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ESSAY

How Law Constructs Preferences

CASS R. SUNSTEIN*

INTRODUCTION

In the last two decades, social scientists have learned a great deal about how people actually make decisions and choices.¹ Much of this work requires qualifications of rational choice models.² Those models are often wrong in the simple sense that they yield inaccurate predictions. Decisions are affected by cognitive limitations and motivational distortions that press choices in unanticipated directions. It follows that a normative account of rational choice (such as expected utility theory) may well lack descriptive accuracy.³ But it does not follow that people's behavior is unpredictable, systematically irrational, random, rule-free, or elusive to social scientists. On the contrary, the departures from rational choice can be described, used, and sometimes even modeled, at least in broad outline. One of the most important findings—and the one I will emphasize here—is that preferences and values often do not predate the moment of choice. Often preferences and values are constructed, rather than elicited, by social situations.⁴ People do not generally consult a freestanding “preference menu” from which selections are made at the moment of choice; preferences can be a product of procedure, description, and context, and

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1. See RICHARD THALER, *QUASI-RATIONAL ECONOMICS* (1994); John Conlisk, *Why Bounded Rationality?*, 34 *J. ECON. LITERATURE* 669 (1996); Matthew Rabin, *Psychology and Economics*, 36 *J. ECON. LITERATURE* 11 (1998).

2. There is of course much controversy in specifying what rational choice models require. Some of the evidence I discuss shows how people react to the presence of decision costs, and it is far from irrational to take those costs into account. It is also fully rational to consider the effects of social norms on choice, since norm-violations can count as costs. It is far less important to struggle over the question of whether the evidence shows violations of rationality than to be as clear as possible on how human beings actually behave—it is the latter issue that I am concerned with here.

3. See, e.g., Amos Tversky, *Rational Theory and Constructive Choice*, in *THE RATIONAL FOUNDATIONS OF ECONOMIC BEHAVIOR* 185 (Kenneth Arrow et al. eds., 1996).

4. See Paul Slovic, *The Construction of Preference*, 50 *AM. PSYCHOLOGIST* 364 (1995); Tversky, *supra* note 3.

all three of these may take different forms. "Alternative descriptions of the same choice problems lead to systematically different preferences; strategically equivalent elicitation procedures give rise to different choices; and the preference between x and y often depends on the choice set within which they are embedded."⁵

This point is especially important for law. The legal system is pervasively in the business of constructing procedures, descriptions, and contexts for choice. Of course the legal system creates procedures, descriptions, and contexts in the course of litigated cases. For example, the alternatives (selected to be) placed before the jury or judge may matter a great deal. Because people seek to avoid the extremes, liability or conviction on some count A may very much depend on the nature of counts B, C, and D. In this respect the preferences and values of juries and judges may well be constructed by law. But similar points hold outside of the courtroom as well. The allocation of legal entitlements and the structures created for exchange (or nonexchange) by law may well affect both preferences and values.

For purposes of analysis we might distinguish among three different academic tasks: positive, prescriptive, and normative. Positive work is concerned with predictions. If, contrary to conventional assumptions, people dislike losses far more than they like equivalent gains, predictions will go wrong insofar as they rest on conventional assumptions. Law can play a constructive role in helping to establish whether to frame something as a loss or as a gain. This point has important implications for positive analysis of law, prominently including the Coase theorem;⁶ as we will see, it suggests that in one respect, the Coase theorem is quite wrong. We will also see that if people are averse to extremes, a problem will arise for a simple axiom of revealed preference theory.⁷

Prescriptive work is concerned with showing how society might actually reach shared goals; this is a central purpose of economic analysis of law. Consider the following information campaigns, which conventional analysis deems equivalent: (a) If you use energy conservation methods, you will save \$X per year; and (b) If you do not use energy conservation methods, you will lose \$X per year. It turns out that information campaign (b) is far more effective than information campaign (a).⁸ Some features of human judgment, properly understood, undermine conventional economic prescriptions about what will work best; they help explain, to take just one example, precisely why the public service advertising slogan "drive defensively; watch out for the other guy" is particularly ingenious.

5. Tversky, *supra* note 3, at 186.

6. See Ronald Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

7. See Paul A. Samuelson, *Assumption Theory in Terms of Neutral Preference*, 15 *ECONOMICA* 243 (1938).

8. See ELLIOT ARONSON, *THE SOCIAL ANIMAL* 124-25 (7th ed. 1995).

Normative work is concerned with what the legal system should do. Recent revisions in understanding human behavior, especially insofar as they suggest the constructed character of preferences and values, greatly unsettle certain arguments against paternalism in law. They do not make an affirmative case for paternalism, but they support a form of anti-antipaternalism. If people are unrealistically optimistic, they may run risks because of a factually false belief in their own relative immunity from harm, even if they are fully aware of the statistical facts. If people's choices are based on incorrect judgments about their experiences *after choice*, there is reason to question whether respect for choices, rooted in those incorrect judgments, is a good way to promote utility or welfare. If, for example, people use heuristic devices that lead to systematic errors, their judgments about how to deal with risks may be badly misconceived. If preferences do not predate situations of choice, and emerge in different forms depending on procedure, description, and context, it becomes harder to fathom what it even means to "override" a "preference." If this notion becomes unclear, the meaning of paternalism itself requires a great deal more thought.

