

## LAW AND PROXIMITY

Adam J. Hirsch\*

Gregory Mitchell\*\*

*Perceptions of proximity matter to people. When they come close to getting something they want, or when they nearly avoid something that harms them, or nearly are harmed by something, people tend to react more strongly than when they miss getting the thing they want by a lot, or when a harm that befalls them was unavoidable, or when a potential harm never came close to occurring. This article explores these psychological phenomena and their implications for legal policy and process. The article begins by reviewing the existing literature on the psychology of proximity and proceeds to consider its implications for the law of torts and criminal law (i.e., harms), and for the regulation of lotteries and gambling law (i.e., goods). The article then turns to situations where legal process can itself raise perceptions of proximity—viz., near misses of legality. The article argues that lawmakers could mitigate the frustrations of near misses by structuring law, and issuing legal judgments, in a manner that avoids or obscures them. In particular, the article explores the implications of the psychology of proximity for the rules-standards debate and assesses the virtues of substantial compliance doctrines, a form of legal structure that has received insufficient attention in the course of the rules-standards debate. The article concludes that lawmakers should take the psychology of proximity into consideration when they make policy choices, but in so doing lawmakers need to bear in mind the potential functionality of that psychology. Near miss experiences can be painful but simultaneously educational, stirring behavioral adjustments in those who endure them.*

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\* William and Catherine VanDercreek Professor of Law, Florida State University. M.A. 1979, J.D. 1982, Ph.D. 1987 Yale University.

\*\* Professor of Law and E. James Kelly, Jr.-Class of 1965 Research Professor, University of Virginia. M.A. 1990, J.D. 1993, Ph.D. 1994 University of California at Berkeley. We appreciate the helpful suggestions of Michael Abramowicz, Russell Christopher, Lawrence Cunningham, Donald Langevoort, Peter Oh, and participants at a faculty workshop at Vanderbilt University Law School.

'Tis double death to drown in ken of shore;  
 He ten times pines that pines beholding food;  
 To see the salve doth make the wound ache more;  
 Great grief grieves most at that would do it good.

— William Shakespeare<sup>1</sup>

#### INTRODUCTION

You have a train to catch. You approach the platform with time to spare, the train rolls in, and you climb on board. You think nothing of the matter.

Suppose, however, that you are running late. You dash to the platform, arrive just as the train is due to leave, and scramble aboard, seconds before the doors close behind you. You enjoy a sense of elation, unlike the ordinary experience of boarding a train. Alternatively, suppose that just as you arrive, with the train in sight only a short sprint ahead of you, a whistle blows, the doors slam shut, and you are left standing alone on the platform as the train begins to pull away. You suffer a sense of frustration, or even exasperation, far more intense than if the train had already gone by the time you reached the station.

We have all felt such sensations, sometimes mildly and sometimes powerfully, in countless situations. When we *barely* accomplish (or escape) something, we experience a *close call*. When we *almost* accomplish (or escape) something, we experience a *near miss*.<sup>2</sup> From the perspective of *homo economicus*, taking a reasoned view of things, close calls are indistinguishable from successes with room to spare; likewise, misses are misses, whether by inches or miles. From the perspective of *homo psychologicus*, however, the margin of victory or defeat matters—and, paradoxically, the narrower that margin, the sweeter or more bitter it tastes.

These psychic phenomena have been intuitively appreciated for centuries. Shakespearian stanzas stand alongside other literary images, threading all the way back to Greek mythology<sup>3</sup>—and, in the dramatic arts, these parallel the more graphic formulae of action-adventure cin-

1. WILLIAM SHAKESPEARE, *THE RAPE OF LUCRECE* ll. 1114–17 (1594) (photo. reprint 1968).

2. We should note that scholars—and courts—sometimes use the term “near miss” to refer to the entire category of proximity events, whether the outcome is positive or negative. *See, e.g., infra* notes 73, 79, 99. For clarity, we follow the terminological distinction indicated in the text.

3. Tantalus suffered “grievous torments,” and also gave birth to a pertinent eponym, by being forced to stand “thirst-parch’d” in a pool which receded whenever he bowed his head to drink, and with fruit dangling from branches just beyond his reach. 2 HOMER, *THE ILIAD AND ODYSSEY OF HOMER* 294 (W. Cowper trans., Dublin, W. Corbet 1792) (antedating 600 B.C.). The British novelist Henry Fielding likewise portrayed proximity as an affective variable:

Nothing more aggravates ill success than the near approach to good. The gamester, who loses his party at Piquet by a single point, laments his bad luck ten times as much as he who never came within a prospect of the game. . . . In short, these kind of hair-breadth missings of happiness look like the insults of Fortune, who may be considered as thus playing tricks with us, and wantonly diverting herself at our expen[s]e.

<sup>3</sup> HENRY FIELDING, *THE HISTORY OF TOM JONES* 7 (Edinburgh, J. Sibbald 1791) (1749).

ema and physical comedy, where near misses and close calls have often figured prominently.<sup>4</sup> The same can be said of games and sports, whose popularity depends on the excitement near misses and close calls provide.<sup>5</sup>

Despite the ubiquity of the phenomena, psychologists have only lately begun to study what is going on inside us at such moments: “The thought that something ‘almost happened’ is a rich, under-researched concept.”<sup>6</sup> If the topic has gone underresearched in psychology, within law it remains wholly *unresearched*. Analysis of the phenomena has never found its way into the scholarly literature.<sup>7</sup>

In this article, we take up the problem of near misses and close calls in the context of law and legal process. Our analysis is both descriptive and prescriptive, assaying whether lawmakers evince a theory of mind that considers the psychological ramifications of proximity, and whether (and when) they ought to do so. What is more, since no one is immune to the human condition, we also turn the tables to contemplate how near misses can, on occasion, affect legal decision makers themselves, and how public policy should in turn take into account this “systemic” reflection of proximity.

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4. See NEAL ROESE, *IF ONLY* 153, 158–62 (2005) (pointing out examples in a variety of well-known films). One need not even witness a near miss to react to it; visualization suffices. In a running gag on the 1960s television spoof *Get Smart!*, a villain would describe his unlikely get-away plan, perhaps jumping out of a fourth story window onto a moving truck, and then disappear out of the window. The hapless hero, Maxwell Smart (played by the late Don Adams) would proceed to look out the window, hold his thumb and forefinger nearly together, and announce deadpan, “Missed it by *that* much!”

5. “Baseball, said Branch Rickey, is a game of inches. In chess, as well, the outcome of a game may sometimes turn on what feels like a hair-raisingly close call.” Jon Jacobs, *Chess Is a Game of Inches*, *CHess LIFE*, Apr. 2005, at 18; see also Lawrence J. Sanna et al., *A Game of Inches: Spontaneous Use of Counterfactuals by Broadcasters During Major League Baseball Playoffs*, 33 *J. APPLIED SOC. PSYCHOL.* 455, 471 (2003) (quoting a manager’s reaction to close baseball games: “You can feel it down there. . . . I can’t describe it as ‘fun’ but it’s the essence of the sport.”). And, of course, near misses and close calls are the heart and soul of the game of golf.

6. Eric P. Seelau et al., *Counterfactual Constraints*, in *WHAT MIGHT HAVE BEEN: THE SOCIAL PSYCHOLOGY OF COUNTERFACTUAL THINKING* 57, 68 (Neal J. Roese & James M. Olson eds. 1995) [hereinafter *WHAT MIGHT HAVE BEEN*]; see also, e.g., Neal J. Roese & James M. Olson, *Counterfactual Thinking: A Critical Overview*, in *WHAT MIGHT HAVE BEEN*, *supra*, at 1, 22 (identifying “perceived closeness” as “[o]ne of the more fascinating yet least understood” psychological experiences).

7. For a tangentially related discussion, see Peter Goodrich, *A Fragment on Cnutism with Brief Divagations on the Philosophy of the Near Miss*, 31 *J.L. SOC’Y* 131, 132 (2004) (on near misses of understanding, connection, and influence). We should differentiate our analysis from studies of the element of luck in law. E.g., Kimberly D. Kessler, Comment, *The Role of Luck in the Criminal Law*, 142 *U. PA. L. REV.* 2183 (1994). Although subjects often ascribe close calls and near misses to luck, see Karl H. Teigen et al., *Good Luck and Bad Luck: How to Tell the Difference*, 29 *EUR. J. SOC. PSYCHOL.* 981, 1006–07 (1999); Karl H. Teigen, *Luck: The Art of a Near Miss*, 37 *SCANDINAVIAN J. PSYCHOL.* 156 (1996); Michael J.A. Wohl & Michael E. Enzle, *The Effects of Near Wins and Near Losses on Self-Perceived Personal Luck and Subsequent Gambling Behavior*, 39 *J. EXPERIMENTAL SOC. PSYCHOL.* 184, 190 (2003); *supra* note 3, our focus is on the psychic experience of proximity and its behavioral consequences, whether or not the occurrence is attributed to luck.

Because near misses can crop up in virtually any area of law, our inquiry into these matters could focus in on a single example as a case study. In this inaugural exploration of the subject, however, we have elected to take an expansive view, seeking to identify common themes across disparate domains. In Part I, we survey what is known about the psychology of near misses and close calls, describing their emotional and behavioral effects. In Part II, we proceed to legal applications, beginning with rules concerned with almost experiencing or almost escaping harms. In Part III, we consider rules related to almost acquiring goods. In Part IV, we turn to near misses of law itself, recognizing that the imposition of legal rules and judgments can in like manner generate frustrations associated with proximity to success.

As a descriptive matter, we find that lawmakers show some understanding of the problems of proximity, and that they have responded to those problems sensibly for the most part. As a prescriptive matter, we draw several conclusions from our review of the problems: (1) Proximate stimuli naturally evoke more active and intense responses than distal stimuli, and the harms associated with near misses are just as real, and often just as intense, as the harms associated with “hits.” Thus, we argue, lawmakers should compensate and criminalize proximity-induced harms in many circumstances. But at the same time, (2) near misses and close calls can frequently motivate adaptive thought and behavior. Where that is so, and the learning environment is a “kind” one, lawmakers may do best to leave persons to learn from these experiences, even if that means allowing them to endure some short-term psychic pain for long-term behavioral gain. Still, (3) in “wicked” learning environments,<sup>8</sup> experiences with proximity usually lead to maladaptive thought and behavior, a circumstance that provides an additional cause for legal intervention. Finally, these same factors relate not only to *where* we draw lines of legality, but also to *how* we do so—that is, to the jurisprudence of line drawing and rule articulating per se. In this last regard, appreciation of the psychological importance of proximity encourages a new respect for substantial compliance doctrines as a structural means of cabining law.

Considered broadly, perhaps the key challenge facing the new behavioral law and economics movement is to make accurate predictions about how subjects will act and react once they move outside the laboratory. Behavioral economists and psychologists have identified a wide range of judgment and decision-making biases under controlled, *ceteris paribus* conditions; what they have not done, because they ignore individual differences and environmental variations in their search for general behavioral tendencies, is identify the conditions under which these multiple, and at times conflicting, biases will exert greater or lesser influ-

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8. The distinction between “kind” and “wicked” learning environments follows the terminology of Robin Hogarth and is further elaborated below. See *infra* note 123 and accompanying text.

ence and hence affect behavior in “realistic” settings.<sup>9</sup> In this connection, the proximate-distal distinction appears to occur at a very basic level of cognition, and, significantly, the responses a near miss elicits have been documented both in experimental studies and in field studies. Perceptions of proximity clearly do matter in the real world—as such, they must also be reckoned with upon the legal landscape.

### I. THE PSYCHOLOGY OF PROXIMATE EXPERIENCES

The reactions we experience to near misses and close calls stem from our brooding over those episodes after they have occurred.<sup>10</sup> In contemplating the state of the world, “[t]he mind is not a determinist.”<sup>11</sup> We perceive the contingency of events and can simulate the alternative courses that events may take, or might have taken. When we imagine how events in the past could have played out differently, we engage in a mental process known as *counterfactual* thinking.<sup>12</sup>

If events take a bad turn, part of our reaction derives from the realization that things might have turned out better. This thought, however, may be more or less credible, depending on the circumstances. In the case of a “far miss,” mental simulations of alternative unfolding events are less apt to produce the preferred outcome. These simulations will mostly yield *semifactuals*, wherein antecedent variables lead to the same, ineluctable consequence.<sup>13</sup> In the case of a near miss, counterfactual fan-

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9. See Adam J. Hirsch, *Spendthrift Trusts and Public Policy: Economic and Cognitive Perspectives*, 73 WASH. U. L.Q. 1, 17–32 (1995) (discussing limits on claims about myopic spending and borrowing); Gregory Mitchell, *Tendencies Versus Boundaries: Levels of Generality in Behavioral Law and Economics*, 56 VAND. L. REV. 1781, 1797–1805 (2003) (discussing bounds on many of the claims about bounded rationality). For a general discussion of this problem, see Jeffrey J. Rachlinski, *The “New” Law and Psychology: A Reply to Critics, Skeptics, and Cautious Supporters*, 85 CORNELL L. REV. 739, 745–52 (2000).

10. For an early discussion, anticipating modern ideas without modern jargon, see FRITZ HEIDER, *THE PSYCHOLOGY OF INTERPERSONAL RELATIONS* 141–44, 146 (1958). Although propensities to such brooding may differ as a function of personality, developmental level, and perhaps even sex and culture in some domains, most adults studied by psychologists exhibit the patterns described in the text. RUTH M.J. BYRNE, *THE RATIONAL IMAGINATION: HOW PEOPLE CREATE ALTERNATIVES TO REALITY* 182–83 (2005); Jing Chen et al., *Culture and Counterfactuals: On the Importance of Life Domains*, 37 J. CROSS-CULTURAL PSYCHOL. 75, 80–81 (2006); Barbara A. Morrongiello, *Children’s Perspectives on Injury and Close-Call Experiences: Sex Differences in Injury-Outcome Processes*, 22 J. PEDIATRIC PSYCHOL. 499, 509–10 (1997).

11. Daniel Kahneman, *Varieties of Counterfactual Thinking*, in *WHAT MIGHT HAVE BEEN*, *supra* note 6, at 375, 383.

12. See generally *WHAT MIGHT HAVE BEEN*, *supra* note 6. For a recent review essay, see Neal J. Roeser et al., *The Mechanics of Imagination: Automaticity and Control in Counterfactual Thinking*, in *THE NEW UNCONSCIOUS* 138 (Ran R. Hassin et al. eds., 2005).

13. Rachel McCloy & Ruth M.J. Byrne, *Semifactual “Even If” Thinking*, 8 THINKING & REASONING 41 (2002). For a delightful literary excursion into semifactual thinking, see O. HENRY, *Roads of Destiny*, in *ROADS OF DESTINY* 3 (1909).

tasies of a better outcome become more available,<sup>14</sup> and (assuming involvement<sup>15</sup>) they produce in those who conceive them feelings of regret and frustration.<sup>16</sup> Popular culture is sufficiently aware of the phenomenon not only to make use of it,<sup>17</sup> but also to depict it as a natural concomitant to proximate experiences.<sup>18</sup>

A second psychological phenomenon can reinforce counterfactual regret. In many (but not all) instances, persons are able to see a favor-

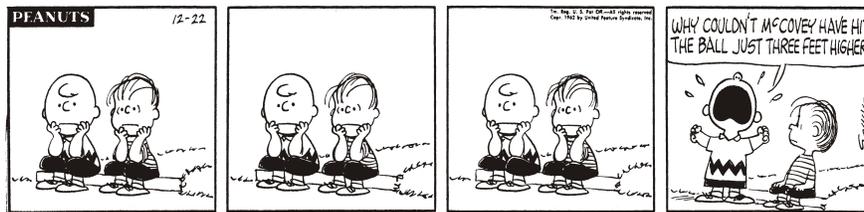
14. E.g., Ruth M.J. Byrne, *Mental Models and Counterfactual Thoughts About What Might Have Been*, 6 *TRENDS COGNITIVE SCI.* 426, 428 (2002) (“‘Closeness’ is related to plausibility.”); Kahneman, *supra* note 11, at 385; Roese & Olson, *supra* note 6, at 23–24; see also Eric van Dijk & Marcel Zeelenberg, *On the Psychology of ‘If Only’: Regret and the Comparison Between Factual and Counterfactual Outcomes*, 97 *ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES* 152, 153–54 (2005) (finding that uncertainty about what alternative outcomes were possible mitigates the experience of regret). Psychologists sometimes distinguish the subset of counterfactuals that follow near misses and close calls from the general sort of fantasizing that can attend any untoward event by referring to the subset as *close counterfactuals*. Daniel Kahneman & Carol A. Varey, *Propensities and Counterfactuals: The Loser That Almost Won*, 59 *J. PERSONALITY & SOC. PSYCHOL.* 1101, 1101 (1990) (coining the phrase). A close counterfactual is more concrete, it “does not invoke an alternative possible world, but states a fact about the history of this world.” *Id.* Also, it tends to crystalize automatically, entails less deliberation, and begets more powerful reactions. Kahneman, *supra* note 11, at 376, 385–86; Neal J. Roese & James M. Olson, *Counterfactual Thinking: The Intersection of Affect and Function*, 29 *ADVANCES EXPERIMENTAL SOC. PSYCHOL.* 1, 47–48 (1997). For economy, we shall employ the general term “counterfactuals,” although our discussion is confined to the kind associated with proximate experiences.

15. In the absence of involvement, counterfactuals may simply excite interest, and they have absorbed many a historian. E.g., *VIRTUAL HISTORY: ALTERNATIVES AND COUNTERFACTUALS* (Niall Ferguson ed., Basic Books 1999) (1997); *WHAT IF?* (Robert Cowley ed., 1999).

16. For a seminal discussion, including experimental evidence, see Daniel Kahneman & Amos Tversky, *The Simulation Heuristic*, in *JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES* 201 (Daniel Kahneman et al. eds., 1982). For more experimental evidence, see, for example, Joel T. Johnson, *The Knowledge of What Might Have Been: Affective and Attributional Consequences of Near Outcomes*, 12 *PERSONALITY & SOC. PSYCHOL. BULL.* 51 (1986). For field studies extending but qualifying the laboratory data, see Christopher G. Davis & Darrin R. Lehman, *Counterfactual Thinking and Coping with Traumatic Life Events*, in *WHAT MIGHT HAVE BEEN*, *supra* note 6, at 353, 354–61; Sanna, *supra* note 5, at 468–72.

