what requires our immediate attention. For example, Damasio's impaired subjects often gather information obsessively, but lose the ability to decide between options.<sup>36</sup> Both information and affect are essential to judgment.

Second, current emotion research views emotion as shaping perceptions of fact as well as perceptions of value, and as influencing deliberative as well as intuitive reasoning. The initial factual assumptions underlying intuitive processing continue to exert a strong influence on the more deliberative processing that follows.<sup>37</sup> For example, as I have argued elsewhere, the empirical debate about whether the death penalty deters crime is unlikely to be resolved no matter how many facts are amassed.<sup>38</sup> Proponents and opponents begin from different assumptions about human behavior. These assumptions influence not only their value judgments about what trade-offs are acceptable but their factual assumptions about how many crimes might be deterred. Unless they come to question their initial assumptions—something people rarely do of their own accord—the deliberation that follows will simply build upon and reinforce those initial assumptions.<sup>39</sup>

This dynamic has implications for the question of experts that divides Kahan and Sunstein. If the intuitive process leads to errors and distortions, deliberation will not correct these errors unless they are

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<sup>34</sup> See, e.g., William D. Casebeer, *Moral Cognition and Its Neural Constituents*, 4 NATURE REVIEWS: NEUROSCIENCE 841, 843-44 (2003) (discussing "theory of mind" as an essential component of moral reasoning).

<sup>35</sup> See DAMASIO, *supra* note 9, at 36-37 (discussing Elliot, a patient with damage to his prefrontal cortex). As Damasio points out, the particular pathology will depend on the nature of the neurological damage at issue. *Id.* at 38-39.

<sup>36</sup> See *id.* at 193 (discussing another patient with damage to his prefrontal cortex).

<sup>37</sup> Kevin M. Carlsmith & John M. Darley, *Psychological Aspects of Retributive Justice*, 41 ADVANCES EXPERIMENTAL SOC. PSYCHOL. (forthcoming 2008) (manuscript at 40-42), available at <http://ssrn.com/abstract=1031193>.

<sup>38</sup> See generally Susan Bandes, *The Heart Has Its Reasons: Examining the Strange Persistence of the American Death Penalty*, 42 STUD. L. POL. & SOC'Y (forthcoming 2008) (manuscript at 16-18), available at <http://ssrn.com/abstract=1019615>.

<sup>39</sup> *Id.*

brought into consciousness<sup>40</sup>—and this is true for experts as well as laypeople.<sup>41</sup>

## V. THE CONSTRUCTION OF RISK

Determining what constitutes a risk is not a mechanical calculus. It is a task of identification and definition that requires deciding what questions to ask, what temporal and causal links to draw,<sup>42</sup> what assumptions about “social” or “natural” forces to make, and how to fit the answers into a coherent narrative amenable to policy recommendations. In short, identifying and delineating risks implicates a cognitive process that is both normative and affect-laden.

In a groundbreaking book on the Chicago heat wave of 1995, sociologist Eric Klinenberg illustrates both the crucial importance and the limitations of factfinding.<sup>43</sup> Klinenberg’s “social autopsy” of the Chicago heat wave examines the 739 heat-related deaths<sup>44</sup> that occurred during a six-day period in Chicago, and analyzes the factors that made it so difficult for this tragedy to be seen, first, as a unified phenomenon at all, and second, as anything other than a natural and inevitable disaster. He concludes that the deaths were the result of a

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<sup>40</sup> Conversely, the intuitive process is more educable than this model assumes. *See, e.g.*, Joshua Correll et al., *Across the Thin Blue Line: Police Officers and Racial Bias in the Decision To Shoot*, 92 J. PERSONALITY & SOC. PSYCHOL. 1006, 1007-08 (2007) (reporting on the effectiveness of training for eliminating racially based aspects of police officers’ split-second decisions to shoot).