None of these points makes a firm case for legal paternalism. But they do suggest that objections to paternalism should be empirical and pragmatic, having to do with the possibility of education and likely failures of government response; such objections should not be *a priori* in nature.

I. DAMAGES

A. PUNITIVE DAMAGES

My principal emphasis here is on the broader implications of a recent empirical study of punitive damages, undertaken by Daniel Kahneman, David Schkade, and me.⁹ Our study involved about 900 jury-eligible citizens in Texas; each was asked to evaluate punitive damage cases, by saying: (a) how outrageous the defendant's conduct was, on a bounded scale of 0 to 6; (b) how much the defendant should be punished, on the same bounded scale; and (c) how much in the way of punitive damages the defendant should be expected to pay on an unbounded scale of dollars. There were twenty-eight total scenarios. The questions allowed measurement of the effects of the defendant firm's size (which was varied), the effects of harm (in all cases, compensatory damages were \$200,000, but in some, the harm seemed qualitatively worse), and the effects of context (all participants read one case in isolation, others together).

Here was the basic puzzle that we sought to explore: Frequently the legal system requires judges or juries to make (normative) judgments of some kind and then to translate those judgments into dollar amounts. This is of course the task of juries who impose punitive damages. How does this translation take

9. See Cass R. Sunstein et al., *Assessing Punitive Damages: (with Notes on Cognition and Valuation in Law)*, 107 YALE L.J. 2071 (1998). The full study, with accompanying statistical analysis, appears in Daniel Kahneman et al., *Shared Outrage and Erratic Awards: The Psychology of Punitive Damages*, 16 J. RISK AND UNCERTAINTY 49 (1998). My discussion of our findings is my own, and Kahneman and Schkade should not be blamed for errors.

place? When the translation occurs, what is it that the legal system is doing? Can the task be done well?

Our basic findings were as follows:

1. People have a remarkably high degree of moral consensus on the degree of outrage and punishment that is appropriate for punitive damage cases.¹⁰ At least in the personal injury cases we offered, this moral consensus, on what might be called *outrage* and *punitive intent*, cuts across differences in gender, race, income, age, and education. For example, our study shows—through the construction of “synthetic juries”—that all-white, all-female, all-Hispanic, all-male, all-poor, all-wealthy, all-black, all-old, and all-young juries are likely to come to similar conclusions about how to rank and how to rate a range of cases.

There is one exception to this generalization. Though women and men rank cases in the same way, women tend to rate cases more severely on the bounded scales, and this effect is heightened when the plaintiff is female. (It could as accurately be said that men tend to rate cases more leniently than women, and this effect is heightened when the plaintiff is female.) But this modest difference does not undermine our basic finding, which involves a striking consensus.

2. The consensus fractures when the legal system uses dollars as the vehicle to measure moral outrage. Even when there is a consensus on punitive intent, there is no consensus about the dollar amount that is necessary to produce the appropriate suffering in a defendant. Under existing law, widely shared and reasonably predictable judgments about punitive intent are turned into highly erratic judgments about appropriate dollar punishment. A basic source of arbitrariness with the existing system of punitive damages (and a problem not limited to the area of punitive damages) is the use of an unbounded dollar scale.

3. A modest degree of additional arbitrariness is created by the fact that juries have a hard time making appropriate distinctions among cases in what might be called a “no-comparison condition.” When one case is seen apart from other cases, people show a general tendency to place it toward the midpoint of any bounded scale. It is therefore less likely that sensible discriminations will be made among diverse cases. This effect is, however, far less important than the effect identified in (2) in producing arbitrary awards.

4. Harm matters a great deal, even if compensatory damages are held constant. The degree of outrage evoked by the defendant’s behavior was not affected by the harm that occurred, but varying the harm had a limited but statistically significant effect on punishment ratings; defendants who had done more harm to the plaintiff were judged to deserve greater punishment. Thus low harm produced an average award of \$727,599 and high harm an average award of \$1,171,251—a substantially greater amount.

10. Two qualifications are necessary. First, this conclusion is restricted to the area we investigated involving personal injury suits. It is an open question whether the moral consensus would operate in areas involving, for example, sexual harassment and discrimination on the basis of race. Second, there is a greater consensus on how to rank the scenarios than on the absolute numbers for outrage and punishment.

5. We hypothesized that the defendant firm's size would affect neither outrage nor punitive intent, but that the same degree of punitive intent would be translated into a larger amount of damages when the firm is larger than when it is smaller. As expected, we found no statistically significant effects of firm size on either outrage or punishment judgments. But large firms were punished with much larger dollar awards (an average of \$1,009,994) than medium firms (\$526,398). This is substantial evidence that equivalent outrage and punitive intent will produce significantly higher dollar awards against wealthy defendants.