17. See *supra* notes 3–5 and accompanying text.

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This cartoon was inspired by the decisive seventh game of the World Series of 1962 between the New York Yankees and the San Francisco Giants. In the bottom of the ninth inning, with the Giants at bat trailing by one run, and with two outs, the Giants had two runners on base—Willie Mays on second and Matty Alou on third. The Giants’ next batter, Hall-of-Fame slugger Willy McCovey, hit a line drive toward right field that looked momentarily like a game-winning base hit, but the Yankees’ second baseman, Bobby Richardson, leapt to catch the ball, ending the game, and the Series, with a victory for the Yankees. Published contemporaneously, the cartoon vividly depicts how near misses such as this can prompt agonizing counterfactual thinking. In this instance, the cartoonist, the late Charles Schulz—obviously a Giants’ fan—was perhaps just portraying what he himself had experienced. See also *supra* note 5.

able outcome of an event becoming increasingly probable as it nears.<sup>19</sup> If the anticipated outcome then fails to materialize, persons experience *disappointment*, aggravating their discomfiture.<sup>20</sup> This second phenomenon is equally well understood by lay persons and has even inspired a turn of phrase. When one suffers the frustration of nearly missing something that was anticipated, one grouches that it was “so close I could taste it.” The expression is a telling one, helping to unpack the psychological reaction. Because one was already “tasting,” that is deriving satisfaction from,<sup>21</sup> the anticipated thing, its subsequent deprivation forces a sort of hedonic reckoning.<sup>22</sup>

The presidential election of 2004 furnishes a vivid example of such a reckoning. Exit polls on election day had shown John Kerry leading in all of the battleground states. Nevertheless, when the votes were tallied that evening, George W. Bush squeaked to victory. Kerry’s staff was mortified: “One Kerry staffer said, [‘]we couldn’t only taste victory, we had it down our throat and then it was ripped out[’].”<sup>23</sup> Because victory had been within sight, Kerry’s narrow defeat was experienced all the more intensely.

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19. Professors Kahneman and Varey offer the example of a “roulette wheel that slows down as it approaches a critical number . . .” Kahneman & Varey, *supra* note 14, at 1104.

20. “. . . then finally [the roulette wheel] stops on a neighboring number.” *Id.* For a classic discussion, see David E. Bell, *Disappointment in Decision Making Under Uncertainty*, 33 OPERATIONS RES. 1 (1985). For discussions of the distinctness of regret and disappointment, see Dale T. Miller & William Turnbull, *The Counterfactual Fallacy: Confusing What Might Have Been with What Ought to Have Been*, 4 SOC. JUST. RES. 1, 14–16 (1990); Marcel Zeelenberg et al., *On Bad Decisions and Discontented Expectancies: The Psychology of Regret and Disappointment*, 14 COGNITION & EMOTION 521, 537–38 (2000); Marcel Zeelenberg et al., *Emotional Reactions to Outcomes of Decisions: The Role of Counterfactual Thought in the Experience of Regret and Disappointment*, 75 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 117, 135–36 (1998); Marcel Zeelenberg et al., *The Experience of Regret and Disappointment*, 12 COGNITION & EMOTION 221 (1998). Although frustration appears a concomitant of any near miss, disappointment need not be. In the absence of anticipation (either because the outcome of the event, or the entire event, was unexpected), the subject will still experience a pure form of frustration stemming from counterfactual contemplation of the near miss. For recognitions of this possibility, see Kahneman & Tversky, *supra* note 16, at 203; Dale T. Miller et al., *Counterfactual Thinking and Social Perception: Thinking About What Might Have Been*, 23 ADVANCES EXPERIMENTAL SOC. PSYCHOL. 305, 305 (1990).

21. The enjoyment of anticipation is referred to in the psychological literature by the related term *savoring* (the opposite of *dread*). Jon Elster & George Loewenstein, *Utility from Memory and Anticipation*, in CHOICE OVER TIME 213, 224 (George Loewenstein & Jon Elster eds., 1992); George Loewenstein, *Anticipation and the Valuation of Delayed Consumption*, 97 ECON. J. 666, 667 (1987); see also Dan Lovallo & Daniel Kahneman, *Living with Uncertainty: Attractiveness and Resolution Timing*, 13 J. BEHAV. DECISION MAKING 179, 179–80, 185 (2000) (finding that savoring can occur under conditions of uncertainty); Samuel M. McClure et al., *Separate Neural Systems Value Immediate and Delayed Monetary Rewards*, 306 SCI. 503 (2004) (neuroeconomic study).

22. If the anticipated thing is a marketable good, that reckoning might be amplified by another phenomenon, called the endowment effect. See *infra* note 110 and accompanying text.

23. *NewsHour with Jim Lehrer: Shields and Brooks* (PBS television broadcast Nov. 5, 2004), (transcript available at [http://www.pbs.org/newshour/bb/political\\_wrap/July-dec04/sb\\_11-5.html](http://www.pbs.org/newshour/bb/political_wrap/July-dec04/sb_11-5.html)).

The mirror image of a near miss is a close call.<sup>24</sup> A close call, by comparison, produces elation, rather than frustration,<sup>25</sup> derived from counterfactual images of how the event could easily have gone worse, not better. This reaction can be amplified by relief, as opposed to disappointment, if a negative outcome had been anticipated.

The dichotomy of reactions to near misses and close calls just described does not, in fact, appear in every instance. Whereas scholars initially assumed that subjects who underwent a proximate experience would inevitably *contrast* the actual experience with what might have been, making a comparison to the better or worse outcome that was nearly missed, evidence now suggests that in some instances subjects instead *assimilate* the two, associating what happened with what nearly happened. Most notably, when the salient element of a proximate experience diverges from the ordinary course and precipitates the event—say, deviating from one’s customary route and suffering an accident—attention is likely to focus on the unusual aspect of the story, inviting contrast to what would *not* have happened had one only stuck to routine. But when the salient element is the event itself, assimilation typically occurs. Thus, people who cancel their reservations (for ordinary reasons) on an airline flight that crashes will often find the experience traumatic, even though it is a close call. The salient fact riveting attention is the calamity that almost *did* happen, making the close call too close for comfort.<sup>26</sup>

That proximate stimuli receive greater attention and motivate thought in different ways from distal stimuli is clear. Yet, just how near a miss or close a call must be in order to trigger proximate reactions, and

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24. Whether a proximate event is experienced as a close call or a near miss can be ambiguous. Surviving a serious automobile accident may simultaneously constitute a close brush with death and a near miss of successful avoidance of the accident. Here, the expectations brought to the event may determine its dominant nature, along with the counterfactual comparisons primed by the event. Chien-Huang Lin et al., *Multiple Reference Points in Investor Regret*, 27 J. ECON. PSYCHOL. 781 (2006); Shelley E. Taylor et al., *It Could Be Worse: Selective Evaluation as a Response to Victimization*, 39 J. SOC. ISSUES 19, 26–35 (1983).

25. As the young Winston Churchill put it, “There is nothing more exhilarating than to be shot at without result.” WILLIAM MANCHESTER, *THE LAST LION: WINSTON SPENCER CHURCHILL, VISION OF GLORY, 1874–1932*, at 228 (1983).

26. Keith D. Markman & Matthew N. McMullen, *Reflective and Evaluative Modes of Mental Simulation*, in *THE PSYCHOLOGY OF COUNTERFACTUAL THINKING* 77, 77–80, 88–89 (David R. Mandel et al. eds., 2005) [hereinafter *COUNTERFACTUAL THINKING*] (suggesting that a subject can contrast and assimilate simultaneously after a close call and thereby experience mixed feelings); Keith N. Markman & Matthew N. McMullen, *A Reflection and Evaluation Model of Comparative Thinking*, 7 PERSONALITY & SOC. PSYCHOL. REV. 244, 246, 253–54 (2003) [hereinafter Markman & McMullen, *Reflection*]; Matthew N. McMullen, *Affective Contrast and Assimilation in Counterfactual Thinking*, 33 J. EXPERIMENTAL SOC. PSYCHOL. 77 (1997). For further research on variables affecting contrast versus assimilation, see Keith D. Markman et al., *The Interplay Between Counterfactual Reasoning and Feedback Dynamics in Producing Inferences About the Self*, 13 THINKING & REASONING 188 (2007); Keith Markman & Philip E. Tetlock, *Accountability and Close-Call Counterfactuals: The Loser Who Nearly Won and the Winner Who Nearly Lost*, 26 PERSONALITY & SOC. PSYCHOL. BULL. 1213 (2000); Philip E. Tetlock, *Close-Call Counterfactuals and Belief-System Defenses: I Was Not Almost Wrong But I Was Almost Right*, 75 J. PERSONALITY & SOC. PSYCHOL. 639 (1998).

whether a discrete threshold separates an event that almost happened from a mere event, remains to be investigated. The perception of proximity is doubtless contextual, for it is known to arise along different dimensions.<sup>27</sup> Hence, a near miss or close call can be spatial, temporal, or quantitative (as in sporting competitions), or even more abstractly numerical (*viz.*, missing a winning lottery number by a single digit<sup>28</sup>). And there is still another realm within which proximate experiences can occur—the mind itself. Persons torn between alternative choices that will prove either right or wrong face the prospect of what we call a *deliberative* near miss. When decision makers discover that they chose wrongly, but are aware that they *almost* chose rightly, their frustration is palpable.<sup>29</sup>

The intensity of one's reaction to a near miss or close call obviously varies with the importance of the event.<sup>30</sup> Yet other factors can also affect valence. In particular, controllability appears a powerful amplifier of counterfactual regret.<sup>31</sup> When circumstances that produced a near miss

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27. Roese & Olson, *supra* note 6, at 22–25.

28. Of course, holding a losing lottery ticket with numbers countably close to the numbers on the winning ticket fails to distinguish its likelihood of winning from that of a ticket with entirely different numbers. Nevertheless, experimental evidence confirms that numerical proximity causes losing ticket holders to experience frustration. William Turnbull, *Naive Conceptions of Free Will and the Deterministic Paradox*, 13 CANADIAN J. BEHAV. SCI. 1, 2–3, 5–12 (1981). Meanwhile, mathematicians have developed their own concept of numerical near misses, albeit one more playful than frustrating. Erica Klarreich, *Springfield Theory*, SCI. NEWS, June 10, 2006, at 360.

29. Once again, a popular aphorism captures the experience: *shoulda, coulda, woulda*. William Safire, *On Language*, N.Y. TIMES, May 15, 1994, § 6 (Magazine), at 22. Other near misses of mind, of less relevance to law, can also occur. When one *almost* remembers something, such a near miss of memory again provokes frustration. For a discussion of this “tip of the tongue” phenomenon within memory research, see Bennett L. Schwartz et al., *The Inferential and Experiential Bases of Metamemory*, 6 CURRENT DIRECTIONS PSYCHOL. SCI. 132 (1997).

30. Roese & Olson, *supra* note 6, at 25–26; *see also* Orit E. Tykocinski & Noa Steinberg, *Coping with Disappointing Outcomes: Retroactive Pessimism and Motivated Inhibition of Counterfactuals*, 41 J. EXPERIMENTAL SOC. PSYCHOL. 551 (2005) (finding that subjects tend more frequently to resort to psychological defense mechanisms against regret, discussed *infra* text at notes 37–46, when a near miss is more important). *See generally* Lawrence J. Sanna & Kandi Jo Turley-Ames, *Counterfactual Intensity*, 30 EUR. J. SOC. PSYCHOL. 273 (2000).

31. Vittorio Girotto et al., *Event Controllability in Counterfactual Thinking*, 78 ACTA PSYCHOLOGICA 111 (1991); Keith D. Markman et al., *The Impact of Perceived Control on the Imagination of Better and Worse Possible Worlds*, 21 PERSONALITY & SOC. PSYCHOL. BULL. 588 (1995); Alice McEleney & Ruth M.J. Byrne, *Spontaneous Counterfactual Thoughts and Causal Explanations*, 12 THINKING & REASONING 235, 239–45 (2006); Matthew N. McMullen et al., *Living in Neither the Best Nor Worst of All Possible Worlds: Antecedents and Consequences of Upward and Downward Counterfactual Thinking*, in WHAT MIGHT HAVE BEEN, *supra* note 6, at 133, 135–39. Subjects are more apt to employ cognitive strategies, discussed *infra* text accompanying notes 37–46, to suppress the counterfactual regret stemming from near misses that lie outside the subjects' control than they are to suppress counterfactual regret stemming from controllable near misses. Hence, the enhanced regret of a near miss is more likely to be experienced when the subject exercised control over the event. Tykocinski & Steinberg, *supra* note 30. Controllable actions, as opposed to controllable inactions, particularly evoke feelings of regret and counterfactual mutations, at least in the short term. Ruth M.J. Byrne &

lay within one's control, alternative scenarios appear easier to imagine; hence one tends to engage in deeper counterfactual reflection than when matters were out of one's hands. In comparative terms, evidence also suggests that near misses are experienced more acutely than analogous close calls.<sup>32</sup> As a rule, the bad concentrates the mind more powerfully than the good.<sup>33</sup>

When experienced sharply, reactions to proximate experiences can also prove chronic. Studies report that, particularly in connection with physical harms, near misses can trigger psychological pathologies such as clinical depression and anxiety.<sup>34</sup> All in all, the potential impact of the experience should not be underestimated.<sup>35</sup> In one reported instance, a near miss even drove its victim to suicide.<sup>36</sup>

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Alice McEleney, *Counterfactual Thinking About Actions and Failures to Act*, 26 J. EXPERIMENTAL PSYCHOL.: LEARNING MEMORY & COGNITION 1318 (2000).

32. Faith Gleicher et al., *The Role of Counterfactual Thinking in Judgments of Affect*, 16 PERSONALITY & SOC. PSYCHOL. BULL. 284, 289–94 (1990); Janet Landman, *Regret and Elation Following Action and Inaction: Affective Responses to Positive Versus Negative Outcomes*, 13 PERSONALITY & SOC. PSYCHOL. BULL. 524, 528–34 (1987); Lawrence J. Sanna & Kandi Jo Turley, *Antecedents to Spontaneous Counterfactual Thinking: Effects of Expectancy Violation and Outcome Valence*, 22 PERSONALITY & SOC. PSYCHOL. BULL. 906, 915, 917 (1996). For a review of studies, see Roese & Olson, *supra* note 6, at 19–22.

33. See Roy F. Baumeister et al., *Bad Is Stronger Than Good*, 5 REV. GEN. PSYCHOL. 323, 355 (2001) (“[T]he greater impact of bad than good is extremely pervasive. It is found in both cognition and motivation; in both inner, intrapsychic processes and in interpersonal ones; in connection with decisions about the future and to a limited extent with memories of the past; and in animal learning, complex human information processing, and emotional responses.”).

34. Davis & Lehman, *supra* note 16, at 365–67; Peter F. Lovibond, *The “Near Miss” as a Fourth Pathway to Anxiety*, 29 BEHAV. & COGNITIVE PSYCHOTHERAPY 35, 35–41 (2001); Susan Nolen-Hoeksema & Jannay Morrow, *A Prospective Study of Depression and Posttraumatic Stress Disorder After a Natural Disaster: The 1989 Loma Prieta Earthquake*, 61 J. PERSONALITY & SOC. PSYCHOL. 115, 115 (1991). Reactions to proximate events thus can differ from typical emotional reactions, which tend to be transient. See Timothy D. Wilson et al., *Making Sense: The Causes of Emotional Evanescence*, in 1 THE PSYCHOLOGY OF ECONOMIC DECISIONS 209, 209–10 (Isabelle Brocas & Jan D. Carrillo eds., 2003) (reporting studies).

35. Several studies conclude that near misses and close calls are capable of paradoxical reversals of satisfaction. Students or athletes who finish in second place by just missing out on first place (a “disappointing win”) may feel subjectively worse than if they had just squeaked into third place (a “relieving loss”), even though objectively second place represents a higher level of achievement than third place. Thomas Gilovich & Victoria Medvec, *Some Counterfactual Determinants of Satisfaction and Regret*, in WHAT MIGHT HAVE BEEN, *supra* note 6, at 259, 259–64; Jeff T. Larsen et al., *The Agony of Victory and Thrill of Defeat: Mixed Emotional Reactions to Disappointing Wins and Relieving Losses*, 15 PSYCHOL. SCI. 325 (2004); Victoria Husted Medvec & Kenneth Savitsky, *When Doing Better Means Feeling Worse: The Effects of Categorical Cutoff Points on Counterfactual Thinking and Satisfaction*, 72 J. PERSONALITY & SOC. PSYCHOL. 1284 (1997); Victoria H. Medvec et al., *When Less is More: Counterfactual Thinking and Satisfaction Among Olympic Medalists*, 69 J. PERSONALITY & SOC. PSYCHOL. 603 (1995); see also Matthew N. McMullen & Keith D. Markman, *Affective Impact of Close Counterfactuals: Implications of Possible Futures for Possible Pasts*, 38 J. EXPERIMENTAL SOC. PSYCHOL. 64, 66–68 (2002) (finding assimilation-based reversals of satisfaction); cf. A. Peter McGraw et al., *Expectations and Emotions of Olympic Athletes*, 41 J. EXPERIMENTAL SOC. PSYCHOL. 438 (2005) (enriching these findings).

