

DRAFT: February 13, 2003

**A BEHAVIORAL ANALYSIS OF
PRIVATE JUDGING**

Christopher R. Drahozal
Professor of Law
University of Kansas School of Law
Lawrence, KS 66047
drahozal@ku.edu

Paper prepared for a symposium on
“The Coming Crisis in Mandatory Arbitration:
New Perspectives and Possibilities”
Duke University School of Law
October 4-5, 2002

A BEHAVIORAL ANALYSIS OF PRIVATE JUDGING

Christopher R. Drahozal*

I. Introduction

Avoiding jury trials is commonly cited as a reason businesses include arbitration clauses in their contracts with consumers.¹ From the perspective of businesses, replacing a jury with an arbitrator “provides much-needed protection from the unpredictability of jury awards, which, in recent years, have been known to reach astronomical heights – awards that appear inappropriate even to the most objective observer.”² From the perspective of consumer advocates, businesses choose arbitration to “decrease their likely payout” by avoiding juries, which they believe “will often be sympathetic to the claims of a consumer against a large company.”³ Underlying these competing perspectives are differing views of jury and arbitral decision making. From the business perspective, juries make awards that are “too high” and thus overcompensate consumer claimants. From the consumer perspective, arbitrators make awards that are “too low” and thus undercompensate consumer claimants.

Stated otherwise, a central issue in the debate over pre-dispute consumer arbitration clauses is whether arbitrators or juries make “better” decisions – that is, whether juries or arbitrators more accurately assign liability and award damages given the facts of the case and the

* Professor of Law, University of Kansas School of Law. I appreciate helpful comments from Lee Fennell, Chris Guthrie, Laura Hines, Stephanie Keer, Richard Naimark, Amy Schmitz, Ellen Sward, and Steve Ware, as well as from symposium participants, especially Tom Metzloff and Neil Vidmar, my discussant.

¹ E.g., Jean R. Sternlight, *Panacea or Corporate Tool?: Debunking the Supreme Court's Preference for Binding Arbitration*, 74 Wash U. L.Q. 637, 684 (1996) (“One of the company's chief goals in selecting arbitration over litigation is generally to avoid a jury trial.”). There are, of course, a number of other reasons why businesses might include pre-dispute arbitration clauses in their standard form contracts, such as confidentiality, reduced availability of class relief, and so on.

² E.g., Martin J. Oppenheimer & Cameron Johnson, *A Management Perspective: Mandatory Arbitration Agreements Are an Effective Alternative to Employment Litigation*, DISP. RESOL. MAG., Fall 1997, at 19; see also Alan S. Kaplinsky & Mark J. Levin, *Alternative to Litigation Attracting Consumer Financial Services Companies*, in ARBITRATION OF CONSUMER FINANCIAL SERVICES DISPUTES 845-48 (1999) (arbitration “eliminates irrational jury verdicts”).

³ E.g., Sternlight, *supra* note 1, at 684; see also Margot Saunders, *The Increase in Predatory Lending and Appropriate Remedial Actions*, 6 N.C. BANKING INST. 111, 137 (2002) (“Creditors use arbitration clauses as a shield to prevent homeowners from litigating their claims in a judicial forum, where a consumer friendly jury might be deciding the case.”); David S. Schwartz, *Enforcing Small Print to Protect Big Business: Employee and Consumer Rights Claims in an Age of Compelled Arbitration*, 1997 WIS. L. REV. 33, 60 (arguing that businesses “prefer arbitration to litigation for their patterned, repetitive disputes with minor players” because of “[l]ower damage awards” in arbitration”).

governing legal standards.⁴ The issue necessarily is a comparative one, as no legal decision maker is infallible.⁵ A full comparison of jury and arbitral decision making is well beyond the scope of this article. Instead, the article focuses on an aspect of arbitral decision making that has been largely unexamined: the extent to which decision making by arbitrators may be affected by heuristics (rules of thumb) and cognitive biases.⁶

Much attention has been given to how such cognitive illusions might affect decision making by juries. Guthrie et al. summarize the experimental results:

Decades of research on *juries* indicates that cognitive illusions adversely affect the quality of adjudication. Researchers have found, for example, that juries believe that litigants should have predicted events that no one could have predicted, allow irrelevant or inadmissible information to influence liability determinations, defer to arbitrary numerical estimates, and rely on incoherent methods to calculate damages.⁷

⁴ Accuracy, of course, has multiple dimensions, such as whether on average the decision maker awards the appropriate level of damages, and the extent of variation in the decision maker's awards. For discussions of the importance of accuracy in legal decision making, see Louis Kaplow, *The Value of Accuracy in Adjudication: An Economic Analysis*, 23 J. LEGAL STUD. 307 (1994); Louis Kaplow & Steven Shavell, *Accuracy in the Assessment of Damages*, 39 J.L. & ECON. 191 (1996); Louis Kaplow & Steven Shavell, *Accuracy in the Determination of Liability*, 37 J.L. & ECON. 1 (1994). *But see* Ian Ayres & Eric Talley, *Solomonic Bargaining: Dividing a Legal Entitlement To Facilitate Coasean Trade*, 104 YALE L.J. 1027, 1035 n.27 (1995) (finding that "decision makers might eschew accuracy even if making accurate court decisions were costless" because of benefits of legal uncertainty).

⁵ Robert MacCoun, *Inside the Black Box: What Empirical Research Tells Us about Decisionmaking by Civil Juries*, in VERDICT: ASSESSING THE CIVIL JURY SYSTEM 164 (Robert E. Litan ed., 1993) ("Several legal scholars have pointed out that the appropriate standard by which to evaluate the quality of jury performance is not some absolute benchmark of perfection, but rather the performance of the most likely alternative factfinder, the trial judge. Or, to extend the argument, the arbitrator, or the expert tribunal.").

⁶ *See, e.g.*, HEURISTICS & BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGEMENT (Thomas Gilovich et al eds., 2002); JUDGEMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES (Daniel Kahneman et al. eds., 1982); Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCI. 1124 (1974). For overviews of the literature from a legal perspective, see, *e.g.*, BEHAVIORAL LAW & ECONOMICS (Cass R. Sunstein ed., 2000); Christine Jolls et al., *A Behavioral Approach to Law & Economics*, 50 STAN. L. REV. 1471 (1998); Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CALIF. L. REV. 1051 (2000); Donald C. Langevoort, *Behavioral Theories of Judgment and Decision Making in Legal Scholarship: A Literature Review*, 51 VAND. L. REV. 1499 (1998); Cass R. Sunstein, *Behavioral Law and Economics: A Progress Report*, 1 AM. L. & ECON. REV. 115 (1999). For a cautionary view, see Gregory Mitchell, *Why Law & Economics' Perfect Rationality Should Not Be Traded for Behavioral Law and Economics' Equal Incompetence*, 91 GEORGETOWN L.J. (2002) (forthcoming) [hereinafter Mitchell, *Equal Incompetence*]; Gregory Mitchell, *Taking Behavioralism Too Seriously? The Unwarranted Pessimism of the New Behavioral Analysis of Law*, 43 WM. & MARY L. REV. 1907 (2002) [hereinafter Mitchell, *Taking Behavioralism Too Seriously?*].

⁷ Chris Guthrie et al., *Inside the Judicial Mind*, 86 CORNELL L. REV. 777, 780-81 (2001).

Less, albeit increasing, attention has been given to how cognitive illusions affect decision making by judges. The experimental studies to date, while mixed, have found that judges are less affected by some cognitive illusions but similarly affected by others.

Almost no attention, however, has been given to how cognitive illusions might affect decision making by arbitrators.⁸ This article extends the behavioral analysis of the legal system⁹ to private judging, and considers the implications of that analysis for the debate on pre-dispute consumer arbitration clauses. Empirical evidence on the effect of cognitive illusions in arbitral decision making is extremely limited. Further complicating the analysis of private judging are structural differences between arbitration hearings and jury trials, which may heighten or dampen the effect of cognitive illusions on decision making in the real world. If arbitrators are assumed to be more like judges than jurors in their decision making – a seemingly reasonable assumption – studies comparing the effect of cognitive illusions on judges and jurors provide at least a starting point for making predictions about arbitral decision making. On this view, the article reaches the very tentative conclusion that arbitrators, like judges, may be less susceptible to at least some cognitive illusions than jurors.

If subsequent research bears out this tentative conclusion – and much more research is needed – it would have important implications for the ongoing debate over consumer arbitration. If arbitral decision making is less subject than jury decision making to the effects of cognitive illusions, then the use of arbitration may improve the accuracy of dispute resolution, reducing the risk of overcompensation (rather than resulting in undercompensation). This is not to suggest

⁸ The effect of cognitive illusions on decision making by consumers has been cited as a possible justification for increased regulation of pre-dispute arbitration clauses in standard form contracts. Sarah Rudolph Cole, *Incentives and Arbitration: The Case Against Enforcement of Executory Arbitration Agreements Between Employers and Employees*, 64 UMKC L. REV. 449, 482 (1996); Sternlight, *supra* note __, at 692-93. *See generally* Jolls et al., *supra* note __, at 1541 (“bounded rationality pushes toward a sort of anti-antipaternalism – a skepticism about antipaternalism, but not an affirmative defense of paternalism”); Robert A. Hillman & Jeffrey J. Rachlinski, *Standard-Form Contracting in the Electronic Age*, 77 N.Y.U. L. REV. 429, 450 (2002) (“consumers . . . rely on decisionmaking strategies about contractual risks that keep them from reading the boilerplate”). A central question is the extent to which market forces may protect consumers who for whatever reason – cognitive biases, high information costs, and so forth – do not protect themselves. Christopher R. Drahozal, *“Unfair” Arbitration Clauses*, 2001 U. ILL. L. REV. 695, 765-66. The mere presence of an arbitration clause in a consumer contract does not necessarily mean that the business drafting the contract is taking advantage of the consumer. Limitations on consumer decision making, such as cognitive biases and the use of heuristics, certainly are one consideration in evaluating whether the use of arbitration benefits or harms consumers, but by no means the only one. One often overlooked consideration is the extent to which business reputation and similar market sanctions may counteract the take-it-or-leave-it nature of many consumer form contracts. *Id.* at 767-69; *see also* RICHARD CRASWELL & ALAN SCHWARTZ, *FOUNDATIONS OF CONTRACT LAW* 322-23 (1994) (“sellers who use unreasonable terms get a reputation for having undesirable contracts”).

⁹ *See* Jeffrey J. Rachlinski, *The “New” Law and Psychology: A Reply to Critics, Skeptics, and Cautious Supporters*, 87 CORNELL L. REV. 739, 739 (2000) (noting that field is referred to variously as “the psychology of judgment and decision making,” “behavioral economics,” and “behavioral decision theory”).

that such utilitarian arguments should be used to override constitutional protections,¹⁰ or that the jury might not serve other functions than simply dispute resolution.¹¹ Instead, the point simply is that when Congress (or another policy maker) is considering whether to restrict the enforceability of consumer arbitration agreements, it should not assume that juries necessarily make “better” decisions than arbitrators. To the contrary, restricting the availability of arbitration may reduce the accuracy of dispute resolution, thereby imposing real costs on the parties to consumer contracts.

Part II provides an overview of the cognitive illusions most relevant to decision making by judges, jurors, and arbitrators. Part III summarizes empirical studies that shed light on the effect of cognitive illusions on arbitral decision making. Part IV examines structural differences between jury decision making and arbitral decision making that may increase or decrease the effect of cognitive illusions. Part V concludes.