The most basic finding that emerges from this study is that outrage and punitive intent are shared, but judgments about dollar awards are not. This is because the legal system gives people no "modulus," or standard, by which to assess different possibilities along the unbounded scale of dollars. If, for example, \$2 million in punitive damages were associated with a particular, specified action, juries would have a "modulus" around which to organize their intuitions. The legal system constructs jury's preferences for punitive awards by asking them to come up with a number along the unbounded scale of dollars, subject to instructions that are usually open-ended.

How might this problem be handled? Once we see that punitive awards are constructed by the legal system's particular response mode—dollars—we can specify the basis of complaints about the status quo, and generate appropriate reforms. I consider three possible approaches.

If the basic problem is simple unpredictability, the legal system might reduce that problem by asking juries not to come up with dollar amounts, but to rank the case at hand among a preselected set of exemplar cases, or to use a bounded scale of numbers rather than an unbounded scale of dollars. A conversion formula, based on previously compiled population-wide data showing how punitive intent corresponds to dollar awards, might be used to generate population-wide judgments about dollar amounts. Through this route, it would be possible to reduce variability and to ensure that jury judgments about appropriate dollar punishments do not reflect the likely unrepresentative views of twelve randomly selected people, but those of the population as a whole. The goal of this approach would be to come up with the community's, rather than the isolated jury's, judgment about appropriate dollar awards. This approach is highly populist, because it seeks to obtain popular convictions. The result would be a form of *predictable populism*.

If the basic problem is that people cannot sensibly map their moral judgments onto dollar awards, the legal system should provide a mechanism by which judges or administrators, rather than jurors, can translate the relevant moral judgments into dollar amounts. It is reasonable to question whether ordinary people can know what a given dollar amount would mean for, or do to, the defendant or those in the position of the defendant. On this view, the jury should also rank the case at hand in comparison to preselected cases, or come up with a number on a bounded scale. A conversion formula, based not on population-

wide data but on expert judgments about what various awards would actually mean or do, would be used to produce rational judgments about dollar amounts. This approach is a mixture of populist and technocratic elements. It is populist insofar as it relies on the community's punitive intent; it is technocratic insofar as experts come up with the relevant conversion formula. The result would be a form of *technocratic populism*.

If the basic problem is that people's moral judgments are not the proper basis for punitive awards, judges might, in some or all contexts, use those moral judgments as one factor to be considered among others, or the legal system might dispense with jury judgments entirely in some or all contexts. If, for example, it is believed that existing social norms are not the appropriate basis for punishment, or if deterrence rather than retribution is the appropriate goal of punitive damages, an expert body might decide on appropriate awards, or offer general guidance to trial court judges. Because this approach reduces or eliminates the jury and relies instead on specialists, it attempts a form of *bureaucratic rationality*.

For present purposes it is unnecessary to choose among these three approaches. My basic claim is that punitive damages reflect outrage that is often widely shared, but dollar awards that can be quite variable. There are different ways of handling that problem, from the most populist to the most technocratic. The legal system inevitably constructs the preferences, or values, that emerge from juries. The question is what normative judgments ought to inform the choice of methods of constructing the relevant preferences and values.

B. COMPENSATORY DAMAGES

Awards for compensatory damages raise many of the same questions as punitive damages. Consider, for example, the issue of pain and suffering. To be sure, such awards are nominally compensatory rather than punitive; they ask the jury to uncover a "fact." But they also involve goods that are not directly traded on markets, and they require a jury to convert into dollars a set of judgments that are, at the very least, hard to monetize. In the absence of uncontroversial market measures to make the mapping reliable,¹¹ the resulting verdicts are notoriously variable, in a way that raises questions very much like those in the punitive damages setting.¹² Similar issues arise in the law of libel, which notoriously lacks clear measures of damages.¹³ Here the jury is likely to be

11. An effort at disciplining decision is made in W. KIP VISCUSI, *REFORMING PRODUCTS LIABILITY* 99-116 (1991).

12. See GENERAL ACCOUNTING OFFICE, *MEDICAL MALPRACTICE: CHARACTERISTICS OF CLAIMS CLOSED* IN 1984, at 1-3, 18-19, 23-24, 40-42 (1987); Randall R. Bovbjerg et al., *Valuing Life and Limb in Tort: Scheduling "Pain and Suffering,"* 83 NW. U. L. REV. 908 (1989); Mark Geistfeld, *Placing A Price On Pain and Suffering: A Method for Helping Juries Determine Tort Damages for Nonmonetary Injuries,* 83 CAL. L. REV. 773 (1995); W. Kip Viscusi, *Pain and Suffering in Product Liability Cases: Systematic Compensation or Capricious Awards,* 8 INT'L REV. OF L. & ECON. 203, 204-08, 214-19 (1988).