36. “[I]n April 1995 . . . a middle-aged inhabitant of Liverpool, in the United Kingdom, took his own life after missing out on a £2 million prize in the National Lottery. He did so after discovering that the numbers he always selected, 14, 17, 22, 24, 42, and 47, were that week’s winning combination. On this occasion, however, he had forgotten to renew his 5-week ticket on time; it had expired the previous Saturday.” Marcel Zeelenberg et al., *What We Do When Decisions Go Awry: Behavioral*

In various ways, people strive to cope with the reactions generated by proximate experiences. Persons who suffer a near miss may alleviate the attendant frustration by convincing themselves that what they missed was less desirable than they had supposed,<sup>37</sup> although this cognitive strategy also applies to far misses.<sup>38</sup> Alternatively, and uniquely in connection with near misses, persons may suppress their tendencies to engage in counterfactual fantasizing either directly (“there’s no use crying over spilt milk!”<sup>39</sup>) or indirectly, by trying to conceptualize—however unrealistically<sup>40</sup>—the near miss as a far miss, for which counterfactual images are less available.<sup>41</sup> Strategic ignorance may also play an occasional role in this regard. When those who have suffered a miss have the capacity to avoid learning how near it was, they may prefer to remain uninformed—and so they will make a point of not inquiring how recently the train they needed to catch had left the platform.<sup>42</sup>

People experience the reactions induced by counterfactual thinking often enough to anticipate them. These “precounterfactuals”<sup>43</sup> may likewise encourage persons to take steps *ex ante* to avoid the occurrence of near misses, and the intense feelings that accompany them, *ex post*. As a general proposition, because the danger of a near miss enhances psychological, if not economic, risk, we would expect persons to respond

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*Consequences of Experienced Regret*, in CONFLICT AND TRADEOFFS IN DECISION MAKING 136, 140 (Elke U. Weber et al. eds., 2001). The story is retold in Marcel Zeelenberg & Eric van Dijk, *On the Comparative Nature of Regret*, in COUNTERFACTUAL THINKING, *supra* note 26, at 147.

37. Orit E. Tykocinski & Thane S. Pittman, *Product Aversion Following a Missed Opportunity: Price Contrast or Avoidance of Anticipated Regret?*, 23 BASIC & APPLIED SOC. PSYCHOL. 149 (2001).

38. JONATHAN BARON, THINKING AND DECIDING 65 (3d ed. 2000); JON ELSTER, SOUR GRAPES: STUDIES IN THE SUBVERSION OF RATIONALITY 109–40 (1983).

39. JANET LANDMAN, REGRET 5–15 (1993).

40. “The use of [this] defense mechanism requires that one . . . forfeit some ‘objectivity’ in return for some ‘peace of mind.’” Tykocinski & Steinberg, *supra* note 30, at 557.

41. Lawrence J. Sanna & Edward C. Chang, *The Past is Not What it Used to Be: Optimists’ Use of Retroactive Pessimism to Diminish the Sting of Failure*, 37 J. RES. PERSONALITY 388 (2003); Orit E. Tykocinski & Thane S. Pittman, *The Dark Side of Opportunity: Regret, Disappointment, and the Cost of Prospects*, in 2 THE PSYCHOLOGY OF ECONOMIC DECISIONS, 179, 188–89, 191–92 (Isabelle Brocas & Juan D. Carrillo eds., 2004); Orit E. Tykocinski, *I Never Had a Chance: Using Hindsight Tactics to Mitigate Disappointments*, 27 PERSONALITY & SOC. PSYCHOL. BULL. 376 (2001); Orit E. Tykocinski et al., *Retroactive Pessimism: A Different Kind of Hindsight Bias*, 32 EUR. J. SOC. PSYCHOL. 577 (2002).

42. For a discussion of how remaining ignorant can provide benefits in another context, see Juan D. Carrillo & Thomas Mariotti, *Strategic Ignorance as a Self-Disciplining Device*, 67 REV. ECON. STUD. 529 (2000) (citing to earlier discussions in still other contexts). For speculations by psychologists that people might seek to avoid knowledge that would cause them to experience regret in general (as opposed to counterfactual regret specifically), see Ilana Ritov & Jonathan Baron, *Outcome Knowledge, Regret, and Omission Bias*, 64 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 119, 127 (1995); Marcel Zeelenberg et al., *Consequences of Regret Aversion: Effects of Expected Feedback on Risky Decision Making*, 65 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 148, 157 (1996).

43. Lawrence J. Sanna, *Defensive Pessimism, Optimism, and Simulating Alternatives: Some Ups and Downs of Prefactual and Counterfactual Thinking*, 71 J. PERSONALITY & SOC. PSYCHOL. 1020, 1020 n.1 (1996).

to that danger with an abundance of caution. Those who choose to “live on the edge,” to “cut things close,” aiming to arrive at the last minute and either *just make* or *just miss* their trains are not mere risk preferrers, but strong risk preferrers.

Other *ex ante* strategies also present themselves. Because the discomfort associated with a near miss increases when one anticipated that which was almost attained, persons may engage in “defensive pessimism” so as to avoid counting their chickens.<sup>44</sup> Similarly, persons can avoid aggravating the discomfort of a deliberative near miss by sticking to plans and routines, once resolved. “Switches” of behavior in risky situations that end in failure encourage the painful feeling that success was within reach. Hence, the cognitive risks of a near miss caused by one’s choices reinforce behavioral tendencies to inflexibility.<sup>45</sup> Indeed, anticipated reactions could make one reluctant even to consider alternatives, because to vacillate over a decision is again to invite a deliberative near miss.<sup>46</sup>

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44. *Id.* at 1020–21. The fact remains that people can derive present utility from anticipating positive events or outcomes (the phenomenon of “savoring”), hence creating a psychological tension with defensive pessimism. BARON, *supra* note 38, at 484–85. Evidence suggests that people tend to resolve this tension by savoring long before events and then lowering expectations as those events grow near. James A. Shepperd et al., *Abandoning Unrealistic Optimism: Performance Estimates and the Temporal Proximity of Self-Relevant Feedback*, 70 J. PERSONALITY & SOC. PSYCHOL. 844 (1996); Wilco W. van Dijk et al., *Blessed Are Those Who Expect Nothing: Lowering Expectations as a Way of Avoiding Disappointment*, 24 J. ECON. PSYCHOL. 505 (2003).

45. The dictum “stick with your first instincts on a multiple choice test” is an erroneous rule of thumb that seems to have developed in order to avoid just this sort of deliberative near miss. Research shows that test-takers who change to a wrong answer engage in greater self-recrimination than those who stick with their instinctive first answer that was also wrong. Justin Kruger et al., *Counterfactual Thinking and the First Instinct Fallacy*, 88 J. PERSONALITY & SOC. PSYCHOL. 725, 732 (2005). A deliberative near miss could follow from a decision not to switch, but a switch is typically more frustrating because it implicates action. Gleicher et al., *supra* note 32, at 289–91; Daniel Kahneman & Dale T. Miller, *Norm Theory: Comparing Reality to Its Alternatives*, 93 PSYCHOL. REV. 136, 145 (1986); Landman, *supra* note 32, at 528–31. See generally McEleney & Byrne, *supra* note 31 (on the action/inaction dichotomy). On other sorts of switching behavior, see Maya Bar-Hillel & Efrat Neter, *Why Are People Reluctant to Exchange Lottery Tickets?*, 70 J. PERSONALITY & SOC. PSYCHOL. 17 (1996); Patrizia Catellani et al., *Counterfactual Thinking and Stereotypes: The Nonconformity Effect*, 34 EUR. J. SOC. PSYCHOL. 421 (2004); Thomas Gilovich et al., *Commission, Omission, and Dissonance Reduction: Coping with Regret in the ‘Monty Hall’ Problem*, 21 PERSONALITY & SOC. PSYCHOL. BULL. 182, 187 (1995); Dale T. Miller & Brian R. Taylor, *Counterfactual Thought, Regret, and Superstition: How to Avoid Kicking Yourself, in WHAT MIGHT HAVE BEEN*, *supra* note 6, at 305.

46. For related discussions of potential undesirable consequences of reflection with respect to decisions that provide subjective satisfaction, see Ziv Carmon et al., *Option Attachment: When Deliberating Makes Choosing Feel Like Losing*, 30 J. CONSUMER RES. 15 (2003); Timothy D. Wilson et al., *Introspecting About Reasons Can Reduce Post-Choice Satisfaction*, 19 PERSONALITY & SOC. PSYCHOL. BULL. 331 (1993); Timothy D. Wilson & Jonathan W. Schooler, *Thinking Too Much: Introspection Can Reduce the Quality of Preferences and Decisions*, 60 J. PERSONALITY & SOC. PSYCHOL. 181 (1991). By enhancing the pain of erroneous judgment, a deliberative near miss might also tend to produce post-judgment self-serving attributions, that is, a tendency to ascribe the error to external factors. See generally Dale T. Miller & Michael Ross, *Self-Serving Biases in the Attribution of Causality: Fact or Fiction?*, 82 PSYCHOL. BULL. 213, 223 (1975) (describing research that supports the proposition that people tend to avoid responsibility for failure).

However potentially unpleasant, the reactions associated with proximate experiences are generally functional.<sup>47</sup> Not always, to be sure:<sup>48</sup> in unique situations and in uncontrollable situations, the pain of a near miss will not avail its victim.<sup>49</sup> But in controllable situations that persons may face again or that structurally resemble other situations that might arise, the counterfactual images that haunt a near miss can play a didactical role, prompting (or even embodying) plans for more successful future conduct.<sup>50</sup>

The same applies to close calls. In situations where assimilation is likely to induce fright, a close call also acts as a “wake up call.”<sup>51</sup> But, in those instances where it instead prompts contrast, and so induces relief, a

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47. For a recent discussion, citing to earlier ones, see Keith D. Markman & Audrey K. Miller, *Depression, Control, and Counterfactual Thinking: Functional for Whom?*, 25 J. SOC. & CLINICAL PSYCHOL. 210 (2006). These reactions may not even be confined to the human species, a datum that suggests their adaptiveness. See M. Keith Chen et al., *How Basic Are Behavioral Biases? Evidence from Capuchin Monkey Trading Behavior*, 114 J. POL. ECON. 517 (2006) (finding that when monkeys receive tokens that they learn to trade for food and have a choice between trading with an experimenter who gives them one slice of apple per token and an experimenter who shows them two slices but then only gives them one, they prefer trading with the first experimenter; the authors associate this reaction with loss aversion, but the experiment appears framed in a way that creates a frustrating near miss).

48. Investigations into the adaptiveness of other emotional reactions have drawn the same conclusion. Barbara A. Mellers, *Choice and the Relative Pleasure of Consequences*, 126 PSYCHOL. BULL. 910, 920–21 (2000); Baba Shiv et al., *Investment Behavior and the Negative Side of Emotion*, 16 PSYCHOL. SCI. 435, 438 (2005).

49. Daniel T. Gilbert et al., *Looking Forward to Looking Backward: The Misprediction of Regret*, 15 PSYCHOL. SCI. 346 (2004); Steven J. Sherman & Allen R. McConnell, *Dysfunctional Implications of Counterfactual Thinking: When Alternatives to Reality Fail Us*, in WHAT MIGHT HAVE BEEN, *supra* note 6, at 199. One study found that where a near miss lay outside subjects’ control, they were more likely to suppress the pain with defensive pessimism, see *supra* note 44 and accompanying text, than when the near miss lay within their control. The authors speculate that such selective suppression reflects the adaptive fitness of counterfactual frustration: “[I]n order for counterfactual thoughts to be adaptive, one must be able to inhibit unwanted counterfactual thoughts once they exhausted their functional purpose and produce nothing but self torment.” Tykocinski & Steinberg, *supra* note 30, at 557.

50. David S. Boninger et al., *Counterfactual Thinking: From What Might Have Been to What May Be*, 67 J. PERSONALITY & SOC. PSYCHOL. 297 (1994); Faith Gleicher et al., *With an Eye Toward the Future: The Impact of Counterfactual Thinking on Affect, Attitudes, and Behavior*, in WHAT MIGHT HAVE BEEN, *supra* note 6, at 283, 284, 290–93, 300–02; Suzanne A. Nasco & Kerry L. Marsh, *Gaining Control Through Counterfactual Thinking*, 25 PERSONALITY & SOC. PSYCHOL. BULL. 557 (1999); Neal J. Roese, *The Functional Basis of Counterfactual Thinking*, 66 J. PERSONALITY & SOC. PSYCHOL. 805 (1994); Shelley E. Taylor & Sherry K. Schneider, *Coping and the Simulation of Events*, 7 SOC. COGNITION 174, 177–87 (1989); cf. Keith D. Markman et al., *The Mental Simulation of Better and Worse Possible Worlds*, 29 J. EXPERIMENTAL SOC. PSYCHOL. 87, 90 (1993) (conceiving counterfactuals as “trade-offs,” entailing “prepar[ation] . . . for the future at the expense of immediate feelings of dissatisfaction.”). See generally Marcel Zeelenberg, *The Use of Crying over Spilled Milk: A Note on the Rationality and Functionality of Regret*, 12 PHIL. PSYCHOL. 325 (1999).

51. Matthew N. McMullen & Keith D. Markman, *Downward Counterfactuals and Motivation: The Wake-Up Call and the Pangloss Effect*, 26 PERSONALITY & SOC. PSYCHOL. BULL. 575, 576–77, 581–83 (2000); see also Lovibond, *supra* note 34, at 36, 42 (noting that the anxiety produced by an assimilated close call “has obvious adaptive significance as a means of learning about potential harm without having to experience it”).

close call can cause complacency and thus impair learning.<sup>52</sup> As a biological proposition, the arousal of planning and adjustment in connection with proximate experiences (more than distal ones) appears efficient, in a behavioral sense, because closeness implies that only small corrections of conduct can improve fitness.<sup>53</sup> These principles, incidentally, operate at the organizational level too, where barely averted accidents have served as important learning tools.<sup>54</sup>

In sum, although still an emerging field, the psychology of proximity has undergone sufficient study—on top of common experience—to permit us, broadly and generally, to predict the immediate and long-term effects of near misses and close calls across a range of settings. We can say with some confidence that as proximity to calamity or success increases, the likelihood of strong reactions to the ultimate outcome increases, counterfactual dwelling on ways the outcome could have been altered increases, and behavioral changes are more likely to follow, especially with respect to potentially repeatable outcomes. Furthermore, the stakes and controllability of the experience greatly affect reactive intensity and thereby the likelihood, once again, that behavioral changes will ensue.<sup>55</sup>

Which brings us to matters of law. Proximate experiences present occasions where persons suffer psychic distress, a fact germane to utilitarian policy goals, but also occasions where valuable learning may occur at a relatively low psychic cost. From a policy perspective, the challenge is to sort those experiences lawmakers should take steps to curb or compensate from those they would do better to ignore.

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52. McMullen & Markman, *supra* note 51, at 577, 581–83 (dubbing this perverse phenomenon the “Pangloss Effect”); Susana Segura & Michael W. Morris, *Scenario Simulations in Learning: Forms and Functions at the Individual and Organizational Levels*, in COUNTERFACTUAL THINKING, *supra* note 26, at 94, 100; Catherine H. Tinsley & Robin Dillon-Merrill, “*Whew that Was Close!*” *How Near Miss Events Bias Subsequent Decision Making Under Risk* (Georgetown U. McDonough Sch. of Bus., Empirical Paper, 2005), available at <http://ssrn.com/abstract=736245> (finding that close calls can cause subjects to underestimate the risk that a comparable accident may occur in the future).

53. Neal J. Roese, *Counterfactual Thinking*, 121 PSYCHOL. BULL. 133, 137 (1997).

54. Paul Barach & Stephen D. Small, *Reporting and Preventing Medical Mishaps: Lessons from Non-medical Near Miss Reporting Systems*, 320 BRIT. MED. J. 759 (2000); Bryan A. Liang, *The Adverse Event of Unaddressed Medical Error: Identifying and Filling the Holes in the Health-Care and Legal Systems*, 29 J.L. MED. & ETHICS 346, 357–58 (2001); Michael W. Morris & Paul C. Moore, *The Lessons We Don't Learn: Counterfactual Thinking and Organizational Accountability After a Close Call*, 45 ADMIN. SCI. Q. 737 (2000) (pilots); James R. Phimister et al., *Near-Miss Incident Management in the Chemical Process Industry*, 23 RISK ANALYSIS 445 (2003); Segura & Morris, *supra* note 52, at 105 (aviation regulators). The possibility remains that contrast effects will impede organizational learning from close calls, as may accountability systems that penalize self-critical thinking. Morris & Moore, *supra*, at 762–63.

55. The psychological importance of near misses as opposed to far ones may in fact represent one aspect of the larger psychological significance of nearness versus distance per se, a significance that may hold additional implications for law and therefore merits further investigation. For psychological discussions, see for example STANLEY MILGRAM, OBEDIENCE TO AUTHORITY 32–40 (1974); Jerker Denrell, *Why Most People Disapprove of Me: Experience Sampling in Impression Formation*, 112 PSYCHOL. REV. 951, 967 (2005).

## II. PROXIMITY TO HARM

## A. Torts

In a sense, all avoidable accidents involve near misses. If only events had gone a little differently, the accident would not have occurred. We should expect tort victims to focus on the abnormal but mutable aspect of the event that caused them injury, thereby leading them to contrast the event with what might have been and hence to experience frustration.<sup>56</sup> Although this reaction may be quite common, the circumstances of accidents nevertheless vary. When victims perceive that they *very* nearly escaped a peril unscathed, their frustration will intensify.

Should this frustration be compensable? As a general matter, tort liability coincides with the extent of harm, and counterfactual frustration contributes to psychic pain. A tort victim can recover compensatory damages even for transient emotional distress that accompanies injury, and the *Restatement* explicitly identifies “anxiety” as one such form of emotional distress “if this is the expectable result of the defendant’s tortious act.”<sup>57</sup> Although the *Restatement* fails to address the problem specifically, near misses have a tangible symptomology which (in light of their frequency) should be reasonably foreseeable. Here proximity-generated distress plays no functional role for the blameless victim. Hence, we may conclude, liability should attach for provable anxiety stemming from nearly avoiding a suffered injury.

Experimental evidence suggests jurors are prepared to compensate tort victims for this sort of trauma. In a series of studies where mock jurors were asked to recommend victim compensation for equivalent injuries under different conditions, proximity to injury-avoidance proved a relevant variable. In one study, mock jurors awarded significantly higher wrongful-death compensation to hypothetical survivors of a plane crash in a remote area who, attempting to walk to safety, died from exposure within a quarter mile of the nearest town than to survivors who died seventy-five miles from the nearest town.<sup>58</sup> A subsequent study both replicated and extended this result: proximity was also found to heighten

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56. See *supra* note 26 and accompanying text. Accordingly, torts resulting from deviations from normality are more likely to elicit psychological distress and dwelling on the event, and thus we predict are more likely to result in the pursuit of a legal claim, than are other torts, all else being equal. This prediction complements Prentice and Koehler’s prediction that jurors will evaluate an alleged tortfeasor’s “abnormal” course of action more harshly than an equally risky but “normal” course of action. Robert A. Prentice & Jonathan J. Koehler, *A Normality Bias in Legal Decision Making*, 88 CORNELL L. REV. 583, 644 (2003).

