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## Risk Realization, Emotion, and Policy Making

Chris Guthrie\*

We live in scary times. We face the prospect of such fearful events as the spread of SARS and other dangerous diseases;<sup>1</sup> repeated terrorist attacks on American soil;<sup>2</sup> the loss of loved ones in war;<sup>3</sup> the tainting of our food supply with mad cow disease and other toxins;<sup>4</sup> and so on. As Professor Feigenson and his colleagues put it, “[t]hreats seem to abound.”<sup>5</sup>

The anticipation of such threats evokes powerful emotion. In their study of terrorism and SARS, Professor Feigenson and his colleagues report “significant positive correlations between people’s risk perceptions and their negative affect.”<sup>6</sup> In their review of the judgment and decision-making literature, Professor Slovic and his colleagues document the interplay between reason and emotion in assessing risk.<sup>7</sup> And in the context of a soldier’s concerns for himself and his family, Professor Moran provides a powerful narrative of fear.<sup>8</sup>

But what happens when such threats are actually realized? Do we accurately predict the emotional impact of such events? Or are there meaningful and predictable differences between the feelings we forecast and the feelings we experience? If there is a meaningful difference between our anticipated sense of well-being and our actual sense of well-being, what impact should this have on policy making?

Using the license I have been granted as a commentator, I intend to explore these questions briefly here. Relying largely on research findings from

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\* Associate Dean for Academic Affairs & Professor of Law, Vanderbilt University Law School.

1. See, e.g., Neal Feigenson et al., *Perceptions of Terrorism and Disease Risks: A Cross-national Comparison*, 69 MO. L. REV. 991 (2004) (describing a cross-national study of perceptions of the risk of SARS and terrorism).

2. See, e.g., *id.*; Paul Slovic, *What’s Fear Got to Do with It? It’s Affect We Need to Worry About*, 69 Mo. L. Rev. 971, 974-79 (2004).

3. See, e.g., Rachel F. Moran, *Fear: A Story in Three Parts*, 69 MO. L. REV. 1013 (2004) (sharing a letter written by a soldier in Iraq in anticipation of his potential death in war).

4. See, e.g., Feigenson et al., *supra* note 1, at 991.

5. *Id.*

6. *Id.* at 1010.

7. Slovic, *supra* note 2, at 971-76 (describing the “risk as analysis” and the “risk as feelings” approaches to assessing and managing risk).

8. Moran, *supra* note 3, at 1013-14.

the emerging literature on “affective forecasting,”<sup>9</sup> I will argue that we are likely to overestimate the impact of these negative life events—even traumatic events—on our enduring sense of well-being. If true, this empirical finding puts policy makers in an awkward position because they are generally called upon to make policy in anticipation of, rather than in response to, such events. Nonetheless, I will argue that policy makers should take into account our tendency to overestimate the emotional impact of such events.

### I. THE “IMPACT BIAS”<sup>10</sup>

Researchers have discovered that we have difficulty predicting how an event will affect our sense of well-being. This is not to say that we are entirely without insight into our future emotional lives. In fact, we are quite skilled at predicting whether we will feel positively or negatively about an event,<sup>11</sup> and we are generally capable of anticipating the specific emotion or emotions that we will feel.<sup>12</sup> What we have difficulty with, however, is predicting the *intensity* and *duration* of our emotional reactions. When we try to imagine how we would feel if a loved one contracted SARS, for instance, we accurately predict that we will feel negatively rather than positively and that the specific emotions we will feel include sadness and fear; however, we are likely to overestimate how intense our reaction will be and how long it will last. As psychologists Timothy Wilson and Daniel Gilbert explain:

Often people predict correctly the valence of their emotional reactions and correctly predict the specific emotions they will experience. Even when achieving such accuracy, however, it is important for people to predict what the initial intensity of the reaction will be and the duration of that emotion. It is useful to know that we will feel happy on our first day at a new job, but better to know how happy and how long this feeling will last, before committing ourselves to a lifetime of work as a tax attorney. It is helpful to know that it will be painful to end a long-term relationship, but bet-

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9. See, e.g., Timothy D. Wilson & Daniel T. Gilbert, *Affective Forecasting*, 35 ADVANCES EXPERIMENTAL SOC. PSYCHOL. 345, 346 (2003) (defining “affective forecasting” as “people’s predictions about their future feelings”). For an accessible introduction to this line of research, see Jon Gertner, *The Futile Pursuit of Happiness*, N.Y. TIMES, Sept. 7, 2003, § 6 (Magazine), at 44.