II. Heuristics and Cognitive Biases: An Overview and Application to Jurors

Experimental studies suggest a number of ways in which human behavior may depart systematically from a rational actor model. This part describes several such “cognitive illusions” – hindsight bias, anchoring, the representativeness heuristic, and extremeness aversion – and relates them to legal decision making, particularly decision making by jurors. Certainly there is reason to be cautious about extrapolating from laboratory results to real-world settings. But given how juries are selected, and the lack of market incentives to which jurors are subject, the jury seems particularly likely to be susceptible to cognitive illusions in its decision making, even taking into account institutional devices for lessening their influence.

¹⁰ See Sternlight, *supra* note __, at 733 (“Whatever the arguable benefits of binding arbitration over litigation, our Constitution states that jury trials are to be preferred over arbitration.”). For discussions of jury trial rights and arbitration, see Sternlight, *supra* note __, at 671; Jean R. Sternlight, *Rethinking the Constitutionality of the Supreme Court’s Preference for Binding Arbitration: A Fresh Assessment of Jury Trial, Separation of Powers, and Due Process Concerns*, 72 TUL. L. REV. 1, 76-78 (1997); Jean R. Sternlight, *Mandatory Binding Arbitration and the Demise of the Seventh Amendment Right to a Jury Trial*, 16 OHIO ST. J. ON DISP. RESOL. 669 (2001); Stephen J. Ware, *Arbitration Clauses, Jury-Waiver Clauses and Other Contractual Waivers of Constitutional Rights*, 66 LAW & CONTEMP. PROBS. __ (2003) (forthcoming).

¹¹ E.g., ELLEN SWARD, *THE DECLINE OF THE CIVIL JURY* 51-64 (2001) (discussing political and socializing roles of juries); VALERIE P. HANS & NEIL VIDMAR, *JUDGING THE JURY* 249 (1986) (“political functions of the jury are not to be ignored. They coexist with the fact-finding functions and should be considered in judging the jury’s role in society”).

A. Hindsight Bias

“Hindsight is 20/20,” the saying goes. Once people know that an event has occurred, it is extremely difficult for them to ignore the occurrence in evaluating the probability that the event would occur in the first place.¹² As Baruch Fischhoff explains:

In hindsight, people consistently exaggerate what could have been anticipated in foresight. They not only tend to view what has happened as having been inevitable but also to view it as having appeared “relatively inevitable” before it happened. People believe that others should have been able to anticipate events much better than was actually the case. They even misremember their own predictions so as to exaggerate in hindsight what they knew in foresight¹³

Of course, not all uses of hindsight in making decisions are inappropriate.¹⁴ If people learn by experience, one would expect them to increase their estimates of the probability of *future* events based on past events. Moreover, “the fact that something happened provides some information about the risky behavior.”¹⁵ “Hindsight bias” occurs when the influence of hindsight on judgment exceeds that which is justifiable.

Experimental studies have found hindsight bias in a variety of decision making settings.¹⁶ For example, Kamin & Rachlinski administered a problem based on the tort case of *Petition of Kinsman Transit Co.*¹⁷ to a group of experimental subjects.¹⁸ Subjects in the “foresight

¹² E.g., Guthrie et al., *supra* note __, at 799-801; Jolls et al., *supra* note __, at 1523-27; Jeffrey J. Rachlinski, *A Positive Psychological Theory of Judging in Hindsight*, 65 U. CHI. L. REV. 571, 576 (1998).

¹³ Baruch Fischhoff, *For Those Condemned to Study the Past: Heuristics and Biases in Hindsight*, in JUDGMENT UNDER UNCERTAINTY, *supra* note __, at 335, 341.

¹⁴ See Mark Kelman et al., *Decomposing Hindsight Bias*, 16 J. RISK & UNCERTAINTY 251, 252 (1998) (distinguishing between primary, secondary, and tertiary hindsight bias).

¹⁵ Sunstein, *supra* note __, at 138.

¹⁶ See, e.g., Susan J. LaBine & Gary LaBine, *Determinations of Negligence and the Hindsight Bias*, 20 LAW & HUM. BEHAV. 501, 511 (1996) (hindsight bias affected mock jurors’ “ratings of the foreseeability of violence” and their “opinions of how well therapists fulfilled their duty”). See generally Rachlinski, *supra* note __, at 576-81 (listing studies). For a critical view, see Mitchell, *Taking Behavioralism Too Seriously?*, *supra* note __, at 1963 (“hindsight bias is not necessarily the juggernaut that Professor Rachlinski and other legal decision theorists portray it to be”); Jay J.J. Christensen-Szalanski & Cynthia Fobian Willham, 48 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 147, 162 (1991) (“The results of this meta-analysis revealed that the overall effect size of the hindsight bias is not large”).

¹⁷ 338 F.2d 708 (2d Cir. 1964).

¹⁸ Kim A. Kamin & Jeffrey J. Rachlinski, *Ex Post . . . Ex Ante: Determining Liability in Hindsight*, 19 LAW & HUM. BEHAV. 89 (1995).

condition” were asked to determine whether the risk of a flood was such that a city should hire a bridge operator during winter months when a drawbridge was not used. Subjects in the “hindsight” condition were told that hiring a bridge operator could have prevented debris from becoming lodged under the bridge and causing a flood. They then were told to decide whether the city should have hired a bridge operator.¹⁹ Only 24% of the subjects in the foresight condition required the city to hire a bridge operator, while 56.9% of the subjects in the hindsight condition held the city liable for failing to hire a bridge operator.²⁰ Kamin & Rachlinski concluded that “outcome knowledge deeply affected participants’ interpretations of a complex story.”²¹ Moreover, their attempts to ameliorate hindsight bias by use of mock jury instructions were unsuccessful.²²

The significance of hindsight bias for legal decision making is obvious: in any number of contexts, juries and other legal decision makers are required to evaluate conduct in retrospect and estimate the likelihood that an uncertain event would occur after it has occurred. Examples include determinations whether a party was negligent, whether conduct was reasonable, and whether a contractual contingency was foreseeable.²³

B. Anchoring

In estimating a numerical amount, people tend to start with some initial value, and then make adjustments to that figure in coming up with a final estimate. If the initial value provides useful information about the underlying value (such as the list price), and if people make reasonable adjustments, this “anchor and adjustment” heuristic can be a useful decision making

¹⁹ *Id.* at 93-94. Of those subjects in the hindsight condition, some also received jury instructions that sought to reduce the effect of hindsight bias. *Id.*

²⁰ *Id.* at 98.

²¹ *Id.* at 99.

²² *See id.* at 98. Indeed, according to Jeff Rachlinski, “the psychological research demonstrates that the hindsight bias is an extremely robust phenomenon,” and attempts to ameliorate the bias through various “debiasing” techniques have proven only partially successful at best. *See* Rachlinski, *supra* note __, at 586-88. *But see* Merrie Jo Stallard & Debra L. Worthington, *Reducing the Hindsight Bias Utilizing Attorney Closing Arguments*, 22 *LAW & HUM. BEHAV.* 671, 682 (1998) (“the use of a debiasing strategy [in defense attorney’s argument] significantly reduced the number of subjects who believed the defendants were negligent”); *see also* Philip G. Peters, Jr., *Hindsight Bias and Tort Liability: Avoiding Premature Conclusions*, 31 *ARIZ. ST. L.J.* 1277, 1299-1313 (1999) (arguing that “use of several [debiasing strategies] has the potential to reduce the [hindsight] bias enough to raise serious questions about the wisdom of adopting reforms that could significantly favor defendants”).

²³ Rachlinski, *supra* note __, at 593 (“Good faith assessments of what constitutes a reasonable course of action in foresight can easily be judged unreasonable in hindsight. Although the hindsight bias also might affect judgments of subjective knowledge or foreseeability, these theories lack empirical support. . . . [I]t seems likely that the bias does affect these two types of judgments, however”).

approach. But anchoring can be problematic if people use an irrelevant anchor, or if they fail to make adequate adjustments to the initial value.²⁴ For example, Tversky & Kahneman asked subjects to estimate various percentages, such as the percentage of African countries in the United Nations. The starting point for the estimates was a number from 1 to 100 spun on a “wheel of fortune” – an obviously irrelevant number. The subjects were then to state whether the correct number was higher or lower and by how much. The median estimate by subjects given 10 as the starting number was that 25% of the countries in the U.N. were African; the median estimate by subjects given 65 as the starting number was that 45% of the countries in the U.N. were African.²⁵

A number of studies have found that the amount of damages claimed by the plaintiff serves as an anchor for verdicts rendered by mock juries.²⁶ Chapman & Bornstein studied the effect of plaintiff demands on mock jury verdicts and found: (1) “the amount requested . . . serves as an anchor that effects compensation awards”; and (2) “this effect is linear, even with the extreme amounts used in this study” (which ranged from \$100 to \$1 billion).²⁷ The title of their study summarizes their findings: “The more you ask for the more you get.”²⁸ To the extent

²⁴ See, e.g., Guthrie et al., *supra* note __, at 787-90; Korobkin & Ulen, *supra* note __, at 1100-02; Sunstein, *supra* note __, at 141; see also Cass R. Sunstein, *Hazardous Heuristics* 13 (University of Chicago, John M. Olin Law & Economics Working Paper No. 165, 2002) (“The most sensible conclusion is that whenever people are uncertain about appropriate values, anchors have a significant effect, and sometimes a startlingly large one”).

²⁵ Tversky & Kahneman, *supra* note __, at 1128.

²⁶ W. Kip Viscusi, *The Challenge of Punitive Damages Mathematics*, 30 J. LEGAL STUD. 313, 329 (2001) (experimental study of jury-eligible respondents finding that “[r]espondents, in effect, abandon the constraints imposed by the deterrence value table and base their judgments [of the appropriate punitive damages amount] largely on the anchoring influence” of the amount requested by plaintiff’s attorney); Reid Hastie et al., *Juror Judgments in Civil Cases: Effects of Plaintiff’s Requests and Plaintiff’s Identity on Punitive Damage Awards*, 23 LAW & HUM. BEHAV. 445, 463 (1999) (“We observed a large effect of the plaintiff’s award request. . . . [T]he more the plaintiffs requested, the more they got. The difference in median awards between the Low Anchor (\$15-50 million) and High Anchor (\$50-150 million) conditions was \$35 million for an identical fact situation. The judge’s instructions that these arguments by the attorneys were not evidence did not eliminate this dramatic effect”); John Malouff & Nicola S. Schutte, *Shaping Juror Attitudes: Effects of Requesting Different Damage Amounts in Personal Injury Trials*, 129 J. SOC. PSYCHOL. 491 (1989) (“The primary finding of the present experiment was that when more money was requested by the plaintiff’s attorney, the jurors awarded more”); Allan Raitz et al., *The Influence of Expert Testimony on Juror’s Decision Making*, 14 LAW & HUM. BEHAV. 385, 393 (1990) (“There is also evidence that jurors in the no expert condition may have ‘anchored’ on a figure presented at trial”). As another example, studies have found that statutory damages caps served as anchors for awards of compensatory and punitive damages. See Jennifer K. Robbennolt & Christina A. Studebaker, *Anchoring in the Courtroom: The Effects of Caps on Punitive Damages*, 23 LAW & HUM. BEHAV. 353, 361 & 366 (1999) (finding that high cap resulted in higher damages); Verlin B. Hinsz & Kristin E. Indahl, *Assimilation to Anchors for Damage Awards in a Mock Civil Trial*, 25 J. APPLIED SOC. PSYCHOL. 991, 1016 (1995) (finding that damage awards tend toward damages limit).

²⁷ Gretchen B. Chapman, *The More You Ask For, the More You Get: Anchoring in Personal Injury Verdicts*, 10 APPLIED COGNITIVE PSYCHOL. 519, 526-27 (1996).