57. RESTATEMENT (SECOND) OF TORTS § 905 & cmts. e & i (1979); *cf. id.* § 435 (discounting the relevance of the foreseeability of harm).

58. Dale T. Miller & Cathy McFarland, *Counterfactual Thinking and Victim Compensation: A Test of Norm Theory*, 12 PERSONALITY & SOC. PSYCHOL. BULL. 513, 514–17 (1986).

mock jurors' perceptions of the degree of tortfeasors' negligence—in other words, closeness to safety can amplify both sympathy and antipathy.<sup>59</sup>

As a matter of legal process, what is worrisome about these studies is mock jurors' receptiveness to compensation in the absence of evidence that the victims suffered near-miss-induced trauma. Some actual accident victims never become aware of their proximity to safety.<sup>60</sup> Whether mock jurors in these studies inferred victims' psychic experiences from the factual scenarios *or had vicarious experiences themselves* is unclear. Furthermore, to the extent they assign higher degrees of negligence to tortfeasors whose harms were nearly avoided, jurors are again led astray by their own psychological reactions to the facts of the case.<sup>61</sup> Courts screening evidence for unfair prejudice and instructing jurors on proper considerations should bear in mind that factual reconstruction of near misses could entail systemic consequences.<sup>62</sup>

The bystander cases offer another tort scenario to which the psychology of proximity pertains. Suppose an accident occurs in the presence of a person who sustains no physical injury (or heightened risk of physical injury). Can he or she nonetheless recover for emotional distress stemming from the event? Courts traditionally have restricted liability to cases where the bystander observed the accident, and where the injured party belonged to the bystander's immediate family, on the theory that without both of these predicates the bystander would endure no shock.<sup>63</sup>

Psychology suggests another circumstance that produces emotional distress and provides a rationale for relaxing the second of these requirements. Bystanders can experience an accident as a near miss if they contemplate how it might have been avoided *through their own interven-*

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59. C. Neil Macrae, *A Tale of Two Curries: Counterfactual Thinking and Accident-Related Judgments*, 18 PERSONALITY & SOC. PSYCHOL. BULL. 84, 85–87 (1992); see also Robert K. Bothwell & Kermit W. Duhon, *Counterfactual Thinking and Plaintiff Compensation*, 134 J. SOC. PSYCHOL. 705, 705–06 (2004) (finding in another experiment that perceptions of victim irresponsibility contributing to an accident diminished compensation, even where the accident was nearly missed); Christopher W. Williams & Paul R. Lees-Haley, *The Role of Counterfactual Thinking and Causal Attribution in Accident-Related Judgments*, 26 J. APPLIED SOC. PSYCHOL. 2100 (1996) (performing another experiment and offering a complementary analysis).

60. See JON KRAKAUER, INTO THE WILD 174 (Anchor Books 1997) (1996) (remarking how a wilderness hiker who died in Alaska just missed getting to safety, but “[b]ecause he had no topographical map . . . he had no way of conceiving that salvation was so close at hand”).

61. For a discussion of the legal concept and consequences of degrees of negligence, see W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS § 34 (5th ed. 1984).

62. See Richard L. Wiener et al., *Counterfactual Thinking in Mock Juror Assessments of Negligence: A Preliminary Investigation*, 12 BEHAV. SCI. & L. 89, 100–01 (1994) (suggesting that mock jury instructions clarifying the legal principles applicable to compensation for torts sufficed to suppress jurors' propensity to increase compensation awards when counterfactual alternatives to the accident were more available).

63. RESTATEMENT (SECOND) OF TORTS § 436(3) (1979). For doctrinal discussions, observing some variation among the jurisdictions, see KEETON ET AL., *supra* note 61, at 365–67; John G. Culhane, *Even More Wrongful Death: Statutes Divorced from Reality*, 32 FORDHAM URB. L.J. 171, 191–93 (2005); Christopher P. Guzelian, *Liability & Fear*, 65 OHIO ST. L.J. 713, 777–95 (2004).

tion. One's own actions ordinarily comprise the most mutable element of any event, eclipsing other elements within counterfactual fantasies,<sup>64</sup> and controllability intensifies the resulting trauma,<sup>65</sup> although it plays no functional role in these unique and unlikely situations. This sort of psychological disturbance does not depend on preexisting emotional ties to the victim, for it flows not from the pain of loss, but from regret and frustration with oneself.

Several published cases hint at this possibility. In one case, the neighbors of a five-year-old victim whom they had taken to the circus brought suit for emotional distress after the victim was attacked by a circus animal.<sup>66</sup> One of the neighbors attempted a rescue and "came poignantly close to saving the child,"<sup>67</sup> but the attack proved fatal. The court found that "[t]he psychological aftermath of the tragedy has been devastating for both plaintiffs," who were diagnosed with chronic depression and related disorders.<sup>68</sup> Strikingly, a psychiatrist described one of the plaintiffs' "torment in reliving the entire event"—an apparent symptom of counterfactual frustration—and the court opined that "[i]t defies the most elementary understanding of the way trauma affects the human mind to assert that . . . the ultimate failure of [the] attempted rescue did not constitute an integral and significant . . . cause[] [of] his mental disturbance."<sup>69</sup> In another case, where a bystander unsuccessfully administered cardiopulmonary resuscitation after the victim (a stranger to him) was struck by a van, the bystander "developed various symptoms of emotional distress that have further led to physical problems. The plaintiff apparently blames himself for [the victim's] death . . . ."<sup>70</sup> The psychology of proximity confirms and explains these reactions, even without an affirmative rescue attempt, although they remain uncompensable under existing tort doctrine.<sup>71</sup>

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64. T. Dagleish, *What Might Not Have Been: An Investigation of the Nature of Counterfactual Thinking in Survivors of Trauma*, 34 *PSYCHOL. MED.* 1215, 1217 (2004) ("[T]rauma survivors will report that their most frequent CFT [counterfactual thoughts] about their trauma concern things that they could have done to improve the outcome"); Davis & Lehman, *supra* note 16, at 358, 364; Christopher G. Davis et al., *The Undoing of Traumatic Life Events*, 21 *PERSONALITY & SOC. PSYCHOL. BULL.* 109, 118–19, 122 (1995); David R. Mandel & Darrin R. Lehman, *Counterfactual Thinking and Ascriptions of Cause and Preventability*, 71 *J. PERSONALITY & SOC. PSYCHOL.* 450 (1996).

65. *See supra* note 31.

66. *Eyrich v. Dam*, 473 A.2d 539, 540 (N.J. Super. Ct. App. Div. 1984).

67. *Id.* at 545.

68. *Id.* at 542–43.

69. *Id.* at 546–47.

70. *Migliori v. Airborne Freight Corp.*, 690 N.E.2d 413, 414 (Mass. 1998).

71. In *Eyrich*, the court awarded recovery only to the plaintiff who attempted rescue, on the theory that he was thereby personally endangered. *Eyrich*, 473 A.2d at 543–61. In *Migliori*, the plaintiff who attempted rescue was denied recovery, due to the absence of personal risk. *Migliori*, 690 N.E.2d at 417–18. There may be a variety of reasons for not compensating the nonrescuing bystander, such as wanting to create incentives for rescues and evidentiary concerns, but the psychology of proximity in-

The problem of close calls in connection with torts—inchoate torts, we might call them—presents similar issues. As discussed earlier,<sup>72</sup> experiencing a close call is exhilarating when the subject contrasts what occurred with what almost occurred. When the subject assimilates the two, however, a close call is harrowing. One cannot predict with confidence how any particular individual will react to any given close call with respect to an accident. Some may experience relief; but for other almost-victims the harm that nearly befell them will comprise the salient element of the episode and thereby trigger assimilation. Hence, near misses and close calls alike can induce emotional distress in connection with negligence. When a close call does provoke such distress, the near-accident becomes indistinguishable from a tangible accident, but for the nature of the harm.

Courts already grasp this application of the psychology of proximity—indeed, modern emotional distress doctrine finds its common law origins there.<sup>73</sup> In most jurisdictions today, persons can recover damages for emotional distress without any accompanying physical injury if the distress arose from an intentional or negligent act that placed the plaintiff in imminent danger—the so-called zone of danger test.<sup>74</sup> As explained by the U.S. Supreme Court, this test is “[p]erhaps based on the realization that ‘a near miss may be as frightening as a direct hit.’”<sup>75</sup> Thus did the Court apply the lessons of psychology learned not from experiment, but from experience.<sup>76</sup>

Finally, the responses associated with proximity experiences hold implications for the assessment of harmful conduct. Recall that the

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icates that a blanket assumption of lessened psychological distress in the nonrescuer as compared to the rescuer is not one of the persuasive reasons. On the law’s treatment of rescuers and nonrescuers generally, see Saul Levmore, *Waiting for Rescue: An Essay on the Evolution and Incentive Structure of the Law of Affirmative Obligations*, 72 VA. L. REV. 879 (1986).

72. See *supra* notes 24–25 and accompanying text.

73. See Lisa Heinzerling & Cameron Powers Hoffman, *Tortious Toxics*, 26 WM. & MARY ENVTL. L. & POL’Y REV. 67, 90 (2001) (“Anxiety-based tort claims, in fact, first developed in cases in which people suffered mental distress as a consequence of acute near-misses, such as barely escaping being run over by a train.” (footnote omitted)). In the eighteenth century, Blackstone emphasized the role of the close call in recovery for intentional torts, when he defined *assault* as “an attempt . . . to beat another; without touching him; as if one lifts up his cane, or his fist, in a threatening manner at another; or strikes at him, but misses him. . . . And . . . though no actual suffering is proved, yet the party . . . shall recover damages as a compensation for the injury.” WILLIAM BLACKSTONE, 3 COMMENTARIES \*120.

74. The *Restatement* requires a physical manifestation of the emotional distress, but some courts do not. RESTATEMENT (SECOND) OF TORTS §§ 313, 436(1), 436A (1979); Guzelian, *supra* note 63, at 766–77. At any rate, anxieties caused by close calls can be chronic, see *supra* note 34, and chronic symptoms qualify as a physical manifestation, according to the *Restatement*. RESTATEMENT (SECOND) OF TORTS § 436(A) cmt. c (1979).

75. *Consol. Rail Corp. v. Gottshall*, 512 U.S. 532, 547 (1994) (quoting Richard N. Pearson, *Liability to Bystanders for Negligently Inflicted Emotional Harms—A Comment on the Nature of Arbitrary Rules*, 34 FLA. L. REV. 477, 488 (1982)).

76. For a commentator’s nod of approval, see Guzelian, *supra* note 63, at 770 n.160. Cf. John C.P. Goldberg & Benjamin C. Zipursky, *Unrealized Torts*, 88 VA. L. REV. 1625, 1685–86 (2002) (proposing a different theory to justify the zone of danger doctrine).

adaptive value of a fear-inspiring close call is that it encourages the party in control to improve conduct so as to avoid a repetition of the experience.<sup>77</sup> Failure to heed such a “wake up call”<sup>78</sup> could be taken as a form of negligence. Once again, courts intuitively appreciate the point. If an accident follows on the heels of a string of close calls under similar circumstances, courts have admitted evidence of the close calls to show knowledge of dangerous conditions (an element in the proof of negligence).<sup>79</sup> In point of fact, the matter is not quite so simple—close calls sometimes inspire relief, which can inhibit learning.<sup>80</sup> Nevertheless, law-makers could deem such a response unreasonable in light of the typically adaptive effect of close calls.<sup>81</sup>

### B. Crimes

An analogous suite of near misses and close calls emerges in the realm of criminal, as opposed to civil, wrongs. In connection with torts, we observed that almost avoiding injury can intensify the victim’s anxiety stemming from an accident, a reasonable ground for increased damages.<sup>82</sup> Anxiety may also follow from almost avoiding criminal victimization. There would, however, seem no cause to invoke criminal penalties on that account. Criminal law aims at prevention or punishment of the offender, not compensation of the victim, and counterfactual frustration arising out of circumstances that render completion of the crime more

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77. See *supra* notes 47–54 and accompanying text.

78. See *supra* note 51.

79. *E.g.*, *Union Pac. R.R. Co. v. Barber*, 149 S.W.3d 325, 336–42 (Ark. 2004) (referring to close calls as “near misses”); *Irby v. Travis*, 935 So. 2d 884, 895–96 (Miss. 2006) (same); *Lopez v. Three Rivers Elec. Coop.*, 26 S.W.3d 151, 156 (Mo. 2000) (en banc) (same); *Laidlow v. Hariton Mach. Co.*, 790 A.2d 884, 897–99 (N.J. 2002) (using the term “close calls”); *Robinson v. Seaboard Sys. R.R. Inc.*, 361 S.E.2d 909, 913 (N.C. Ct. App. 1987) (“near misses”). In such cases, defendants challenge the admissibility of evidence of prior close calls as irrelevant and prejudicial. Courts have not decided these cases entirely consistently. Compare *Barber*, 149 S.W.3d at 336–42 (no per se exclusion of “near-miss evidence” in railroad accident cases), with *Irby*, 935 So. 2d at 895–96 (admissible only if “carefully qualified” in railroad accident cases), and *Rothermel v. Consol. Rail Corp.*, No. Civ. A.94 C-10-021, 1998 WL 110010, at \*1–3 (Del. Super. Ct. Jan. 21, 1998) (inadmissible in railroad accident cases unless the “near misses” and ultimate accident stemmed from a structural defect). Although the published cases have involved organizational defendants, the instant doctrine is not limited to them, and a parallel doctrine applies to individuals charged with criminal behavior. See *infra* note 99 and accompanying text.

80. See *supra* note 52 and accompanying text.

81. The reasonable person standard has traditionally comprised an objective standard, RESTATEMENT (SECOND) OF TORTS § 283 & cmts. (1979), but what objectivity means in this context, and to what extent it should focus on the actor’s own characteristics versus those of people in general, is debatable. See KENT GREENAWALT, LAW AND OBJECTIVITY 103–04 (1992) (raising this issue). To the extent reasonableness involves an assessment of how actors generally respond to close calls, however, relief and complacency rather than increased vigilance could be held the “unreasonable” response.

82. See *supra* notes 56–57 and accompanying text.

unusual or unlikely bears no apparent relation to the heinousness of the crime or to the dangerousness of the perpetrator.

Lawmakers accept this normative difference and do not consider a victim's experience of nearly eluding harm an aggravating factor for crimes.<sup>83</sup> Nevertheless, studies of mock juries sitting on hypothetical cases where a criminal act was almost avoided (for example, a home burglary occurring just the night before the family returned from a long vacation), or that occurred under unusual circumstances—and hence almost did not—(for example, a mugging suffered by a victim who was not following his or her customary route home) yield results comparable to studies of hypothetical torts.<sup>84</sup> Mock jurors deem these criminal acts more serious and assign harsher penalties to the perpetrators.<sup>85</sup> This “unsettling”<sup>86</sup> finding again indicates that courts need to exercise caution in admitting evidence indicating how close a crime came to not occurring, for evidence of proximity could produce unfair, prejudicial effects.

In the context of tort law, we observed that the psychology of proximity justifies the imposition of civil liability on a party who causes emotional distress by almost injuring someone.<sup>87</sup> By comparison, should lawmakers impose criminal liability on a party who almost commits, but fails to consummate, an offense? The psychological argument for criminal liability here is straightforward and parallel. Lawmakers should both sanction and seek to prevent inchoate crimes not just for the harm they might cause, but also for the harm they *do* cause. Although some near-victims, and members of the community at large, may react to a criminal close call with relief, enough are likely to assimilate it with actual harm to occasion counterfactual dismay and disquiet.

As a matter of law, criminal liability attaches to completed but failed criminal attempts, be they attempted crimes against a person or against property.<sup>88</sup> Also punishable are thwarted preparations for a crime, if they have progressed to a sufficient extent. Under the common law, preparations are actionable as a criminal attempt once the actor has gotten dangerously near, either physically or sequentially, to committing the crime.<sup>89</sup> In short, inchoate crimes can be prosecuted as crimes, just as inchoate torts are compensable as torts.

Traditional justifications for criminal attempts doctrine foreshadow modern psychological theory. William Blackstone allowed that “a design

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83. See MODEL PENAL CODE § 7.03 (1985) (setting out conventional aggravating factors).

84. See *supra* notes 58–59 and accompanying text.

85. C. Neil Macrae et al., *Counterfactual Thinking and the Perception of Criminal Behavior*, 84 BRIT. J. PSYCHOL. 221 (1993); Macrae, *supra* note 59, at 85–87; Kandi Jo Turley et al., *Counterfactual Thinking and Perceptions of Rape*, 17 J. BASIC & APPLIED SOC. PSYCHOL. 285 (1995).

86. Turley et al., *supra* note 85, at 300–01.

87. See *supra* notes 72–76 and accompanying text.

88. MODEL PENAL CODE §§ 5.01(1)(a)–(b), 211.1(1)(a), (2) (1985).

89. *Id.* § 5.01 cmt. 5; R.A. DUFF, CRIMINAL ATTEMPTS 33–48 (1996); WAYNE R. LAFAVE, CRIMINAL LAW § 11.4(b) (4th ed. 2003).

to transgress is not so flagrant an enormity as the actual completion of that design.”<sup>90</sup> Nevertheless, “evil, the nearer we approach it, is the more disagreeable and shocking.”<sup>91</sup> A century later, Oliver Wendell Holmes, Jr., chimed in that the line between punishable and nonpunishable preparations is premised on “the degree of apprehension felt”—an intuitive recognition that “the nearness of the danger” has an impact.<sup>92</sup> Once again, we find law reflecting the guidance of psychology, even if it had not yet formed into an experimental science.

