Bottom-Up versus Top-Down Lawmaking

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Democratic legal systems make law in one of two ways: by abstracting general principles from the decisions made in individual cases (from the bottom up); or by declaring general principles through a centralized authority that are to be applied in individual cases (from the top down). These two processes are, respectively, adjudication and legislation. Each process highlights and hides different aspects of a legal problem. The single-case perspective of adjudication can seem narrow, and hence inferior to the broad perspectives that legislatures can incorporate into their decisionmaking processes. The adjudicative approach, however, has advantages that are less obvious. Notably, the adjudicative process is more likely to facilitate the adoption of simple, elegant rules for decisionmaking. The assessment of which approach is superior is therefore indeterminate. Each has its strengths and weaknesses that make it more or less appropriate for different contexts.

I. Introduction

Democratic societies make law in two ways: case-by-case adjudication by courts or adoption of general principles by legislatures.[1] Case-by-case adjudication produces law when courts adopt general principles to decide the outcome of individual disputes. Legislation, in contrast, involves an abstract declaration of general principles to apply to some future set of disputes. Only rarely is legislation designed specifically to resolve a particular dispute.[2] Because both processes produce law, they possess profound similarities. As Professor Schauer puts it, courts not only determine how the case before them ought to be decided, but also how other "cases *of this kind* ought to be decided."[3] Legislatures "decide how cases of some kind—[albeit] some

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1 Although this Essay addresses the operation of courts and legislatures, administrative agencies also rely on these two methods, and only these two methods, to create rules. See generally Jeffrey J. Rachlinski, *Rule-Making Versus Adjudication: A Psychological Perspective*, 32 Fla St U L Rev 529 (2005) (discussing the cognitive aspects of the choice between rulemaking and adjudication in the administrative context).

2 Exceptions exist, although they are generally symbolic. A recent legislative effort directed specifically at Terry Schiavo, for example, passed into law, even though it had no effect on the ultimate outcome. See Relief of the Parents of Theresa Marie Schiavo, Pub L No 109-3, 119 Stat 15 (2005) (giving Theresa Schiavo's parents standing to sue for immediate injunctive relief in the United States District Court for the Middle District of Florida anyone authorized to deprive Theresa of food, fluids, or medical treatment and declaring that the statute does not have any precedential value for future legislation). Another effort directed at presidential advisor Karl Rove has little chance at passage and was doubtless introduced as legislative theater. See Charles Babington, *Senate Does Battle Over Rove's Role in Plame Leak; Dueling Republican, Democratic Amendments Fail*, Wash Post A4 (July 15, 2005).

3 Frederick Schauer, *Do Cases Make Bad Law?*, 73 U Chi L Rev 883, 891 (2006).

future set of cases—ought to be decided."[4] Adjudication thus builds law from the ground up, one dispute at a time. Legislation builds law from the top down by creating general principles that cover future disputes. This difference, though subtle, can be enough to inspire different resolutions to the same issues.

In fact, adjudication and legislation commonly produce different answers to the same legal questions. For example, no court has ever set a fixed cap on tort liability, but such caps have become a common source of reform among state legislatures.[5] Similarly, other than cases involving sovereign immunity, courts do not simply bestow immunity from tort liability on parties out of a belief that doing so serves some important social goal, but legislatures frequently do.[6] These differences likely result from the different political pressures that legislatures and courts confront. Judges are not immune to political pressures—many face elections just as legislators do. But judges are generally more insulated from such pressures than legislators.[7] Legislative solutions to social problems are thus more likely to reflect efforts to accommodate competing political interests than are judicial solutions.

Legislatures also pursue fundamentally different goals than courts.[8] Legislatures must set budgets for the political entities they represent and craft laws of general applicability. Their mandate demands that they try to serve the interests of the public as a whole, which sometimes requires subordinating individual interests to the collective good. In contrast, courts must decide individual disputes. Their mandate is to make a good decision in each individual case. This basic difference in goals produces differences in procedures that the two insti-

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4 Id.

5 See Catherine Sharkey, *Unintended Consequences of Medical Malpractice Damage Caps*, 80 NYU L Rev 391, 412–17 (2005) (noting that "state law governs medical malpractice claims" and reviewing state variations in legislative efforts to cap damages in medical malpractice cases through clear rules limiting compensatory damages and punitive damages). But courts sometimes impose rough caps on punitive damages as well when those awards are very large relative to compensatory damages. See Theodore Eisenberg and Martin T. Wells, *The Predictability of Punitive Damages Awards in Published Opinions, the Impact of* BMW v. Gore *on Punitive Damages Awards, and Forecasting Which Punitive Awards Will Be Reduced*, 7 S Ct Econ Rev 59, 82 (1999) (reporting data indicating that appellate courts seem to have adopted rough rules of thumb correlated with the ratio of compensatory to punitive damages for capping remittitur claims in cases involving punitive damages).

6 See for example, 8 USC § 1102 (2000) (diplomatic immunity); 10 USC § 2385 (2000) (military arms purchase tax immunity); 12 USC § 1456 (2000) (qualified immunity from law for home mortgage corporations).

7 For an exposition about judicial independence, see generally John Ferejohn, *Independent Judges, Dependent Judiciary: Explaining Judicial Independence*, 72 S Cal L Rev 353 (1999).

8 For a general overview of the legislative process and its goals, see William N. Eskridge, Jr., Phillip P. Frickey, and Elizabeth Garrett, *Legislation and Statutory Interpretation* 1–17 (Foundation 2000).

tutions follow. The legislative process necessarily consists of private meetings, public debate, and compromise. The adjudication process necessarily consists of resolving competing arguments—often without compromise, but always with a focus on getting the individual case right. Individual rights in the courts often come at the expense of the public good, at least in the individual case. The legislature is all about majority rule; the courts are all about due process.

Other differences between the legislative process and the judicial process can also produce variations between the solutions to social problems that courts and legislatures produce. Constitutions endow each with different types of authority. Legislatures have the power to craft rules of general applicability, whereas the courts only have the power to decide cases. The limited authority of the courts necessarily produces differences in the way the courts make law. Legislatures may, at any time, make rules that cover almost any subject. Their rules may be as broad or as narrow as they deem sensible. Courts tend not to declare policy without a case in point before them, and limit their declarations to what is necessary to resolving only that case.[9]

The incremental nature of the courts as compared to legislatures, however, seems unlikely to produce different substantive rules in the long run. Flashy issues that fade from the public sphere quickly are more likely to influence legislatures than courts because courts can only decide those cases that come before them. Legislatures, however, can raise any issue they choose. Courts will thus have more limited opportunities to address novel issues than legislatures. Persistent political and social questions inevitably come before the courts,[10] but transient issues might come and go without producing any case law. Legislatures respond more rapidly to novel social issues, but if the issue persists, courts will face opportunities to address it.

Legislatures and courts thus face three fundamental differences that could produce variations in substantive rules: differences in political pressures, differences in goals, and differences in jurisdictional authority. In his article, Professor Schauer proposes a novel difference between courts and legislatures—that of cognitive style. As he observes, the adjudication process ensures that the courts will face a con-

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9 See Cass Sunstein, *One Case at a Time: Judicial Minimalism on the Supreme Court* 1 (Harvard 1999) ("[F]requently judges decide very little. . . . This is a pervasive practice: doing and saying as little as is necessary in order to justify an outcome.").

10 The observation that persistent conflicts eventually present themselves for judicial resolution is an old one. "There is hardly a political question in the United States which does not sooner or later turn into a judicial one." Alexis de Tocqueville, *Democracy in America* 270 (Doubleday 1969) (J.P. Mayer, ed).

crete example as they develop law.[11] This fact arguably means that courts produce superior law. Legislatures might fail to imagine the potential applications of the law that they adopt. One need only review the unexpected growth of statutes such as RICO—developed to fight the mafia but used by prosecutors and private parties in all kinds of ways the legislature would never have foreseen—to provide examples of laws with unexpected applications that now govern society.[12] Or consider the alternative minimum tax, initially intended to fight bizarre tax schemes that allowed a small number of wealthy individuals to avoid taxes, but which has now become a major revenue source.[13] The Endangered Species Act likewise regulates all manner of activities that Congress never envisioned when it passed.[14] Many argue that the great virtue of the common law lies in its use of real cases to make law, avoiding the foibles and unpredictability of legislation concerning inchoate, disembodied problems.[15] Professor Schauer, however, tells another story. He contends that human cognitive processes ensure that concrete examples are not illuminating sentinels guiding sensible decisionmaking, but are will-o-wisps that can lead courts into folly.[16]

The adjudicative perspective facilitates adopting different answers to legal questions than a legislative perspective. The case-by-case approach might thwart attention to general systemic variables, highlighting instead the personalities and unique features of the par-

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11 See Schauer, 73 U Chi L Rev at 892 (cited in note 3) ("[W]hen there is a real case, the rulemaker can see in a concrete context how the rule will play out in the actual controversies of real life.").

12 See, for example, Nicholas R. Mancini, Comment, *Mobsters in the Monastery? Applicability of Civil RICO to the Clergy Sexual Misconduct Scandal and the Catholic Church*, 8 Roger Williams U L Rev 193, 196 (2002) ("In recent years, the inherent ambiguity of the statute itself, coupled with a broad reading by the Supreme Court, has led to RICO's application in areas well beyond its original and intended focus, including use of the statute against both tobacco companies and pro-life abortion clinic protestors.") (internal citations omitted).

13 See General Accounting Office, *Alternative Minimum Tax, an Overview of its Rationale and Impact on Individual Taxpayers* 2–3 (Aug 2000), online at http://www.gao.gov/new.items/gg00180.pdf (visited June 11, 2006) (explaining that although the Alternative Minimum Tax was aimed at a small group of people with high income but no tax liability, it now increasingly affects middle class taxpayers and may affect as many as seventeen million taxpayers by the year 2010).

14 See, for example, Charles C. Mann and Mark L. Plummer, *Noah's Choice: The Future of Endangered Species* 161 (Knopf 1995) (noting that when passing the Endangered Species Act, "[f]ew members of Congress . . . had the 'foggiest idea of what they were doing'"). See also *Tennessee Valley Authority v Hill*, 437 US 153 (1978) (enjoining construction of a nearly completed dam started before the Endangered Species Act was enacted at a cost of approximately $27 million in order to prevent the extinction of a small population of snail darters).