10. Wilson & Gilbert, *supra* note 9, at 351. For a recent exploration of the operation of the impact bias in negotiation, see Chris Guthrie & David Sally, *The Impact of the Impact Bias on Negotiation*, 87 MARQ. L. REV. 817 (2004).

11. Wilson & Gilbert, *supra* note 9, at 347 (observing that “[i]n general . . . people make accurate predictions about which side of the neutral point their emotional experiences will fall, especially if they have had experience in that domain”).

12. *Id.* at 401 (observing that “[p]eople are also skilled at guessing the specific kinds of emotional reactions they will have”).

ter to know how painful and whether the pain will last half a second or half a decade.<sup>13</sup>

Our tendency to overestimate the impact of future events on our emotional lives is called the “impact bias.”<sup>14</sup>

To identify the impact bias, researchers have used two methodological approaches. Some researchers have used a “within-subjects”<sup>15</sup> design in which they first ask participants to predict how they would feel upon the occurrence of some event, and then ask the same participants to indicate how they feel after the occurrence of the event. Other researchers have used a “between-subjects”<sup>16</sup> design in which they ask one group of participants to predict how they would feel about some event and then ask another group of participants who have experienced the event to indicate how they feel.

Researchers have found evidence of the impact bias in several contexts. Consider, for example, the following:

In one study, researchers asked students enrolled in introductory psychology classes to predict how they would feel if they received a grade one level lower than they expected (e.g., a B- rather than an expected B).<sup>17</sup> On a 9-point scale, participants predicted they would experience an average sense of well-being of 3.37.<sup>18</sup> In fact, they experienced an average sense of well-being of 4.95, demonstrating that they predicted they would feel significantly worse than they actually did.<sup>19</sup>

Another group of researchers asked undergraduate participants to predict how they would feel if they experienced the break-up of a romantic relationship.<sup>20</sup> On a 7-point scale, participants predicted, on average, that their sense of well-being would be 3.89.<sup>21</sup> Those who experienced such break-ups, how-

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13. *Id.* at 349 (parentheticals omitted).

14. *Id.* at 351.

15. For a detailed explanation, see, for example, JOHN J. SHAUGHNESSY & EUGENE B. ZECHMEISTER, *RESEARCH METHODS IN PSYCHOLOGY* 212-14 (3d ed. 1994).

16. *See, e.g., id.* at 180-85.

17. Roger Buehler & Cathy McFarland, *Intensity Bias in Affective Forecasting: The Role of Temporal Focus*, 27 *PERSONALITY & SOC. PSYCHOL. BULL.* 1480, 1483-84 (2001).

18. *Id.* at 1484.

19. *Id.* To address a couple of methodological limitations associated with this study (namely, a low response rate and retrospective evaluations of affect following receipt of the grade), the researchers conducted a follow-up study. *Id.* Again, the researchers found that participants overestimated how negatively they would feel upon receipt of a grade below their expectations. *Id.* at 1485.

20. Daniel T. Gilbert et al., *Immune Neglect: A Source of Durability Bias in Affective Forecasting*, 75 *J. PERSONALITY & SOC. PSYCHOL.* 617, 620-22 (1998).

21. *Id.* at 622.

ever, gave a mean response of 5.27 two months after breaking up, indicating a significantly higher level of well-being than they expected.<sup>22</sup>

This same group of researchers also asked voters in the 1994 gubernatorial election in Texas to predict how they would feel if their preferred candidate lost the election.<sup>23</sup> On the same 7-point scale, the voters predicted, on average, that their sense of well-being would be 4.07.<sup>24</sup> One month later, however, those whose favored candidate lost the election gave a mean well-being rating of 5.33, indicating that they “were significantly happier than they had expected to be.”<sup>25</sup>