Modern criminal codes, which vary a good deal, sometimes widen the boundaries of culpability and hence reduce the significance of the close call within today’s law of attempts. Under the Model Penal Code, any “substantial step” toward a crime suffices, regardless of the number or significance of the remaining steps, so long as the step taken “strongly corroborat[es]” the actor’s criminal purpose.<sup>93</sup> The drafters justify this approach on a different policy basis, focusing not on the degree of community apprehension caused by unsuccessful or incomplete acts, but rather on “apprehension of dangerous persons,” allowing “law enforcement officials . . . to stop the criminal effort at an earlier stage, thereby minimizing the risk of substantive harm.”<sup>94</sup> Because criminal law is premised (at least in part) on prevention, the psychological effects of proximity need not comprise the exclusive basis for the law of attempts.<sup>95</sup> Nevertheless, where broader rationales have failed to persuade—and many states remain unpersuaded<sup>96</sup>—this kernel of justification has stood the test of time. The common law’s proximity rule continues to enjoy intuitive popularity.<sup>97</sup>

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90. 4 BLACKSTONE, *supra* note 73, at \*15.

91. *Id.*

92. OLIVER WENDELL HOLMES, JR., *THE COMMON LAW* 68 (photo. reprint 1991) (1881).

93. MODEL PENAL CODE § 5.01 (1985). This approach, “shifts the emphasis from what remains to be done, the chief concern of the [common law], to what the actor has already done.” *Id.* § 5.01 cmt. 6(a). For other modern statutory variations, see LAFAVE, *supra* note 89, § 11.4(c)–(e).

94. MODEL PENAL CODE § 5.01 cmt. 6(a) (1985).

95. For recent summaries of the theory of criminal attempts, citing to modern scholarship justifying their punishment, alternatively, on the basis of prevention of harm or the notion that they comprise a harm, see LAFAVE, *supra* note 89, § 11.2(b); Andrew Ashworth, *Criminal Attempts and the Role of Resulting Harm Under the Code, and in the Common Law*, 19 RUTGERS L.J. 725, 733–34 (1988).

96. On the limited influence of the Model Penal Code’s definition of criminal attempts, see Robert Batey, *Minority Report and the Law of Attempt*, 1 OHIO ST. J. CRIM. L. 689, 696 (2004); DUFF, *supra* note 89, at 56–57; Robert Batey, *Paul H. Robinson’s Criminal Law*, 73 NOTRE DAME L. REV. 781, 794 (1998) (book review).

97. For studies of lay opinion, see PAUL H. ROBINSON & JOHN M. DARLEY, *JUSTICE, LIABILITY & BLAME* 27 (1995) (“In the view of our subjects, punishment ought not to be imposed until a person has reached a point of dangerous proximity to completion of the offense.”); John M. Darley et al., *Community Standards for Defining Attempt: Inconsistencies with the Model Penal Code*, 39 AM. BEHAV. SCI. 405, 417 (1996) (discussing the same findings); cf. Erich J. Greene & John M. Darley, *Effects of Necessary, Sufficient, and Indirect Causation on Judgments of Criminal Liability*, 22 LAW &

Unintentional but reckless endangerment of a person (analogous to negligent endangerment) also qualifies as a crime.<sup>98</sup> Here the behavioral consequences of a close call again hold evidentiary significance. Because it can play an instructive role, a close call or series of close calls preceding an injurious accident could serve to demonstrate recklessness or even implied malice. Courts have indeed drawn this inference, typically in cases involving motor vehicles.<sup>99</sup> These criminal cases parallel the tort cases, noted earlier,<sup>100</sup> where close calls are deemed to alert actors to risks they are running and to encourage a change of conduct. Within criminal law, depending on the state, a conviction for recklessness may nonetheless require proof of *subjective* awareness of the risk borne by the defendant.<sup>101</sup> Because some persons experience relief (rather than fright) when they have a close call, which hampers learning,<sup>102</sup> a defense premised on the psychology of proximity remains a possibility in these cases, at least where subjective awareness of risk is at issue.

In sum, the psychology of proximity proves relevant to the law of torts and crime in sometimes symmetrical and sometimes asymmetrical ways, given the different public policies that underlie each category of harm. The primary role for psychology in these contexts is to substantiate and explain the experiential reaction of victims, actors, or communities to near misses and close calls as a prologue to the assessment of their pertinence. Because proximate stimuli reliably contribute to harm in ways that distal stimuli do not, lawmakers will often find reason to draw distinctions within the law of tort and crime along proximity lines.

### III. PROXIMITY TO ACQUIRING GOODS

Just as persons may nearly suffer or avoid harm, so may they nearly or barely acquire goods. This polar-opposite experience, perhaps height-

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HUM. BEHAV. 429, 446 (1998) (“In the judgments of our respondents, proximity to harm matters. Among cases in which the actions of the would-be perpetrator were identical, the closer the set of following events brought the potential victim to actual pill ingestion or death, the higher the liability assigned to the perpetrator.”).

98. MODEL PENAL CODE § 211.2 (1980).

99. *E.g.*, Stiegele v. State, 714 P.2d 356, 360 (Alaska Ct. App. 1986) (holding that the jury could infer extreme indifference to human life from close calls preceding the accident.); *People v. David*, 281 Cal. Rptr. 656, 660 (Ct. App. 1991) (affirming second-degree murder conviction where evidence showed defendant had several near collisions before the fatal accident); *State v. Stocks*, No. 02-08-1008, 2006 WL 2381953, at \*1 (N.J. Super. Ct. App. Div. Aug. 18, 2006) (inferring that defendant was “grossly reckless” based on close calls before accident); *State v. Griffin*, 640 P.2d 629, 631 (Or. Ct. App. 1982) (finding recklessness based on close calls prior to fatal accident); *Commonwealth v. Kling*, 731 A.2d 145, 150 (Pa. Super. Ct. 1999) (same); *see also, e.g.*, *Wyatt v. Commonwealth*, 624 S.E.2d 118, 122 (Va. Ct. App. 2006) (holding that evidence of a close call is not a prerequisite for a finding of recklessness). All of those opinions refer to close calls as “near misses.”

100. *See supra* note 79 and accompanying text.

101. Under the Model Penal Code, criminal recklessness is defined to require awareness, whereas criminal negligence follows an objective standard. MODEL PENAL CODE §§ 2.02(2)(c)–(d) & cmts. 3–4 (1985); *cf. supra* note 81 and accompanying text.

102. *See supra* notes 51–52 and accompanying text.

ened by anticipation, can again excite feelings and motivate behavior. Unlike the anxieties associated with inchoate harms, however, those associated with inchoate goods are ordinarily not, and arguably should not be, compensable. If, let us say, a beneficiary whom a testator disinherits on the deathbed could sue the estate for damages based on emotional distress, freedom of testation would cease to exist in its robust form. A devastating reversal of fortune though it might (quite literally) be, the last-minute revocation of an inheritance results from the testator's assertion of property rights. These rights find justification in economic and political theory, even though their exercise can cause frustration in others.

Where, however, individuals are making consumption choices for themselves, the psychology of proximity can affect their own reactions and behaviors. In this connection, lawmakers could potentially intervene in a paternalistic way, to regulate consumer decision making so as to minimize subsequent counterfactual regret.

Consider situations where choices between goods are tentative (for instance, investments that pay off in the future). A party who switches to a different choice runs the risk of doing worse and profoundly regretting that decision—a deliberative near miss.<sup>103</sup> Parties themselves are often averse to switching precisely because they anticipate regret.<sup>104</sup> Paternalistic lawmakers could go so far as to bar switches of tentative choice, in order to protect decision makers from the anxiety that could result.<sup>105</sup> But, for reasons we shall shortly elaborate,<sup>106</sup> we would not advocate such a course.

The problem grows starker when we come to appreciate the potential use—or misuse—of the psychology of proximity in the realm of consumer choice. It happens that in certain market settings, near misses of goods can be made to occur artificially. In such settings, skillful marketers can exploit psychology to induce choices that would not be made, but for the perception of proximity that the marketers themselves create.<sup>107</sup>

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103. See *supra* note 29 and accompanying text.

104. See *supra* note 45 and accompanying text.

105. For a prohibition of switching behavior apparently tied to this concern, see Miller & Taylor, *supra* note 45, at 305–06, 315.

106. See *infra* note 122 and accompanying text.

107. As is often true, such strategies by sellers have parallels in the world of swindling. The old “bait and switch” con includes elements of near-miss manipulation: A store advertises a good at a bargain price; thus encouraged, a customer rushes to the store to buy the good, where a salesman informs the customer that the good is sold out but then offers to sell him or her a substitute good at a profitable price. Considering the case psychologically, Professor Arthur Leff reasoned that, by luring the customer into the store, the tactic both disposes the customer to make a purchase and confines the customer's vision with respect to his or her options:

[T]he critical con move was that initial push in the right direction; damping the later impulse to *unbuy* takes further energy. . . . Once I am in a particular store . . . the universe of choice begins

Consider the auction sale. Auctions are, of course, a venerable market institution and take many forms. In the last decade, with the advent of online auctions conducted electronically over vast distances and offering up a vast assortment of merchandise, public participation in auctions has expanded dramatically.<sup>108</sup>

One longstanding concern about auctions, from the perspective of behavioral economics, is the tendency of bidders to overpay for goods purchased at auction, an anomaly known as the winner's curse.<sup>109</sup> Psychologists have explained the curse as the result of competitive arousal or an anticipatory sense of endowment that enhances the value that the bidder attaches to an auctioned item.<sup>110</sup> We surmise that the bidder's sense of proximity to acquiring an item also powerfully reinforces the curse, increasing his or her attachment to that item. Indeed, the genius of an ascending auction, and the genesis of the winner's curse, lies in the incremental nature of the bidding process. At any given moment, the top bidder is *almost* winning the auction and faces either the anguish of a near miss or the thrill of a close call—feelings enhanced by the bidder's ability to control the outcome.<sup>111</sup> But it is something of a mirage, for the sale price, to which the bidder remains so tantalizingly close, is in reality a moving target.

The temporal dimension of an auction sets up further potential for anticipation of near misses that, in turn, encourages increased bidding. When consumers decide whether to purchase merchandise out of inven-

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to seem limited to what is there. It is constricted to [the store's] kind of goods (instead of all other possible uses of my money) and [the store's] examples of those goods (rather than everyone else's). . . . The contours of choice are, therefore, distorted: there is a tendency in favor of finishing one's business wherever one already is *without regard to any nonpresent alternatives*. Thus, eliciting a move in a particular buying direction creates momentum in favor of a particular sale.

ARTHUR ALLEN LEFF, SWINDLING AND SELLING 107–08 (1976).

108. The industry leader, eBay, founded in 1995, now boasts over 100 million registered buyers and sellers worldwide. Kelly L. Frey, Sr. et al., *eBay, eCommerce, eLaws*, TENN. B.J., Aug. 2006, at 26, 27. See generally David Lucking-Reiley, *Auctions on the Internet: What's Being Auctioned, and How?*, 48 J. INDUS. ECON. 227 (2000). The alternative structures of auctions are outlined in Paul Klemperer, *Auction Theory: A Guide to the Literature*, 13 J. ECON. SURV. 227, 229 (1999). See generally BRIAN LEARMOUNT, A HISTORY OF THE AUCTION (1985).

109. See generally RICHARD H. THALER, *The Winner's Curse*, in THE WINNER'S CURSE: PARADOXES AND ANOMALIES OF ECONOMIC LIFE 50 (1992).

110. Dan Ariely & Itamar Simonson, *Buying, Bidding, Playing or Competing? Value Assessment and Decision Dynamics in Online Auctions*, 13 J. CONSUMER PSYCHOL. 113 (2003); James E. Heyman et al., *Auction Fever: The Effect of Opponents and Quasi-Endowment on Product Valuations*, J. INTERACTIVE MARKETING, Autumn 2004, at 7; James R. Wolf et al., *Is Overbidding in Online Auctions the Result of a Pseudo-Endowment Effect?* (Nov. 3, 2005), available at <http://ssrn.com/abstract=735464>; James R. Wolf et al., *Do Auction Bidders "Really" Want to Win the Item, or Do They Simply Want to Win?* (Jan. 19, 2006), available at <http://ssrn.com/abstract=764785>. The endowment effect refers to the tendency of people to value what they already have more than the prospect of gaining the same things, leading to a disparity between the price they are willing to accept for a thing that they own and the price they are willing to pay for an equivalent thing. See BARON, *supra* note 38, at 289–91 (surveying the literature). For an early recognition that a person who anticipates acquiring something could develop an attachment to it before the fact, see JEREMY BENTHAM, *Supply Without Burden* (1793), in 2 THE WORKS OF JEREMY BENTHAM 585, 590 (1843).

111. See *supra* note 31 and accompanying text.

tory, they can make the choice at their leisure. In an auction, however, they must bid promptly or the merchandise will be going, going, gone.<sup>112</sup> Hence, bidders at an auction risk nearly missing a good either because they are slightly overbid, or because they do not decide whether to bid quite quickly enough. These are both risks that bidders can anticipate as precounterfactuals, encouraging behaviors *ex ante* that function to avoid the risks<sup>113</sup>—in this instance, by both hurrying and continuing to bid.

How much of this structure is unwitting and how much consciously intended to maximize prices paid? That, of course, is difficult to say, but we have some reason to believe that the architects of auctions understand and take advantage of the psychology of proximity. Under rules of the house that apply to many ascending auctions, both live and electronic, “jump bidding” is prohibited.<sup>114</sup> These auctions appear affirmatively structured to *ensure* incremental adjustments of the sale price and thus to maximize the second-to-last bidder’s nearness to the prize. At any rate, the financial success of auctions stands in little doubt—a success vastly magnified by the rise of the internet, overcoming some of the logistical impediments to auctioning as a marketing tool. One study published in 2003 found that out of 500 auctions conducted on an electronic auction site, no fewer than 494 buyers (98.8%) could have easily identified identical substitute items at cheaper prices on other retail sites.<sup>115</sup>

Thus arises the possibility of regulatory intervention. States historically have regulated some forms of auctions to ensure against fraud and, in some instances, to ensure that sale prices are not too low. In a number of jurisdictions, for example, appraisal statutes prevent goods offered at an execution or foreclosure sale from being sold below a set fraction of their appraised value, known as the “upset price.”<sup>116</sup> In other jurisdic-

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112. Electronic auctions conducted by Amazon recreate this feature by closing the bidding once ten minutes have passed without a bid. By comparison, eBay places a hard deadline on each auction; once the deadline is reached the bidding is closed. Alvin E. Roth & Axel Ockenfels, *Last Minute Bidding and the Rules for Ending Second-Price Auctions: Evidence from eBay and Amazon Auctions on the Internet*, 92 AM. ECON. REV. 1093, 1093 (2002).

113. See *supra* note 43 and accompanying text. “The frequency and magnitude of anticipated post-auction feelings can be a major influence on bidding decisions toward the end of the auction.” Ariely & Simonson, *supra* note 110, at 117 (reporting evidence from a survey). Ariely and Simonson refer to the effect of anticipating how one will feel about losing an auction as the “loser’s curse.” *Id.* (not to be confused with another phenomenon christened with the same name, see Charles A. Holt & Roger Sherman, *The Loser’s Curse*, 84 AMER. ECON. REV. 642, 642 (1994)).

114. Patrick Bajari & Ali Hortaçsu, *The Winner’s Curse, Reserve Prices, and Endogenous Entry: Empirical Insights from eBay Auctions*, 34 RAND J. ECON. 329, 337 n.18 (2003); Klemperer, *supra* note 108, at 229. See generally Mark Isaac et al., *A Theory of Jump Bidding in Ascending Auctions*, 62 J. ECON. BEHAV. & ORG. 144 (2007) (discussing the reasons for and impact of jump bidding).

115. Ariely & Simonson, *supra* note 110, at 118. The amount overpaid averaged 15.3%. *Id.*

116. Robert M. Washburn, *The Judicial and Legislative Response to Price Inadequacy in Mortgage Foreclosure Sales*, 53 S. CAL. L. REV. 843, 883–84, 903–07, 924 (1980). In other auctions, the house similarly may allow the seller to start the bidding at a certain level, known as the “reserve price.”

tions, redemption statutes give debtors whose goods are sold at execution or foreclosure sales the right to repurchase those goods within a space of time.<sup>117</sup> The concern accentuated by the psychology of proximity is sale prices that are too high, not too low. By analogy to appraisal statutes, lawmakers could establish a *ceiling* on the sale prices of goods sold by some or all auction houses, although the transaction costs associated with appraising the goods would be substantial. By analogy to redemption statutes, lawmakers could require some or all auction houses to grant buyers a window of time during which they can *return* the goods—in other words, a postsale cooling-off period, equivalent to ones that already apply to certain sorts of contracts under state and federal law.<sup>118</sup>

Alternatively, some or all auction houses could be required to build into the structure of their auctions elements that serve to diminish the impact of proximity to success. For instance, lawmakers could require some or all auction houses to permit jump bidding or, more intrusively, to follow a sealed bid format.<sup>119</sup> Lawmakers could also seek to reduce the potential of auctions to produce temporal near misses by mandating softer bidding deadlines.<sup>120</sup> None of these sorts of regulations have yet been contemplated by lawmakers, however.<sup>121</sup>

And, we would argue, with good reason. Protecting bidders from eBay will deprive them of an important opportunity for learning.<sup>122</sup> Non-fraudulent auctions, especially online auctions, offer feedback in perhaps an optimal learning environment: not only is the environment “kind,”<sup>123</sup>

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Jorge Contreras, *The Art Auctioneer: Duties and Assumptions*, 13 HASTINGS COMM. & ENT. L.J. 717, 743, 747 (1991) (observing variations of the practice).

117. Washburn, *supra* note 116, at 929–32.

118. See, e.g., Erin Ann O'Hara, *Choice of Law for Internet Transactions: The Uneasy Case for Online Consumer Protection*, 153 U. PA. L. REV. 1883, 1922 (2005) (identifying examples); Louis E. Wolcher, *The Accommodation of Regret in Contract Remedies*, 73 IOWA L. REV. 797, 802 n.19 (1988) (same).

119. Unlike participants in live auctions, bidders at electronic ascending auctions may be unaware of the values of competing bids simply due to monitoring costs. eBay, however, makes a practice of sending e-mail notices to bidders whenever one has been outbid in order to avoid those costs.

120. The hard deadline on bidding at electronic auctions conducted on eBay, *see supra* note 112, seems particularly likely to produce temporal near misses and, more importantly, anticipation of near misses. See Roth & Ockenfels, *supra* note 112 (finding that house rules for terminating auctions has a significant impact on bidding behavior).