²⁸ *Id.*

irrelevant numbers involved in the litigation process alter the damages awarded by juries (and judges and arbitrators as well), awards may be higher or lower than would otherwise appropriate.

C. Representativeness Heuristic

People tend to predict the likelihood that an event falls within a category based on whether the characteristics of the event seem “representative” of the category. This “representativeness heuristic” can be a useful rule of thumb, but can lead to mistakes when people rely too much on the characteristic and too little on the underlying “base rate.”²⁹ For example, Tversky & Kahneman described to subjects a woman who had been a philosophy major in college and “was deeply concerned with issues of discrimination and social justice, and also participated in anti-nuclear demonstrations.”³⁰ When asked whether it was more likely the woman was a bank teller or a bank teller involved in the feminist movement, almost 90% of the subjects chose the latter. But logically, the class of bank tellers includes the class of feminist bank tellers, such that necessarily the woman is more likely to be a bank teller than a feminist bank teller. The subjects failed to consider the base rate, instead putting too much weight on characteristics that appeared representative of the smaller class.³¹ Commentators have relied on the representativeness heuristic to justify rules of evidence such as the inadmissibility of character evidence,³² based on the fear that jurors will disregard the relevant base rate and instead place too much weight on the evidence of bad character.³³

²⁹ See, e.g., Guthrie et al., *supra* note __, at 805-08; Korobkin & Ulen, *supra* note 1, at 1085-87.

³⁰ see See Amos Tversky & Daniel Kahneman, *Judgments of and by Representativeness*, in JUDGMENT UNDER UNCERTAINTY, *supra* note __, at 84, 92-93. For a discussion of criticisms of the “Linda problem” (so-called because of the name given to the woman by Tversky & Kahneman), see Keith E. Stanovich & Richard F. West, *Individual Differences in Reasoning: Implications for the Rationality Debate?*, in HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT 421, 433-34 (Thomas Gilovich et al. eds., 2002). For further experimental illustrations of the representativeness heuristic, see Tversky & Kahneman, *supra* note __, at 1124-27. For a skeptical view, see Gerd Gigerenzer, *How to Make Cognitive Illusions Disappear: Beyond “Heuristics and Biases,”* 2 EUR. REV. SOC. PSYCHOL. 83, 90-101 (1991).

³¹ A related heuristic is availability, in which people tend to disregard base rates and place too much weight on memorable events. *E.g.*, Tversky & Kahneman, *supra* note __, at 1127-28. Jolls et al. cite “anecdote-driven environmental legislation” as a consequence, explaining that the availability heuristic “encourages the well-known ‘pollutant of the month’ syndrome, where regulation is driven by recent and memorable instances of harm.” Jolls et al., *supra* note __, at 1518. In order to promote enactment of particular legislation, “[a]vailability entrepreneurs’ will . . . focus attention on a specific event in order to ensure that this event will be salient and available to many members of the public.” *Id.* at 1519. Supporters of increased regulation of consumer and employment arbitration have employed this strategy, citing anecdotal instances of allegedly abusive arbitration practices as evidence of the need for new legislation. *E.g.*, Sen. Russell D. Feingold, *Mandatory Arbitration: What Process is Due?*, 39 HARV. J. ON LEGIS. 281, 281 (2002).

³² FED. R. EVID. 404(a).

³³ Korobkin & Ulen, *supra* note __, at 1087-88.

D. Extremeness Aversion

Individuals may seek to avoid extreme results. Experimental studies have found that adding an extreme, third option alters the choices subjects make between two other options, even if the third option provides no relevant information about the other two choices.³⁴ For example, in a study by Simonson & Tversky, subjects who had been asked to choose between two cameras, one costing \$169.99 and one costing \$239.99, were evenly split between the two. Then a third option was added, a camera costing \$469.99. With the camera costing \$239.99 now the intermediate option, the percentage of subjects choosing it increased, even though there was an additional choice available.³⁵

According to Sunstein, such “[e]xtremeness aversion gives rise to *compromise effects*. As between given alternatives, most people seek a compromise.”³⁶ The implications of extremeness aversion for the legal system are straightforward: to the extent legal decision makers have an aversion to extreme outcomes, “[o]ther things being equal, juries and judges may well try to choose a compromise solution.”³⁷

E. Application to Real-World Jurors

As this discussion illustrates, behavioral studies of legal decision making raise serious questions about the accuracy of decision making by jurors. Indeed, they have prompted some commentators to suggest the possibility of reducing the role of juries in the civil justice system.³⁸ But an important caveat is the extent to which the results of experimental studies using mock jurors apply to real-world decision making by jurors. The answer, of course, is that there is no way to know for sure.

³⁴ E.g., Mark Kelman et al., *Context-Dependence in Legal Decision Making*, 25 J. LEGAL. STUD. 287, 290-95 (1996) (subjects more likely to choose verdict of murder rather than manslaughter when murder was intermediate option); Schlomo Benartzi & Richard H. Thaler, *How Much Is Investor Autonomy Worth?* 18-20 (Mar. 2001) (unpublished manuscript), available at <<http://gsbwww.uchicago.edu/fac/richard.thaler/research/Autonomy.pdf>> (finding, that “[c]onsistent with extremeness aversion, [investment] program C is the least attractive when framed as an extreme choice and most attractive when framed as the middle choice”).

³⁵ Itamar Simonson & Amos Tversky, *Choice in Context: Tradeoff Contrast & Extremeness Aversion*, 29 J. MARKETING RES. 281, 290 (1992).

³⁶ Sunstein, *supra* note __, at 135. Extremeness aversion is a form of “context dependence,” because the preferences of the subjects vary depending on the context in which the choice is made. Kelman et al., *supra* note __, at 288.

³⁷ Sunstein, *supra* note __, at 136.

³⁸ See Cass R. Sunstein et al., *Predictably Incoherent Judgments*, 54 STAN. L. REV. __ (2002) (forthcoming); W. Kip Viscusi, *How Do Judges Think About Risk?*, 1 AM. L. & ECON. REV. 26, 60 (1999).

Certainly some criticisms of experimental studies are not particularly applicable to juries. For example, one reason to believe that experimental results may not translate into real-world situations is selection effects. As Richard Posner explains:

Selection effects suggest that the experimental and real-world environments will differ systematically. The experimental subjects are chosen more or less randomly; but people are not randomly sorted to jobs and other activities. People who cannot calculate probabilities will either avoid gambling, if they know their cognitive weakness, or, if they do not, will soon be wiped out and thus be forced to discontinue gambling. People who are unusually “fair” will avoid (or, again, be forced out of) roughhouse activities – including highly competitive businesses, trial lawyering, and the academic rat race. Hyperbolic discounters will avoid the financial services industry. These selection effects will not work perfectly, but they are likely to drive a big wedge between experimental and real-world consequences of irrationality.³⁹

By comparison, the largely random selection of juries bears substantial similarities to the selection of subjects for experimental studies – indeed, some studies have used as subjects individuals waiting to serve as prospective jurors.⁴⁰ This suggests that the results of experimental studies may be more appropriately applied to jury decision making than many other real-world activities

On the other hand, it is no doubt true that the vast majority of jurors take their responsibilities more seriously than do participants in experimental studies. As Philip Peters explains:

Unlike research subjects, jurors are accountable for their decisions. Each juror’s vote will be scrutinized not only by the other jurors, but also by the judge and often by the juror’s family and friends. Jurors also feel accountable to their communities. This accountability distinguishes jury trials from research studies and has the potential to improve jury decision making.⁴¹

³⁹ Richard A. Posner, *Rational Choice, Behavioral Economics, and the Law*, 50 STAN. L. REV. 1551, 1570-71 (1998).

⁴⁰ Neil Vidmar & Jeffrey J. Rice, *Assessments of Noneconomic Damage Awards in Medical Negligence: A Comparison of Jurors with Legal Professionals*, 78 IOWA L. REV. 883, 891 (1993).

⁴¹ Peters, *supra* note __, at 1300-01. On the importance of accountability (or lack thereof) in experimental studies, see Mitchell, *Equal Incompetence*, *supra* note __, at 65-71; Philip E. Tetlock, *Accountability and Complexity of Thought*, 45 J. PERSONALITY & SOC. PSYCHOL. 74, 74-75 (1983) (“The evidence on the effects of accountability is thus mixed: sometimes accountability leads to complex or effortful information processing, and sometimes it leads to expedient decisions that can be readily justified to others”). See generally Jennifer S. Lerner & Philip E. Tetlock, *Accounting for the Effects of Accountability*, 125 PSYCHOL. BULL. 255 (1999) (literature review).

Moreover, most experimental subjects receive far less information about the case than real-world jurors, raising questions about the “ecological validity” of the experiments.⁴² Certainly other differences between experimental settings and real-world jury trials likewise have the potential to increase or decrease the effect of cognitive biases on the decision making of jurors. As a result, any conclusions from experimental studies in this area necessarily will have some degree of uncertainty.

III. Heuristics and Cognitive Biases in Arbitral Decision Making

The effects of cognitive illusions on jury decision making have been often studied, at least in experimental settings. The effects of cognitive biases on other legal decision makers, especially arbitrators, have been far less studied. This part discusses the available evidence on how heuristics and cognitive biases might affect arbitrators. It begins by examining the extremely limited empirical research on cognitive illusions in arbitral decision making. Because that evidence (experimental or otherwise) is largely nonexistent, this part then considers evidence about the effect of cognitive illusions on decision making by judges. The assumption is that the effect of cognitive illusions on arbitrators is more like their effect on judges than their effect on jurors. If so, evidence on heuristics and cognitive biases from studies of judicial decision making may provide some insights into arbitral decision making as well.

The existing evidence on judges takes two forms: experimental studies of decision making by judges, and studies of litigation outcomes comparing the results of cases decided by judges and juries. Taken together, these studies suggest that (1) judges likely are less subject to some cognitive illusions than jurors and equally subject to others; and (2) those differences seem to persist in actual cases, although to a lesser degree than might be expected from the experimental studies alone. While far from conclusive, the existing evidence suggests that arbitrators may be (somewhat at least) less subject to cognitive illusions in their decisions than jurors.

A. Empirical Studies of Decision Making by Arbitrators

Empirical studies of the prevalence of cognitive illusions in arbitral decision making are exceedingly rare. I am aware of no experimental studies using arbitrators as subjects that examine biases and heuristics. Moreover, arbitration proceedings are private, and most

⁴² See Mitchell, *Taking Behavioralism Too Seriously?*, *supra* note __, at 1985; Richard Lempert, *Juries, Hindsight, and Punitive Damage Awards: Failures of a Social Science Case for Change*, 48 DEPAUL L. REV. 867, 877 (1999).

arbitration awards are unpublished,⁴³ so that studies of outcomes in commercial (including consumer and employment) arbitration are uncommon.⁴⁴

One area in which some empirical work has been done is to test whether arbitrators have a tendency to reach compromise awards – to “split the baby.” This phenomenon – if it exists – is sometimes credited to the anchoring of awards on the amount sought by the claimant.⁴⁵ Compromise awards also would be consistent with extremeness aversion by arbitrators.⁴⁶ Another suggested explanation is that to attract repeat business arbitrators have an incentive to compromise, to keep both sides happy and willing to select the arbitrator again.⁴⁷ For consumer and employment arbitration, the implications of arbitral incentives are less clear. Individual consumers and employees are unlikely to be repeat players, so that arbitrators would have little incentive to “split the baby” to induce consumers and employees to select them again.⁴⁸ Attorneys for consumers and employees, however, may be repeat players.⁴⁹ As for psychological explanations, they would seem to apply as well to consumer and employment arbitration as to other forms of arbitration.