15 See Schauer, 73 U Chi L Rev at 883–84 (cited in note 3) (noting the conventional wisdom that making law through real cases may be superior to abstract construction through legislation because "real litigants exemplify[] the issues the law must resolve").

16 See id at 894 ("[T]here is a substantial risk that the common law rulemaker will be unduly influenced by the particular case before her.").

ties. A legislative approach might do the opposite: hiding important individual variations while highlighting general, systemic variables. This is not to say that courts do not attend to systemic variables, or that legislatures are not interested in individual stories. Courts often worry about the effect that their rules will have on future litigation or on the behavior of parties that might be the targets of future lawsuits.[17] Similarly, legislative hearings are filled with individual stories and testimony.[18] The difference, however, is one of degree and motivation. Courts *must* resolve the dispute before them and need not declare principles. Legislatures *must* declare general principles and do not generally resolve single disputes. This difference necessarily alters the perspective of the two bodies—courts focus on particular facts of a case, whereas legislatures focus on generalized facts across a set of cases.[19]

Whereas Professor Schauer emphasizes the defects of the common law process, I propose that neither a common law nor a legislative approach is necessarily superior. For certain kinds of problems, the adjudicative approach of building law from the ground up might thwart the goals of the legal system. For others, the top-down approach might be more troublesome. Sometimes, each leads to different answers that cannot be said to be inferior or superior from a normative perspective. I thus build upon both the observations of Professor Schauer and on Professor Sherwin's comments.[20]

II. COGNITIVE WEAKNESSES OF ADJUDICATION

Professor Schauer scores several excellent points against the common law process. And, in fact, he has left several cognitive weaknesses for others to identify. His basic point—that adjudication and legislation produce fundamentally different ways of thinking—has broad support in the psychological literature on judgment and choice.

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17 See Richard A. Posner, *Economic Analysis of Law* 24 (Little, Brown 4th ed 1992) ("[T]he judge . . . cannot ignore the future. Since the judge's legal ruling will be a precedent influencing the decision of future cases, the judge must consider the probable impact of alternative rulings on the future behavior of people.").

18 See Cass R. Sunstein, *What's Available? Social Influences and Behavioral Economics*, 97 Nw U L Rev 1295, 1308–10 (2003) (describing the influence of individual stories on the legislative process); Timur Kuran and Cass R. Sunstein, *Availability Cascades and Risk Regulation*, 51 Stan L Rev 683, 735 (1999) ("In one common pattern, a special-interest group supplies information to members of Congress, who then hold hearings that enable the group to testify and publicize its mission.").

19 See Schauer, 73 U Chi L Rev at 891 (cited in note 3) ("[T]he common law judge has before her a concrete token of the type of case for which she is making a rule, while other rulemakers make their rules without having before them in the same immediate way a particular token of the case-type that the rule will encompass.").

20 See generally Emily Sherwin, *Judges as Rulemakers*, 73 U Chi L Rev 919 (2006).

And indeed, this literature identifies several other weaknesses of the case method.

A. Context Affects Judgment and Choice

The principal insight underlying this newfound difference between adjudication and legislation is that background context influences people's judgment. Cognitive psychologists have generated decades of research that supports this conclusion.[21] For example, difficult problems such as the well-known Wason card-selection task become easy when the context of the problem is changed from an abstract brainteaser to a concrete, familiar dilemma.[22] Compare the abstract and contextual versions of the problem:

> Abstract:
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> A deck of cards has letters on one side and numbers on the other. Four cards that show "E", "F", "3", and "8" are available. To determine whether the rule, "every card with a vowel also has an odd number on the back" is true, the backsides of which two cards must be examined? (Answer: E and 8.)[23]
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> Social Context:
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> Four people are sitting at a table in a bar: one is drinking beer, one is drinking coke, one is twenty-five years old, and one is sixteen years old. To determine whether the law requires that anyone who is drinking alcohol be over twenty-one years old, which two ages or beverages must you examine? (Answer: the beverage of the sixteen-year-old and the age of the beer drinker.)

The logical structure of the problems is identical. Nevertheless, few people answer the first problem correctly. People commonly select "E" and "3," in an effort to produce evidence confirming the rule, rather than seeking evidence that might prove it false.[24] The key to a

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21 For an overview of research on human judgment, see generally Thomas Gilovich and Dale Griffin, *Introduction—Heuristics Then and Now*, in Thomas Gilovich, Dale Griffin, and Daniel Kahneman, eds, *Heuristics and Biases: The Psychology of Intuitive Judgment* 1 (Cambridge 2002).

22 The Wason card-selection task is "[o]ne of the most intriguing and widely used experimental paradigms for exploring people's ability to detect violations of conditional rules." Leda Cosmides and John Tooby, *Cognitive Adaptations for Social Exchange*, in John H. Barkow, Leda Cosmides, and John Tooby, eds, *The Adapted Mind: Evolutionary Psychology and the Generation of Culture* 163, 181–83 (Oxford 1992) (concluding that the abstract versions of the Wason card-selection task elicited fewer than 25 percent correct responses whereas the concrete version elicited 75 percent correct responses).

23 See id at 182 fig 3.3(a).

24 Id at 181 ("Most people choose either the [E] card alone or [E]&[3]. Few people choose the not-[3] card, even though a[n] [E] on the other side of it would falsify the rule.").

correct answer is to search for evidence that the rule is false, not to search for evidence that it is true. The social context of the second problem induces an effort to identify a rule breaker, thereby facilitating the correct response.[25]

Similarly, Bayesian problems with detecting low-probability events (which commonly bedevil the courts[26]) can be made much easier by simply rearranging the information provided.[27] The prime example of this is the "rare disease" problem, which runs as follows: to detect a rare disease, present in 1 in 1000 individuals, doctors administer a test that is 90 percent accurate (meaning that among people who have the disease, the test will be positive 90 percent of the time, and among people without the disease, the test will be negative 90 percent of the time). What is the probability that a patient who tests positive actually has the disease? Many people answer "90 percent," even though the answer is actually roughly 1 percent.[28] Restating the problem so as to describe the rate of false positives and false negatives as proportions rather than as percentages, however, facilitates an accurate understanding of the problem.[29]

The effect of context can also influence judgments of social problems for which a correct answer does not exist. For example, people treat the loss of some good differently than they treat the gain of the same good.[30] Losses feel more weighty and urgent than gains of similar

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25 Id at 183 ("Experiments with the drinking age problem and other familiar social contracts show that human reasoning changes dramatically depending on the subject matter one is reasoning about.").

26 See Thomas D. Lyon and Jonathan J. Koehler, *The Relevance Ratio: Evaluating the Probative Value of Expert Testimony in Child Sexual Abuse Cases*, 82 Cornell L Rev 43, 64 (1996):

> We suspect that the false belief [by judges] that clusters of symptoms must be probative of abuse is in part attributable to a failure to distinguish between the probability that a *particular* cluster of symptoms will occur, a rare event, and the probability that a cluster of symptoms of *some sort* will occur (a frequent event).

27 See Gerd Gigerenzer, *Calculated Risks: How to Know When Numbers Deceive You* 45–48 (2002) (describing how presenting a problem of Bayesian reasoning using natural frequencies rather than probabilities facilitates accurate judgment).

28 Roughly 99 individuals will test falsely negative out of 1000 (10 percent × 999 not infected). Only 1 of 100 will actually be positive (100 total = 99 false positive + 1 true positive). Thus, the probability that a patient who tests positive actually has the disease is roughly 1 percent (1 true positive ÷ 100 total tests). For an exposition on this example, see Ward Casscells, Arno Schoenberger, and Thomas B. Graboys, *Interpretations by Physicians of Clinical Laboratory Results*, 299 New Eng J Med 999, 999–1000 (1978).

29 See Ulrich Hoffrage and Gerd Gigerenzer, *Using Natural Frequencies to Improve Diagnostic Inferences*, 73 Academic Med 538, 538 (1998) (reporting that presentation of patient symptom information in "natural frequency format" rather than probabilities facilitates accurate diagnosis by doctors).

30 See generally Amos Tversky and Daniel Kahneman, *Loss Aversion in Riskless Choice: A Reference-Dependent Model*, 106 Q J Econ 1039 (1991); Daniel Kahneman, Jack L. Knetsch, and Richard Thaler, *Experimental Tests of the Endowment Effect and the Coase Theorem*, 98 J Polit

magnitude, meaning people will spend more resources to avoid losing a possession than they would acquiring the same possession.[31] Also, describing a choice as involving gains leads decisionmakers to make less risky choices than when the same choice is described as involving losses.[32] Together, these effects produce a strong preference for the status quo, even when the status quo is somewhat arbitrary. Choices involving losses trigger a different way of evaluating a gamble; one in which people are willing to take enormous risks so as to avoid certain loss from their status quo. In contrast, choices involving gains induce people to "lock in" sure gains even if doing so sacrifices the prospects of a more sizeable gain.

As these common examples demonstrate, the pervasive message of the psychological literature on judgment and choice is that context influences decisionmaking—often more so than a decision's underlying logical structure. The forum in which a decision is made therefore will almost certainly have considerable effect on the decision itself. Professor Schauer's assertion that the adjudicative and legislative processes are apt to produce different resolutions to social problems thus seems well founded.

B. The Influence of Idiosyncratic Cases on Adjudication

The lesson that context matters, however, does not favor either an adjudicative or legislative approach to lawmaking. It simply suggests that to the extent that the two approaches produce different contexts, they will inspire legal decisionmakers to reach different conclusions about appropriate responses to social problems. As Professor Schauer indicates, however, the adjudicative approach to making legal rules seems to present social problems in a perspective that seems cognitively

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Econ 1325 (1990). See also Amos Tversky and Daniel Kahneman, *Rational Choice and the Framing of Decisions*, 59 J Bus S251, S257–60 (1986); Daniel Kahneman and Amos Tversky, *Choices, Values, and Frames*, 39 Am Psychologist 341, 342–44 (1984); Amos Tversky and Daniel Kahneman, *The Framing of Decisions and the Psychology of Choice*, 211 Science 453, 453–55 (1981); Daniel Kahneman and Amos Tversky, *Prospect Theory: An Analysis of Decision under Risk*, 47 Econometrica 263, 265–69 (1979).