13. See Richard A. Epstein, *Was New York Times v. Sullivan Wrong?*, 53 U. CHI. L. REV. 782 (1986) (discussing liability and damages in libel cases).

mapping a complex judgment, about the quality of the harm and perhaps the nature of the plaintiff and the defendant, onto an unbounded dollar scale.¹⁴

The latter half of the twentieth century has also witnessed the rise of two important new torts: intentional infliction of emotional distress¹⁵ and sexual harassment.¹⁶ Both of these torts are accompanied by damage remedies. With respect to such remedies, the basic story should be familiar. Monetization is extremely difficult. Significant arbitrariness is entirely to be expected; similar cases may well give rise to dramatically different awards. With sexual harassment, variable awards are pervasive, and it is likely that some plaintiffs are receiving too much and others too little.¹⁷ How does a jury know what amount would provide an employee, or a student, with adequate compensation for *quid pro quo* or hostile environment harassment? What does compensation mean, in practice? In both of these contexts, compensatory and punitive damages are likely to be entangled, in the sense that juries probably do not sharply separate the one from the other.

In the areas of intentional infliction of emotional distress and sexual harassment, there may well be a relatively uniform set of underlying judgments among different demographic groups, though with sexual harassment it would be most interesting to see whether there are differences between men and women or among other groups. This is an intriguing and entirely feasible empirical project along the lines of the study I have described here. A principal source of unpredictability is likely to involve the translation of the underlying moral judgments into dollar amounts. Hence reform strategies, here as elsewhere, might be based on a particular conclusion about what is wrong with the outcomes of jury deliberations—unpredictable awards, inadequate understanding of the effects of dollar amounts, or a reliance on improper factors. The legal system might restrict, or construct, jury “preferences” in many different ways.

We can bring together these various grounds for compensatory awards by noting how the reform proposals discussed above may or may not bear on compensatory damages awards that are especially likely to be erratic. The most important feature of compensatory damages is that they are intended to restore the *status quo ante*.¹⁸ Punitive damages, by contrast, are intended to reflect a

14. There is also a predictable difference between the amount that would compensate a libel plaintiff for injury inflicted and the amount that would persuade a libel plaintiff to allow his reputation to be damaged in the relevant way. See generally Edward J. McCaffery et al., *Framing the Jury: Cognitive Perspective on Pain and Suffering Awards*, 81 VA. L. REV. 1341 (1995).

15. See ROBERT KEETON & WILLIAM PROSSER, *THE LAW OF TORTS* 54-66 (1984) for an overview.

16. See CATHARINE MACKINNON, *SEXUAL HARASSMENT OF WORKING WOMEN* (1979).

17. See Cass R. Sunstein, *Damages in Sexual Harassment Cases* (May 12, 1998) (unpublished manuscript on file with the University of Chicago Law School). As yet there appears to be no systematic study to this effect, but highly suggestive evidence comes from the literature on pain and suffering damages, which shows such a pattern. See Michael J. Saks et al., *Reducing Variability in Civil Jury Awards*, 21 L. & HUM. BEHAV. 243, 244-45 (1997), and research there cited.

18. Note in this regard the difference between the amount a plaintiff would require to deem himself restored, and the amount a plaintiff would demand to allow the injury in the first instance. See McCaffery et al., *supra* note 14.

normative judgment about the outrageousness of the defendant's conduct (together with a judgment about deterrence). Thus the compensatory decision, far more than the punitive decision, reflects an assessment of fact (at least in theory).¹⁹ At first glance this is a sharp distinction between the two. In this light, would it make sense to consider reforms designed respectively to (a) capture a population-wide judgment about appropriate compensation, (b) capture a "compensatory intent" that would be mapped, by experts, onto dollar amounts, and (c) dispense partly or entirely with juries on the ground that juries are unlikely to have the competence to make accurate judgments about the factual questions involved?

To answer this question, it is necessary to ask why juries are now charged with the task of making judgments about appropriate compensation in cases in which that inquiry strains their factual capacities. The most straightforward answer is self-consciously populist. In cases involving libel, pain and suffering, sexual harassment, and the intentional infliction of emotional distress, no institution is likely to be especially good at uncovering the "fact" about compensation, if there is indeed any such "fact." Moreover, it is appropriate (on this view) to let the underlying decision reflect not merely facts but also judgments of value that are held by the community as a whole.²⁰ Whatever fact-finding deficiencies the jury may have (as compared to, say, a specialized agency) are overcome by the value of incorporating community sentiments into the decision about appropriate compensation for injuries that are not easily monetized. On this view, compensatory judgments, at least in these contexts, are not so different from punitive judgments after all; both of them have important normative components.