<sup>41</sup> *See, e.g.*, Susan Bandes, *The Lessons of Capturing the Friedmans: Moral Panic, Institutional Denial and Due Process*, 3 LAW, CULTURE & HUMAN. 293, 302 (2007) (discussing, inter alia, the role of child psychology and child abuse experts in fomenting moral panic about daycare sexual abuse and satanic worship). For an example of a successful effort to counteract bias by bringing it into consciousness, see Jeffrey J. Rachlinski et al., *Does Unconscious Bias Affect Trial Judges?* (Am. Law & Econ. Ass’n 17th Annual Meeting, Working Paper No. 67, 2007), available at <https://www.law.uchicago.edu/files/lawpoliticswkshp-rachlinski.pdf> (measuring race and gender bias among trial judges and finding that once it is brought into consciousness, it can be ameliorated).

<sup>42</sup> *See, e.g.*, Jonathan A. Fugelsang & Kevin N. Dunbar, *A Cognitive Neuroscience Framework for Understanding Causal Reasoning and the Law*, 359 PHIL. TRANSACTIONS ROYAL SOC. LONDON B 1749, 1751-52 (2004).

<sup>43</sup> ERIC KLINENBERG, *HEAT WAVE: A SOCIAL AUTOPSY OF DISASTER IN CHICAGO* (2002).

<sup>44</sup> “Heat-related” deaths are those that would not have occurred but for the heat. *Id.* at 29-30.

complex combination of factors, most of which were man-made and therefore susceptible to correction.<sup>45</sup>

The account has much to say about experts and their role in risk and disaster assessment. One of the few heroes of Klinenberg's narrative is an expert: the Cook County Medical Examiner, who, in the face of considerable pressure, insisted on establishing and applying the criteria that led to the classification of the deaths as "heat related" and made possible the identification of a pattern of "excess deaths."<sup>46</sup> Yet the most compelling message of the book is that many of the factors that caused and defined this disaster did not fall into familiar categories of risk or catastrophe and thus failed to register with experts or opinion makers. In part, this was an issue of salience, or availability—heat waves simply don't generate the tangible physical damage (or the spectacular, camera-ready images) that floods, fires, and hurricanes do. But in addition, the social factors that contributed to the mortality rate also contributed to the masking of the scope and nature of the disaster. The vast majority of the victims were poor, isolated, and "invisible"—that is, off the radar of the general populace and the "social scientific experts on disasters."<sup>47</sup> Klinenberg notes that

the methods and theories used in conventional health and climate studies deprive scientists of the instruments they need to conduct a thorough investigation. There is little in their professional tool kit to help explain the social sources of the disaster. Although every major study and report has found that medical and meteorological approaches are inadequate to explain why so many Chicago residents died, no one has analyzed how the city's social environment contributed to the devastation.<sup>48</sup>

As Klinenberg argues, before an unexpected situation can be perceived as a disaster or a risk, it needs to fit certain frames that prompt certain types of experts to ask—or to be asked—the questions they are used to addressing. In this case, "political officials, journalists, and research scientists established the dominant analyses of the heat wave as well as the basic categories that organized public discourse about the trauma."<sup>49</sup> The result was that the disaster was viewed as a naturally occurring phenomenon, perhaps exacerbated by the individual fault of the victims' families or even the victims themselves. The conse-

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<sup>45</sup> He describes the crisis and its causes as exemplifying a "*total social fact*, one that integrates and activates a broad set of social institutions and generates a series of social processes that expose the inner workings of the city." *Id.* at 32.

<sup>46</sup> *Id.* at 26-27.

<sup>47</sup> *Id.* at 17.

<sup>48</sup> *Id.* at 18.

<sup>49</sup> *Id.* at 23.

quence of this construction of events was that, for years afterward, experts and government officials saw no need to determine how to prevent such a disaster from happening again.

Even as to more easily recognizable disasters and tragedies, affect-laden assumptions about human behavior and causality affect risk assessment. Consider, for example, the response to Hurricane Katrina. What lessons about risk regulation can be learned from the facts of the disaster? First, we need to decide what in fact went wrong, and what facts are relevant to preventing another disaster. To some, Katrina was a natural disaster, or at least a natural disaster in a place that is below sea level and therefore never should have been settled. For others, it was a product of humanly exacerbated global warming, or of negligence by the Corps of Engineers, perhaps compounded by various other forms of government ineptitude. Some saw not generalized ineptitude but racism. Others saw an aggregation of poor choices by individuals—such as building shoddy homes on low ground or failing to implement an exit plan.