However, two published studies of commercial arbitration (one domestic and one international) have found no evidence that arbitrators make compromise awards. In her classic study of domestic arbitration, Soia Mentschikoff examined commercial arbitrations administered by the American Arbitration Association (“AAA”) from 1947 to 1950.⁵⁰ In 50% of the awards,

⁴³ Cf. Christopher R. Drahozal, *Commercial Norms, Commercial Codes, and International Commercial Arbitration*, 33 VAND. J. TRANSNAT’L L. 79, 122 (2000) (international arbitration awards).

⁴⁴ In addition to the studies discussed in this section, see the studies of employment arbitration outcomes by Lisa Bingham *infra* notes ___-__.

⁴⁵ Stephanie E. Keer & Richard W. Naimark, *Arbitrators Do Not “Split the Baby” – Empirical Evidence from International Business Arbitration*, 18 J. INT’L ARB. 573, 573-74 (2001).

⁴⁶ See *supra* text accompanying notes ___-__.

⁴⁷ Cf. Alan Scott Rau, *Integrity in Private Judging*, 38 SO. TEX. L. REV. 485, 523 (1997) (“The dynamic of arbitrator self-interest has long been familiar in collective bargaining cases and is thought, for example, to provide one explanation for the apparently common practice of compromise awards. Repeat business for the arbitrator is likely only if he is able to retain the future goodwill of both union and management; the desire to do so may give him an incentive (in the hallowed phrase) to ‘split the baby.’”).

⁴⁸ See *infra* text accompanying notes ___-__.

⁴⁹ See Drahozal, *supra* note ___, at 751; Samuel Estreicher, *Predispute Agreements to Arbitrate Statutory Claims*, 72 N.Y.U. L. REV. 1344, 1355 (1997). But see Lisa B. Bingham, *Employment Arbitration: The Repeat Player Effect*, 1 EMPLOYEE RTS. & EMPLOYMENT POL’Y J. 189, 198-99 (1997) (“there is reason to believe that most individual members of the plaintiff’s bar may never successfully emerge as repeat players in employment arbitration”).

⁵⁰ Soia Mentschikoff, *Commercial Arbitration*, 61 COLUM. L. REV. 846, 856-67 (1961).

she found that the claimant was awarded either all or none of the amount sought. “Obviously,” Mentschikoff concluded, “such awards can not be the result of compromise.”⁵¹ In addition, Mentschikoff examined more closely 36 additional cases, finding that “many of the partial awards are arrived at in a judicial manner since they result from the striking of particular items of damage that the arbitrators believe are not justified under the facts or law of the particular case.”⁵²

Likewise, a recent study of international arbitration awards by Keer & Naimark rejected the view that arbitrators make compromise awards.⁵³ In a sample of 54 international arbitration proceedings administered by the AAA, the mean award as a percent of amount claimed was 50.53%, and the median award as a percent of amount claimed was 46.66%. But the distribution of the awards was bimodal, with 31% of claimants recovering nothing and 35% recovering 100% of the amount claimed. The remaining 34% of claimants were awarded a widely distributed percentage of the amount claimed.⁵⁴ Keer and Naimark conclude that “the results from this study show emphatically that arbitrators do not engage in the practice of “splitting the baby.”⁵⁵ The few studies examining behavioral aspects of arbitral decision making thus have uncovered no evidence of extremeness aversion in arbitral decision making.⁵⁶

A handful of studies seek to compare outcomes in arbitration and litigation, but they shed little light on behavioral aspects of arbitral decision making. Howard compared a sample of employment arbitration awards dealing with discrimination claims to court cases alleging employment discrimination.⁵⁷ The mean jury award in the court cases studied was \$417,178, while the mean arbitration award was \$114,905. Howard did not attempt to control for differences in the claims (e.g., strength of claim on the merits, extent of injury suffered) in court and in arbitration. Thus, at least some of the difference in recovery between court and arbitration

⁵¹ *Id.* at 861.

⁵² *Id.*

⁵³ Keer & Naimark, *supra* note ____.

⁵⁴ *Id.* at 574. They also describe an unpublished AAA study of 4479 commercial arbitration awards with results consistent with their findings. *Id.* at 574 & n.9 (finding “approximately 42% of those cases were awarded 0-20% of their original claim amount and 30% were awarded 81-100% of their original claim amount).

⁵⁵ *Id.* at 578. Neither study makes any attempt to compare the likelihood of compromise awards in arbitration to the likelihood of compromise judgments or verdicts in civil litigation.

⁵⁶ An alternative interpretation of these results might be that extremeness aversion applies only to choices among discrete alternatives but not to choices along a continuum, as an arbitrator (or jury) would make in determining the amount of damages to award.

⁵⁷ William M. Howard, *Arbitrating Claims of Employment Discrimination: What Really Does Happen? What Really Should Happen?*, DISP. RESOL. J. (Oct.-Dec. 1995), at 40.

likely is due to differences in the claims in the different fora, rather than differences between decision makers.⁵⁸

Maltby compared the results of AAA employment arbitrations from 1993-1995⁵⁹ with the results of employment cases litigated in federal courts in 1994.⁶⁰ He recognized that the cases were not comparable on the merits: “[t]he district court cases all involved statutory civil rights claims for which the law provides emotional distress and punitive damages” while “[m]any of the AAA cases . . . were contract claims with only economic damages.”⁶¹ Maltby sought to control for the differing types of claims by comparing arbitration and litigation on the basis of damages awarded as a percent of amount claimed. He found that employees recovered 18% of amounts claimed in arbitration, but only 10.4% of amounts claimed in court.⁶²

Donald Wittman has compared outcomes in jury cases with outcomes in court-annexed arbitration proceedings.⁶³ Examining a sample of 353 cases tried both by an arbitrator and a jury (thus ensuring that the facts of the cases were the same), he found substantial similarities between jury decision making and arbitral decision making.⁶⁴ Unfortunately, the results provide little insight into how awards by arbitrators in consumer cases (i.e., arbitration that is not court-annexed) are likely to compare to jury verdicts. In Wittman’s study, arbitrators had a strong incentive to make an award close to the likely jury verdict in the case, and parties had a strong incentive to select arbitrators whose awards were accurate predictions of jury verdicts.⁶⁵ Parties to pre-dispute arbitration clauses in consumer contracts have no comparable incentive to prefer arbitrators whose awards mirror jury verdicts.

⁵⁸ *Id.* at 45.

⁵⁹ The data Maltby used on employment arbitration awards was collected and reported by Lisa Bingham. *See infra* text accompanying notes ___-___.

⁶⁰ Lewis Maltby, *Private Justice: Employment Arbitration and Civil Rights*, in *ARBITRATION NOW* 1, 16-18 (Paul H. Haagen ed. 1999) [hereinafter Maltby, *Private Justice*]; *see also* Lewis Maltby, *Employment Arbitration: Is It Really Second Class Justice?*, *DISP. RESOL. MAG.*, Fall 1999, at 23 [hereinafter Maltby, *Second Class Justice*].

⁶¹ Maltby, *Private Justice*, *supra* note ___, at 17-18.

⁶² *Id.* at 18. For an alternative interpretation of Maltby’s results, *see infra* note ___.

⁶³ Donald Wittman, *Lay Juries Versus Professional Arbitrators and the Arbitrator Selection Hypothesis*, ___ *AM. L. & ECON. REV.* ___ (2002) (forthcoming). MacCoun describes another, unpublished study by Wittman that “compared jury and arbitration awards and found that juries were more variable than arbitrators,” possibly due to “forum selection processes.” *See* MacCoun, *supra* note ___, at 164-65

⁶⁴ Wittman, *supra* note ___ (“with the exception of the deep pockets issue, the jury and arbitrator equations are very similar regarding both their coefficients and their sum of squared errors”).

⁶⁵ *Id.* (court-annexed arbitration conducted under scheme whereby party requesting trial must pay arbitrator’s fee and other costs if jury verdict not more favorable to party than arbitration award).

Finally, Vidmar & Rice conducted an experimental study that compared the damages awarded by jurors and arbitrators in a hypothetical medical malpractice case.⁶⁶ They gave a description of the case to 21 lawyers who had served as arbitrators “for various personal injury, contract, and labor disputes,” and 89 prospective jurors who actually had been selected for jury duty.⁶⁷ The median and mean damage awards of the two groups were statistically indistinguishable.⁶⁸ However, the damage awards of the individual jurors had a substantially higher variance (although when the individual awards were pooled into twelve juror panels the variance fell substantially).⁶⁹ The study did not consider the effect of cognitive illusions on arbitral (or jury) decision making.

Thus, the extremely limited empirical evidence on cognitive illusions in arbitral decision making casts little light on how arbitral decision making is likely to compare to jury decision making. Arbitrators (at least in commercial cases) do not seem to be subject to extremeness aversion), and there is some experimental evidence that awards by arbitrators may have less variance than verdicts of individual jurors. But there is little else.

B. Empirical Studies Comparing Decision Making by Judges and Juries

Given the extremely limited empirical evidence on heuristics and cognitive biases in arbitral decision making, it may be possible to get some insight into arbitral decision making by examining decision making by judges, a close but by no means exact analogy. The assumption is that arbitrators are likely to be more like judges than jurors in how biases and heuristics affect their decision making. Arbitrators, unlike jurors but like judges, make decisions that resolve disputes on a recurring basis.⁷⁰ Arbitrators, like judges, receive specialized training; jurors receive only the judge’s instructions before undertaking to decide a case. Many arbitrators, like judges, are lawyers.⁷¹ The vast majority of jurors are not.⁷² Demographically, arbitrators tend to

⁶⁶ Vidmar & Rice, *supra* note __; see also NEIL VIDMAR, MEDICAL MALPRACTICE AND THE AMERICAN JURY: CONFRONTING THE MYTHS ABOUT JURY INCOMPETENCE, DEEP POCKETS AND OUTRAGEOUS DAMAGE AWARDS 221-35 (1995).

⁶⁷ Vidmar & Rice, *supra* note __, at 890-91.

⁶⁸ *Id.* at 893.

⁶⁹ *Id.* at 897-98; see also *infra* text accompanying notes __ - __.

⁷⁰ See Mitchell, *Equal Incompetence*, *supra* note __, at 153-54 (discussing potential importance of “feedback and opportunities for learning” in reducing effect of cognitive illusions).

⁷¹ Although lawyers and other professionals are subject to the effects of cognitive biases, some research suggests that they may be less affected than non-professionals. See Chris Guthrie, *Panacea or Pandora’s Box? The Costs of Options in Negotiation*, __ IOWA L. REV. __ (2003) (forthcoming) (“This is not to say, of course, that lawyers are pure ‘rational actors’ who are impervious to the effects of ‘psychological biases’ in decision making; in fact, lawyers, like other novice and expert decision makers, are susceptible to such biases. However, experimental

look more like judges than jurors in other ways as well.⁷³ The analogy is, of course, only a rough one. Nevertheless, given the lack of studies of how biases and heuristics affect arbitrators, studies comparing their effect on judges and juries may provide some insight.⁷⁴

1. Experimental Studies

Only recently have researchers begun conducting experimental studies of cognitive illusions in decision making by judges. Although only a handful of such studies have been published, they have, at least, been broader in scope than the studies of arbitral decision-making.⁷⁵ To date, the results have been somewhat conflicting. Nevertheless, as a general matter the studies have found judicial decision-making in some respects to be better (i.e., less affected by cognitive illusions), and in others no worse, than decision making by jurors.

evidence suggests that lawyers are more likely than others to be able to resist these biases and make decisions rationally.”).

⁷² Not all arbitrators are lawyers either. Many arbitrators in trade association arbitrations, for example, are not lawyers but instead are selected for their experience in the industry. *See, e.g.*, Lisa Bernstein, *Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions*, 99 MICH. L. REV. 1724, 1728 (2001). But such experience itself could provide feedback and an opportunity to learn that might improve arbitral decision making relative to juries. *See infra* text accompanying note ____.