Finally, another group of researchers asked participants (“the predictors”) at an anonymous testing site in Pittsburgh to predict how they would feel upon learning that they were HIV-positive.<sup>26</sup> Then, five weeks later, they asked those who learned they were HIV-positive how they actually felt.<sup>27</sup> Unfortunately, several participants opted out of the follow-up study, so the researchers supplemented their results with a second sample of participants (“the assessors”) who had learned within the past few weeks that they were HIV-positive.<sup>28</sup> The researchers then compared the former participants’ predictions to the latter participants’ actual assessments and found that the predictors anticipated experiencing significantly more distress than the assessors actually experienced.<sup>29</sup>

In sum, researchers have found that the impact bias influences our reactions to all kinds of life events, including “romantic breakups, personal insults, sports victories, electoral defeats, parachute jumps, failures to lose weight, reading tragic stories, and learning the results of pregnancy and HIV tests.”<sup>30</sup> “[E]ven uncommon events—such as losing a child in a car accident, being diagnosed with cancer, becoming paralyzed, or being sent to a concentration camp—seem to have less impact on long-term happiness than one might naively expect.”<sup>31</sup> This appears to be true even for the least common (we hope) and most traumatic of events:

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22. *Id.*

23. *Id.* at 624-26.

24. *Id.* at 625.

25. *Id.*

26. Elaine M. Sieff et al., *Anticipated Versus Actual Reaction to HIV Test Results*, 112 AM. J. PSYCHOL. 297, 300-08 (1999).

27. *Id.* at 300.

28. *Id.* at 300-01.

29. *Id.* at 307.

30. Wilson & Gilbert, *supra* note 9, at 353. In short, “bad events proved less intense and more transient than test participants predicted.” Gertner, *supra* note 9, at 46.

31. Gilbert et al., *supra* note 20, at 618 (citations omitted). For some evidence in support of this proposition, see Glenn Affleck & Howard Tennen, *Construing Benefits from Adversity: Adaptational Significance and Dispositional Underpinnings*, 64 J. PERSONALITY 899, 901-02 (1996) (identifying several studies involving the survivors

Soon after the collapse of the World Trade Center, experts predicted that one out of five New Yorkers—some one and a half million people—would be traumatized by the tragedy and require psychological care.

. . . .  
. . . [D]ata from surveys taken after September 11th contradicted the early predictions that there would be widespread psychological damage. A telephone survey of nine hundred and eighty-eight adults living below 110th Street, conducted in October and November of 2001, found that only 7.5 per cent had been diagnosed as having P.T.S.D. [post-traumatic stress disorder]. . . . A follow-up of this survey, in March of 2002, found that only 1.7 per cent of New Yorkers suffered from prolonged P.T.S.D.<sup>32</sup>

Researchers do not know why we overestimate the emotional impact of future life events, but they have identified two phenomena that point us in this direction.<sup>33</sup> First, when predicting reactions to a future event, we tend to ignore the impact that *other* events are likely to have on our sense of well-being. When contemplating what it would be like to lose a loved one in a terrorist event or to contract HIV, we are likely to ignore other events in our lives that will also play a role in our sense of well-being at the time and focus

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of “a wide array of medical problems for which nearly all or more than a majority of informants cited benefits or gains from their adversity”); Rebecca L. Collins et al., *A Better World or a Shattered Vision? Changes in Life Perspectives Following Victimization*, 8 SOC. COGNITION 263, 271 (1990) (reporting that a sample of cancer patients “seemed able to derive more benefit than harm from their experiences”); Peter Suedfeld, *Reactions to Societal Trauma: Distress and/or Eustress*, 18 POL. PSYCHOL. 849, 858-59 (1997) (“[T]he ‘bottom line’ is that people most commonly put their lives together again and move ahead, many citing greater strength, insight, altruism, and sense of purpose as consequences of their traumatic experience.”). *But see* Darrin R. Lehman et al., *Positive and Negative Life Changes Following Bereavement and Their Relations to Adjustment*, 12 J. SOC. & CLINICAL PSYCHOL. 90 (1993) (expressing skepticism about self-reports of positive life changes following tragic events).