31 See Tversky and Kahneman, 106 Q J Econ 1039 (cited in note 30) (describing the different hedonic responses to gains and losses); Kahneman, Knetsch, and Thaler, 98 J Pol Econ at 1325 (cited in note 30) (presenting studies indicating that people value gains less than losses). But see generally Kathryn Zeiler and Charles R. Plott, *The Willingness to Pay/Willingness to Accept Gap, the Endowment Effect, Subject Misconceptions and Experimental Procedures for Eliciting Valuations*, 95 Am Econ Rev 530 (2005) (presenting evidence that testing errors and subject misconceptions, rather than the so-called endowment effect, account for previous study results indicating loss aversion).

32 Tversky and Kahneman, 59 J Bus at S259 (cited in note 30); Kahneman and Tversky, 39 Am Psychologist at 341 (cited in note 30); Tversky and Kahneman, 211 Science at 454 (cited in note 30); Kahneman and Tversky, 47 Econometrica at 279 (cited in note 30).

inferior to the legislative approach.[33] Despite conventional wisdom that "rulemaking and lawmaking are better done when the rulemaker has before her a live controversy,"[34] the live controversy can be misleading. Courts necessarily see one case at a time, thereby giving the quirks and oddities of the individual parties more salience in a judicial proceeding than they would have in front of a legislature. Individual cases might have unique characteristics that drive decisions. Aspects of an individual case that create or invoke sympathy might lead courts to make a decision that differs from that a legislature would make.

Consider the examples that arise from the influence of counterfactual thinking on judgment. Suppose an airplane crashes in the wilds of the Yukon. The cause of the crash is such that the families of those people killed in the crash are entitled to compensation. The pilot initially survives the crash, but succumbs to the bitter Arctic conditions as he struggles towards a town. Should his compensation depend upon whether he dies one-quarter mile from the town or whether he dies seventy-five miles from the town? One would think not and presumably no legislature would embrace such a rule. His life is worth no less in either case, and anyone responsible for the crash is no more or less culpable for the loss based on how close he came to surviving. And yet, when people are asked to assess the appropriate degree of compensation in such a crash, the pilot's progress influences the award.[35] Subjects who read that the pilot walked ninety-nine miles expressed a willingness to award more than subjects who read that the pilot walked only one mile. The authors of this study explain that it is easier to imagine that the pilot could have survived when he made it ninety-nine miles and hence his death seems more regrettable. Judges who see these cases one at a time are more prone to being influenced by such factors than are legislators, who see only the aggregate situation divorced from the details.

Individual cases also likely invoke the kinds of emotional responses that can be misleading. Consider the difference between a trial involving the potential liability of an airline for failing to install safety equipment and the consideration of whether an airline should be required to install the very same safety device. Both the trial and

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33 Schauer, 73 U Chi L Rev at 888–89 (cited in note 3) ("[T]he effects of a particular case are likely . . . to distort the case-based rulemaker's ability accurately to assess the field of future events that any prospective rule would encompass.").

34 Id at 892.

35 See Dale T. Miller and Cathy McFarland, *Counterfactual Thinking and Victim Compensation: A Test of Norm Theory*, 12 Personality & Soc Psych Bull 513, 516–17 (1986) (discussing the results of an experiment concluding that "the closer a negative event is to not happening, the stronger is the reaction provoked by the event").

the regulatory effort would likely include testimony on the relative costs and benefits of the safety device. The trial, however, would also include extensive individual testimony about the personal loss suffered by the family of the victim. The emotional content of the testimony could affect the court in several ways. First, emotional testimony is more vivid than the pallid statistics, which would make it more memorable and influential. Second, emotional testimony can trigger reliance on an "affect heuristic";[36] not only would courts want to find for the plaintiff, they would feel it appropriate to do so. Judges might even want to support the plaintiff, even without knowing exactly why.[37] Judges and juries are more apt to sympathize with the blameless survivors of an accident and this sympathy can lead the court to find a way to find for the plaintiff.

By itself, the influence of the unique sympathies associated with individual disputes would not necessarily produce misguided legal rules. If judges refrain from creating legal rules in unique or unusual cases, then the sympathies and emotions of an individual case would have no influence on the adoption of legal rules. The problem, as Professor Schauer notes, is the influence of a common cognitive process—the "availability heuristic."[38] The availability heuristic refers to the tendency for easily remembered events to seem more common than those that are more difficult to recall.[39] Because the case before the judge is vivid, salient, and therefore memorable, judges might overstate the frequency with which similar facts occur. Relying on the extensive literature demonstrating the influence of availability, Professor Schauer argues that a judge might often fail to appreciate the unusual nature of a case before him and, instead, think the fact pattern common.[40]

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36 For a general discussion of the affect heuristic, see Paul Slovic, et al, *The Affect Heuristic*, in Thomas Gilovich, Dale Griffin, and Daniel Kahneman, eds, *Heuristics and Biases: The Psychology of Intuitive Judgment* 397 (Cambridge 2002).

37 Such decisions might be explained by a "social intuitionist" model of moral judgment. See generally Jonathan Haidt, *The Emotional Tail and the Rational Dog: A Social Intuitionist Approach to Moral Judgment*, 108 Psych Rev 814 (2001) (presenting a model of moral judgment that characterizes those judgments not as rational, but intuitive, almost automatic, evaluations only after which post hoc ratiocination takes place).

38 See Schauer, 73 U Chi L Rev at 894–96 (cited in note 3) (discussing the role of availability in the common law rulemaking process).

39 For a general description of the availability heuristic, see Amos Tversky and Daniel Kahneman, *Judgment under Uncertainty: Heuristics and Biases*, 185 Science 1124, 1127–28 (1974). See also Kuran and Sunstein, 51 Stan L Rev at 683 (cited in note 18) (discussing the application of availability to the lawmaking process).

40 See Schauer, 73 U Chi L Rev at 894 (cited in note 3) ("[D]ecisionmakers . . . often believe that the most proximate member of a class is representative of the class.").

Research by Keith Holyoak and Dan Simon on the tendency to generalize rules supports Schauer's conclusion.[41] In their work, these researchers asked people to make a judgment about whether a defendant should be liable for posting allegedly defamatory material on the Internet.[42] The judgment required that the participants decide whether Internet bulletin boards were analogous to newspapers and hence subject to greater protection from libel suits. The researchers also manipulated evidence about the defendant's character. Participants who read of the defendant's positive character traits were inclined to find for the defendant and participants who read of the defendant's negative character traits were inclined to find against the defendant. By itself, that result represents an unfortunate demonstration of the power of character evidence, but is not that surprising.[43] Evidence of the defendant's character, however, also influenced the participants' judgments concerning whether the Internet is like a newspaper. Participants altered their judgments concerning the appropriate analogy so as to be consistent with their desire to find for or against the defendant. If judges exhibit a similar degree of consistency, then sympathies toward individual cases might well affect rules that courts adopt.

To be sure, legislatures certainly cannot be said to be occupied by people devoid of sympathy or free of cognitive errors. Legislatures review individual testimony in hearings and politicians are famous for public expressions of empathy. Former President Clinton, for example, was often described as America's "Mourner in Chief."[44] Unlike adjudication, however, legislation does not require that such testimony exist. And unlike judges, politicians are not *forced* to confront emotional testimony nor address it.

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41 See generally Keith J. Holyoak and Dan Simon, *Bidirectional Reasoning in Decision Making by Constraint Satisfaction*, 128 J Exp Psych: Gen 3 (1999). See also Dan Simon, *A Third View of the Black Box: Cognitive Coherence in Legal Decision Making*, 71 U Chi L Rev 511, 537–40 (2004).

42 See Holyoak and Simon, 128 J Exp Psych: Gen at 5–10 (cited in note 41).

43 See Sarah Tanford and Michele Cox, *The Effects of Impeachment Evidence and Limiting Instructions on Individual and Group Decision Making*, 12 Law & Hum Beh 477 (1988) (presenting research on the effect of character evidence on a judgment in a products liability case); Sarah Tanford and Michele Cox, *Decision Processes in Civil Cases: The Impact of Impeachment Evidence on Liability and Credibility Judgments*, 2 Soc Beh 165, 178–79 (1987) (presenting research on the effect of character evidence on a judgment in a tort case).

44 See Margaret Carlson, *A President Finds His Voice: Bush Began to Look Like a Leader When He Threw Out the Script*, 158 Time 50, 50 (Sept 24, 2001) (noting that "Clinton was ridiculed once upon a time as Mourner in Chief, but in truth he didn't own the office until the tears ran down his cheeks as he comforted the survivors of the Oklahoma City bombing").

C. Adjudication Fails to Embrace a Prospective, Categorical Approach to Making Law

Legislation also involves two other features that minimize the likely impact of emotional content on decisionmaking. First, it is prospective. Courts usually act in response to some inflicted harm after it occurs and will thus always have injured victims or aggrieved parties before them. Legislatures make rules to govern future conduct and hence, legislatures act without knowing precisely how individuals will be affected by the rules they adopt or even who might be affected. To be sure, legislatures often act in response to some disaster.[45] When they do, they behave much like courts, taking testimony from individuals who have been harmed, and adopt some measure to prevent precisely the same harm. Likewise, courts sometimes act prospectively, issuing injunctions against future harm. But these variations only illustrate the general principle that courts usually act retrospectively and legislatures act prospectively. Even when legislators respond to some specific disaster, they are aware that they are not assigning culpability and compensation for past harm, they are making rules to govern future conduct. Similarly, even though courts grant injunctive relief to govern future conduct, it is directed only at those specific parties before the court.

Second, legislatures are exposed to tradeoffs that are not part of judicial proceedings. Many legislatures, in fact, spend the bulk of their time on the budget process, which necessarily involves tradeoffs.[46] Legislatures are keenly aware that money spent on one project either will be taken from another, will require a tax increase, or will be added to a deficit.[47] Legislative mandates to private parties or subordinate political entities do not entail the same tradeoffs, but these mandates occur in an institution that is accustomed to making tradeoffs. Furthermore, legislatures often commission research to measure the costs

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45 Consider Kuran and Sunstein, 51 Stan L Rev at 691–703 (cited in note 18) (presenting three examples of congressional responses to specific disasters—(a) Love Canal, in which a chemical company filled public waterways with 21,000 tons of chemical waste, (b) the use of the chemical pesticide Alar, and (c) the crash of TWA flight 800 in 1996—as examples of irrational legislation due to effects of the availability heuristic).

46 See Eskridge, Frickey, and Garrett, *Legislation and Statutory Interpretation* at 181–82 (cited in note 8) (discussing the federal budget process and noting that, for example, 40 percent of the work of the Senate consists of budget-related activity).