Thus the simplest argument on behalf of jury judgments about compensation is that any such judgment is—perhaps inevitably and certainly appropriately—not solely compensatory. It has evaluative dimensions, both in deciding what

19. There are many complications here. An obvious issue is what, in this context, compensation is compensation *for*. If someone has suffered a month of pain, is compensation supposed to restore the plaintiff hedonically? To give dollar equivalents for injury to capabilities and functionalities, to be assessed in part objectively rather than subjectively? Because the idea of "compensation" does not answer such questions, the jury's assessment inescapably creates normative issues. There is much room here for further descriptive work (what are the components of that assessment, in fact?) and normative work as well (what should the question of compensation be taken to mean in these various contexts?). See AMARTYA SEN, *COMMODITIES AND CAPABILITIES* (1985) (defending a "capability" approach to an assessment of well-being).

20. An underlying question, in all of these areas, involves the extent to which the damage judgment should be person-specific. Suppose, for example, that an especially sensitive plaintiff has suffered an especially severe hedonic loss as a result of libel or sexual harassment—or, by contrast, that an especially tough-skinned plaintiff has suffered an unusually small hedonic loss as a result of the same torts. Should a jury consider the extent to which the plaintiff's injury was objectively reasonable, independent of purely hedonic factors? Officially, tort law incorporates a reasonable person inquiry at the level of liability, but once the defendant has been found liable, the defendant must take the plaintiff as the plaintiff experienced the injury. In other words, damages determinations are supposed to be person-specific—but we do not know if juries are willing to think in these terms, and it is also unclear that they should.

compensation properly includes and in imposing burdens of proof and persuasion and resolving reasonable doubts. The evaluative judgments, it might be thought, should be made by an institution with populist features and virtues. The point may well apply to judgments about compensation for pain and suffering, libel, intentional infliction of emotional distress, and sexual harassment. A populist institution, on this view, should be permitted to undertake evaluative judgments about what amount would compensate someone who has suffered as a result of an improper medical procedure, a lie about his private life, or an unwanted sexual imposition by an employer or teacher.

In many cases involving compensatory awards, however, the problem of erratic judgments, emerging from scaling without a modulus, remains. This problem would not be severe (indeed, it would not be a problem at all) if what appeared to be erratic judgments were really a product of careful encounters with the particulars of individual cases, producing disparate outcomes that are defensible as such because they are normatively laden. But the study I have described suggests grave reasons to doubt that this is in fact the case. Thus there is a serious question of reform strategies.

How would the proposals discussed in Part IIA work here? Notice that for compensatory damages, ranking is far preferable to rating along a bounded scale. It is certainly useful to see how a jury believes that the injury at issue compares with other injuries, but less useful, when punishment is not involved, to get a sense of the jury's numerical rating. A ranking might be used in various ways. If the basic problem is erratic judgments in the context of compensatory damages, it might be desirable to use a conversion formula to obtain a population-wide judgment about appropriate compensation. A problem with this approach is that a population-wide judgment about appropriate dollar compensation might be ill-informed—it might not reflect “true” compensation. If the normative dimensions of that judgment seem to deserve a good deal of weight—if we see the jury's judgment about compensation as appropriately reflecting considerations not involving the apparently factual question of compensation—this approach might well make sense. But if the factual dimensions deserve to predominate, the jury's ranking might be understood as a kind of “compensatory intent,” to be converted to compensatory awards not by population-wide data but instead by an administrative or legislative conversion formula rooted in a judgment of the appropriate treatment of the cases against which the case at hand has been ranked. This kind of reform seems somewhat awkward, for the notion of “compensatory intent,” supposedly rooted in a judgment about the facts, is less straightforward than that of “punitive intent,” which is an unmistakably normative judgment. But it would mix populist and technocratic elements in a way that is mildly reminiscent of the treatment of social security disability cases—though there the jury is not of course given a role, displaced as it is by an administrative law judge.²¹

21. See *Heckler v. Matthews*, 465 U.S. 728 (1984). Note in this regard that many administrative

If the social security disability cases are really taken as a good analogy, technocratic considerations should predominate, and the third kind of reform proposal might seem best. In this view, an administrative or legislative body might create a kind of "pain and suffering grid," "libel grid," or "sexual harassment grid," combining the basic elements of disparate cases into presumptively appropriate awards. A judge would produce a dollar award by seeing where the case at hand fits in the grid and perhaps by making adjustments if the details of the case strongly call for them. A technocratic approach of this kind could eliminate or at least greatly reduce the problem of erratic awards.²² Whether such an approach is desirable depends on the value of incorporating populist elements in the way that the more modest reforms promise to do.

Elements of these various approaches can be found in reform proposals, thus far restricted to the pain and suffering context, that attempt to cabin the jury's judgment by requiring it to decide in accordance with damage schedules and to place the case at hand in the context of other cases.²³ In view of the fact that similar problems beset other areas of the law, there is no reason not to consider similar reforms in the contexts of libel, sexual harassment, and intentional infliction of emotional distress. A key issue is the appropriate role of technocratic and populist elements in the compensatory judgment. A judgment about that issue will go a long way toward shaping reforms.