⁷³ Compare UNITED STATES GENERAL ACCOUNTING OFFICE, EMPLOYMENT DISCRIMINATION: HOW REGISTERED REPRESENTATIVES FARE IN DISCRIMINATION DISPUTES 2 (1994) with Amy E. Black & Stanley Rothman, *Shall We Kill All the Lawyers First?: Insider and Outsider Views of the Legal Profession*, 21 HARV. J. L. & PUB. POL’Y 835, 838-42 (1998).

⁷⁴ The focus here thus is on studies that compare decision making by judges and juries, rather than studies that consider one of the two (usually juries) alone. For surveys of empirical research on jury decision making, see Neil Vidmar, *The Performance of the American Civil Jury: An Empirical Perspective*, 40 ARIZ. L. REV. 1849 (1998); MacCoun, *supra* note ___, at 137; Robert J. MacCoun, *Experimental Research on Jury Decisionmaking*, 244 SCI. 1046 (1989). For a survey of empirical studies focusing on punitive damage awards, see Jennifer Robbennolt, *Determining Punitive Damages: Empirical Insights and Implications for Reform*, 50 BUFFALO L. REV. 103 (2002).

⁷⁵ In addition, experimental studies have compared hypothetical damage awards of judges and jurors, without explicitly considering cognitive illusions. *See, e.g.*, Stephen Landsman & Richard F. Rakos, *A Preliminary Inquiry into the Effect of Potentially Biasing Information on Judges and Juries in Civil Litigation*, 12 BEHAVIORAL SCI. & L. 113, 125 (1994) (“judges and jurors in civil cases react similarly when exposed to material that is subsequently ruled inadmissible – their perceptions of central trial issues are altered”); Jennifer K. Robbennolt, *Punitive Damages Decision Making: The Decisions of Citizens and Trial Court Judges*, 26 LAW & HUM. BEHAV. 315, 333 (2002) (“No differences were found in the likelihood that punitive damages would be awarded or in the sizes of the punitive damages awards of judges and jury-eligible citizens”); Roselle L. Wissler et al., *Decisionmaking about General Damages: A Comparison of Jurors, Judges, and Lawyers*, 98 MICH. L. REV. 751, 756 (1999) (“the models evidence a remarkable degree of similarity among all groups of decisionmakers, plus a high degree of predictability, in regard to their judgments of injury severity. As to the translation of injury perceptions into monetary awards, however, more differences among the groups appeared, and the predictive power of the models declined”).

One such study was by Guthrie, Rachlinski, & Wistrich, who administered a questionnaire to federal magistrate judges attending a Federal Judicial Center workshop in 1999.⁷⁶ A total of 168 magistrate judges returned the questionnaire, with one requesting that the response not be used in further research, leaving a sample of 167. The questionnaire contained a series of hypothetical fact patterns designed to test for the effect of various heuristics and cognitive biases on judicial decision making. Based on the answers to the questionnaire, Guthrie et al. concluded that judges were less affected by some cognitive illusions than jurors but similarly affected by others. On the one hand, the judges “were impressive” in answering correctly “a difficult [evidentiary] question in a short period of time,” in doing so avoiding the representativeness heuristic (although 60% still answered incorrectly).⁷⁷ On the other hand, the results suggested that judges were as susceptible to anchoring effects and hindsight bias as other decision makers.⁷⁸ Thus, judges awarded substantially less when the defendant moved to dismiss for failure to satisfy the \$75,000 amount-in-controversy requirement in federal court (which plainly was met on the facts) than when no such motion was filed. In the view of Guthrie et al., “the \$75,000 jurisdictional minimum anchored their damage awards.”⁷⁹ Further, judges’ predictions of the likely outcome of a case on appeal were highly sensitive to what they were told about the actual outcome, according to Guthrie et al. an illustration of hindsight bias.⁸⁰

A study by Viscusi and Hastie (with results published separately by Viscusi and Hastie & Viscusi) found judges to be less subject to hindsight bias than mock jurors in their study.⁸¹ They distributed a questionnaire to a sample of state court judges (both trial and appellate) attending a law and economics program and received 95 responses, a response rate of almost 100%. They

⁷⁶ Guthrie et al., *supra* note __. For a study on hindsight bias in decision making by judges, see John C. Anderson et al., *Evaluation of Auditor Decisions: Hindsight Bias Effects and the Expectation Gap*, 14 J. ECON. PSYCHOL. 711, 730 (1993) (study of 58 auditors and 65 state and federal trial judges) (“our findings provide new evidence that individuals’ evaluations of auditor’s performance are dependent on *outcome information*. Subjects provided higher auditor evaluations in the presence of favorable outcome information and lower evaluations in the presence of unfavorable outcome information”).

⁷⁷ Guthrie et al., *supra* note __, at 809-11.

⁷⁸ *Id.* at 787-94, 799-805. Unlike the Viscusi and Hastie & Viscusi studies discussed *infra* text accompanying notes __-__, Guthrie et al. did not administer a similar questionnaire to mock jurors. Indeed, at least some of the questions they asked required decisions that a jury ordinarily would not make. *E.g.*, *id.* at 791 (anchoring question required magistrate judges to rule on motion to dismiss for want of subject matter jurisdiction). Instead, Guthrie et al. compared the magnitude of the biases they found to the magnitude found in other studies, based on different fact patterns, *id.* at 816-18, making it difficult to draw any firm conclusions about comparability. See Mitchell, *Taking Behavioralism Too Seriously?*, *supra* note __, at 1998 n.184.

⁷⁹ *Id.* at 791-92.

⁸⁰ *Id.* at 802-03.

⁸¹ Reid Hastie & W. Kip Viscusi, *What Juries Can’t Do Well: The Jury’s Performance as a Risk Manager*, 40 ARIZ. L. REV. 901 (1998); Viscusi, *supra* note __.

administered the same questionnaire to mock jurors, to facilitate a comparison. In a pair of tests for hindsight bias, Viscusi and Hastie found that the judges “were much less prone to hindsight bias than are jurors in their treatment of corporate safety decisions. Indeed, in making legal judgments, there was little effect of hindsight for judges, as compared to substantial effects for mock jurors.”⁸²

The sample of judges studied by Viscusi and Hastie has been criticized by several commentators. Guthrie et al. assert that the sample (attendees at a law and economics program) and the context (at such a program) “may have induced somewhat more calculated reasoning processes that dampened the effect.”⁸³ Richard Lempert likewise criticized the sample of judges, asserting that the program “may well have attracted judges who are more pro-business than judges generally.”⁸⁴ Moreover, Lempert was critical that the sample included both trial judges and appellate judges,” because “[t]rial judges, as a group, may have different values or, because their experiences differ, they may respond differently in hindsight.”⁸⁵ While perhaps the sample overstates the acumen of judges generally at avoiding hindsight bias, at a minimum, the study nonetheless demonstrates that some judges are able to avoid the bias. As such, it also suggests that some arbitrators may be able to avoid hindsight bias as well.

2. Studies of Litigation Outcomes

While experimental studies are able to control for the underlying facts of the dispute, studies of real-world litigation outcomes avoid charges of a lack of realism.⁸⁶ This section

⁸² Viscusi, *supra* note __, at 59; Hastie & Viscusi, *supra* note __, at 917. They also examined risk assessment by judges, concluding that while “judges did exhibit many of the patterns of biases in risk judgments that have been the focus of the literature on the rationality of choice under uncertainty,” “[f]or the most part, these biases do not contaminate the thinking of judges with respect to their interpretation of legal rules.” Viscusi, *supra* note __, at 60; *see also* W. Kip Viscusi, *Jurors, Judges, and the Mistreatment of Risk by the Courts*, 30 J. LEGAL STUD. 107, 135 (2001) (“Judges had more accurate risk beliefs and were less prone to overestimate low-probability events” than were jurors). *See generally* CASS R. SUNSTEIN ET AL., PUNITIVE DAMAGES: HOW JURIES DECIDE (2002) (collecting studies).

⁸³ Guthrie et al., *supra* note __, at 818 n.201; *see also* Robbennolt, *supra* note __, at 335. The questionnaire was administered before the second week of the law and economics program; all of the judges had attended an earlier one week session of introductory law and economics courses.

⁸⁴ Richard Lempert, *Juries, Hindsight, and Punitive Damage Awards: Failures of a Social Science Case for Change*, 48 DEPAUL L. REV. 867, 884 (1999). For a reply, *see* Reid Hastie & W. Kip Viscusi, *Juries, Hindsight, and Punitive Damages Awards: Reply to Richard Lempert*, 51 DEPAUL L. REV. 987 (2002).

⁸⁵ Lempert, *supra* note __, at 884.

⁸⁶ *See supra* text accompanying notes __-__. Such studies also necessarily control for differences in structural characteristics of the various dispute resolution processes, which experimental studies can do only imperfectly at best. *See infra* text accompanying notes __-__.

examines several studies that compare outcomes (either win rates or damage awards) of judges and juries, to see the extent to which experimental differences in decision making may affect real cases.

The earliest and best known study seeking to compare outcomes between judges and juries is Kalven & Zeisel's University of Chicago Jury Project.⁸⁷ Kalven & Zeisel collected reports on 4000 civil jury verdicts and then asked the judge "how he would have decided the case had it been tried to him alone."⁸⁸ They found that in 78% of the cases, the judge agreed with the jury's verdict on liability. In 12%, the jury found for the plaintiff and the judge would have found for the defendant. In the remaining 10%, the jury found for the defendant and the judge would have found for the plaintiff.⁸⁹ Juries awarded significantly higher damages, however. Of the cases in which the judge agreed with the jury's finding for the plaintiff (44%), on average the jury-awarded damages were 20% higher than what the judge would have awarded.⁹⁰ One weakness with the methodology is that the judges were asked whether they agreed with the jury's verdict after it was rendered, rather than being asked before the verdict what they thought the outcome should be. Thus, "it is possible that their responses partially reflected their attitudes toward the jury system in addition to their evaluation of the cases at hand."⁹¹ The study has the advantage, however, of ensuring that the cases evaluated by the jury and the judge were identical.

Other studies of litigation outcomes are much less able to control for case characteristics. Thus, they potentially are subject to serious selection effects that make interpretation of the results difficult.⁹² For example, in a sample of federal court cases from 1979 through 1989, Clermont & Eisenberg found a number of case categories in which plaintiffs had higher win rates before judges than before juries.⁹³ They concluded that "the most plausible explanation of the data lies in small differences between judges' and juries' treatment of cases and, more

⁸⁷ See HARRY KALVEN, JR. & HANS ZEISEL, *THE AMERICAN JURY* 63-64 (1966). The focus of *The American Jury* is on juries in criminal cases, however. *Id.* at 55-81.

⁸⁸ Harry Kalven, Jr., *The Dignity of the Civil Jury*, 50 VA. L. REV. 1055, 1063 (1964).

⁸⁹ KALVEN & ZEISEL, *supra* note __, at 63-64; *see also* Kalven, *supra* note __, at 1065 (79 percent agreement in personal injury cases).

⁹⁰ Kalven, *supra* note __, at 1065; KALVEN & ZEISEL, *supra* note __, at 64 n.13.

⁹¹ MacCoun, *supra* note __, at 165. For other criticisms, see Michael H. Walsh, *The American Jury: A Reassessment*, 79 YALE L.J. 142, 146-47 (1969) ("sample used was not statistically ideal" among others).

⁹² See George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1 (1984); Joel Waldfogel, *Selection of Cases for Trial*, in 3 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 419 (Peter Newman ed. 1998).