32. Jerome Groopman, *The Grief Industry*, NEW YORKER, Jan. 26, 2004, at 30, 33.

33. Other phenomena undoubtedly contribute to the impact bias. In their review article, Wilson and Gilbert discuss some of these—including “framing effects,” “expectation effects,” and “intrapersonal empathy gaps”—but these phenomena do not lead systematically to overestimation. *See* Wilson & Gilbert, *supra* note 9, at 354-66. Additionally, people may overestimate the impact of life events on their on-going sense of well-being because they fail to recognize that they have something akin to a happiness “set point” which does not fluctuate too much regardless of life events. *See* DAVID LYKKEN, *HAPPINESS: THE NATURE AND NURTURE OF JOY AND CONTENTMENT* (1999) (relying largely on studies of twins to argue that we possess a “happiness set point” but that there are things we can nonetheless do to increase our level of well-being).

instead on the negative event in isolation. In other words, we are prone to a phenomenon researchers have labeled “focalism”<sup>34</sup> or a “focusing illusion.”<sup>35</sup>

Second, we underestimate the extent to which we process an experience or outcome psychologically to dampen its emotional impact. Upon experiencing some event, we engage in what Wilson and Gilbert call “sense-making processes”;<sup>36</sup> that is, we “inexorably explain and understand events that were initially surprising and unpredictable, and this process lowers the intensity of emotional reactions to the events.”<sup>37</sup> This is particularly true when we experience negative events, which trigger the so-called “psychological immune system”.<sup>38</sup>

The psychological immune system can be thought of as a special case of the kind of human sense making we have already discussed. When any novel important event occurs, cognitive processes are triggered to make sense of it. If that event is negative and challenges people’s sense of well-being, the psychological immune system turbo charges the sense-making process, giving it extra force and direction. People are motivated to make sense of any novel event, but are especially motivated to interpret negative events in ways that minimize their impact.<sup>39</sup>

In advance, however, we fail to “anticipate how much [we] will transform events psychologically in ways that reduce their emotional power.”<sup>40</sup> In other words, we fail to appreciate that we have a psychological immune system that protects us from intense, enduring, unpleasant emotions caused by a negative event.

## II. POLICY MAKING

Assuming this research is accurate and applicable to the sorts of events of concern here, what should policy makers do? In the usual course, policy makers make policy in anticipation of events. Faced with the threat of additional terrorist acts on American soil or the spread of SARS, policy makers

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34. Wilson & Gilbert, *supra* note 9, at 366 (“Events do not occur in a vacuum of course, but in the rich context of many other events in people’s lives. By neglecting to consider how much these other events will capture their attention and influence their emotions, people overestimate the impact of the focal event.”).

35. David A. Schkade & Daniel Kahneman, *Does Living in California Make People Happy? A Focusing Illusion in Judgments of Life Satisfaction*, 9 PSYCHOL. SCI. 340, 340-41 (1998).

36. Wilson & Gilbert, *supra* note 9, at 371.

37. *Id.*

38. Gilbert et al., *supra* note 20, at 619.

39. Wilson & Gilbert, *supra* note 9, at 380-81.

40. *Id.* at 374.

must decide what to do with suspected terrorists or what to do with those who have contracted SARS.

Before taking some regulatory action to protect against some anticipated event, policy makers should first assess the costs and benefits of the status quo. One cost, of course, is that the anticipated event will occur, and some of us will suffer affective harm as a consequence. Work on affective forecasting suggests, however, that we are likely to overestimate the intensity and duration of the negative affect associated with this event.

Does this mean, then, that policy makers should not take steps to prevent or minimize these harms from coming to pass? Obviously, there are other costs associated with such events, so the answer to this question does not turn entirely on the affective consequences of such events. However, the work on affective forecasting might very well alter the cost/benefit calculus because it shows that actual affective harms are likely to be less substantial than anticipated affective harms. Thus, when policy makers are inclined to intrude on individual autonomy to prevent anticipated harms—for example, by curtailing the civil rights of alleged terrorists, by violating individual privacy rights in an effort to limit the spread of AIDS or SARS, or by recalling beef at the expense of the families and companies raising and processing it—they should be aware of our tendency to overestimate the impact of our emotional reactions to the events they are trying to prevent. In all likelihood, we will not react as strongly as they might anticipate, suggesting that they should proceed with some caution when regulating.

## CONCLUSION

Research on the impact bias suggests that human suffering is likely to be less intense and less enduring than we might imagine. We do suffer, of course, but research on the impact bias suggests that we are quite resilient in the face of unfortunate and even tragic events.