II. TWO IMPORTANT AVERSIONS

I now turn to two human aversions with special relevance to law's constructive character: aversion to losses and aversion to extremes.

A. LOSS AVERSION

People are especially averse to losses. They are more displeased with losses than they are pleased with equivalent gains—very roughly speaking, twice as displeased.²⁴ Contrary to economic theory, people do not treat out-of-pocket costs and opportunity costs as if they were equivalent. Here the constructive effect of law is extremely important, because law may frame consequences as a loss or instead a gain, not least by creating the legal entitlement in the first instance.

agencies impose civil and criminal penalties, and they are also in a position to scale without a modulus. It would be extremely valuable to have a sense of their practice, and to know whether they have created some of the same kind of variability discussed here.

22. There is also an underlying question about the relationship between rule-bound judgment and particularistic judgment. Standards laid down in advance may leave room for erratic particularistic judgments if they are open-ended; but if they are rigid and rule-like, they may prevent the reasonable exercise of discretion to adapt to the particulars of the individual case. One issue here is how to minimize both decision costs and error costs, and in the abstract it is hard to know how much constraint on particularistic judgment will accomplish that task. For a good discussion, see generally Louis Kaplow, *Rules Versus Standards: An Economic Analysis*, 42 DUKE L.J. 557 (1992).

23. See Saks et al., *supra* note 17, at 246; Bovbjerg et al., *supra* note 12, at 953.

24. See Daniel Kahnman et al., *Experiment Tests of the Endowment Effect of Coase Theorem*, in THAYER, *supra* note 1, at 167, 175.

Loss aversion has important implications for positive analysis of law. It means, for example, that the Coase theorem is in one respect quite wrong.²⁵ Contrary to the Coase theorem, the allocation of the legal entitlement may well matter in the sense that those who are initially allocated an entitlement are likely to value it more than those without the legal entitlement.²⁶ The legal entitlement may well create an endowment effect, that is, a greater valuation stemming from the mere fact of endowment.²⁷ This effect has been observed in many contexts.²⁸ Thus workers allocated a (waivable) right to be discharged only for cause may well value that right far more than they would if employers were allocated a (tradable) right to discharge at will.

There is a further point. Whether an event “codes” as a loss or a gain depends on a range of contextual factors, including how the event is framed. The *status quo* is usually the reference point, so that losses are understood as such by reference to existing distributions and practices;²⁹ but it is possible to manipulate the frame so as to make a change code a loss rather than a gain, or vice-versa. Consider a company that says “credit card surcharge” versus “cash discount;” or a parent who says that for behavior X (rather than behavior Y) a child will be rewarded, as opposed to saying that for behavior Y (rather than behavior X) a child will be punished;³⁰ or familiar advertisements to the effect that “you cannot afford not to” have a certain product. In environmental regulation, it is possible to manipulate the reference point by insisting that policymakers are trying to “restore” water or air quality to its state at time X; the restoration time matters a great deal to people’s choices.³¹ But for present purposes, the most important source of reference point is the law—where has the legal system placed the initial entitlement? Much research remains to be done on the effects of this initial allocation. It bears, for example, on the distinction between “subsidies” and “penalties” that has proved so crucial to the law governing unconstitutional conditions;³² that distinction can be understood as responsive to the phenomena of loss aversion and framing effects, which very much affect different judgments about whether someone has been subsidized or instead penalized.³³

Loss aversion also raises serious questions about the goals of the tort system. Should damages measure the amount that would restore an injured party to the

25. Daniel Kahneman et al., *Experimental Tests of the Endowment Effect and the Coase Theorem*, 98 J. POLIT. ECON. 1325, 1343-44 (1990).

26. *Id.*

27. *Id.* at 1342.

28. *See id.*, at 1392-42; Cass R. Sunstein, *Endogenous Preferences, Environmental Law*, in CASS R. SUNSTEIN, *FREE MARKETS AND SOCIAL JUSTICE* (1997).

29. *See* William Samuelson & Richard Zeckhauser, *Status Quo Bias in Decision Making*, 1 J. RISK & UNCERTAINTY 7 (1988).

30. Personal experience suggests that this works!

31. *See* Robin Gregory et al., *The Role of Past States in Determining Reference Points for Policy Decisions*, 55 ORG. BEHAV. AND HUM. DECISION PROCESSES 195 (1993).

32. *See* GEOFFREY R. STONE ET AL., *CONSTITUTIONAL LAW* 1761-64 (3d ed. 1996).