⁹³ Kevin M. Clermont & Theodore Eisenberg, *Trial By Jury or Judge: Transcending Empiricism*, 77 CORNELL L. REV. 1124, 1137-38 (1992).

importantly, in the parties' varying the selection of cases that reach judge and jury."⁹⁴ A subsequent study by Helland & Tabarrok, using a sample of state court verdicts, found that "[j]uries do grant systematically larger awards to injured plaintiffs than judges."⁹⁵ Most of the difference, they found, was due to differential routing of cases to judges and juries:

The differences in judge and jury decision making we have discovered, however, explain only one-quarter to one-third of the difference in average award rates across judges and juries. Three quarters to two thirds of the difference in average awards is due not to differences in decision making but to differences in the sample of cases appearing before judges and juries.⁹⁶

Of course, their results could be restated with the opposite emphasis: up to one-third of the difference between awards by judges and juries persists even after attempting to control for case selection effects.

A recent study by Eisenberg et al. focused on the award of punitive damages by judges and jurors.⁹⁷ They considered a sample of state court jury trials from 45 of the 75 most populous counties in the United States from 1996, and found that "[j]uries and judges award punitive damages at about the same rate, and their punitive awards bear about the same relation to their compensatory awards."⁹⁸ While they find somewhat greater variance in jury awards, "the effect is not robust and leads to very few jury punitive awards outside the range of what judges are expected to award."⁹⁹ Hersch & Viscusi, using the same data as Eisenberg, reach a strikingly different conclusion:

What we found based on a careful statistical analysis was that these data are quite consistent with there being greater restraint by judges. Our statistical analysis of the level of punitive damages awards for all cases, including those with compensatory damages but no punitive awards, showed that juries award higher levels of punitive damages. If one considers the components of this effect, juries also differ from judges. Juries have a higher probability of awarding

⁹⁴ *Id.* at 1126. For an alternative interpretation of their results, see Richard A. Posner, *An Economic Approach to the Law of Evidence*, 51 STAN. L. REV. 1477, 1501 (1999).

⁹⁵ Eric Holland & Alexander Tabarrok, *Runaway Judges? Selection Effects and the Jury*, 16 J.L. & ECON. ORG. 306, 330 (2000).

⁹⁶ *Id.*

⁹⁷ Theodore Eisenberg et al., *Juries, Judges, and Punitive Damages: An Empirical Study*, 87 CORNELL L. REV. 743 (2002).

⁹⁸ *Id.* at 779.

⁹⁹ *Id.*

punitive damages. Moreover, juries are especially likely to make a large punitive damages award conditional on there being a punitive damages award. Thus, juries are more prone to generate large awards than are judges.¹⁰⁰

The differing results, according to Hersch & Viscusi, were the result of the two studies treating trials from one county differently and Eisenberg et al.'s use of two jury variables highly correlated with each other.¹⁰¹

A final study by Eisenberg (with different co-authors) focuses directly on cognitive differences between judges and juries, and finds less incoherence in punitive damages awards than psychological theories predict.¹⁰² The cognitive problem they consider is one of “scaling without a modulus”: the difficulty of translating moral judgments about behavior into a quantitative damages award.¹⁰³ Eisenberg et al. find (using the same state court jury sample as above¹⁰⁴) some incoherence in punitive damages awards of the sort predicted by the theory, but far less than experimental studies would indicate.¹⁰⁵ They conclude that “[f]orces seem to be at work that already promote coherence,” so that structural changes suggested by some commentators (such as shifting punitive damages decision making from juries to judges¹⁰⁶) may be unnecessarily.¹⁰⁷

¹⁰⁰ Joni Hersch & W. Kip Viscusi, *Punitive Damages: How Judges and Juries Perform* 36 (Harvard John M. Olin Discussion Paper No. 362, May 2002).

¹⁰¹ *Id.* at 31-34 (explaining that differing results were due to treatment of Harris County, Texas, in the studies and Eisenberg et al.'s use of “both a jury indicator variable as well as the interaction of jury trial with compensatory damages,” which served “to induce multicollinearity”).

¹⁰² Theodore Eisenberg et al., *Reconciling Experimental Incoherence with Real-World Coherence in Punitive Damages*, 54 STAN. L. REV. ____ (2002) (forthcoming).

¹⁰³ See Sunstein et al., *supra* note __, at 142-44; Sunstein et al., *supra* note __; Cass R. Sunstein et al., *Assessing Punitive Damages (with Notes on Cognition and Valuation in Law)*, 107 YALE L.J. 2071 (1998). According to Sunstein et al., one consequence is that while decisions may be “sensible and coherent” *within* a category of cases, they become incoherent when compared *across* categories of cases. Sunstein et al., *supra* note __, at __. Decision makers who see multiple categories of cases (e.g., judges and perhaps arbitrators) thus may make better decisions than decision makers who only one case (e.g., juries). *Id.*

¹⁰⁴ See *supra* text accompanying notes __ - __.

¹⁰⁵ Eisenberg et al. test the following predictions they derive from the theory: that (1) “the relation between punitive and compensatory awards will not meaningfully vary across case categories in actual jury cases”; and (2) “‘case categories’ influence should be greater in judge-tried cases than in jury-tried cases.” Eisenberg et al., *supra* note __, at __. They find “modest support” for these predictions in the data. *Id.*

¹⁰⁶ See *supra* text accompanying note __.

¹⁰⁷ Eisenberg et al., *supra* note __, at __.

C. Conclusions

The existing evidence on the effect of cognitive illusions on arbitral decision making is slight. Drawing from studies of judicial decision making (on the assumption that arbitrators are more like judges than jurors) provides further insights. The experimental studies of judges and jurors, while certainly not conclusive, find that judges are less subject to some cognitive biases and heuristics than jurors and no more subject to others. Although studies of litigation outcomes suggest that the effect of cognitive illusions is less than might be expected, some differences in outcome seem to persist. As such, the studies suggest (albeit tentatively) that arbitral decision making, like judicial decision making, is less subject than jury decision making to some cognitive illusions, and equally subject to others.¹⁰⁸

IV. Structural Differences Between Jury Trials and Arbitration

The preceding part suggested a tentative conclusion about the effects of cognitive biases and heuristics on arbitral decision making, based largely (although not exclusively) on experimental studies: that arbitrators likely are less subject to at least some cognitive illusions than are jurors. This part examines various structural differences between jury trials and arbitration proceedings, and considers whether the differences are likely to increase or decrease the effect of cognitive illusions.

¹⁰⁸ If arbitral decision making bears at least some relationship to decision making by judges, one might ask why businesses use arbitration clauses rather than including jury trial waivers in their standard form contracts. There are several possible explanations. First, while arbitrators may decide cases more like judges than juries, they may be less subject to biases and heuristics than judges (perhaps because of competition in the market for arbitrators or the subject matter expertise of arbitrators). Cf. Jeffrey J. Rachlinski, *Heuristics and Biases in the Courts: Ignorance or Adaptation?*, 79 ORE. L. REV. 61, 64 (2000) (“Judges surely have some incentives to make good law and avoid illusions of judgment, but they lack the incentives that other institutions face.”); Posner, *supra* note __, at 1494 (“The literature on these illusions provides some basis for thinking that market settings tend to dispel or at least reduce them, but none for thinking that government processes have similar effects.”). Second, businesses might be indifferent between judges and arbitrators (or perhaps even prefer judges), but use arbitration clauses because courts are unwilling to enforce pre-dispute waivers of the right to jury trial. See Sternlight, *supra* note __, at 677-95; Ware, *supra* note __, at __. Third, other factors – such as reducing the availability of class relief, confidentiality, and so forth – may (and certainly do to some extent) lead businesses to prefer arbitration over bench trials.

A. Group Versus Individual Decision Making

A key difference between juries and arbitrators is in the decision-making dynamic. Arbitrators decide either alone or in panels of three,¹⁰⁹ while juries decide in groups varying from six to twelve in number.¹¹⁰ Most experimental studies of jury behavior ignore the possible effects of group deliberations and focus on the decision making of individual jurors.¹¹¹ Others select “synthetic juries” that combine individual respondents into jury panels and then use the median response as the verdict of the synthetic jury.¹¹² While such an approach tends to mitigate the effect of outlying responses, it does not take into account the dynamics of group deliberations and any effect they may have on the verdict.

If group decisions differ from individual decisions, then these differences in decision-making dynamic could prove to be an important structural difference between jury trials and arbitration. One possibility is that group deliberations may dampen the effect of cognitive illusions on the jury’s verdict, with discussions within the group improving the quality of the group’s decision. Because arbitrators decide alone or in small groups, there is no (or less) opportunity for group deliberations to reduce the effect of cognitive illusions on arbitration awards. On the other hand, group polarization may result in a group decision that is more extreme than the median of individual members’ views.¹¹³ If so, jury verdicts may be more extreme than predicted by experimental studies of cognitive illusions, while arbitral decision making would be much less affected.

¹⁰⁹ E.g., American Arbitration Association, Commercial Arbitration Rules, Rule R-17 (effective Sept. 1, 2000) [hereinafter AAA Commercial Arbitration Rules].

¹¹⁰ BUREAU OF JUSTICE STATISTICS, U.S. DEP’T OF JUSTICE, STATE COURT ORGANIZATION 278, table 42 (1998). For an overview of research on the effects of jury size, see SWARD, *supra* note __, at __.

¹¹¹ See David R. Shaffer & Shannon R. Wheatman, *Does Personality Influence Reactions to Judicial Instructions? Some Preliminary Findings and Possible Implications*, 6 PSYCHOL. PUB. POL’Y & LAW 655, 657 (2000) (“perhaps the greatest limitation of mock-trial simulations is that the vast majority of them attempt to draw inferences from decisions rendered by nondeliberating mock *jurors* rather than deliberating mock *juries*”).

¹¹² E.g., VIDMAR, *supra* note __, at 226-28; Viscusi, *supra* note __, at 124.

¹¹³ See generally Cass R. Sunstein, *Deliberative Trouble? Why Groups Go to Extremes*, 110 YALE L.J. 71, 85-97 (2000) (discussing group polarization).

The empirical evidence on the point is mixed.¹¹⁴ However, at least some studies have found that deliberations can exacerbate, rather than lessen, cognitive biases in decision making.¹¹⁵ For example, in an experimental study of punitive damages awards, Schkade et al. found that jury deliberations tended to result in more extreme verdicts: when individual jurors rated behavior as worthy of strong punishment, deliberation increased the overall jury rating; when individual jurors rated behavior as worthy only of weak punishment, deliberation tended to decrease the overall jury rating.¹¹⁶ As applied to punitive damages, when individual jurors favored large awards of punitive damages, deliberations increased the amount awarded by the jury. Indeed, Schkade et al. reported that 27% of mock juries that voted to award punitive damages awarded amounts as great or greater than the highest individual award before deliberations.¹¹⁷ Similar effects have been identified in studies of decision making by panels of appellate courts.¹¹⁸

¹¹⁴ Norbert L. Kerr et al., *Bias in Jurors vs. Bias in Juries: New Evidence from the SDS Perspective*, 80 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 70, 82 (1999) (“For the jury, our findings confirm what is evident in the empirical record – that there is probably no general answer to the question ‘which is more biased, jurors or juries?’ The answer to this question must be ‘it depends.’”); Norbert L. Kerr et al., *Bias in Judgment: Comparing Individuals and Groups*, 103 PSYCHOL. REV. 687, 713 (1996) (same); see, e.g., Dagmar Stahlberg & Frank Eller, *We Knew It All Along: Hindsight Bias in Groups*, 63 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 46, 56 (1995) (“Our findings suggest that groups are as prone to hindsight bias as individuals when making hypothetical predictions,” but reject suggestion of greater hindsight bias in groups). For studies finding benefits of jury deliberations, see, e.g., Kamala London & Narina Nunez, *The Effect of Jury Deliberations on Jurors’ Propensity to Disregard Inadmissible Evidence*, 85 J. APPLIED PSYCHOL. 932, 937 (2000) (“studies find that individuals are biased when exposed to inadmissible evidence. However, the results [here], as well as results from other research, suggest that jury deliberations may somehow moderate the effect of biasing factors”); James H. Davis et al., *Effects of Group Size and Procedural Influence on Consensual Judgments of Quantity: The Example of Damage Awards and Mock Civil Juries*, 73 J. PERSONALITY & SOC. PSYCHOL. 703, 714 (1997) (reporting “surprising” result that “groups awarded less than preferred by parallel individuals working alone, although this difference is only marginally significant”). See generally MICHAEL J. SAKS, SMALL-GROUP DECISION MAKING AND COMPLEX INFORMATION TASKS 3 (1981) (“The legal fact-finding task, especially in complex cases, seems to be of the type in which, ceteris paribus, large heterogeneous groups perform better than individuals”).