121. The main concern that has aroused attention (especially by the Federal Trade Commission) up to now in connection with the rise of electronic auction houses is auction fraud. Miriam R. Albert, *E-Buyer Beware: Why Online Auction Fraud Should be Regulated*, 39 AM. BUS. L.J. 575, 585–614 (2002); James M. Snyder, Note, *Online Auction Fraud: Are the Auction Houses Doing All They Should or Could to Stop Online Fraud?*, 52 FED. COMM. L.J. 453, 463–65 (2000). Thus far, many states have been prepared to exempt electronic auction houses from regulations that generally apply to auctions and auctioneers. Frey et al., *supra* note 108, at 27–30.

122. The same is true, *a fortiori*, in connection with investment and other switching decisions, where comparable psychological manipulation by sellers is absent. See *supra* notes 103–05 and accompanying text.

123. Professor Hogarth's terminology. In kind environments, feedback from our actions is fast and accurate, and learning is, in turn, easy and effective. Hogarth distinguishes “wicked” environments, where feedback is slow, noisy, and/or uncertain, and where learning becomes, in turn, much more difficult and less effective. ROBIN M. HOGARTH, *EDUCATING INTUITION* 87–89 (2001).

in that outcome feedback from one's actions is rapid, direct, and clear—one promptly sees the consequences of one's bidding—but also occurs under circumstances likely to generate adaptive reflection and more rational behavior, especially when one has overpaid for an item.<sup>124</sup> Moreover, given the low value of most expenditures in auctions nowadays, the costs of learning in terms of overpayment are likely to be small in individual terms, whereas the learning may generalize to other settings where impulsive behavior leads to inefficient outcomes.<sup>125</sup> Some empirical verification of learning in the auction environment already exists: evidence shows that bidders can become sufficiently sophisticated in their bidding strategies to lift the winner's curse in both traditional and online auctions.<sup>126</sup> Add to this the consumption value that participants in auctions may derive, and the case for additional regulation becomes weak.

Another commercial enterprise that exploits the psychology of proximity—this time without question, and apparently without qualm—is

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124. "Outcome feedback" refers to success or failure of a chosen option. James P. Byrnes et al., *Learning to Make Good Decisions: A Self-Regulation Perspective*, 70 *CHILD DEV.* 1121, 1122 (1999). The few studies that have empirically examined the role of feedback in adult decision making suggest that adults can "progressively learn to make better decisions if they receive[] relatively clear feedback from outcomes." *Id.* at 1125 (citations omitted). For a fuller discussion of the arguments in favor of allowing learning up to a point, even in the face of irrational tendencies, see Jonathan Klick & Gregory Mitchell, *Government Regulation of Irrationality: Moral and Cognitive Hazards*, 90 *MINN. L. REV.* 1620 (2006).

125. Certainly the direct learning benefits for future auctions should be substantial. In general, individuals perform much closer to the predictions of rational choice norms in "repeated play" settings. See, e.g., Gideon Keren & Willem A. Wagenaar, *Violation of Utility Theory in Unique and Repeated Gambles*, 13 *J. EXPERIMENTAL PSYCHOL.: LEARNING, MEMORY & COGNITION* 387, 390 (1987) (reporting that subjects "expressed preferences congruent with utility theory" with repeated, but not unique, gambles); Vernon L. Smith, *Economics in the Laboratory*, 8 *J. ECON. PERSP.* 113, 118 (1994) (discussing the tendency for rational behavior to emerge in the context of a repetitive market institution and noting that "[i]n many experimental markets, poorly informed, error-prone, and uncomprehending human agents interact through the trading rules to produce social algorithms which demonstrably approximate the wealth maximizing outcomes traditionally thought to require complete information and cognitively rational actors" (footnote omitted)).

126. Axel Ockensfels & Alven E. Roth, *Late and Multiple Bidding in Second Price Internet Auctions: Theory and Evidence Concerning Different Rules for Ending an Auction*, 55 *GAMES & ECON. BEHAV.* 297, 315 (2006) (finding that more experienced eBay bidders utilize "bid sniping" strategies that avoid end-of-auction bidding wars to a greater extent than less experienced bidders); Stuart E. Theil, *Some Evidence on the Winner's Curse*, 78 *AMER. ECON. REV.* 884, 894 (1988) (concluding on the basis of empirical data that the winner's curse does not significantly distort bidding within the auction market for highway construction contracts). Additional research needs to be conducted, however, for there is mixed evidence on how much experience is needed to prevent overbidding and the generality of learning effects. Compare Dan Ariely et al., *An Experimental Analysis of Ending Rules in Internet Auctions*, 36 *RAND J. ECON.* 890, 899–900 (2005) (finding evidence of the value of experience), with Bajari & Hortaçsu, *supra* note 114, at 335 (finding no such evidence). It should be noted that one of the difficulties in measuring the effects of experience on online bidding behavior is that one rational learned response may be to withdraw from online auctions. Although mandatory education would likely increase the rate of learning, such a requirement is impractical for an online system that succeeds, at least in part, due to its low barriers to entry. eBay does offer bidders educational resources, including information about good bidding practices, either for free, see <http://www.ebay.com/university/>, or for a fee, see [http://pages.ebay.com/marketplace\\_research/](http://pages.ebay.com/marketplace_research/).

the gambling industry. Designers of gambling games have long understood that near misses of jackpots and other large prizes encourage gamblers to play, and to continue playing.<sup>127</sup> Accordingly, they have fashioned their games, one way or another, to make the near acquisition of goods a recurring feature of the gambling “market,” just as it is in the auction market.

Consider an ingenious example: the Dutch Postcode Lottery.<sup>128</sup> In an ordinary lottery, potential gamblers choose either to buy or to forego buying a lottery ticket, and those who decline never learn whether they would have won if they had gone ahead and bought one; hence, they are safely insulated from the frustration of discovering that they sustained a deliberative near miss.<sup>129</sup> A state lottery operated in the Netherlands is nevertheless designed to ensure that nonparticipants receive this disturbing information. In the Dutch Postcode Lottery, a postal code equivalent to an American zip code, shared by twenty-five households, is drawn each week.<sup>130</sup> Ticket purchasers who reside within the district divide the prize.<sup>131</sup> Thus, residents who failed to buy a ticket will learn that they almost won when the winning postal code is publicized (or when they hear about it from their neighbors), and they can anticipate now the exasperation they will endure as a consequence. Advertisements promoting the lottery among the famously frugal Hollanders emphasize precisely this reaction:

Sour, that is how it feels when you miss an amount of at least 2 million *by just an inch*. Because seeing a multimillion prize fall on your own address, but winning nothing since you did not buy a ticket, that is something you do not want to experience.<sup>132</sup>

This psychological construct might have backfired on the lottery organizers in 2007, when a non-ticket holder who resided in a winning

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127. E.g., Jonathan Parke & Mark Griffiths, Editorial, *Gambling Addiction and the Evolution of the “Near Miss,”* 12 ADDICTION RES. & THERAPY 407, 407 (2004). For experimental studies, see Denis Côté et al., *Near Wins Prolong Gambling on a Video Lottery Terminal*, 19 J. GAMBLING STUD. 433 (2003); Lloyd H. Strickland & Frederick W. Grote, Jr., *Temporal Presentation of Winning Symbols and Slot Machine Playing*, 74 J. EXPERIMENTAL PSYCHOL. 10 (1967). But cf. Paul H. Delfabbro & Anthony H. Winefield, *The Danger of Over-Explanation in Psychological Research: A Reply to Griffiths*, 90 BRIT. J. PSYCHOL. 447, 447–48 (1999) (identifying difficulties with experimental studies of near misses in the context of gambling); R.L. Reid, *The Psychology of the Near Miss*, 2 J. GAMBLING BEHAV. 32, 35–36 (1986) (failing to replicate Strickland and Grote’s results); Wohl & Enzle, *supra* note 7, at 190 (finding that by fostering the perception that one is unlucky, near misses can deter further gambling).

128. This lottery is described in Marcel Zeelenberg & Rik Pieters, *Consequences of Regret Aversion in Real Life: The Case of the Dutch Postcode Lottery*, 93 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 155 (2004).

129. Where one such near miss could nevertheless be identified, its effect upon the subject was, to say the least, profound. See *supra* note 36 and accompanying text.

130. Zeelenberg & Pieters, *supra* note 128, at 157.

131. *Id.*

132. *Id.* at 158 (translating and quoting a Dutch lottery brochure) (emphasis added). The authors explain this form of lottery as taking advantage of regret aversion, but they fail to recognize how the psychology of proximity powerfully amplifies the regret that would ensue here—a point that the advertisement itself highlights.

postal zone sued them for “emotional blackmail.”<sup>133</sup> The plaintiff alleged that “she couldn’t write her postal code without reliving the trauma of not sharing in the prize,”<sup>134</sup> a symptom that—whether or not feigned—is once again suggestive of the counterfactual frustration associated with near misses. Her claim, however, was denied by a Dutch court.<sup>135</sup>

The Dutch Postcode Lottery relies on the exposure of random near misses in gambling to prompt actions *ex ante* to avoid the attendant emotional risks—in this instance by spending a small sum to purchase a ticket. Other gambling games played in the United States, including instant-winner scratch-off cards, mechanical slot machines, and their electronic, computer-generated facsimiles, are often preprogrammed to produce frequent near misses.<sup>136</sup> For a player of these games, almost winning is not something one anticipates but rather that one experiences, again and again. The result is the same: gamblers are motivated to keep on playing the game.

Why gamblers find near misses intoxicating remains a topic of debate within the psychological literature.<sup>137</sup> But whatever perverse reactions they engender, frequent near misses also give the naïve gambler a false sense of the odds of winning.<sup>138</sup> In other words, the gambler fails to

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133. *Ticket to Writhe*, GLOBE & MAIL, June 23, 2007, at A20.

134. *Id.*; *cf. supra* text accompanying note 69.

135. *Ticket to Writhe*, *supra* note 133 at A20.

136. *E.g.*, Poulos v. Caesars World, Inc., 379 F.3d 654, 661 (9th Cir. 2004); Anthony N. Cabot & Robert C. Hannum, *Gaming Regulation and Mathematics: A Marriage of Necessity*, 35 J. MARSHALL L. REV. 333, 353–55 (2002); Mark Griffiths, *The National Lottery and Scratchcards*, 10 THE PSYCHOLOGIST 23, 23–26 (1997); Jonathan Parke & Mark Griffiths, *The Psychology of the Fruit Machine: The Role of Structural Characteristics (Revisited)*, 4 INT’L J. MENTAL HEALTH & ADDICTION 151, 162–66 (2006) (suggesting that contrived near misses have become a feature in more aspects of slot machine play, as the machines themselves have become more complicated); Parke & Griffiths, *supra* note 127, at 407–10 (same); Sherman & McConnell, *supra* note 49, at 225; Gary Rivlin, *The Chrome-Shiny, Lights-Flashing, Wheel-Spinning, Touch-Screened, Drew-Carey-Wisecracking, Video-Playing, ‘Sound Events’-Packed, Pulse-Quickening Bandit*, N.Y. TIMES, May 9, 2004, § 6 (Magazine), at 42; *see also* Markman & McMullen, *Reflection*, *supra* note 26, at 254 (identifying designers’ effort to render vivid the near misses that occur randomly in the casino game *keno* by illuminating not only the winning number but the losing numbers that surround it); Thomas Gilovich, *Biased Evaluation and Persistence in Gambling*, 44 J. PERSONALITY & SOC. PSYCHOL. 1110 (1983) (finding a general tendency of gamblers to experience losses as near wins).

137. *Compare* Mark D. Griffiths, *The Psychology of the Near-Miss (Revisited): A Comment on Delfabbro & Winefield (1999)*, 90 BRIT. J. PSYCHOL. 441, 442 (1999) (suggesting that gamblers assimilate near wins with wins and thus find them exciting, even though they are costless to the gambling house), and Mark Griffiths, *Psychobiology of the Near-Miss in Fruit Machine Gambling*, 125 J. PSYCHOL. 347, 352–56 (1991)(same), with GEOFFREY R. LOFTUS & ELIZABETH F. LOFTUS, MIND AT PLAY: THE PSYCHOLOGY OF VIDEO GAMES 30–33 (1983) (suggesting that near misses enhance regret but encourage further play in order to eliminate the regret).

138. *E.g.*, Poulos, 379 F.3d at 661; Parke & Griffiths, *supra* note 127, at 407; *see also* Reid, *supra* note 127, at 33 (finding that interview subjects consider near misses in gambling “encouraging”); Karl H. Teigen, *When the Unreal Is More Likely Than the Real: Post Hoc Probability Judgments and Counterfactual Closeness*, 4 THINKING & REASONING 147, 173–75 (1998) (finding that people make prob-

realize that he or she is playing with a stacked deck. Thus, unlike the auction setting, some games of chance provide a “wicked,” rather than a kind, learning environment.<sup>139</sup> the outcome feedback is not simply uncertain—concealing the odds of winning with a variable reinforcement schedule—it is affirmatively misleading. Indeed, the learning environment grows progressively more wicked when gambling games give players strategic choices (as many do). Near misses ostensibly flowing from erroneous choices nourish the false hope that sooner or later (but in truth always later) the gambler can discover how to outwit the game.<sup>140</sup>

We thus reach a different conclusion with respect to games of chance in which the perception of almost winning is manipulated and the true odds of winning are obscured. If proximity experiences ordinarily hold adaptive value for the behavior of subjects in kind learning environments, when near misses are credibly falsified they become maladaptive. Add the further fact that contrived near misses cause some gamblers to become addicted,<sup>141</sup> and the case for intrusively regulating this aspect of the gambling market becomes strong. In at least some instances, then, the psychology of proximity can vindicate invasions of consumer sovereignty. It happens that a dozen states with legalized gambling—including Nevada—have already acted to prohibit “scripted” near misses from games they otherwise allow.<sup>142</sup> The remaining states should follow suit.

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ability estimates based on closeness and observing that this is a heuristic process, which the author dubs the “closeness heuristic”).

139. See *supra* note 123 and accompanying text.

140. MICHAEL B. WALKER, *THE PSYCHOLOGY OF GAMBLING* 141 (1992); Mark D. Griffiths, *The Role of Cognitive Bias and Skill in Fruit Machine Gambling*, 85 *BRIT. J. PSYCHOL.* 351, 354, 366–67 (1994); Sherman & McConnell, *supra* note 49, at 225. Thus, a manufacturer executive instructed his game designers that “whenever a bonus round offered players a choice, the machine would reveal the values of the options not selected. ‘You want the player to have the feeling, ‘I almost picked that one; I’ll get it next time.’” Rivlin, *supra* note 136, at 47. On the magnification of near miss reactions produced by control (or, in this instance, the illusion of control), see *supra* note 31 and accompanying text. In many card games, with an honest dealer and an ability to keep rough track of cards played (or to count cards without being detected), gamblers can make reasonable assessments about their odds of winning and, even if they are not engaging in sophisticated strategies, can develop effective strategies for limiting their losses. See Gideon Keren & Willem A. Wagenaar, *On the Psychology of Playing Blackjack: Normative and Descriptive Considerations With Implications for Decision Theory*, 114 *J. EXPERIMENTAL PSYCHOL.: GEN.* 133, 157 (1985). Thus, while the learning environment in a game of blackjack is certainly not very kind, it is much less wicked than that found with scripted slot machines that regularly register “false” near misses. Nonetheless, as Keren and Wagenaar add, “[t]he really normative way to minimize blackjack losses is simply not to play, unless one is a counter.” *Id.* at 156.

141. E.g., Parke & Griffiths, *supra* note 127, at 409–10.

142. E.g., NEV. ADMIN. CODE § 14.040 (2002); N.J. ADMIN. CODE § 19:46-1.28A (2005); Cabot & Hannum, *supra* note 136, at 353–57; see also Bradley S. Fiorito, Comment, *Calling a Lemon a Lemon: Regulating Electronic Gambling Machines to Contain Pathological Gambling*, 100 *NW. U. L. REV.* 1325, 1344–46 (2006) (noting game designers’ efforts to evade these regulations).

## IV. PROXIMITY TO LEGALITY

Considered structurally, discontinuities in the world are what give rise to near harms and goods. Yet, just as discontinuities separate physical occurrences from nonoccurrences, thresholds separate abstract states of legality from illegality. “Law consists in drawing . . . lines.”<sup>143</sup> Hence, near misses can occur upon the legal landscape itself—in law, as in life—and in the process generate equivalent reactions and behaviors in those who traverse that landscape.

When parties meet all but one of the qualitative requirements for formalizing a legal act—the execution of a contract or a will, for example—we might expect them, or their beneficiaries, to experience frustration in “just missing” the validation of the transaction. Likewise, when lawmakers set quantitative or temporal boundaries that legal actors approach but do not quite reach, we might expect the same.<sup>144</sup> Sometimes these thresholds operate mechanically—the year-and-a-day rule in criminal law, for example.<sup>145</sup> Other times, as for example under statutes of limitations, legal actors must act diligently to meet a deadline. In those instances where a party’s choices and activities can affect the outcome, we would expect his or her reaction to the near miss of a legal threshold to escalate.<sup>146</sup>

For several reasons, those reactions should concern us.<sup>147</sup> First, they can contaminate legal process. Earlier, we summarized findings that mock jurors sympathize with the victims of near misses of harms.<sup>148</sup> Judges appear no less sympathetic beings and are equally capable of appreciating litigants’ reactions to near misses of legality. These often prompt rhetorical hand-wringing from the bench. Thus, courts have characterized the outcomes of near misses of legality as “harsh”<sup>149</sup> or

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143. *Schlesinger v. Wisconsin*, 270 U.S. 230, 241 (1925) (Holmes, J., dissenting).

144. This analysis assumes assimilation does not occur, as it should not if the party’s attention focuses on the irregularity that gave rise to the near miss. See *supra* note 26 and accompanying text.

145. Under the year-and-a-day rule, which still applies to homicide cases in a minority of jurisdictions, if a victim dies on or before the 366th day after being shot by the defendant, the defendant can be prosecuted for homicide; if the victim expires on the 367th day or thereafter, the defendant cannot be prosecuted. See generally Neil M.B. Rowe, *The Year-and-a-Day Rule: A Common Law Vestige That Has Outlived Its Purpose*, 8 JONES L. REV. 1 (2004).