33. *See, e.g.*, *Harris v. McRae*, 448 U.S. 297 (1980)

status quo ante, or should they reflect the amount that an injured party would demand to be subject to the injury before the fact? Juries appear to believe that the amount that would be demanded pre-injury is far greater than the amount that would restore the *status quo ante*.³⁴ The legal system appears generally to see the compensation question as the latter one, though it does not seem to have made this choice in any systematic way. The disparity has large implications for the choice between liability rules and property rules. Property rules allow a taking only via “willingness to accept;” liability rules frame the question in terms of “willingness to pay.” The economic literature on the choice between the two generally does not recognize that the resulting valuations may be dramatically different.³⁵

B. EXTREMENESS AVERSION

As car salespeople and good advertisers well know, people are averse to extremes. Whether an option is extreme depends on the stated alternatives. Extremeness aversion gives rise to compromise effects.³⁶ In this as in other respects, the framing of choice matters; the introduction of (unchosen, apparently irrelevant) alternatives into the frame can alter the outcome. When, for example, people are choosing between some small radio A and a mid-size radio B, most may well choose A; but the introduction of a third, large radio C is likely to lead many people to choose B instead.³⁷ Thus the introduction of the third, unchosen (and in that sense irrelevant) option may produce a switch in choice as between two options. Almost everyone has had an experience of switching to (say) the second most expensive item on some menu of options, and of doing so partly because of the presence of the very most expensive item.

Extremeness aversion suggests that a simple axiom of conventional economic theory—involving the irrelevance of added, unchosen alternatives—is wrong.³⁸ It also has large consequences for legal advocacy and judgment, as well as for predictions about the effects of law. How can a preferred option best be framed as the “compromise” choice? When should a lawyer argue in the alternative, and what kinds of alternative arguments are most effective? This should be a central question for advocates to answer. Juries and judges may well try to choose a compromise solution, and what “codes” as the compromise solution depends on what alternatives are made available. In elections, medical interventions, and policymaking, compromise effects matter a great deal.

34. See McCaffery et al., *supra* note 14, at 1403.

35. See, e.g., Louis Kaplow & Steven Shavell, *Property Rules Versus Liability Rules: An Economic Analysis*, 109 HARV. L. REV. 713 (1996).

36. See Mark Kelman et al., *Context-Dependence in Legal Decision Making*, 25 J. LEGAL STUD. 287, 288 (1996).

37. *Id.*

38. See Amartya Sen, *Internal Consistency of Choice*, 61 ECONOMETRICA 495 (1993).

III. COOPERATION, BEING FAIR, AND APPEARING FAIR

Economists sometimes assume that people are self-interested. This may well be true, and often it is a useful simplifying assumption. But people also may want to act fairly and, more importantly, they want to be *seen* to act fairly, especially but not only among nonstrangers. For purposes of understanding law, what is especially important is that people may sacrifice their economic self-interest in order to be, or to appear, fair; and they may punish people perceived as unfair.

Consider, for example, the ultimatum game.³⁹ The people who run the game give some money, on a provisional basis, to the first of two players. The first player is instructed to offer some part of the money to the second player. If the second player accepts that amount, he can keep what is offered, and the first player gets to keep the rest. But if the second player rejects the offer, neither player gets anything. Both players are informed that these are the rules. No bargaining is allowed. Using standard assumptions about rationality, self-interest, and choice, economists predict that the first player should offer a penny and the second player should accept. But this is not what happens. Offers usually average between 30% and 40% of the total. Offers of less than 20% are often rejected. Often there is a fifty-fifty division. These results cut across the level of the stakes and also across diverse cultures.

The results of the ultimatum game are highly suggestive.⁴⁰ Perhaps people will not violate norms of fairness, even when doing so is in their economic self-interest, at least if the norm violations would be public. Do companies always raise prices when circumstances create short-term scarcity? For example, are there social constraints on price increases for snow shovels after a snowstorm, or for umbrellas during a rainstorm? It may well be that contracting parties are reluctant to take advantage of the misfortunes of others, partly because of social constraints on self-interested behavior. Here there is enormous room for future work.

Experimental research also suggests that there can be a high degree of cooperation in prisoners' dilemma situations, not only but especially when people are speaking with one another.⁴¹ It is noteworthy to find the existence of many laws that are rarely enforced but that seem to meet with widespread compliance. Consider, for example, laws forbidding people from smoking in public places. Such laws are obeyed partly because of private enforcement via social norms. Would-be smokers are deterred because they would be perceived to be flouting pervasive norms. Much remains to be learned about the relation-

39. See THE HANDBOOK OF EXPERIMENTAL ECONOMICS 282-288 (John H. Kagel & Alvin E. Roth eds., 1995) for a general discussion.

40. See Christine Jolls, Cass R. Sunstein, & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998).

41. See THE HANDBOOK OF EXPERIMENTAL ECONOMICS, *supra* note 39, at 111-73 for an overview. A prisoner's dilemma arises when individually rational behavior produces collective harm. See EDNA ULLMAN-MARGALIT, *THE EMERGENCE OF NORMS*, 18-21 (1977), for a lucid discussion.

ship between law and norms, and on how law can help create new cooperative norms, or promote the success of emerging ones.