47 See Elizabeth Garrett, *Harnessing Politics: The Dynamics of the Offset Requirement in the Tax Legislative Process*, 65 U Chi L Rev 501, 561–68 (1998) (discussing how the constraints of the budget process inspire congressional reviews of spending and policy).

associated with regulatory decisions.[48] Even if they do not, lobbyists and those trying to influence the legislative process will often make such research available to those legislators sympathetic to their goals. Courts, by contrast, usually lack such information or even shun it explicitly.[49] Exceptions exist, but they are exceptions. In products liability design defects cases, for example, liability depends upon a showing that the benefits of a safety precaution outweigh its costs.[50] And for their part, legislatures are perfectly capable of acting without any understanding the costs of their activity.[51] The job of a legislator, however, is to make tradeoffs. The job of a judge is to resolve disputes. Legislatures will face such tradeoffs directly, whereas courts will see these tradeoffs as only distantly related to the case before them.

Once again, psychological research supports the notion that deciding social problems one case at a time can also distort a sense of scale and proportion. In one study of such distortions, Cass Sunstein and his colleagues asked subjects to assign punitive damage awards to cases involving an egregious example of fraud, a significant physical injury arising from egregious conduct in products liability, or both.[52] Participants who evaluated the fraud case alone assigned higher damage awards than subjects who evaluated the products liability case alone. When evaluated together, however, the products case drew higher awards than the fraud case.[53] The authors explain that the fraud case was a rather outrageous instance of fraud relative to the subjects' expectations about fraud, and thus the contrast with expectations pro-

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48 See generally Cass Sunstein, *Congress, Constitutional Moments, and the Cost-Benefit State*, 48 Stan L Rev 247 (1996) (discussing increased congressional enthusiasm for regulatory cost-benefit analysis after 1994).

49 See W. Kip Viscusi, *Corporate Risk Analysis: A Reckless Act*, 52 Stan L Rev 547, 586 (2000) ("A major puzzle raised by the performance of the courts is that many of the most well-known cases involving punitive damages are also those in which corporations undertook a risk analysis, or in some cases, a sound benefit-cost analysis.").

50 See James A. Henderson, Jr., and Aaron D. Twerski, *Achieving Consensus on Defective Product Design*, 83 Cornell L Rev 867, 887–904 (1998) (arguing that courts have embraced risk-utility analysis as a test for defective designs).

51 For example, scholars have accused Congress of adopting the Sarbanes-Oxley Act in rapid response to a perceived crisis in the securities market without having any notion of the costs and benefits of the far-reaching legislation they were adopting. See Larry E. Ribstein, *Sarbox: The Road to Nirvana*, 2004 Mich St L Rev 279, 280, 284–92 (2004) ("Congress acted hastily in designing a vaccine for the market's ills with little understanding of what caused the disease.").

52 See Cass R. Sunstein, et al, *Predictably Incoherent Judgments*, 54 Stan L Rev 1153, 1173–79 (2002).

53 See id at 1176:

> When cases from categories that differ in prominence are viewed in isolation, the effect of the category is suppressed. As a result, the more prominent harm is assigned a lower rating and a lower dollar value when judged by itself than when directly compared to a harm of a less prominent kind.

duced a high award. The personal injury seemed like a more common sort of personal injury and did not produce such a contrast. When the subjects evaluated the two cases together, however, they were reminded that reckless conduct that inflicts physical injuries is more outrageous than reckless conduct that inflicts only financial injuries.[54] Contrast effects such as this are far more likely to influence courts, who see only one case at a time, than legislatures, who can make broader comparisons.

Careful statistical reasoning is also apt to be more difficult in an individual case than in the aggregate. As discussed earlier, representing statistical evidence in frequencies rather than probabilities can dramatically improve the accuracy of human inference.[55] Several cognitive errors can be avoided by casting a decision as one involving frequencies (for example, 1 in 10) rather than percentages (for example, 10 percent). For example the conjunctive fallacy, which is the tendency to see the likelihood that two independent events will both occur as more probable than the likelihood that either event will occur alone, seems to diminish when participants are asked to generate frequencies of events, rather than assign probabilities.[56] Similarly, base-rate neglect, the tendency to ignore the rate at which an event occurs, seems to affect probability estimates stated in percentages more than estimates stated in relative frequencies.[57] Furthermore, a frequency format does not seem to elicit the overconfident judgments that subjective probability estimates produce.[58]

Single cases tend to trigger a subjective format and hide the commonalities a case might have with a broader category.[59] A case-by-case approach makes the facts seem unique, whereas legislatures cannot

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54 See id at 1178 ("The comparison of cases drawn from different categories restores differences between categories of harms that differ in prominence, and in most cases, this should be considered an improvement in the quality of judgment.").

55 See Gigerenzer, *Calculated Risks* at 48 (cited in note 27).

56 See Barbara Mellers, Ralph Hertwig, and Daniel Kahneman, *Do Frequency Representations Eliminate Conjunction Effects? An Exercise in Adversarial Collaboration* 12 Psych Sci 269, 269–71 (2001) (presenting conflicting evidence as to whether frequency representations eliminate the conjunctive fallacy).

57 See generally Leda Cosmides and John Tooby, *Are Humans Good Intuitive Statisticians after All? Rethinking Some Conclusions from the Literature on Judgment under Uncertainty*, 58 Cognition 1 (1996) (arguing that humans think of statistical information in terms of absolute numbers or frequencies rather than probabilities, and therefore that framing information in absolute terms eliminates the cognitive biases of base-rate neglect, probabilistic reasoning, and the conjunction fallacy).

58 See Gerd Gigerenzer, *How to Make Cognitive Illusions Disappear: Beyond "Heuristics and Biases,"* 2 Eur Rev Soc Psych 83, 87–90 (1991).

59 See Daniel Kahneman and Dan Lovallo, *Timid Choices and Bold Forecasts: A Cognitive Perspective on Risk Taking*, 39 Mgmt Sci 17, 23 (1993) (arguing that people tend to make decisions one at a time, ignoring the effect of those decisions on future decisionmaking).

avoid seeing the aggregation of cases that their rules might affect. Courts notoriously mishandle statistical information in particular.[60] Courts often reject reliance on statistical information, even when it is relevant.[61] In other instances, they treat statistical evidence as wholly dispositive, even when it is merely suggestive.[62] The widely accepted doctrine of res ipsa loquitur, in fact, is founded precisely on a logical fallacy akin to base-rate neglect.[63] Courts also demonstrably rely on outcome evidence that could not have been known beforehand when assessing the liability of trustees for imprudent distribution of a trust's assets.[64] Courts have a lengthy history of embracing logical fallacies that arise from a narrow, subjective perspective and cementing them into broad legal principles.[65]

D. Adjudication's Excessive Emphasis on Individual Responsibility

The adjudicative process is also necessarily focused on assigning responsibility to individuals. A long tradition of research in social psychology indicates that the process of assigning credit and blame leads people to attribute too much behavior to stable personality traits and not enough to the power of situations.[66] People, at least in Western cultures, tend to attribute behavior excessively to stable traits while ignoring aspects of a situation that can induce behavior, a phenomenon called the "fundamental attribution error."[67] We are too quick to

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60 For a general discussion of the use of probability in courts, see Jonathan J. Koehler, *One in Millions, Billions and Trillions: Lessons from* People v. Collins *(1968) for* People v. Simpson *(1995)*, 47 J Legal Educ 214 (1997) (discussing common misinterpretations of statistical evidence in the courtroom); Jonathan J. Koehler and Daniel N. Shaviro, *Veridical Verdicts: Increasing Verdict Accuracy Through the Use of Overtly Probabilistic Evidence and Methods*, 75 Cornell L Rev 247 (1990) (arguing that the use of "overtly probabilistic" evidence increases jury verdict accuracy).

61 See, for example, *Smith v Rapid Transit, Inc*, 317 Mass 469, 58 NE2d 754, 755 (1945), quoting *Sargent v Mass Accident Co*, 307 Mass 246, 29 NE2d 825, 827 (1940) (rejecting the use of the raw statistical fact that the defendant bus company owned the majority of buses in a particular township where an accident occurred as a basis for liability because "it is not enough that mathematically the chances somewhat favor a proposition to be proved").

62 See, for example, Jonathan J. Koehler, *Probabilities in the Courtroom: An Evaluation of the Objections and Policies*, in Dorothy K. Kagehiro and William S. Laufer, eds, *Handbook of Psychology and Law* 167 (Springer 1992).

63 See generally David Kaye, *Probability Theory Meets Res Ipsa Loquitur*, 77 Mich L Rev 1456 (1979) (noting the ambiguity of the doctrine of res ipsa loquitur when examined using probability theory).

64 See Jeffrey J. Rachlinski, *Heuristics and Biases in the Courts: Ignorance or Adaptation?*, 79 Or L Rev 61, 79–81 (2000) (discussing the influence of hindsight bias on trustee liability).

65 See id at 79–93 (discussing how the hindsight bias and fallacies arising from the representativeness heuristic have affected the development of law in undesirable ways).

66 See Lee Ross and Richard E. Nisbett, *The Person and the Situation: Perspectives of Social Psychology* 27–28 (McGraw-Hill 1991).

67 See Lee D. Ross, *The Intuitive Psychologist and His Shortcomings: Distortions in the Attribution Process*, in L. Berkowitz, ed, 10 *Advances in Experimental Social Psychology* 173,

assume that an ordinary misstep is the result of clumsiness rather than a wet floor, that a dour expression indicates an unfriendly demeanor rather than a passing mood, and that the wrong answer to a trick question indicates low intelligence. The ordinary social interactions of everyday life seem to focus our attention onto the personality of those whom we encounter. The external forces that often actually govern people's behavior are less visible and have less influence on attributions of responsibility. Assuming that judges and juries are no different than other adults, when they sit in judgment over others in the courts they likely attribute too much blame to individuals and not enough to social forces.[68]

Classic studies in social psychology demonstrate that the fundamental attribution error arises, in part, out of the way people direct their attention.[69] Even though the situational influences on other people's behavior are often invisible, people have little trouble seeing the influence of external forces on their own behavior. The fundamental attribution error is a mistake people make about others, not themselves. Individuals will commonly attribute their own behavior to the product of the situation in which they find themselves, even as those who observe them attribute it to some stable aspect of their personality.[70] Psychologists believe that this "actor-observer" effect results from the salience of the situation to the actor relative to the salience of the actor to the observer. The trial process places the individual front and center, thereby highlighting their behavior and perhaps facilitating the commission of the fundamental attribution error.