146. See *supra* note 31 and accompanying text.

147. We are surely not the first to express such concern, broadly speaking. The field of therapeutic jurisprudence, in a similar vein, “focuses on the law’s impact on emotional life and psychological well-being.” Bruce J. Winick et al., *Preface: A New Model for the Practice of Law*, 5 PSYCHOL. PUB. POL’Y & L. 795, 795 (1999). See generally LAW IN A THERAPEUTIC KEY (David B. Wexler & Bruce J. Winick eds., 1996); Symposium, *Therapeutic Jurisprudence: Issues, Analysis, and Applications*, 24 SEATTLE U. L. REV. 217 (2000).

148. See *supra* notes 58–59, 84–85 and accompanying text.

149. “All fixed deadlines seem harsh because all can be missed by a whisker.” *Prussner v. United States*, 896 F.2d 218, 222 (7th Cir. 1990) (Posner, J.); see also, e.g., *Ne. Ga. Health Sys. v. Danner*, 580 S.E.2d 293, 296 (Ga. Ct. App. 2003) (Barnes, J., dissenting); *Stidham v. Henson*, 887 S.W.2d 353, 354

even “draconian.”<sup>150</sup> Occasionally, courts elaborate, as when a federal district court judge “recognize[d] the plaintiff’s frustration” in failing to meet a deadline by a single day.<sup>151</sup> Presented with a party who forfeited the right to bring a cause of action as a consequence of underpaying by *three* dollars a filing fee, a state court judge described the outcome as “a horror story” and conceded that the court was “very sympathetic” to the party’s situation.<sup>152</sup>

Judicial sympathy may press in the direction of surreptitious abuse of law. In the inheritance field, for instance, jurisdictions that purport to insist on strict compliance with will formalities have sometimes winked at mis-executed wills that narrowly failed to meet all of the formal requirements.<sup>153</sup> In other words, like hard cases, near-miss cases sometimes make bad law. When they do, the propriety of legal process suffers.

Second, and more fundamentally, ensuring that citizens do not leave the courthouse exasperated by what occurred there carries weight in a democratic society.<sup>154</sup> To be deprived of justice “by a whisker”<sup>155</sup> may well cause a greater sense of injury than to miss by far. Of course, an Oliver Wendell Holmes might reply that lines have to be drawn somewhere, and so citizens have no cause to complain when courts etch them in stone<sup>156</sup>—yet, it is the unrefined experiences of ordinary persons, not the thought experiments of the legal philosopher, that lie at stake here. If we care about citizens’ satisfaction with law as actually applied, then

(Ky. 1994); *Hannon v. Weber*, 638 N.W.2d 48, 50 (S.D. 2001); *infra* note 152 and text accompanying notes 165, 172.

150. *In re John Renton Young, Ltd.*, 87 B.R. 635, 641 (Bankr. D. Nev. 1988); *Burton v. Planning Comm’n of the Town of Redding*, 553 A.2d 161, 165 (Conn. 1989) (majority and dissenting opinions).

151. *Charnaux v. Health Net*, No. C03-05875, 2004 WL 2645976 at \*6 (N.D. Cal. Nov. 16, 2004).

152. *Duran v. St. Luke’s Hosp.*, 8 Cal. Rptr. 3d 1, 2 (Ct. App. 2003) (quoting the unpublished trial court opinion). The trial court had also emphasized the nearness of the miss: “Nonpayment of . . . that \$3 is very[,] very minimal.” *Id.* The appellate court similarly referred to the enforcement of the rule as a “harsh but unavoidable result.” *Id.* at 1.

153. One court acknowledged the tendency: “Rigid insistence on literal compliance often frustrates [the policies of will formalities] . . . . To avoid such frustration, some courts, although purporting to require literal compliance, have allowed probate of technically-defective wills.” *In re Will of Ranney*, 589 A.2d 1339, 1344 (N.J. 1991). For academic observations, see Adam J. Hirsch, *Inheritance Law, Legal Contraptions, and the Problem of Doctrinal Change*, 79 OR. L. REV. 527, 554 (2000); John H. Langbein, *Substantial Compliance with the Wills Act*, 88 HARV. L. REV. 489, 525–26 (1975). In some areas of criminal law, this tendency is so pervasive that it is broadly recognized and relied upon. For a discussion, see Margaret Raymond, *Penumbral Crimes*, 39 AM. CRIM. L. REV. 1395 (2002).

154. In two-party cases, the matter is complicated by the presence of relativity: one party’s near miss is the other’s close call. Nonetheless, the problem of interpersonal utility comparisons to one side, near misses tend to generate stronger reactions than close calls. *See supra* note 32 and accompanying text.

155. *Prussner v. United States*, 896 F.2d 218, 222 (7th Cir. 1990).

156. “[A]n advocate . . . will show the arbitrariness of the line proposed by putting cases very near to it on one side or the other. But the theory of the law is that such lines exist, because the theory of the law as to any possible conduct is that it is either lawful or unlawful.” Oliver Wendell Holmes, *Law in Science and Science in Law*, 12 HARV. L. REV. 443, 457 (1899); *see also* FREDERICK SCHAUER, *PROFILES, PROBABILITIES AND STEREOTYPES* 113–18 (2003). Holmes did not allow hard cases to sway him either. *See* Letter from Oliver Wendell Holmes, Jr., to Frederick Pollock (Dec. 11, 1909), in 1 HOLMES-POLLOCK LETTERS 155, 156 (Mark DeWolfe Howe ed., 1941) (presenting his views on hard cases).

avoiding so far as possible the high anxiety associated with near misses becomes a relevant consideration.

We observed in connection with goods that the frequency of near misses of those goods is sometimes manipulable. That is also true in connection with legality, in an even deeper way. Law is an abstraction. Although legal line drawing inevitably produces near misses, lawmakers can refashion the structure of rules at their pleasure to make near misses disappear. In fact, a variety of legal structures exhibit this very attribute.

Consider a standard, as opposed to a rule. Legal actors who miss a standard have no way of knowing how close they came to a different outcome, because they have no clear lines to go by. Although scholars have emphasized its potential to accomplish individualized justice as the primary virtue of a standard,<sup>157</sup> the psychology of proximity illuminates a secondary virtue in a standard's benign obscurity.

Oddly enough, at the opposite extreme, the problem of near legality again disappears: if lawmakers create a blizzard of fine lines, so that rules become effectively incremental in nature, then discontinuities in law are not obscured, but rather squeezed out of existence. The Internal Revenue Code comes closest to implementing such a pointillist approach to lawmaking. Here, psychology brings to light a previously unrecognized virtue of legal complexity—to wit, its potential to calm citizens' reactions in their engagement with rules, to the extent complexity is manifested as gradations of legal consequences.<sup>158</sup>

Yet, lawmakers have at their disposal still another option, one that from a structural perspective focuses directly on the matter at hand. Lawmakers can blunt the sharp edge of a rule without melting it down altogether, by granting courts leave to waive the rule in close cases.<sup>159</sup> This result is achieved by recourse to *substantial compliance* doctrines. These doctrines can save the legal, and hence the psychological, day for actors who almost comply with a clear rule. Unlike a standard, a rule cabined by a substantial compliance doctrine is only fuzzy at the mar-

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157. For a classic discussion, see ROSCOE POUND, AN INTRODUCTION TO THE PHILOSOPHY OF LAW 59–71 (rev. ed. 1954). For more recent discussions of the jurisprudence of standards, see for example Pierre Schlag, *Rules and Standards*, 33 UCLA L. REV. 379 (1985); Steven Shavell, *Optimal Discretion in the Application of Rules* (Harvard Law & Econ. Discussion Paper No. 509, 2005), available at <http://ssrn.com/abstract=716921>; Cass R. Sunstein, *Problems with Rules*, 83 CAL. L. REV. 953 (1995).

158. For a discussion of the public policy of legal complexity, see Peter H. Schuck, *Legal Complexity: Some Causes, Consequences, and Cures*, 42 DUKE L.J. 1, 18–25 (1992).

159. This result does not merely reverse parties' reactions in two-party cases. To be sure, winking at one party's near miss (which thereby becomes a close call) does transform the other party's close call into a near miss. To this extent, a wash occurs. Nevertheless, the two parties' roles are not equivalent, because counterfactual frustration affects more strongly the party who controls the situation (such as a filing deadline). See *supra* note 31 and accompanying text.

gin.<sup>160</sup> Taxonomically, substantial compliance doctrines comprise something of a hybrid form, a quasi-rule (or, just as aptly, a quasi-standard).<sup>161</sup> Structurally, they function quite precisely to avoid near misses of law.<sup>162</sup> That substantial compliance doctrines have emerged independently in quite a few, scattered regions of the legal landscape testifies both to lawmakers' recognition of the problem of near misses of legality and to the expedience of this solution to the problem.<sup>163</sup>

Substantial compliance doctrines have received a bit of attention within the scholarly literature of specific fields where the doctrines have taken root.<sup>164</sup> As a generic legal form, however, substantial compliance

160. One court emphasized this distinction, amusingly but meaningfully, by averring its "rigid insistence' on substantial compliance" with the execution requirements for a will. *Draper v. Pauley*, 480 S.E.2d 495, 496 (Va. 1997) (quoting *Robinson v. Ward*, 387 S.E.2d 735, 738 (Va. 1990)).

161. Possibly as a result, courts have betrayed confusion about whether substantial compliance is an equitable or a common law concept. Compare, for example, *Greczyn v. Colgate-Palmolive*, 869 A.2d 866, 868 (N.J. 2005) (identifying it as an equitable doctrine), with *Prussner v. United States*, 896 F.2d 218, 224 (7th Cir. 1990) (identifying it as common law).

162. Professor John Langbein made the point indirectly while advocating a pure standard for excusing formal errors in will execution, as opposed to a substantial compliance doctrine: "The courts read into their substantial compliance doctrine a near-miss standard, ignoring the central issue of whether the testator's conduct evidenced testamentary intent." John H. Langbein, *Excusing Harmless Errors in the Execution of Wills: A Report on Australia's Tranquil Revolution in Probate Law*, 87 COLUM. L. REV. 1, 53 (1987).

163. By analogy, the same pattern has sometimes appeared in the natural landscape, where disparate species at different times have independently evolved an equivalent trait, a clear indication of its biological usefulness. For an example, see Sid Perkins, *Learning to Listen: How Some Vertebrates Evolved Biological Sonar*, SCI. NEWS, May 14, 2005, at 314.

164. The existing body of scholarship on substantial compliance doctrines treats them individually. See generally JAMES D. COX ET AL., SECURITIES REGULATION 319–20 (5th ed. 2006); 2 E. ALLAN FARNSWORTH, FARNSWORTH ON CONTRACTS § 8.12 (3d ed. 2004); 1 GRANT GILMORE, SECURITY INTERESTS IN PERSONAL PROPERTY 471–72 (1965); 2 JOHN W. STRONG, MCCORMICK ON EVIDENCE § 324, at 349–50 (5th ed. 1999); Meredith H. Bogart, *State Doctrines of Substantial Compliance: A Call for ERISA Preemption and Uniform Federal Common Law Doctrine*, 25 CARDOZO L. REV. 447, 469–96 (2003) (pension law); Langbein, *supra* note 153, at 489 (will formalities); Jack Leyhane, *Substantial Compliance: Substantially Erroneous Doctrine*, 9 LOY. CONSUMER L. REV. 353 (1997) (insurance law); C. Douglas Miller, *Will Formality, Judicial Formalism, and Legislative Reform: An Examination of the New Uniform Probate Code 'Harmless Error' Rule and the Movement Toward Amorphism (Part I)*, 43 FLA. L. REV. 167, 229–54 (1991); David Polin, *Substantial Compliance with Requirements of Life Insurance Policy Regarding Change of Beneficiary*, 44 AM. JUR. 3D *Proof of Facts* § 2 (1997); Juliana J. Zekan, *The Name Game—Playing to Win Under § 9-402 of the Uniform Commercial Code*, 19 HOFSTRA L. REV. 365 (1990); Jennifer Howard, Note, *ERISA Preemption: Whether State Common Law Doctrines of Substantial Compliance Fall Under the Purview of ERISA*, 92 KY. L. J. 551 (2003–04) (pension law); Lawrence Jennings Imel, Comment, *Substantial Compliance with the Contractors' State Licensure Law: An Equitable Doctrine Producing Inequitable Results*, 34 LOY. L.A. L. REV. 1539, 1540–42 (2001); Victoria Levin, Note, *The Substantial Compliance Doctrine in Tax Law: Equity vs. Efficiency*, 40 UCLA L. REV. 1587 (1993); Renee A. Mangini, Note, *The Contractors' State Licenses Law: From Strict Adherence to Substantial Compliance*, 9 WHITTIER L. REV. 613 (1987); Steven C. Rattner, Comment, *Letters of Credit: A Return of the Historical Documentary Compliance Standard*, 46 U. PITT. L. REV. 457 (1985); Zach Scruggs, Note, *What Is Substantial Compliance Anyway? Examination of the Present Status of the Notice of Claim Requirements of Section 11-46-11 in Light of Mississippi's Shift from Strict to Substantial Compliance in Reaves v. Randall and Carr v. Town of Shubuta*, 69 MISS. L.J. 859 (1999) (tort claim statute); David J. Simon & Deborah A. Lee, Comment, *The Substantial Compliance Doctrine: Preserving Limited Liability Under the Uniform Limited Partnership Act*, 13 U.C. DAVIS L. REV. 924 (1980); Ann K. Triplett, Note, *A Sympathetic Vehicle: Michigan v. Katt and Setting Dangerous Precedent*, 37 LOY. L.A. L. REV. 1373 (2004) (residual hearsay exception); Jeremy

doctrines have attracted no attention whatsoever within the jurisprudential literature, and they want structural comparison to other legal forms: strict rules on one hand, and pure standards on the other. In fact, the psychology of proximity suggests that substantial compliance doctrines possess unique attributes that could render them singularly attractive, depending on the circumstances—they represent a “third way” that a more traditional focus on the rules/standards dichotomy has tended to conceal.

The form is also more versatile than has sometimes been perceived. Some courts have doubted whether lawmakers could rationally apply the substantial compliance principle to one whole category of rules—namely, temporal dividing lines in law. No less of an authority than Justice Thurgood Marshall, speaking for a majority of the U.S. Supreme Court, claimed that

[t]he notion that a filing deadline can be complied with by filing sometime after the deadline falls due is, to say the least, a surprising notion, and it is a notion without limiting principle. If 1-day late filings are acceptable, 10-day late filings might be equally acceptable, and so on in a cascade of exceptions that would engulf the rule . . .; yet regardless of where the cutoff line is set, some individuals will always fall just on the other side of it. Filing deadlines, like statutes of limitations, necessarily operate harshly and arbitrarily with respect to individuals who fall just on the other side of them, but if the concept of a filing deadline is to have any content, the deadline must be enforced. . . . [It] cannot be complied with[] substantially.<sup>165</sup>

This reasoning offers a variation of the famous Sorites Paradox in linguistic theory:<sup>166</sup> the word *heap* (like the concept of *substantial* compliance) has no defined limits, and hence no meaning, because the subtraction of one particle from a heap of any given size is never enough to change its character. The paradox stems from a failure to recognize that the concept of a heap (like substantiality) is surrounded by fuzzy, rather than sharp, lines. As such, the effect of subtracting one more grain from the heap—or missing a deadline by another day—is unclear. But a want of clarity does not render a concept devoid of “any content.”<sup>167</sup> The fallacy of Justice Marshall’s analysis lies in the assumption that blurring a

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S. Weber, Comment, *Law, Justice and Jury Waiver Procedure in the Ohio Supreme Court*, 46 CASE W. RES. L. REV. 1113 (1996).

165. *United States v. Locke*, 471 U.S. 84, 100–01 (1985). For similar observations, see *Heidbreder v. Carton*, 645 N.W.2d 355, 370 (Minn. 2002); *Seattle v. Pub. Employment Relations Comm’n*, 809 P.2d 1377, 1380 (Wash. en banc. 1991).

166. For a theoretical discussion, see TIMOTHY WILLIAMSON, *VAGUENESS* 8–35 (1994).

167. *Locke*, 471 U.S. at 101.

deadline is equivalent to extending it.<sup>168</sup> Once we have blurred the deadline, we can no longer determine which legal actors “fall just on the other side of it.”<sup>169</sup> Although more commonly applied to near misses of qualitative formality,<sup>170</sup> substantial compliance doctrines have in fact attached themselves to a small number (if not a heap) of temporal, as well as other quantitative, boundaries in law, despite Marshall’s analysis.<sup>171</sup> From a structural perspective, lawmakers have no reason to distinguish near misses of rules on such a categorical basis.

Nevertheless, we cannot rate the expedience of precluding near misses of legality as our preeminent concern when crafting legal structures. Other, concurrent concerns may prove at least as important. In those instances where lawmakers feel bound to offer certainty and predictability (or simply to avoid litigation), they may do best to create strict rules, “their occasional harshness [being] redeemed by the clarity which they impart to legal obligation.”<sup>172</sup> Here, experiencing the near miss should also have adaptive value, at least in those situations where a legal actor anticipates repeated experiences with a rule. Lawmakers can still mitigate the psychological effects of near misses of legality by adding gradations, as previously discussed, although complexity implicates obvious costs of its own. On the other hand, where case-by-case justice looms as the dominant concern, a standard becomes optimal and simultaneously serves to obscure proximity as a structural fringe benefit.

As a hybrid, a substantial compliance doctrine can offer the best of both worlds. It generates a smaller zone of uncertainty than a standard does,<sup>173</sup> providing substantive justice only within that zone. Thus, the doctrine avoids near misses while producing a lower yield of litigation. Proximity to compliance also provides prima facie evidence of good faith (where relevant),<sup>174</sup> as well as prima facie evidence that excusing the near

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168. Nor does a substantial compliance doctrine operate merely to shift the region where a party experiences a near miss. As in the case of a pure standard, parties who fail to satisfy a substantial compliance doctrine cannot learn how close they came to doing so. Cf. SCHAUER, *supra* note 156, at 116 & 322 n.14 (suggesting that if an unwritten rule exists allowing motorists to travel ten miles per hour faster than a posted speed limit without being ticketed, the threshold that a motorist can nearly miss merely shifts forward by ten miles per hour).

169. *Locke*, 471 U.S. at 101.

170. *E.g.*, U.C.C. § 9-506(a) (2000).