IV. HEURISTICS AND BIASES

People make judgments about probability on the basis of heuristic devices, responsive perhaps to high costs of inquiry and decision, that may often work well but that tend to lead to systematic errors. The use of heuristics may not reflect irrationality (especially if they minimize decision costs), but it may produce serious problems at the individual and social levels. This work bears on the demand for (and hence also the supply of) government services, including regulation.

A. CASE-BASED DECISION THEORY

Heuristic devices are often used when the costs of deliberation are high; in such cases, second-order decisions, operating as default rules, can make particularized assessments less necessary.⁴² An important way of reducing decision costs is to make assessments on the basis of previous cases rather than through calculation of relevant costs and benefits.⁴³ In fact people often reason by calling to mind particular cases and seeing how the problem at hand compares with those cases; this can be an important method of reducing decision costs.⁴⁴ The construction of preferences and values stems from the law's selection of salient cases.

The emphasis on case-based decisions, as a way of minimizing decision costs while producing acceptably low error costs, has significant consequences for the understanding of law. Adjudication usually involves a form of case-based reasoning, and we may be able better to understand its nature, and its vices and virtues, if we see it as an alternative to expected utility theory emerging from the distinctive institutional characteristics of judicial institutions.

B. AVAILABILITY

People tend to think that risks are more serious when an incident is readily called to mind or "available."⁴⁵ If pervasive, the availability heuristic will produce systematic errors. Assessments of risk will be pervasively biased, in the sense that people will think that some risks (of a nuclear accident, for example) are high, whereas others (of a stroke, for example) are relatively low. "Availability cascades" can produce a large demand for law, as in the familiar "pollutant of the month" syndrome in environmental law. We lack a firm understanding of

42. See CASS R. SUNSTEIN & EDNA ULLMANN-MARGALIT, *SECOND-ORDER DECISIONS* (Working Paper no. 57, University of Chicago, Law and Economics Working Papers) (2d series 1998).

43. Itzhak Gilboa & David Schmeidler, *Case-Based Decision Theory*, 110 Q.J. ECON. 605 (1995).

44. *Id.* at 607-10.

45. See W. KIP VISCUSI, *FATAL TRADEOFFS: PUBLIC AND PRIVATE RESPONSIBILITIES FOR RISK* 107-10 (1992); Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCIENCE 1129 (1979);

how availability cascades occur and of how institutions might be designed to produce appropriate responses.⁴⁶

C. ANCHORING

Often people make probability judgments on the basis of an initial value, or “anchor,” for which they make insufficient adjustments.⁴⁷ The initial value may have an arbitrary or irrational source. When this is so, the probability assessment may go badly wrong. This point bears on jury and judge deliberations reconstructing the facts. It also suggests possible problems with damage determinations, where arbitrary anchors can have large effects.

D. REPRESENTATIVENESS

Judgments about probability are often judgments about the likelihood that some process A will bring about some event B. Under what circumstances will driving produce significant increases in air pollution, or fatal accidents? When will airbags produce risks to children? Do disposable diapers cause pollution problems? In answering such questions, people ask about the extent to which A is representative of B in the sense that it *resembles* B. This point suggests that people will be insensitive to the sample size, misunderstand the phenomenon of regression to the mean, have excessive confidence in their own judgments, and misunderstand the effect on probability of base-rate frequency.⁴⁸ As a result, people may systematically misunderstand risk levels. Risk regulation in general and in particular cases may go awry.

CONCLUSION

I have attempted to sketch some of the ways that the legal system helps construct preferences and values—both by creating procedures, descriptions, and contexts in courts themselves, and by creating entitlements that help shape preferences and values in domains that might appear to have nothing to do with law. In the area of punitive and compensatory damages, the legal system helps construct the key variables by selecting the response mode, here one of dollars, and also the context in which dollar awards are chosen. We have seen that people’s normative judgments, at least in personal injury cases, appear to be remarkably uniform; their dollar judgments are not. Different response modes might well work better, by diminishing arbitrariness or enabling people to do something that they do well. Similar points apply in areas involving compensatory damages where erratic judgments are also likely. In those areas, large questions involve the appropriate role of technocratic and populist features in the operation of the legal system.

46. Timur Kuran & Cass R. Sunstein, Availability Cascades and Risk Regulation (work in progress), is an effort to deal with these issues.

47. See Tversky & Kahneman, *supra* note 45, at 1129.

48. *Id.*

In the last decades, a great deal of progress has been made by assuming that people have “preference maps” in their heads before the time of decision and choice. For many purposes this assumption, whether or not true, has been productive; certainly it has been a fruitful basis for the last generation of work on the relation between law and human behavior. But the context of punitive damages—where outcomes are palpably a product of procedure and where arbitrariness is widely observed—is simply an especially vivid example of a situation in which preferences and values do not, in any simple way, antedate the process that is used to elicit them. The fact that preferences and values can be a function of methods of elicitation, or construction, has a range of unexplored implications for law. I have attempted to trace a few of those implications here, and also to suggest several areas where future research would be fruitful.