¹¹⁵ E.g., Shari Seidman Diamond & Jonathan D. Casper, *Blindfolding the Jury to Verdict Consequences: Damages, Experts, and the Civil Jury*, 26 LAW & SOC’Y REV. 513, 553-57 (1992); Martin F. Kaplan & Charles E. Miller, *Group Decision Making and Normative Versus Informational Influence: Effects of Type of Issue and Assigned Decision Rule*, 53 J. PERSONALITY & SOC. PSYCH. 306, 311 (1987).

¹¹⁶ Schkade et al., *Deliberating About Dollars: The Severity Shift*, 100 COLUM. L. REV. 1139, 1140 (2000).

¹¹⁷ *Id.* at 1155-56 (10% were higher than highest individual award; 17% were equal to highest individual award). They also found greater variability in awards by deliberating juries, and concluded: “This finding suggests, though it certainly does not prove, the possibility that juries will produce more variability in awards than judges (a suggestion supported by the possibility that judicial experience with a wider range of cases will introduce the equivalent of a ‘modulus’ by which to discipline dollar awards).” *Id.* at 1148 n.43.

¹¹⁸ See Frank B. Cross & Emerson H. Tiller, *Judicial Partisanship and Obedience to Legal Doctrine: Whistleblowing on the Federal Courts of Appeals*, 107 YALE L.J. 2155 (1998); Richard L. Revesz, *Environmental Regulation, Ideology, and the D.C. Circuit*, 83 VA. L. REV. 1717, 1755 (1997).

Thus, while juries (and panels of arbitrators) decide in groups rather than individually, at least some evidence suggests that group deliberations will not reduce and may actually heighten the effects of cognitive illusions on decision making.

B. Markets & Incentives

Jurors are selected randomly and are paid a small, fixed fee.¹¹⁹ Their “financial incentive to conduct a careful sifting of the evidence is nil.”¹²⁰ Arbitrators, by comparison, get paid only if selected to serve, and must compete with other arbitrators to be selected. This market competition gives arbitrators different incentives in deciding cases than juries, incentives that may improve the quality of their decision making by inducing greater care.¹²¹

The broader question is whether these sorts of market forces are sufficient to mitigate the effect of heuristics and cognitive biases. Richard Posner writes that “[t]he literature on [cognitive] illusions provides some basis for thinking that market settings tend to dispel or at least reduce them.”¹²² Selection effects that reduce cognitive illusions are more likely in market settings,¹²³ and the greater amount at stake may lead to different results than experimental studies

¹¹⁹ BUREAU OF JUSTICE STATISTICS, *supra* note ___, at 269, table 40.

¹²⁰ Posner, *supra* note ___, at 1497. This is not to say that juries do not take their responsibilities seriously, merely that they have no financial incentive to do so.

¹²¹ See, e.g., GORDON TULLOCK, TRIALS ON TRIAL 127-33 (1980); Robert D. Cooter, *The Objectives of Private and Public Judges*, 41 PUB. CHOICE 107, 107 (1983); Robert D. Cooter & Daniel L. Rubinfeld, *Trial Courts: An Economic Perspective*, 24 LAW & SOC’Y REV. 533, 545 (1990); Christopher R. Drahozal, *Judicial Incentives and the Appeals Process*, 51 SMU L. REV. 469, 502 (1998); Stephen Walt, *Decision by Division: The Contractarian Structure of Commercial Arbitration*, 51 RUTGERS L. REV. 369, 411 (1999).

¹²² Posner, *supra* note ___, at 1494; see also Sunstein, *supra* note ___, at 150 (“In some circumstances, market forces are indeed strong enough to make behavioral economics irrelevant for predictive purposes. Then the question becomes whether it is possible to identify those circumstances. This is a large question, and we lack authoritative answers”).

¹²³ See *supra* text accompanying notes __-__.

find (although the evidence is uncertain on this point).¹²⁴ Other commentators, however, are more skeptical that the market has sufficient corrective effect.¹²⁵

In addition, competition among arbitrators also gives rise to the possibility of repeat-player bias, in which arbitrators have an incentive to favor repeat players (who are more likely to select them to serve again) than non-repeat players.¹²⁶ The empirical evidence to date, however, is inconclusive on whether such bias exists.¹²⁷

Lisa Bingham found a “repeat player effect” in a sample of 270 AAA employment arbitration awards from 1993 and 1994.¹²⁸ Employees were awarded some recovery in 63% of all awards, but in only 16% of awards against repeat-player employers (employers who were parties to more than one award in the sample). Employees recovered 48% of their demand against non-repeat-player employers but only 11% of their demand against repeat-player employers.¹²⁹ Bingham made clear that there were several possible explanations for these results, including that there were “systematic differences in the merits of these cases, in that employees in repeat player

¹²⁴ See, e.g., Dan N. Stone & David A. Ziebart, *A Model of Financial Incentive Effects in Decision Making*, 61 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 250, 259 (1995) (“results support the contention that financial incentives are no panacea for eliminating decision biases. Instead, incentives appear to increase the extent of attention given to a task, but also to increase potentially distracting emotions”); Vernon L. Smith & James M. Walker, *Monetary Rewards and Decision Cost in Experimental Economics*, 31 ECON. INQUIRY 245, 259 (1993) (“A survey of experimental papers which report data on the comparative effects of subject monetary awards (including no rewards) shows a tendency for the error variance of the observations around the predicted optimal level to decline with increased monetary reward”). See generally Mitchell, *Equal Incompetence*, *supra* note __, at 71-80 (summarizing studies) (“Sometimes decisions with material consequences are the same as decisions without material consequences; sometimes they are different”); Colin F. Camerer & Robin M. Hogarth, *The Effects of Financial Incentives in Experiments: A Review and Capital-Labor-Production Framework*, 19 J. RISK & UNCERTAINTY 7, 8 (1999) (“The studies show the effects of incentives are mixed and complicated”).

¹²⁵ E.g., Langevoort, *supra* note __, at 1523.

¹²⁶ E.g., Rau, *supra* note __, at 521-29; David S. Schwartz, *Enforcing Small Print to Protect Big Business: Employee and Consumer Rights in an Age of Compelled Arbitration*, 1997 WIS. L. REV. 33, 60-61; Sternlight, *supra* note __, at 685. See generally Marc Galanter, *Why the “Haves” Come Out Ahead: Speculations on the Limits of Legal Change*, 9 LAW & SOC’Y REV. 95 (1974). As Gordon Tullock has explained, however, the incentive of arbitrators to please repeat players does not necessarily mean that they will rule in favor of the repeat players. TULLOCK, *supra* note __, at 127-28 (“a bias toward the [repeat player] retailer might be the arbitrator’s profit-maximizing course of action. It might not, however, because the retailer might be interested in his general reputation and want an arbitrator who was either impartial or, for that matter, actually procustomer”).

¹²⁷ Walt, *supra* note __, at 418.

¹²⁸ Bingham, *supra* note __.

¹²⁹ *Id.* at 213.

cases may have weaker legal claims, while employees in the non-repeat player cases may have stronger legal claims.”¹³⁰

In a follow-up study, based on 203 AAA employment arbitration awards from 1993-1995 Bingham obtained similar results.¹³¹ She concluded, however, that “these patterns largely correspond with differences in the nature of the basis for arbitration. Repeat player employers get to arbitration based on an implied contract stemming from a personnel manual or employee handbook,” meaning that the employee “may have a substantively weaker legal claim which contributes to the relatively weak employee outcomes.”¹³² In short, the repeat player effect she identified apparently had more to do with the strength of the repeat-player employer’s claim (and perhaps ability to screen cases) than with the incentives facing the arbitrator. In a subsequent study, Bingham & Sarraf compared outcomes before and after the Employment Due Process Protocol,¹³³ finding that “employers arbitrating pursuant to an adhesive personnel handbook arbitration clause are less successful in employment arbitration after the Protocol than before.”¹³⁴ They conclude that “[s]elf-regulation through the Due Process Protocol is making a difference in the outcomes of employment arbitration.”¹³⁵

Thus, while there is some reason to believe that market forces will improve the quality of decision making by arbitrators, no definitive answer is possible.

¹³⁰ *Id.*

¹³¹ Lisa B. Bingham, *Unequal Bargaining Power: An Alternative Account for the Repeat Player Effect in Employment Arbitration*, INDUS. REL. RESEARCH ASS’N 50TH ANN. PROC. 33, 38-39 (1999) [hereinafter Bingham, *Unequal Bargaining Power*]; see also Lisa B. Bingham, *On Repeat Players, Adhesive Contracts, and the Use of Statistics in Judicial Review of Employment Arbitration Claims*, 29 MCGEORGE L. REV. 223 (1998).

¹³² Bingham, *Unequal Bargaining Power*, *supra* note __, at 39-40.

¹³³ Task Force on Alternative Dispute Resolution in Employment, *A Due Process Protocol for Mediation and Arbitration of Statutory Disputes Arising out of the Employment Relationship* (May 9, 1995).

¹³⁴ Lisa B. Bingham & Simon Sarraf, *Employment Arbitration Before and After the Due Process Protocol for Mediation and Arbitration of Statutory Disputes Arising Out of Employment: Preliminary Evidence that Self-Regulation Makes a Difference*, in ALTERNATIVE DISPUTE RESOLUTION IN THE EMPLOYMENT ARENA, PROCEEDINGS OF NEW YORK UNIVERSITY 53RD ANNUAL CONFERENCE ON LABOR (Samuel Estreicher, ed. 2000) (forthcoming); see also Lisa B. Bingham, *Self-Determination in Dispute System Design and Employment Arbitration*, __ U. MIAMI L. REV. __ (2002) (forthcoming) (summarizing findings).

¹³⁵ Bingham & Sarraf, *supra* note __, at __.

C. Other Differences

There are a variety of other structural differences between arbitration proceedings and jury trials that could correct for or exacerbate the effect of cognitive illusions on legal decision making. The following are a sample.

Fees. One key difference between litigation and arbitration is with respect to fees. To file a lawsuit, a plaintiff merely pays a small filing fee (in addition to paying his or her own lawyer, on contingency or otherwise).¹³⁶ No other charge is made by the public court system: judges' salaries, and other administrative costs, are paid wholly by the government. By comparison, a claimant filing a demand for arbitration pays both a fee to any arbitration institution providing administrative services, as well as a fee to the arbitrator or arbitrators resolving the dispute.¹³⁷ As a general matter, the fees are graduated, increasing as the amount sought by the claimant increases.