171. *Hickel v. Oil Shale Corp.*, 400 U.S. 48, 54, 56–57 (1970); *Poway Unified Sch. Dist. v. Chow*, 46 Cal. Rptr. 2d 651, 654–55 (Ct. App. 1995); *Webster County v. Vaughn*, 365 S.W.2d 109, 111 (Ky. Ct. App. 1963); *O’Malley v. Cont’l Life Ins. Co.*, 75 S.W.2d 837, 838–39 (Mo. 1934); *McGregor Co. v. Heritage*, 620 P.2d 488, 492 (Or. Ct. App. 1980) (amalgamating qualitative and quantitative substantial compliance); *Miller v. Unemp. Comp. Bd. of Rev.*, 476 A.2d 364, 366–67 (Pa. 1984); *Hoeneke v. Lehman*, 542 S.W.2d 728, 730–31 (Tex. Civ. App. 1976); *see also Locke*, 471 U.S. at 126–27 (Stevens, J., dissenting).

172. *Prussner v. United States*, 896 F.2d 218, 222 (7th Cir. 1990); *see also id.* at 224; *Bowles v. Russell*, 127 S. Ct. 2360, 2367 (2007).

173. *See, e.g.*, H.R. REP. NO. 93-1597 at 11 (1974), *reprinted in* 1974 U.S.C.C.A.N. 7098, 7106 (pointing out this attribute in connection with the residual hearsay exception).

174. *See Howard D. Johnson Co. v. Madigan*, 280 N.E.2d 689, 692 (Mass. 1972) (“[T]he plaintiff demonstrated good faith in its subsequent substantial compliance.”); *Fink v. Thompson*, 772 A.2d 386, 394 (N.J. 2001) (“Plaintiff’s actions constitute a good faith effort and substantial compliance with

miss will not flout policies that the rule subserves.<sup>175</sup> These last two attributes of near misses—the circumstantial evidence of intent to comply and of the likely conformity with public policy that they provide—may well comprise variables in the inscrutable function that turns near-miss cases into hard cases, along with their counterfactual resonance.

Substantial compliance doctrines also evince one other virtue, following from their ability to soften hard cases. They relieve pressure on courts to commit abuses of law that can ensue when lawmakers demand strict compliance.<sup>176</sup> Once again, the psychology of proximity can affect legal process systemically. If lawmakers face a choice between overt enforcement of a substantial compliance doctrine and a regime in which strict compliance becomes a façade—sometimes observed and sometimes covertly evaded, with no clear predictability—they may find virtue in integrity.<sup>177</sup>

Note also that near misses may occur in connection with thresholds of the parties' own devising. Parties entering into contractual agreements or making gratuitous transfers may set conditions that have to be satisfied before the transactions take effect. The law of contracts and wills ordinarily enforces these conditions; indeed, it ordinarily enforces them scrupulously, again presenting the prospect of cases in which conditions are almost, but not quite, met.<sup>178</sup> Assessing this state of affairs, Professor Allan Farnsworth sounded the usual, evocative phrases: "In the rules governing express conditions, the law is at its most draconian . . . . Instead of a rule of substantial compliance, a harsh rule of strict compliance generally prevails."<sup>179</sup>

Whether this approach is appropriate is scarcely clear. Courts justify rigid enforcement of express conditions on the ground that parties' "bargained-for expectation of strict compliance should be given effect."<sup>180</sup> That would be true, of course, in instances where the principle of strict compliance was itself expressly recited in the contract. The mere fact that the condition is express, though, does not carry any necessary

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the . . . statute."). The possibility remains, however, that a near miss instead reflects a legal actor's taste for risk. *See supra* pp. 567–68.

175. *See* *Tamulis v. Comm'r*, 509 F.3d 343, 347 (7th Cir. 2007) ("The doctrine of substantial compliance 'seek[s] to . . . forgive noncompliance for either unimportant and tangential requirements . . . [where] a good faith effort at compliance should be accepted.'" (quoting *Volvo Trucks of N. Am., Inc. v. United States*, 367 F.3d 204, 210 (4th Cir. 2004))).

176. *See supra* note 153 and accompanying text.

177. *See generally* RONALD DWORKIN, *LAW'S EMPIRE* 176, 219–27 (1986).

178. For a recent example of a bequest conditioned on the beneficiary surviving for 120 days that he was alleged either to have satisfied or failed to satisfy by a matter of *five minutes*, see *Estate of Davies*, 26 Cal. Rptr. 3d 239, 241 (Ct. App. 2005).

179. 2 FARNSWORTH, *supra* note 164, § 8.7a, at 466–67; *see also id.* § 8.3 at 422–24.

180. *Renovest Co. v. Hodges Dev. Corp.*, 600 A.2d 448, 452–53 (N.H. 1991), *quoted in* 2 FARNSWORTH, *supra* note 164, § 8.3, at 423.

implications concerning the manner of its application.<sup>181</sup> Lawmakers here are promulgating a default rule of construction, filling in a missing part of the condition's meaning. As such, the rule should reflect what most parties probably would have preferred had they addressed the matter.<sup>182</sup>

The advantage of a rule of strict compliance regarding conditions is, once again, that it affords the parties certainty and clarity as to their legal rights. But if parties anticipate, as they are perfectly capable of doing, the counterfactual frustration associated with near misses, they might prefer to avoid it *ex ante*. A rule of substantial compliance in this context would represent another coping strategy, arising uniquely in a legal context, that allows parties to forestall the aftereffects of near misses by rendering them inconsequential. Whether most parties would in fact deem this concern paramount and hence would prefer to apply a rule of substantial compliance to textual conditions in contracts or wills is ultimately an empirical question.

Notice finally that near misses of legality can occur in one other context—where the substance of a rule remains uncertain. Litigation then becomes necessary to clarify or elaborate the rule. At that stage, parties will offer their own, partisan interpretations, and a court will render its decision. That decision itself may be a close thing, leaving losing parties with the perception of having nearly missed an adjudicative victory.

Courts can render adjudicative near misses less painful by making them less transparent. It is surely the rare opinion that confesses self-doubt about the appropriate interpretation of a rule.<sup>183</sup> Where, however, a panel of judges or a court sitting *en banc* interprets rules, it may betray the closeness of an issue by rendering a split decision. Parties then become aware of how near they came to winning by observing how the court divided.<sup>184</sup>

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181. Lawmakers have carved out an exception from the rule of strict compliance where a condition is impossible to perform, and hence a miss (near or far) is inevitable. In inheritance law, a doctrine of substantial compliance applies in this situation. RESTATEMENT (SECOND) OF PROP.: DONATIVE TRANSFERS § 5.2 reporter's note 5 (1983). In contract law, a similar rule prevails. See RESTATEMENT (SECOND) OF CONTRACTS § 271 (1981). In some jurisdictions, a rule of substantial compliance also applies to conditions within insurance contracts. Leyhane, *supra* note 164, at 356–57.

182. For summaries of default rule theory in contract law, see ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 211–17 (4th ed. 2004); RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW § 4.1, at 95–97, § 14.3, at 426 (7th ed. 2007). For an application of contract default rule theory to gratuitous transfers law, see Adam J. Hirsch, *Default Rules in Inheritance Law: A Problem in Search of Its Context*, 73 FORDHAM L. REV. 1031 (2004).

183. Rare, but not unheard of. See *Feole v. Wall*, No. CA. 02-518S, 2004 WL 350036, at \*8 (D.R.I. Feb. 23, 2004) (“[A]lthough it is a close call, this Court cannot say that this trial judge’s actions . . . [were] inconsistent with . . . federal law.”).

184. See, e.g., WILL OURSLER, FAMILY STORY 281, 288 (1963) (remarking the closeness of the tally of votes in the final appellate court ruling in an epic will contest); John Hill, *Court: Alexander Qualifying Stands*, SHREVEPORT TIMES, Aug. 31, 2004, available at 2004 WLNR 16072957 (party’s “attorneys noted the 7-5 decision [by the Fifth Circuit Court of Appeal] was a close call”).

To some degree, systemic factors may operate to suppress near misses of this sort. Once again, legal decision makers, no less than legal actors, are susceptible to the psychology of proximity. Assuming they care about judicial outcomes, or simply prefer to be on the winning side, judges have an incentive to vote to deny appeal on cases they fear losing, a practice known as defensive denial.<sup>185</sup>

When a judge anticipates that a decision will be close, he or she should have an even greater propensity for defensive denial, because it is psychologically more frustrating to lose by a little than by a lot. Hence, we predict, an appeal will be *less* frequently granted, all else being equal, in close cases. This hypothesis has yet to come under study, although some anecdotal evidence already supports it.<sup>186</sup>

In any event, legal process could be adapted to operate more discreetly. Under the continental civil law, courts issue a single, combined judgment without indicating dissent from the majority's ruling.<sup>187</sup> During John Marshall's tenure as Chief Justice, the United States Supreme Court similarly followed the practice of issuing single opinions.<sup>188</sup> The nine justices did have the right to dissent but forbore to exercise it, bowing to the will of the majority—as judges sometimes continue to do today.<sup>189</sup>

As dissenting opinions have grown increasingly frequent in the United States, their virtues and vices have become a topic of debate. Much of that debate has focused on the authority of courts and their internal dynamics.<sup>190</sup> The psychology of proximity raises an additional con-

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185. LEE EPSTEIN & JACK KNIGHT, *THE CHOICES JUSTICES MAKE* 80–81 (1998); H.W. PERRY, *DECIDING TO DECIDE* 198–207 (1991).

186. See Linda Greenhouse, *Case of the Dwindling Docket Mystifies the Supreme Court: Legal Scholars Offer Theories on a Drop in Appeals*, N.Y. TIMES, Dec. 7, 2006, at A1, A36 (suggesting that the recent drop in the number of grants of certiorari by the U.S. Supreme Court traces to defensive denial by justices of the sharply divided Court, and adding intuitively “[t]o grant a case takes four votes, which can be a *heartbreaking* distance from the five votes it takes to win” (emphasis added)).

187. ALAN WATSON, *THE MAKING OF THE CIVIL LAW* 176–77 (1981). Consequently, as another scholar remarks, “[M]odern civil law presents an illusion of certainty.” Peter G. Stein, *Roman Law, Common Law, and Civil Law*, 66 TUL. L. REV. 1591, 1596 (1992); see also Maurice Kelman, *The Forked Path of Dissent*, 1985 SUP. CT. REV. 227, 227 (similar observation).

188. Donald G. Morgan, *The Origin of Supreme Court Dissent*, 10 WM. & MARY Q. (3d ser.) 353 (1953); Karl M. ZoBell, *Division of Opinion in the Supreme Court: A History of Judicial Disintegration*, 44 CORNELL L.Q. 186, 192–96 (1959).

189. Kelman, *supra* note 187; Donald R. Songer, *Consensual and Nonconsensual Decisions in Unanimous Opinions of the United States Courts of Appeals*, 26 AM. J. POL. SCI. 225, 226 (1982) (summarizing studies).

190. For a sampler of discussions, see LEARNED HAND, *THE BILL OF RIGHTS* 72–73 (1958); CHARLES EVANS HUGHES, *THE SUPREME COURT OF THE UNITED STATES* 67–68 (1928); KARL N. LLEWELLYN, *THE CASE LAW SYSTEM IN AMERICA* 59–61 (Paul Gewirtz ed., 1989); RICHARD A. POSNER, *THE FEDERAL COURTS: CHALLENGE AND REFORM* 353–64 (1996); Robert G. Flanders, Jr., *The Utility of Separate Judicial Opinions in Appellate Courts of Last Resort: Why Dissents Are Valuable*, 4 ROGER WILLIAMS U. L. REV. 401 (1999); Ruth Bader Ginsburg, *Remarks on Writing Sepa-*

cern: the impact of dissent on the particular litigants who come before a court. To be sure, this element in the equation has not gone entirely unnoticed, and the occasional discussion suggests some appreciation of the underlying psychology. In Great Britain, Lord Mansfield strove mightily (and successfully, by and large) to maintain the unanimity of his King's Bench in the late eighteenth century, which "gives weight and dispatch to the decisions, certainty to the law and," he added, "infinite satisfaction to the suitors; and the effect is seen by that immense business which flows from all parts into this channel."<sup>191</sup> Mansfield offered no further speculations concerning the source of that satisfaction, but modern commentators have remarked on the same practice prevailing in some courts:

In English criminal appeals, it has long been regarded as imperative that the discomfiture of the unsuccessful appellant should not be aggravated by an overt division of opinion among the judges. To the criminal, punishment itself is bitter enough, without the salt of a favorable but impotent dissenting judgment rubbed into the wound.<sup>192</sup>

*The salt of a dissenting judgment rubbed into the wound.* British judges sense intuitively that a near miss of judgment inflicts more "discomfiture"<sup>193</sup> than a far miss does. They are prepared to obfuscate in order to alleviate the frustration of counterfactual reflections. That frustration should prove especially acute in criminal cases, where a near miss has such profound implications.<sup>194</sup> Yet, by issuing unanimous decisions, courts of general jurisdiction will also tend to stanch counterfactual reactions, rendering the experience of justice more dispassionate. If the historical popularity of Lord Mansfield's court is any indication, that may well accord with the preferences of the parties themselves.<sup>195</sup> This ap-

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rately, 65 WASH. L. REV. 133 (1990); Scott C. Idleman, *A Prudential Theory of Judicial Candor*, 73 TEX. L. REV. 1307 (1995); Antonin Scalia, *The Dissenting Opinion*, 1994 J. SUP. CT. HIST. 33.

191. *Millar v. Taylor*, (1769) 98 Eng. Rep. 201, 251 (K.B.), quoted in LOUIS BLOM-COOPER & GAVIN DREWRY, FINAL APPEAL 80 (1972); see also CECIL FIFOOT, LORD MANSFIELD 46-47 (1936) (quoting another contemporary assertion of satisfaction with Mansfield's incessantly unanimous court); EDMUND HEWARD, LORD MANSFIELD 58-59 (1979) (remarking Mansfield's efforts to achieve unanimity).

192. BLOM-COOPER & DREWRY, *supra* note 191, at 81.

193. *Id.*

194. See *supra* note 30 and accompanying text. Because parties exercise no control over the closeness of a judgment, counterfactual emotions may be more muted than in the case of near misses of rules. See *supra* note 31 and accompanying text. At the same time, again because of the absence of control, counterfactual frustration stemming from a near miss of judgment has no adaptive value to the party. See *supra* note 49 and accompanying text. In civil litigation, where one party's frustration with a divided court is another's elation, and neither party exercises any control, the psychological argument for unanimity must rest on the assumption that frustration is the more potent experience. See *supra* note 32 and accompanying text. Hence, satisfaction with legal process is better served by suppressing all counterfactual reactions.

195. To the extent that the shrouding of judicial disagreement contributed to the popularity of the King's Bench, parties who chose to bring their suits before it, rather than the Court of Common Pleas and other tribunals with overlapping jurisdiction, were engaged in strategic ignorance. See *supra* note 42 and accompanying text.

pears a process value worthy of attention as debate over the dissent's ascent continues to unfold.

#### CONCLUSION

In this article, we have considered how the psychology of proximity relates to law across a variety of domains. We have also shown how lawmakers have already taken proximity into consideration to some degree within those individual domains. That should come as no surprise: unlike many cognitive biases that subjects manifest without awareness,<sup>196</sup> people endure (typically petty) near misses every day of their lives. It is to be expected that lawmakers' informal understanding of the psychology of proximity will seep into law. But even where that has already occurred, our more studied account adds explanatory weight to analyses that courts, up to now, have put forward as conclusory assertions and also suggests extensions and nuances that lawmakers, as students of folk psychology, have failed thus far to grasp.

As a substantive principle, we argue that the reflexive prescriptive response to our identification of what might be called a "proximity bias" should not be greater regulation.<sup>197</sup> Rather, when it affects behavior, the proximity bias should be recognized as providing what is relatively rare in our economic lives: a chance to learn effectively from our mistakes, often at a low cost. Whereas near misses unquestionably lead to regret and dissatisfaction, they also motivate helpful counterfactual thought and serve as a check on proclivities that might otherwise cause persons to repeat their mistakes.

This is not to say that proximate experiences never demand legal intervention. As we note, "wicked" learning environments, such as those that surround some forms of gambling, make positive learning from near misses unlikely.<sup>198</sup> In other domains, counterfactual frustrations serve no didactical function and hence call more readily for redress, unless eclipsed by other policy considerations.<sup>199</sup>

This article has touched on only a few examples of how the legal system might take account of the psychology of proximity. Further re-

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196. *E.g.*, Timothy D. Wilson et al., *Mental Contamination and the Debiasing Problem*, in *HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT* 185, 185 (Thomas Gilovich et al. eds., 2002).

197. We hesitate to describe the behavioral ramifications of proximity as a "bias," for that implies inappropriateness. As we have argued, such a bias makes considerable sense environmentally and, in many settings, will have positive learning effects. So the proximity bias should not be seen as uniformly undesirable.

198. *See supra* notes 136–42 and accompanying text.

199. As they may be, in particular instances. *See, e.g., supra* p. 579.

search doubtless could disclose others.<sup>200</sup> The task we have begun merits further effort, for theories of behavior forming the basis of law that fail to incorporate proximity omit an important contextual determinant of outcome satisfaction and impact. Of course, integrating the proximity bias into behavioral models of law will not be easy. But that is the nature of moving from idealized economic models to portraits of behavior truer to life, which inevitably become blurrier or more intricate.

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200. We believe, for example, that consideration of the psychology of proximity can enrich theories of public choice. For a recent discussion of rent extraction tied to an apparent near miss of legislation, and concerning which this body of psychology appears intriguingly applicable, see Edward J. McCaffery & Linda R. Cohen, *Shakedown at Gucci Gulch: The New Logic of Collective Action*, 84 N.C. L. REV. 1159 (2006). We also believe the psychology of proximity pertains to litigation theory as regards, for instance, propensities to settle cases and debates over the unanimity requirement for juries and verdict structure. See Michael Abramowitz, *A Compromise Approach to Compromise Verdicts*, 89 CAL. L. REV. 231, 312 (2001); Chris Guthrie, *Better Settle Than Sorry: The Regret Aversion Theory of Litigation Behavior*, 1999 U. ILL. L. REV. 43.