The legislative approach to making law, in contrast, highlights social forces. It directs decisionmakers' attention to economic factors and social trends, facilitating a sociological perspective on regulating human activity. A casual perusal of the development of almost every area of law demonstrates that courts attend to the characteristics of individual actors while legislatures regulate social settings. Tort law, for example, would not allow a plaintiff to recover from a manufacturer of alcohol, firearms, or cigarettes merely because that manufacturer put these

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184–87 (Academic 1977) (discussing the fundamental attribution error as the "general tendency to overestimate the importance of personal or dispositional factors relative to environmental influences").

68 See Lee Ross and Donna Shestowsky, *Contemporary Psychology's Challenges to Legal Theory and Practice*, 97 Nw U L Rev 1081, 1092–96 (2003) (arguing that "when called upon to account for the past behavior of other individuals or to make predictions about the future behavior of those individuals, we tend to underestimate the impact of situational or environmental factors and overestimate the importance of 'dispositional' factors") (internal citations omitted).

69 See Ross and Nisbett, *The Person and the Situation* at 27 (cited in note 66).

70 See generally Richard E. Nisbett, et al, *Behavior as Seen by the Actor and as Seen by the Observer*, 27 J Personality & Soc Psych 154 (1973) (presenting research on the actor-observer effect).

products on the market.[71] The manufacturer has to be blameworthy in some fashion, by selling unsafe versions of such products. But Congress regulates the sale of these goods in exacting detail.[72] Property law will not allow me to recover from my neighbor for driving a sport utility vehicle that contributes greatly to air pollution unless the neighbor's use of that vehicle infringes directly upon my ability to use my own property.[73] Environmental law, in contrast, regulates the use of automobiles extensively.[74] Contract law would allow a used-car salesman to sell a badly dysfunctional car "as is," so long as no fraud was involved.[75] State and federal laws on the sale of automobiles, however, mandate warranties and provide consumers with a far greater array of rights than might be included in many sales contracts.[76]

In all of these cases, legislatures adopt such measures out of a belief that the broader context in which these encounters occur justifies such intervention. In contrast, courts are reluctant to regulate the economy that produces guns, alcohol or cigarettes. Courts take the society that produces such products as given and try to regulate only the interaction between individuals harmed by the products and the manufacturers. Legislatures have no such qualms. They directly manage the economy and the products that enter into it. Likewise, courts regulate property disputes only when the harm caused between neighbors requires some resolution. Both state and national legislatures, however, treat environmental concerns on a social level. Numerous environmental statutes regulate almost every aspect of industrial production,

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71 See James A. Henderson, Jr., and Aaron D. Twerski, *Closing the American Products Liability Frontier: The Rejection of Liability without Defect*, 66 NYU L Rev 1263, 1329 (1991) (asserting that courts have largely rejected the idea that they may categorically ban products).

72 Whole agencies, notably the Consumer Products Safety Commission and the National Highway Transportation Safety Administration, are devoted to regulating consumer product safety and banning products deemed unsafe.

73 A successful nuisance suit requires that the plaintiff demonstrate that the defendant have engaged in a substantial interference with another's interest in "the private use and enjoyment of land." Restatement (Second) of Torts § 822 (1977). At least one court rejected as nonjusticiable a lawsuit brought on behalf of everyone living in Los Angeles affected by air pollution against anyone contributing to air pollution. See *Diamond v General Motors Corp*, 20 Cal App 3d 374, 97 Cal Rptr 639, 645 (1971).

74 The Clean Air Act includes extensive provisions governing automobile emissions. See 42 USC §§ 7521–54 (1990).

75 See David A. Szwak, *Uniform Computer Information Transactions Act [U.C.I.T.A.]: The Consumer's Perspective*, 63 La L Rev 27, 37 (2002) ("Used car sales involve a similar lack of warranty protection, but have given rise to legislation and case law affording consumers' rights against 'lemons' which inevitably turn up in the marketplace.") (internal citations omitted).

76 See Magnuson-Moss Warranty Act, 15 USC §§ 2301–12 (2000) (requiring sellers of consumer products with warranties to provide detailed and clear information about the warranty to consumers before purchase and forbidding disclaimer or modification of implied warranties of merchantability). Several states have similar provisions. See, for example, NY Gen Bus Law § 198-b (McKinney 2004); NJ Stat §§ 56:12–29 (West 2001).

and many statutes assign responsibility for cleanup without regard to individual fault.[77] Whereas the common law largely treats contracts as a matter of shared promises between autonomous individuals, legislatures attend to concerns that people enter into agreements that are one-sided, due to psychological, social, and economic pressures. To address such concerns, legislatures adopt consumer-protection laws that courts would never embrace. Rather than hold parties responsible for the agreements they enter into, such laws blame social and economic context for unfortunate promises and preclude people from making such agreements.[78]

The common law is not monolithic in its emphasis on individual responsibility—it contains pockets of social attribution. Notably, contract law includes the doctrines of unconscionability and duress, under which courts will refrain from enforcing contracts entered into under coercive circumstances.[79] Applying these doctrines requires courts to review the social and economic circumstances that produced the contract actively.[80] A determination that enforcing a contract would be unconscionable, or that the contract was the product of coercion or duress, entails a judgment that the circumstances, rather than the party's actual intent or desire to enter the contract, induced a party to enter into the contract.[81] These doctrines are, however, the exception to the general rule that parties will be held to the terms of their agreements. Relative to the legislative process, the common law has produced far fewer instances in which an individual's behavior is attributed to circumstances rather than to an individual's intent. Having developed law in a context in which the principal task is to assign blame, courts have largely adopted rules that attribute most behavior to people, rather than circumstances, just as social psychological research predicts.

Legislatures thus seem to have a perspective that is better suited to managing social and economic interactions. Courts are apt to attend to misleading signals and be persuaded by the emotional content in

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77 See Bruce A. Ackerman and Richard B. Stewart, *Reforming Environmental Law*, 37 Stan L Rev 1333, 1334–41 (1985) (calling the contemporary system of environmental regulation in the United States an example of "Soviet-style central planning").

78 See Jeffrey J. Rachlinski, *The Uncertain Psychological Case for Paternalism*, 97 Nw U L Rev 1165, 1178–82 (2003) (discussing paternalistic legislative interventions into contract law).

79 See Robert A. Hillman, *The Richness of Contract Law: An Analysis and Critique of Contemporary Theories of Contract Law* 129–43 (Kluwer 1997) (explaining the justification for, history of, and application of the unconscionability and duress doctrines in contract law).

80 See Robert A. Hillman and Jeffrey J. Rachlinski, *Standard-Form Contracting in the Electronic Age*, 77 NYU L Rev 429, 456–58 (2002) (discussing the factors that influence unconscionability).

81 See Hillman, *The Richness of Contract Law* at 129–43, 179–81 (cited in note 79).

individual cases, are generally unable or unwilling to assess how the disputes that come before them affect broad social and economic considerations, and are likely to focus excessively on individual conduct. These factors further support Professor Schauer's view that cases make bad law.

III. COGNITIVE WEAKNESSES OF LEGISLATION

Legislators are likely to be subject to their own set of cognitive errors.[82] The perspective of the legislature is necessarily different than that of a court, which means the cognitive processes upon which legislators rely will necessarily differ from those of judges. In turn, this gives legislatures different strengths and weaknesses than courts. Determining whether the cognitive perspective of the adjudication process produces superior law to that of the legislative process requires assessing not just the vices of the adjudication process relative to the lawmaking process, but also its virtues. Courts have several advantages over legislatures that might facilitate superior lawmaking.

A. Courts Adapt over Time

Professor Sherwin notes that one of the strengths of the adjudication process is its ability to learn over time.[83] Contemporary psychological research on judgment and choice supports her observations. Even as psychologists have identified cognitive limitations that can produce erroneous decisionmaking, they have also found people to be remarkably adaptive decisionmakers.[84] Over time, judges might learn to avoid the myopic focus on individuals that leads them to neglect broader forces that produce the disputes they adjudicate. This might mean that courts, as institutions, evolve over time to take a broader perspective, much like the legislature, and avoid common cognitive errors. In particular, courts might develop rules of evidence and procedure that facilitate sensible inferences and deter harmful ones. For example, the evidentiary prohibitions on character evidence might be

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82 See Jeffrey J. Rachlinski and Cynthia R. Farina, *Cognitive Psychology and Optimal Governmental Design*, 87 Cornell L Rev 549, 572–75 (2002) (discussing cognitive errors among legislators).

83 Sherwin, 73 U Chi L Rev at 925 (cited in note 20).

84 See Gerd Gigerenzer, *The Adaptive Toolbox*, in Gerd Gigerenzer and R. Selton, eds, *Bounded Rationality: The Adaptive Toolbox* 37, 46–48 (MIT 2001) (arguing that cognitive heuristics are based on human cognitive limitations and are well suited for special context-specific purposes often producing fast and "computationally" cheap decisions). See generally John W. Payne, James R. Bettman, and Eric J. Johnson, *The Adaptive Decision Maker* (Cambridge 1993) (arguing that people select from different decisionmaking strategies depending on the context of the decision based on tradeoffs between accuracy and difficulty of use).

a means of responding to the common tendency to attribute behavior too quickly to stable personality traits.[85] Prohibiting testimony about an individual's personality presumably reduces the extent to which a judge or jury might make unwarranted inferences about criminal proclivities. Similarly, courts have embraced several presumptions that guard against the influence that the hindsight bias might otherwise have on their judgment.[86]

The fact that courts are not a monolithic entity also gives them an advantage that legislatures lack. The common law process is a process of trial and error with both parallel and hierarchical mechanisms for improving legal rules. The hierarchical appellate process offers a means of correcting a foolish legal rule produced at trial. Appellate judges also suffer from cognitive limitations, but will have a slightly different perspective on the underlying legal issues than a trial judge. The appellate process is still motivated by an effort to resolve a single case, but the appellate court is more removed from the vagaries and sympathies that arise in the trial process. In fact, appellate courts often express great deference to the decisions of trial courts because the appellate courts worry about making judgments about factual issues with only a "cold transcript" before them.[87] If Professor Schauer's thesis is correct, this deference might be misplaced. The emotional content in a single case might affect the trial court in a way that a more distant appellate court might be able to avoid. In any case, appellate courts are not deferential with regards to the law. The salient, vivid facts of underlying cases are less prominent in the appellate process than at trial, thereby mitigating the untoward influences Professor Schauer identifies.