Although there are numerous factual issues that are susceptible to measurement imbedded in these perceptions, the larger questions of what caused the disaster and how best to prevent the next one require complex judgments of both fact and value. Causation is never solely a factual calculation—it always requires a standard of proof, a decision about the relevance of motive, fault, or blameworthiness, and a way of comparing contributory factors. Any discussion of solutions will be influenced, in part, by evaluative assumptions and biases about who is deserving of aid, what is fixable and what is inevitable, which factors are most relevant, and who is within our circle of empathy and compassion.

As Klinenberg's study illustrates, experts as well as laypeople will gather and evaluate data in light of implicit assumptions about how the world works. For experts to add value to the equation, they need more than just additional data. They need a means of identifying their own background assumptions and recognizing the emotional influences that animate them, and a means of splitting off the influences that interfere with sound judgment.<sup>50</sup> Current research suggests

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<sup>50</sup> See, e.g., Joe Nocera, *The Worst Investors? Humans*, N.Y. TIMES, Sept. 29, 2007, at C1 (reviewing JASON ZWEIG, *YOUR MONEY & YOUR BRAIN* (2007)) (recounting the difficulties financial experts encounter in overriding their emotions to apply their own principles of investing). According to Nocera, Zweig believes that experts who succeed in the face of crisis do not "ignore their emotions . . . [but rather] turn them inside

that people are not very good at identifying their own fallibilities, and that correction is more likely to come from debate with others and exposure to differing viewpoints than from continued private deliberation.<sup>51</sup>

Values and the emotions that animate them should be assessed in light of our democratic aspirations. As political scientist Sharon Krause argues, “[T]he ideal of reciprocity . . . obligates citizens to justify public decisions in terms that all can endorse.”<sup>52</sup> “[R]ightly conceived,” this ideal “involves the communication of appropriate sentiments and an attachment to the common, affective concerns that are constitutive of the political order.”<sup>53</sup>

#### CONCLUSION

Happily, our cognitive apparatus works pretty well for the challenges and responsibilities of living in a participatory democracy. Although we all bring emotions, values, and beliefs to the table, these components of judgment are shaped and refined in a social context. We are not particularly good at identifying and correcting for our own assumptions and biases, even when we have ample time and information to deliberate. The better approach to correcting for blind spots and biases, and to identifying the emotions that interfere with considered judgment, is exposure to differing viewpoints and vigorous debate.<sup>54</sup> This solution jibes nicely with the requirements of a pluralistic democratic process in which values are constantly being challenged and shaped, and in which government strives to reflect and influence the considered values of the populace.

Participatory democracy is both a goal and a process. Our form of government flourishes when its citizens are open to new information, can talk across ideological divides, and strive to make informed choices. In this account, values are not static. They are formed and continually refined in a societal context. They help shape our societal and governmental priorities, and these priorities, in turn, help shape

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out. When they feel fear, they don't act on it. They examine it. They say, what should this feeling tell me?” *Id.* (internal quotation marks omitted).

<sup>51</sup> See Haidt & Bjorklund, *supra* note 19.

<sup>52</sup> Sharon R. Krause, Public Deliberation, Democratic Politics, and the Feeling of Impartiality 2 (Feb. 9, 2007) (unpublished manuscript), available at [https://www.law.berkeley.edu/institutes/csls/lawemotion\\_conference/PublicDeliberation\\_paper.pdf](https://www.law.berkeley.edu/institutes/csls/lawemotion_conference/PublicDeliberation_paper.pdf).

<sup>53</sup> *Id.*

<sup>54</sup> See Carlsmith & Darley, *supra* note 37, at 40-41; Haidt & Bjorklund, *supra* note 19.

our values. As cognitive neuroscience and related disciplines are making increasingly clear, this process of defining and acting upon our collective values, so essential to the working of participatory democracy in a heterogeneous and open society, simply could not take place without the ability to recognize and evaluate emotion.

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Preferred Citation: Susan A. Bandes, Response, *Emotions, Values, and the Construction of Risk*, 156 U. PA. L. REV. PENNUMBRA 421 (2008), <http://www.pennumbra.com/responses/03-2008/Bandes.pdf>.