The policy discussions¹³⁸ and court cases¹³⁹ dealing with arbitration fees consider the extent to which such fees might preclude individuals from asserting claims in arbitration. The focus here, however, is on a different consequence of arbitration fees: their effect on party behavior in the arbitration proceeding. As discussed above, a number of experimental studies have found a strong anchoring effect of amounts claimed by plaintiffs on jury verdicts.¹⁴⁰ In court, the plaintiff has little financial incentive to moderate damages claims. By comparison, in arbitration, a claimant has a significant financial incentive to be realistic about damages claims because of the graduated fees charged by most arbitration institutions.¹⁴¹ Claimants who ask for

¹³⁶ *E.g.*, PUBLIC CITIZEN, THE COSTS OF ARBITRATION (May 10, 2002) (executive summary available at <www.publiccitizen.org/publications/release.cfm?ID=7173>).

¹³⁷ 1 IAN R. MACNEIL ET AL., FEDERAL ARBITRATION LAW § 3.2.2.2, at 3:13 (1999).

¹³⁸ *E.g.*, PUBLIC CITIZEN, *supra* note __; Paul D. Carrington & Paul H. Haagen, *Contract and Jurisdiction*, 1996 SUP. CT. REV. 331, 384-85; Schwartz, *supra* note __, at 61.

¹³⁹ *E.g.*, *Green Tree Fin'l Corp.-Ala. v. Randolph*, 531 U.S. 79 (2000); *Cole v. Burns Int'l Sec. Servs.*, 105 F.3d 1465 (D.C. Cir. 1997).

¹⁴⁰ *See supra* text accompanying notes __ - __.

¹⁴¹ The fee structure in arbitration provides an alternative explanation for Maltby's findings, *see supra* text accompanying notes __ - __, that arbitration claimants recover a higher percentage of their demands than do plaintiffs in federal court. *See* CHRISTOPHER R. DRAHOZAL, *COMMERCIAL ARBITRATION: CASES AND PROBLEMS 7* (2002) ("Given that the fees parties pay in arbitration are based on the amount demanded, [Maltby's] numbers may reflect no more than the fact that parties in arbitration have a strong incentive to be more realistic about their initial demands than parties in court").

more have to pay more, which may counteract to some degree any bias resulting from anchoring on the amount sought by claimants.¹⁴²

Rules of Evidence. Detailed rules govern the admissibility and presentation of evidence in court.¹⁴³ By contrast, formal rules of evidence ordinarily do not apply in arbitration.¹⁴⁴ Although arbitrators retain the power to exclude irrelevant evidence,¹⁴⁵ “the penchant for commercial arbitrators to ‘let it all in’ is well documented.”¹⁴⁶ The gatekeeping function of the trial judge over the admission of evidence “is one way of combating cognitive illusions.”¹⁴⁷ For example, Federal Rule of Evidence 407, which provides that evidence of subsequent remedial measures is “not admissible to prove negligence” or other wrongful conduct,¹⁴⁸ “reveals a good understanding of the hindsight bias and the judicial ability to respond to it.”¹⁴⁹ The absence of rules of evidence in arbitration may increase the susceptibility of arbitral decision making to hindsight bias.¹⁵⁰

Appellate Review. Court rules provide for some degree of substantive oversight of jury verdicts, such as by permitting judges to grant a new trial or judgment notwithstanding the

¹⁴² Of course, arbitration fees may be higher or lower than necessary to result in an optimal damage claim by claimant.

¹⁴³ See the Federal Rules of Evidence and state rules of evidence.

¹⁴⁴ See, e.g., AAA Commercial Arbitration Rules, *supra* note __, Rule R-33(a); NAF Code of Procedure, *supra* note __, Rule 35(C); JAMS Employment Arbitration Rules and Procedures, Rule 18(d) (effective November 2000) [hereinafter JAMS Employment Arbitration Rules]. Parties can and sometimes do contract for rules of evidence to apply in arbitration proceedings, but such contract provisions are rare. See Drahozal, *supra* note __, at 731 (three clauses in sample of thirty-four arbitration clauses in franchise agreements provided for Federal Rules of Evidence to govern in arbitration proceeding).

¹⁴⁵ See, e.g., AAA Commercial Arbitration Rules, *supra* note __, Rule R-33(b); JAMS Employment Rules, *supra* note __, Rule 18(d).

¹⁴⁶ 3 IAN R. MACNEIL ET AL., *supra* note __, § 35.1.2.4, at 35:9.

¹⁴⁷ Posner, *supra* note __, at 1494.

¹⁴⁸ FED. R. EVID. 407.

¹⁴⁹ Rachlinski, *supra* note __, at 617-18. Rachlinski argues, however, that as a general matter keeping evidence from the jury “probably cannot cure the hindsight bias” because “[t]o avoid the influence of the bias, the evidence that needs to be suppressed is the very fact that some adverse event led to a lawsuit.” *Id.* at 605.

¹⁵⁰ Cf. Posner, *supra* note __, at 1494 (“If judges as well as jurors are prone to make cognitive errors or be overcome by emotion, trial by jury may actually proceed more rationally than trial by judge, since in a bench trial there is no gatekeeper protecting the trier of fact from confusing or excessively prejudicial evidence”).

verdict.¹⁵¹ Courts exercise an even greater degree of scrutiny over awards of punitive damages.¹⁵² Indeed, studies show that a significant percentage of punitive damages awards by juries are modified or set aside after the verdict,¹⁵³ suggesting that courts take their supervisory role seriously. Both jury verdicts and bench trial verdicts are subject to review by appellate courts, with fact findings subject to some degree of deference and legal issues reviewable de novo. The availability of appellate review may correct errors resulting from cognitive biases,¹⁵⁴ may give judges the incentive to avoid errors in the first place,¹⁵⁵ and may provide feedback useful in avoiding future errors.¹⁵⁶ By comparison, only very limited appellate review is available for arbitration awards.¹⁵⁷ Courts will vacate awards only on narrow procedural grounds,¹⁵⁸ or for manifest disregard of the law.¹⁵⁹ Thus, in arbitration there is far less opportunity for appellate review to avoid any errors resulting from heuristics or cognitive biases than there is in court.¹⁶⁰

V. Conclusion

Businesses cite arbitration as a way to avoid aberrational jury verdicts, implicitly if not explicitly assuming that arbitrators make “better” decisions than juries. By contrast, consumer advocates criticize arbitration as a way for businesses to avoid paying damages to deserving claimants, effectively assuming that juries make better (or at least no worse) decisions than arbitrators. These conflicting perspectives pose an important question in the debate over pre-

¹⁵¹ See, e.g., FED. R. CIV. P. 50 & 59; see also SWARD, *supra* note ___, at 271-299.

¹⁵² E.g., *BMW of North Am., Inc. v. Gore*, 517 U.S. 559 (1986).

¹⁵³ E.g., W. KIP VISCUSI, *REFORMING PRODUCTS LIABILITY* 94 (1991) (concluding that “plaintiffs received only . . . 29 percent of the original punitive award” due to reduction on appeal or settlement after verdict); Neil Vidmar et al., *Jury Awards for Medical Malpractice and Post-Verdict Adjustment of Those Awards*, 48 *DEPAUL L. REV.* 265 (1998) (finding many outlier compensatory damage verdicts reduced after verdict).

¹⁵⁴ Steven Shavell, *The Appeals Process as a Means of Error Correction*, 24 *J. LEGAL STUD.* 379 (1995).

¹⁵⁵ Drahozal, *supra* note ___, at 492.

¹⁵⁶ David A. Schkade, *Erratic by Design: A Task Analysis of Punitive Damages Assessment*, 39 *HARV. J. ON LEGIS.* 121, 130 (2002) (“Jurors get neither rewards nor feedback based on their decisions”) (italics omitted).

¹⁵⁷ Unless the parties provide by contract for an appellate arbitral tribunal. See, e.g., JAMS Employment Rules, *supra* note ___, Rule 30 & Optional Arbitration Appeal Procedure.

¹⁵⁸ See, e.g., 9 U.S.C. § 10. See generally 4 MACNEIL ET AL., *supra* note ___, § 40 (discussing grounds for vacating arbitration awards).

¹⁵⁹ See *Wilko v. Swan*, 346 U.S. 427 (1953).

¹⁶⁰ For an incentives-based explanation for the lack of an appeals process in commercial arbitration, see Drahozal, *supra* note ___, at 502.

dispute arbitration clauses in consumer contracts: how do decisions by arbitrators compare to decisions by juries?

This article examines arbitral decision from a behavioral perspective and finds some reason to believe that decision making by arbitrators is less subject to cognitive illusions than is decision making by juries. This is not an across-the-board conclusion regarding the superiority of arbitral decision making generally, but rather a very tentative conclusion about the effect of heuristics and cognitive biases on arbitral decision making. This tentative conclusion is based largely on experimental studies of decision making by judges, recognizing that the comparison between judges and arbitrators is not perfect and that drawing real-world conclusions from experimental results is difficult. If arbitral decision making in fact proves to be less subject to cognitive illusions than jury decision making, it suggests that restricting the enforceability of pre-dispute arbitration clauses may impose real costs on the parties to consumer contracts by reducing the accuracy of dispute resolution.

The most obvious implication of this analysis, however, is that more research is needed on how cognitive illusions affect arbitral decision making. Commentators already have suggested studies on the psychology of dispute resolution in the international arbitration context.¹⁶¹ Both Neil Vidmar¹⁶² and Lisa Bingham¹⁶³ have used arbitrators as experimental subjects while examining other issues. Studies of cognitive illusions in the consumer context would be of great interest (and practical importance) as well.

Experimental studies have the clear benefit of being able to hold constant the facts facing the decision maker. Problems would need to be developed (preferably with significant detail and context provided to the decision maker) to test for the effect of various cognitive illusions, such as hindsight bias, anchoring, the representativeness heuristic, and extremeness aversion. Conferences attended by arbitrators would be an obvious place for administering the problems. They also could be administered by mail, although the response rate almost certainly would be lower. The problems should be administered to mock jurors as well, to facilitate comparisons. Such experimental studies would provide a good starting point for the behavioral analysis of

¹⁶¹ See Shari Seidman Diamond, *The Psychological Aspects of Dispute Resolution 26-27* (paper presented at the 16th Biennial Conference of the International Council for Commercial Arbitration, London, UK, May 14, 2002) (suggesting research agenda that would “systematically observe[] and analyze[] actual behavior and the decision-making process” in international arbitration, comparable to recent study of jury deliberations); Christopher R. Drahozal, *Of Rabbits and Rhinoceri: A Survey of Empirical Research on International Commercial Arbitration*, 19 J. INT’L ARB. ____ (2002) (forthcoming).

¹⁶² See Vidmar & Rice, *supra* note ____.

¹⁶³ See Lisa B. Bingham & Debra J. Mesch, *Decision Making in Employment and Labor Arbitration*, 39 INDUS. REL. 671 (2000) (experimental study comparing labor and employment arbitrators).

arbitral decision making,¹⁶⁴ and contribute to a comparison of decision making by arbitrators and juries.

¹⁶⁴ Studies of outcomes in arbitration proceedings, testing for the effect of cognitive illusions, likewise would be of interest, but would be far more difficult to operationalize. Problems of case selection and ensuring comparable facts make studies of arbitration outcomes – particularly any attempts to compare arbitration awards to jury verdicts – highly problematic. *E.g.*, Stephen J. Ware, *The Effects of Gilmer: Empirical and Other Approaches to the Study of Employment Arbitration*, 16 OHIO ST. J. ON DISP. RESOL. 735, 757 (2001) (“Empirical studies are vulnerable to the possibility that the studied cases going to arbitration are systematically different from the studied cases going to litigation. This will remain true as long as the law allows contracts to determine whether or not a case goes to arbitration”).