The judicial process also produces a parallel authority. One court's pronouncement of a legal rule might be contradicted by the conclusions of a coequal court in a different jurisdiction. Even identifying

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85 See Russell B. Korobkin and Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 Cal L Rev 1051, 1087 (2000) (asserting that evidentiary rules sometimes exclude character evidence because "[u]sing the representativeness heuristic, many jurors are likely to conclude that because the defendant has the appearance of a criminal (in that he has a felony conviction), he therefore must have committed the crime for which he is charged"). But see Chris William Sanchirico, *Character Evidence and the Object of Trial*, 101 Colum L Rev 1227, 1242–46 (2001) (reviewing these arguments, but ultimately contending that cognitive errors do not justify such restrictions).

86 See Jeffrey J. Rachlinski, *A Positive Psychological Theory of Judging in Hindsight*, 65 U Chi L Rev 571, 607–24 (1998) (describing how courts have adapted to the influence of the hindsight bias).

87 See Kevin M. Clermont, *Procedure's Magic Number Three: Psychological Bases for Standards of Decision*, 72 Cornell L Rev 1115, 1128 (1987) ("On issues of judge-found fact, the appellate court normally defers to the trial court's view, reversing only if that view is clearly erroneous and thus generates 'the definite and firm conviction that a mistake has been committed.'"), quoting *United States v United States Gypsum Co*, 333 US 364, 395 (1948).

the present state of the law by sifting through common law opinions is no easy task for lawyers or law professors. Many areas of law generate thousands of cases, but the law can be found in only a handful of decisions thought to constitute a sensible statement of the governing legal rule. Even if many courts adopt a misguided approach to an issue, so long as lawyers, professors, and subsequent courts have the means of identifying the sensible decisions of their predecessors, the misguided rulings will lose influence.

To the extent that the hierarchical nature of the courts and the presence of parallel authority serve as ways of correcting error, then one institution in the system stands out as a source of cognitive error that cannot easily be corrected—the United States Supreme Court. It is at the top of its hierarchy, and like state supreme courts, it faces no realistic chance that its decisions will be reversed.[88] Unlike the state courts, however, the Supreme Court lacks parallel authority from other jurisdictions with which to compare its resolution to legal problems. Occasionally, justices of the Supreme Court refer to the law of other nations, but these efforts are rare, and sometimes met with scorn by politicians or other justices of the Court.[89] Professor Schauer has thus properly focused his concerns on the judges in the higher courts and relies on many examples of lawmaking by the Supreme Court.[90] Owing to the insulation of the Court from other perspectives, the common law of the Constitution is more vulnerable to the influence of cognitive error than the ordinary common law.

Interestingly, this analysis suggests that *Erie Railroad Co v Tompkins*[91] may well have been one of the most insightful decisions the Supreme Court has ever produced. In deciding that the common law must be generated through decentralized state procedure, the Court preserved the prospects for experimentation and error correction. Once Justice Brandeis and his colleagues embraced the notion

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88 See William N. Eskridge, Jr., *Overriding Supreme Court Statutory Interpretation Decisions*, 101 Yale L J 331, 416 (1991) (noting that Congress rarely overturns statutory interpretations adopted by the United States Supreme Court).

89 For example, in declaring the death penalty unconstitutional as applied to juvenile offenders, Justice Kennedy cited international trends. See *Roper v Simmons* 543 US 551, 575 (2005) ("Our determination that the death penalty is disproportionate punishment for offenders under [eighteen] finds confirmation in the stark reality that the United States is the only country in the world that continues to give official sanction to the juvenile death penalty."). Even though Justice Kennedy, writing for the Court in *Roper*, also noted that "this reality does not become controlling," id, the citation drew criticism from his own colleagues on the Court. Justice Scalia, in dissent, asserted that "the basic premise of the Court's argument—that American law should conform to the laws of the rest of the world—ought to be rejected out of hand." Id at 624 (Scalia dissenting).

90 See generally Schauer, 73 U Chi L Rev 883 (cited in note 3).

91 304 US 64 (1938).

that the common law courts were creating, not finding, law, they implicitly recognized the possibility of multiple answers to the same social problems.[92] A decentralized process means that the vagaries of an individual case will have less influence on the evolution of the law as a whole. The *Erie* holding, and the accompanying opinion, have long been recognized as having many virtues;[93] the assessment of the cognitive aspects of lawmaking adds one more. The cognitive analysis suggests that the *Erie* Court, in an uncharacteristically humble moment, may have saved the evolution of the common law from an array of cognitive errors that a centralized process might otherwise cement into law.

Legislative action, in contrast, is essentially final until the legislature revisits the issue. To be sure, parallel legislative authority exists in that various states can adopt different solutions to the same legal problems. But the mechanisms and institutions for comparing and contrasting rules in different jurisdictions used to synthesize a uniform legal rule in a Restatement or treatise are largely absent or at least are not highly influential. Likewise, although individual testimony that can influence legislation often occurs at the committee or subcommittee level in legislatures, thereby creating a parallel to the trial court and appellate court process, a significant difference exists. Trial judges who hear the individual testimony do not sit on appellate courts, but the same legislators who heard testimony and questioned witnesses vote in both the committee and the full legislature. Furthermore, the full legislature is not really an institution designed to correct the errors of its committees and subcommittees in the way appellate courts are designed to correct the mistakes of the trial courts. The full legislature generally only reviews legislation in those instances in which the committees support it—negative determinations are not reviewed. Thus, despite superficial similarities between the legislative process and the court system, the legislative process lacks the essential character of the common law process in creating hierarchical and parallel mechanisms for reviewing judgment.

B. Courts Approach Problems from Multiple Frames

The repeated experimentation inherent in a system of parallel courts can circumvent many of the pitfalls of judgment that can plague legislatures. The decentralized nature of the common law process in

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92 See id at 79 ("[T]he law of [a] State exist[s] by the authority of that State without regard to what it may have been in England or anywhere else."), quoting *Black & White Taxicab Co v Brown & Yellow Taxicab Co*, 276 US 518, 533 (1927) (Holmes dissenting).

93 For one positive assessment, see Edward A. Purcell, Jr., *Brandeis and the Progressive Constitution:* Erie*, the Judicial Power, and the Politics of the Federal Courts in Twentieth-Century America* 95–114, 132–40, 172–91 (Yale 2000).

the United States might, for example, mitigate the influence of framing effects on decisions. A legislature approaches most social problems from a single, natural frame created by the status quo. For example, when a legislature considers outlawing or restricting some business practice it faces a natural status quo. Consider low initial "teaser rates" for credit cards, as one example.[94] Those consumers who are seen as victims of the practice will benefit from such legislation, and those businesses that engage in the practice will suffer the cost of not being able to undertake it in the future. Unlike legislatures, courts will confront the same underlying issue from a variety of perspectives. Some consumers will appear before the courts as plaintiffs, arguing that the business practice is sufficiently unconscionable or outrageous that the courts should restore their property or money to them. Such cases will resemble the frame that the legislature sees, where consumers (or in a court case, a single consumer) are seeking a benefit at the expense of a group of businesses (or in a court case, a single business). In other cases, businesses will appear before the courts seeking to force a consumer to live up to the terms of the agreement. In these cases, the business is seeking a benefit at the expense of the consumer. The context of a single dispute can alter the frame in which the courts review the problem, even as the legislature remains stuck in a single frame.

The various default conditions that courts face will have two beneficial effects with respect to framing. First, the differences in frame might lead individual courts to adopt different legal rules. As case law accumulates, the courts might select from these rules the most sensible without regard to frame. Second, the courts might notice that the status quo is having an undesirable effect on the rules that they are adopting. In turn, this might lead courts to be able to step outside of the frame and see the kinds of disputes that they face from a broader perspective than the default presents. One way to avoid the effects of framing is to try to recast the dispute so as to see it from multiple perspectives.[95] The process of lawmaking by adjudication, in effect, does just that.

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94 See Oren Bar-Gill, *Seduction by Plastic*, 98 Nw U L Rev 1373, 1416–28 (2004) (arguing that cognitive errors in consumers' use of credit cards have produced inefficiently excessive borrowing).

95 See Chris Guthrie, Jeffrey J. Rachlinski, and Andrew J. Wistrich, *Inside the Judicial Mind*, 86 Cornell L Rev 777, 822–23 (2001) ("Considering a decision from different perspectives does not necessarily eliminate the effects of decision frames, but it can reveal to the decision maker the arbitrary nature of a frame's influence.").

C. Courts Have Limited Remedial Authority

Courts have a much more limited range of remedial authority than legislatures. They can award monetary damages to a particular party or enjoin the activities of a single individual or entity.[96] Legislatures, by contrast, can adopt almost any imaginable solution to a social problem. They can tax or subsidize an activity, regulate precisely how an activity may be undertaken, or forbid an activity altogether.[97] This range of authority is doubtless essential to solving some social problems that are not amenable to the resolution by adjudication.[98] But even as the scope of legislative authority confers the power necessary to resolving many social problems, it might create a cognitive trap for legislatures. Legislatures might be tempted to use their limitless regulatory authority in ways that are overly ambitious.

The psychological concern that the limitless regulatory authority of the legislature raises is that of excess tailoring of regulatory solutions. That is to say, legislatures might adopt a solution so closely tied to the details of the problem as they see it that the solution fails to address the underlying social problem. The concept of excess tailoring in problems of judgment arises directly from work in psychology and statistics.[99] In some circumstances, simple decision rules predict future results better than the results of a multiple regression analysis. The reason for this is that multiple regression can "overfit" the data.[100] Regression is tailored tightly to the unique pattern of data analyzed, so much so that a regression equation might be unreliable when it is applied to new data. Simplistic prediction rules, however, are sometimes more robust. Hence, in some instances simpler rules can generate more accurate predictions than multiple regression.

Examples of excessive tailoring by legislatures can be identified in the United States. In the late 1970s, for example, Congress became in-

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96 See Dan B. Dobbs, *Handbook of the Law of Remedies* § 1.1 at 3 (West 1973) ("[R]emedies [are] either equitable or legal.").

97 See Robert V. Percival, et al, *Environmental Regulation: Law, Science, and Policy* 121–31 (Aspen 4th ed 2003) (describing the options available to regulators in the environmental context).

98 See Robert L. Rabin, *Environmental Liability and the Tort System*, 24 Houston L Rev 27, 28–33 (1987) (discussing the limitations of the common law in addressing environmental problems).

99 Consider Jean Czerlinski, Gerd Gigerenzer, and Daniel G. Goldstein, *How Good Are Simple Heuristics?*, in Gerd Gigerenzer, Peter Todd, and the ABC Group, eds, *Simple Heuristics That Make Us Smart* 97 (Oxford 1999) (demonstrating that the best strategy for decisionmaking varies depending on context, with simple strategies that account only for few facts frequently performing just as well if not better than complex modeling strategies).

100 See Laura Martignon and Ulrich Hoffrage, *Why Does One-Reason Decision Making Work? A Case Study in Ecological Rationality*, in Gigerenzer, Todd, and ABC Group, eds, *Simple Heuristics That Make Us Smart* 119, 140 (cited in note 99) (arguing that individuals use simple decision heuristics when time for the decision is short, the cost of error is low, or a strong factual cue is available).

terested in addressing the problem of abandoned hazardous-waste disposal facilities, largely due to reports in the news media of a single incident that occurred in Niagara Falls, New York, in a neighborhood called Love Canal.[101] Love Canal was a working class neighborhood that had been constructed on an abandoned canal project into which a chemical company had dumped thousands of barrels of hazardous waste. By the late 1970s barrels of this abandoned waste had begun to leak and waste escaped into the backyards and basements of the residents. The Environmental Protection Agency (EPA) ultimately recommended that pregnant women and young children abandon their homes. Common law litigation by the homeowners against the chemical company seemed an unsatisfactory means of redressing the situation, and Congress ultimately adopted the Comprehensive Environmental Response, Compensation, and Liability Act[102] (CERCLA) to address the problem of abandoned hazardous-waste facilities.[103] CERCLA required the EPA to begin cleanup of hazardous-waste facilities and enabled the EPA to recover for the cost of cleanup from anyone who deposited the waste and any present or past landowner of the site. The standard of liability was strict—those involved in the sites could not defend themselves by arguing that they took reasonable steps to avoid harming people.

Although hailed by many environmentalists as a laudable advance in the law, others have criticized the statute for imposing excessive costs on industry and for making it difficult to develop land that might be contaminated by prior disposal.[104] Furthermore, CERCLA has forced industry and government to spend enormous sums on an issue that is not, by any measure, the most serious of the modern environmental problems.[105] Many, including the EPA, have argued that abandoned

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101 See Kuran and Sunstein, 51 Stan L Rev at 696–98 (cited in note 18) (describing the events of Love Canal and the congressional and executive response thereto). See also Gigerenzer, *The Adaptive Toolbox* at 47 (cited in note 84) ("Overfitting occurs when a model with more parameters fits a sample of data better than a model with fewer parameters but makes less-accurate predictions for a new data sample than the simpler model.").

102 42 USC §§ 9601–75 (2000).

103 See Kuran and Sunstein, 51 Stan L Rev at 696–98 (cited in note 18) (attributing the passage of CERCLA to publicity over the events at Love Canal).

104 Consider Richard L. Revesz and Richard B. Stewart, *The Superfund Debate*, in Richard L. Revesz and Richard B. Stewart, eds, *Analyzing Superfund: Economics, Science, and Law* 3, 8 (Resource for the Future 1995) (explaining that real estate purchasers must perform extensive "environmental assessments, which depending on the circumstances, can include extensive testing of soil and groundwater" in order to avoid subsequent landowner liability under CERCLA).

105 See Kuran and Sunstein, 51 Stan L Rev at 698 (cited in note 18) ("At much less than the cost of Superfund, tax incentives and informational campaigns to promote better diet and exercise could probably have saved tens of thousands of lives per year.").

hazardous-waste disposal facilities are a limited social problem.[106] Most abandoned waste sites stand little chance of contaminating property or drinking water and could have been remediated with a limited government program.[107] CERCLA is best suited to solving the problems at a place like Love Canal. At that site, a large number of residential homeowners had unwittingly purchased land from a single, solvent chemical company that could be easily identified. When applied to almost any other aspect of the problem of abandoned hazardous-waste disposal sites, however, CERCLA has had unfortunate effects. At many sites, some companies involved are insolvent, thereby imposing excessive costs on those few companies that remain available.[108] CERCLA also includes demanding cleanup standards, appropriate for a residential community like Love Canal, but wasteful for rural or undeveloped land.[109]

Attributing the passage of CERCLA to cognitive dysfunction is not new—many scholars have branded CERCLA as anecdote-driven legislation.[110] The notion of anecdote-driven legislation, however, refers to some exemplar of a social problem that becomes so vivid and salient, that it instills an exaggerated sense of urgency in the public eye. Because people can easily recall the vivid case of Love Canal, the problem of abandoned hazardous-waste sites is cognitively available, making it seem like a more common threat than it is.[111] Whatever role cognitive availability played in the passage of statutes like CERCLA,

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106 Compare United States Environmental Protection Agency Office of Policy Analysis, *Unfinished Business: A Comparative Assessment of Environmental Problems* 73 (Department of Commerce 1987) (ranking hazardous-waste disposal as the nation's sixteenth greatest environmental problem), with id at 93 (ranking the public perception of chemical waste disposal as the nation's single greatest environmental problem).

107 Consider W. Kip Viscusi, *Rational Risk Policy* 126–27 (Oxford 1998) ("[O]ften highly publicized risks do not pose substantial risks to health but instead reflect excessive reactions to minor hazards. The result is that the political pressures for government action are often the greatest when the need for government policies is least.").

108 See Revesz and Stewart, *The Superfund Debate* at 7 (cited in note 104) (noting that the CERCLA liability regime imposes joint and several liability on parties responsible for a contamination site).

109 Indeed CERCLA sets broad regulatory standards that do not vary by context, often producing absurd outcomes. See, for example, Stephen Breyer, *Breaking the Vicious Circle: Toward Effective Risk Regulation* 40 (Harvard 1993) (noting an especially absurd requirement under CERCLA that clean waste sites must meet "relevant and appropriate" goals set under the Safe Drinking Water Act resulted in "IBM in California . . . hav[ing] to make the water its factory discharges far cleaner than the ocean or the bay into which it normally pours it").

110 See, for example, Kuran and Sunstein, 51 Stan L Rev at 691–703 (cited in note 18) (discussing the Love Canal chemical spill that became a basis for legislative action); David A. Hyman, *Lies, Damned Lies, and Narrative*, 73 Ind L J 797, 800–07 (1998) (arguing that "[l]egislatures—populated by lawyers and exceedingly attuned to public pressure—are enthusiasts of anecdotal evidence") (internal citations omitted).

111 See Kuran and Sunstein, 51 Stan L Rev at 691–98 (cited in note 18).

however, availability only explains why Congress adopted some remedial measure. Availability alone does not explain why the statute represents a misguided effort. In fact, abandoned hazardous-waste disposal facilities might have represented an unaddressed social problem in need of attention. A powerful anecdote like Love Canal might have been just what was needed to fix the public's attention on the issue and inspire congressional action. The real problem was not that Congress passed legislation dealing with abandoned hazardous-waste disposal facilities, but that it passed legislation that was tailored too precisely to the situation at Love Canal. Similar stories can be told for other environmental statutes, welfare reform, and tort reform.[112]

The problem of excessively tailored legislation is stunningly similar to the statistical vulnerabilities associated with regression analysis. The observations that a statistician feeds into a regression analysis invariably incorporate some error in the measurement of the parameters in the model.[113] This measurement error limits the ability of the regression model to predict future observations, or the "validity" of the regression model.[114] As statisticians note, the reliability of the observations necessarily limits the validity of the model.[115] A regression equation is blind to this concern. A regression analysis will produce a unique equation that best fits the observations fed into the model, even though observations invariably include some inherent variability. Standard statistical techniques, however, account for the unreliability of data. The regression equation itself provides a statistical assessment of the predictive utility of the model known as R-squared.[116] R-squared measures how well the regression equation predicts actual data. A low R-squared indicates that the regression equation is simply fitting noise—there is no discernable regression pattern in the data—and has no real predictive value. An equation with a low accompanying R-squared could be used to make some prediction, but the prediction would have no value.

The legislative process, however, contains no analogy to R-squared. The legislative process includes no established test to assess how well the regulatory solution a legislature adopts fits the real problem. To the extent that a legislature acts in response to an anecdote-

112 See Hyman, 73 Ind L J at 804–07 (cited in note 110).

113 See, for example, Jacob Cohen and Patricia Cohen, *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences* § 3.7.5 at 111–13 (Wiley 2d ed 1975).

114 Id § 3.7.6 at 113–15.

115 See Mary J. Allen and Wendy M. Yen, *Introduction to Measurement Theory* § 5.4 at 98 (Brooks/Cole 1979).

116 See Cohen and Cohen, *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences* § 3.5.3 at 94–95 (cited in note 113).

driven crisis, it risks embracing a regulatory solution that fails to address the social problem that underlies the anecdote. Even assuming the legislators correctly understand the details of the story, those details are apt to be unique. Any single account of a social problem will include idiosyncrasies. Indeed, the very fact that a story rises to the attention of the national media almost ensures that it has unusual characteristics. By adopting a regulatory solution carefully tailored to fit a unique problem, a legislature is apt to be tailoring a regulatory response to a problem that only rarely occurs, thereby undermining efforts to address the underlying issues and likely creating unintended consequences.

Even though courts, by definition, only review anecdotes, they are less likely to implement excessively tailored regulatory solutions. Courts can award only monetary damages and injunctive relief. The latter remedy is usually narrowly tailored, but generally applies only to a single party. Courts have little choice but to adopt simple solutions. Also, courts will inevitably revisit an issue as new cases arise. When different cases present the same social problems, they will do so in different contexts, with different sets of idiosyncratic facts. The courts will thus invariably notice that the facts of different cases necessarily differ. The differences between cases perhaps explain why courts, relative to legislatures, tend to adopt modest resolutions to the disputes before them. Courts commonly refuse to address issues outside of those in the case before them even in instances in which it might be prudent for them to do so.[117] Judges are certainly capable of hubris, but the limited remedial authority of the courts limits the impact of their hubris.

D. Courts Rely on Pattern Recognition

As Professor Sherwin notes in her comments on Professor Schauer's article, human judgment sometimes manages to insulate people from making common errors.[118] She highlights analogical reasoning as a palliative for many of the concerns that Professor Schauer notes. I would add that the common law courts have also relied on the remarkable human pattern-recognition skills to facilitate sensible lawmaking.

Repeated encounters with the same issues facilitate the remarkable human ability to categorize. The human brain seems quite adept

117 See Sunstein, *One Case at a Time* at 3–5 (cited in note 9).

118 See generally Sherwin, 73 U Chi L Rev 919 (cited in note 20) (arguing that judges' constraint from precedent and analogical reasoning can to some extent debias judges from the cognitive errors cited by Schauer).

at identifying patterns.[119] Replicating the ordinary human ability to identify structure and patterns remains a challenge for artificial intelligence researchers. Today, machines that can make calculations millions of times more rapidly than the human brain still cannot recognize speech or handwriting with anything remotely like the accuracy that every human possesses.[120] Chess-playing computers still barely match the ability of chess grand masters, whose skills arise largely from their ability to identify complex patterns among the pieces on the chessboard.[121] Indeed, psychologists argue that people tend to see patterns where none exist; superstition and myth arise largely from beliefs in nonexistent patterns and relationships.[122]

In developing the common law, judges have relied heavily on pattern-recognition abilities. The process of common law evolution consists largely of determining whether a new case is similar to older ones or whether a new category or exception needs to be carved out. Consider products liability law as an example. Products can, and have, injured people in an almost infinite variety of ways. And yet the courts in the United States have distilled this infinite variation into three causes: manufacturing defects, design defects, and failure to warn.[123] Every injury a product can cause fits neatly into one of these three causes. The courts have also developed a body of rules governing the allocation of responsibility for injuries attributable to each of these three causes.

The process of categorization simplifies the litigation process enormously and ingeniously. Take, for example, the law governing people who are injured while on someone else's property. Although people enter the property of others for an infinite number of reasons, the common law organizes them into four categories: invitees, licensees, trespassers, and child trespassers.[124] The duty a landowner owes is

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119 See John R. Anderson, *Cognitive Psychology and Its Implications* 32–43 (Freeman 4th ed 1995) (discussing the cognitive process of pattern recognition in which "patterns are broken down into smaller features," recombined, and connected with memory).

120 See John Taylor, *Cognitive Systems Project InterAction Conference, Grand Challenge Two—Neurocomputational Approaches to Speech and Language* (2003) ("[I]t is clear that despite substantial progress over the last few years, human speech recognition performance still greatly exceeds that achievable by machine."), online at http://www.iac03.com/grand_challenge_02.html (visited June 11, 2006).

121 See generally *Game Over–Kasparov and the Machine* (Thinkfilm 2003) (documenting chess world champion Garry Kasparov's narrow defeat by a computer manufactured by IBM dubbed "Deep Blue").

122 See Thomas Gilovich, *How We Know What Isn't So: The Fallibility of Human Reason in Everyday Life* 9–17 (Free 1991) (arguing that people tend automatically to see patterns in events, sometimes even where there are none).

123 See Henderson and Twerski, 83 Cornell L Rev at 869 (cited in note 50).

124 See Dan B. Dobbs, *The Law of Torts* §§ 232–36 at 591–615 (West 2001) (providing detailed exposition of landowner duties to trespassers, licensees, invitees, and children).

highest to an invitee, somewhat less to a licensee, and less still to a trespasser, unless the trespasser is a child.[125] Some modern courts resist using these categories, branding them a rigid formalism, and commentators decry the deference to landowners that these categories have come to reflect.[126] But these criticisms ignore the genius of the system that has developed. The categorical approach distills the complex inquiry of how to determine who is responsible for an injury into a handful of simple rules. To be sure, rules invariably misclassify some cases. The application of the lesser duty owed to a trespasser doubtless leaves some deserving trespasser without a remedy. But the individualized application of a more generic standard (such as that the landowner owes due care to anyone on her property[127]) is also apt to be sufficiently fraught with complexities that it might well produce more injustice than a wooden rule developed through experience, one case at a time, by centuries of litigation.

Not only is the common law process remarkable at creating categories, it has amazing potential to identify similarities in seemingly disparate cases. Consider the analogies courts have found to the quirky *Summers v Tice*[128] case. The case arose from a hunting accident. Three men went out hunting, proceeding through a field in a line. The center man got ahead, and when a group of birds took flight before him, both of his comrades carelessly fired at his position. One of the two comrades hit him with his shot. Owing to the similarity of their firearms and situations, the court could not determine which of the two struck him. Usually the burden of proving causation lies with the plaintiff, which would have meant victory for both defendants, even though one of them negligently caused the injury. The *Summers* court, however, shifted the burden to the defendants.[129] Decades later, a court reviewing the liability of a pharmaceutical manufacturer found great value in analogizing to *Summers*. In *Sindell v Abbot Laboratories*,[130] the court

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125 See id.

126 See, for example, *Rowland v Christian*, 69 Cal 2d 108, 443 P2d 561 (1968) (rejecting the formalistic categories of invitee, licensee, trespasser and holding that the defendant landowner owed a reasonable duty of care). See also generally Osborne M. Reynolds, Jr., *Licensees in Landoccupiers' Liability Law—Should They Be Exterminated or Resurrected?*, 55 Okla L Rev 67 (2002) (noting some courts' merger of the licensee and invitee categories).

127 See generally *Rowland*, 443 P2d 561.

128 33 Cal 2d 80, 199 P2d 1 (1948) (holding that two defendants who are both negligent are joint and severally liable for a plaintiff's injuries when causation is undetermined but it is known that only one of them caused the harm in fact).

129 Id at 3 ("When we consider the relative position of the parties and the results that would flow if plaintiff was required to pin the injury on one of the defendants only, a requirement that the burden of proof on that subject be shifted to defendants becomes manifest.").

130 26 Cal 3d 588, 607 P2d 924 (1980) (holding several manufacturers of an identical chemical that caused birth defects liable for pro rata shares of damages based on their respective shares of

had determined that all manufacturers of a pharmaceutical were negligent in their marketing of the drug, but that the plaintiff could not identify from which manufacturer she had purchased the drug. The ability to find an analogous case with reasoning to reply upon facilitated the court's analysis of the *Sindell* case. The common law process managed to highlight the similarities between such disparate events as a hunting accident and modern pharmaceutical marketing. There are certainly differences between the situations, but the *Sindell* court did not have to start its reasoning from scratch.

Any of the simple categories that the courts have developed to resolve disputes is obviously open to criticism. The categories may be too narrow or too broad, or might simply assign responsibility improperly. But what is remarkable is how easily the common law courts have distilled massive complexity down into simple, sometimes elegant rules. Rarely can that be said of any legislature. The courts adopt simple rules based on rudimentary categories; legislatures adopt complex rules with endless categorization, subcategorization, and nuanced calculation.

IV. CONCLUSION: AN INDETERMINATE ANALYSIS

Although courts can be maligned as myopic institutions that sometimes make misguided social policy, their single-case approach has virtues. The legislative approach avoids many of the pitfalls of the single-minded focus of the courts on resolving only the dispute before them. But at the same time, courts might well be developing sensible heuristics for solving social dilemmas that legislatures might miss while trying to overfit solutions to anecdotal accounts of social problems. Courts and legislatures alike are capable of creating misguided laws. The question, from the perspective of cognitive psychology, is what features of an underlying situation are best suited to resolving the social issues raised.

Cognitive assessments stand much of the conventional thinking about the lawmaking process on its head. Professor Schauer notes that a cognitive approach undermines the virtues of rulemaking in response to a concrete example.[131] But other aspects of the assessment of the common law also get turned around. For example, consider the assessment of the role of complexity. Many areas of law seem too complicated for the common law courts to address and require a legislative approach. Conversely, the courts seem best able to implement rules that require contextual balancing because legislatures cannot easily envi-

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the market during the relevant time period, despite the fact that the manufacturer who actually produced the batch that caused the instance of harm in question could not be identified).

131 See generally Schauer, 73 U Chi L Rev 883 (cited in note 3).

sion all of the circumstances in which the balance they identify is to be struck. The cognitive analysis, however, suggests exactly the opposite: that courts will be best at developing adaptive rules for complex environments while legislatures will do best at balancing policy interests. The courts have been able to develop simple rules that manage complex environments. The cognitive structure of the common law process likely facilitates the process of identifying sensible rules. In particular, the necessarily modest approach of courts creates multiple opportunities to slowly evolve rules that avoid many of the pitfalls likely to ensnare legislatures that try to regulate the same issue. In contrast, courts face many cognitive obstacles to implementing sensible cost-benefit analysis. Courts are apt to see the probabilities associated with the balance in a subjective format that can impede sensible assessment of the risks and uncertainties.

Determining the relative strengths and weaknesses of lawmaking from the bottom-up versus the top-down thus requires identifying the strengths and weaknesses of the various approaches. And here I part company with Professor Schauer's conclusions. Legislation seems best for solving social problems that are not pushed into the public agenda as a result of vivid anecdotes. Legislatures can manage lingering, longstanding problems that facilitate careful study. When anecdotes drive policy, legislatures cause problems. Curiously, the courts may be best able to handle social problems that produce vivid disasters. Courts seem well suited to categorizing disasters according to underlying similarities, as has happened in products liability law and the law governing liability of landowners.

To some extent, the cognitive assessment of social problems presented in this Essay and in Professor Schauer's article inspires a reassessment of the appropriate institution in which to resolve social problems. The courts have traditionally dealt with products liability and might be thought to be best suited to approaching longstanding social harms arising from products such as tobacco or high-fat foods. Legislatures commonly respond to disasters such as 9/11 or the Enron scandal. The cognitive assessment of the two modes of lawmaking, however, suggests the opposite approach would be more sensible. The resolution of the social problems presented by tobacco and fatty foods lies in complex balancing of interests and sensible sifting of mountains of research and data. To be sure, legislatures face political influences that might make them ill suited to resolving such problems, but courts may be too myopic to conduct this balancing. The cognitive perspective favors a legislative approach to these problems. In contrast, the courts, with a long history of neatly categorizing and processing all manner of accidents, might better assess disasters and uncover the underlying forces that produced them more effectively than legislatures.