

CONFRONTING CONVENTIONAL THINKING: THE HEURISTICS PROBLEM IN FEMINIST LEGAL THEORY

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INTRODUCTION

One of the most significant lessons from cognitive psychology in the past quarter century is the idea that when people make judgments under conditions of uncertainty, they use shorthand methods of decision making called “heuristics.”¹ While these mental shortcuts usually result in accurate judgments, they can include systematic psychological biases and errors of probabilistic reasoning. For instance, decision makers tend to estimate the frequency of an event happening according to instances of it they can easily recall.² People cannot remember all the information they receive, so they estimate the probabilities of an event occurring based on the most “salient”—vivid or unusual—examples they readily call to mind.³ When people erroneously extrapolate probabilities in these ways, they overestimate the risks of death from shark bites, plane crashes, or lightning strikes. These heuristics also help explain why people play the lottery and contribute less to their IRAs than they should.⁴

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¹ See JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES (Daniel Kahneman et al. eds., 1982) [hereinafter JUDGMENT UNDER UNCERTAINTY].

² Amos Tversky & Daniel Kahneman, *Availability: A Heuristic for Judging Frequency and Probability*, in JUDGMENT UNDER UNCERTAINTY, *supra* note 1, at 163.

³ See John B. Pryor & Mitchel Kriss, *The Cognitive Dynamics of Salience in the Attribution Process*, 35 J. PERSONALITY & SOC. PSYCHOL. 49 (1977); David M. Sanbonmatsu et al., *Overestimating Causality: Attributional Effects of Confirmatory Processing*, 65 J. PERSONALITY & SOC. PSYCHOL. 892 (1993).

⁴ See, e.g., Jack L. Knetsch & J. A. Sinden, *Willingness to Pay and Compensation Demanded: Experimental Evidence of an Unexpected Disparity in Measures of Value*, 99 Q.J. ECON. 507 (1984); Cass R. Sunstein & Richard H. Thaler, *Libertarian Paternalism Is Not an Oxymoron*, 70 U. CHI. L. REV. 1159, 1196-97 (2003).

About twenty years ago, scholars began to recognize the implications of these patterns of cognitive errors for legal decision makers.⁵ Some theorists applied behavioral studies regarding heuristics to explain the ways parties, judges, and jurors actually make decisions.⁶ For instance, plaintiffs are more likely to think of notorious, perhaps even frivolous cases with large jury verdicts than they are to remember average jury awards for a particular type of case. As a result, they use the more flamboyant examples, instead of the more precise statistical information, to estimate their own chances of success at trial.⁷ Similarly, factfinders are prone to errors of judgment from these simplifying techniques, such as the hindsight bias of overestimating the predictability of past events—meaning that when a jury looks backward at a defendant’s conduct, “the defendant’s level of care will seem less reasonable in hindsight than it did in foresight”⁸—or the anchoring bias of accepting without question an initial, although arbitrary, suggested numeric reference point.⁹

Legal scholars have applied insights about heuristics to basic assumptions in a wide variety of doctrinal fields, such as criminal law, contracts, environmental law, securities regulation, constitutional law, and evidence.¹⁰ Others have pointed out the influence of some of these

⁵ See Ward Edwards & Detlof von Winterfeldt, *Cognitive Illusions and Their Implications for the Law*, 59 S. CAL. L. REV. 225 (1986); Michael J. Saks & Robert F. Kidd, *Human Information Processing and Adjudication: Trial by Heuristics*, 15 LAW & SOC’Y REV. 123 (1980).

⁶ See, e.g., Samuel Estreicher, *Human Behavior and the Economic Paradigm at Work*, 77 N.Y.U. L. REV. 1 (2002).

⁷ Chris Guthrie, *Framing Frivolous Litigation: A Psychological Theory*, 67 U. CHI. L. REV. 163, 202-03 (2000).

⁸ See, e.g., Jeffrey J. Rachlinski, *A Positive Psychological Theory of Judging in Hindsight*, 65 U. CHI. L. REV. 571, 572 (1998) (“Reasonableness must be determined from the perspective of the defendant at the time that the precautions were taken, but the hindsight bias ensures that subsequent events will influence that determination.”). See generally Baruch Fischhoff, *For Those Condemned to Study the Past: Heuristics and Biases in Hindsight*, in JUDGMENT UNDER UNCERTAINTY, *supra* note 1, at 335, 341; Scott A. Hawkins & Reid Hastie, *Hindsight: Biased Judgments of Past Events After the Outcomes Are Known*, 107 PSYCHOL. BULL. 311, 311-13 (1990).

⁹ Jeffrey J. Rachlinski, *Heuristics and Biases in the Courts: Ignorance or Adaptation?*, 79 OR. L. REV. 61, 97 (2000).

Several studies document the effects that anchors have on determinations of damage awards in civil lawsuits. These studies reveal that the amount that plaintiffs request in damages influence the determination of civil damage awards. This occurs even when the anchor is wholly absurd, such as asking for more than a billion dollars in an individual personal-injury lawsuit.

¹⁰ See, e.g., Frank B. Cross, *The Public Role in Risk Control*, 24 ENVTL. L. 887 (1994); Melvin Aron Eisenberg, *The Limits of Cognition and the Limits of Contract*, 47 STAN. L. REV. 211 (1995); Timur Kuran & Cass R. Sunstein, *Availability Cascades and Risk Regulation*, 51 STAN. L. REV. 683 (1999); Donald C. Langevoort, *Behavioral Theories of Judgment and Decision Making in Legal Scholarship: A Literature Review*, 51 VAND. L. REV. 1499 (1998); Daryl J. Levinson, *Framing Transactions in Constitutional Law*, 111 YALE L.J. 1311 (2002); Robert Prentice, *Whither Securities Regulation? Some Behavioral Observations Regarding*

biases and cognitive illusions on the development of particular statutes or individual legal doctrines.¹¹

On the jurisprudential level, scholars have drawn on behavioral decision theory to criticize assumptions underlying the rational choice model in law and economics. The systematic behavioral anomalies identified by cognitive psychologists challenged the law and economics postulate of universal rational decision making.¹² Writers in other areas of jurisprudence—including positivism,¹³ natural law,¹⁴ legal realism,¹⁵ public choice theory,¹⁶ and critical race theory¹⁷—have also used the insights of heuristics and biases research to evaluate theories of how decision makers produce law. Notably absent, however, are inquiries by feminist legal theorists into the influence of heuristics on issues of concern to feminism.

Legal theorists have drawn on other, related insights from cognitive psychology regarding the formation of stereotypes and applied this knowledge to question the effectiveness of employment discrimination law.¹⁸ Stereotyping minority group members—assuming

Proposals for Its Future, 51 DUKE L.J. 1397 (2002); Christopher Slobogin, *A Jurisprudence of Dangerousness*, 98 NW. U. L. REV. 1 (2003); Cass R. Sunstein, *Behavioral Analysis of Law*, 64 U. CHI. L. REV. 1175 (1997); Symposium, *Foreword: Visions of Rationality in Evidence Law*, 2003 MICH. ST. L. REV. 847.

¹¹ See, e.g., Robert A. Hillman, *The Limits of Behavioral Decision Theory in Legal Analysis: The Case of Liquidated Damages*, 85 CORNELL L. REV. 717 (2000); Charles Yablon, *Hindsight, Regret, and Safe Harbors in Rule 11 Litigation*, 37 LOY. L.A. L. REV. 599 (2004).

¹² See, e.g., BEHAVIORAL LAW AND ECONOMICS (Cass R. Sunstein ed., 2000); Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1476-77 (1998); Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CAL. L. REV. 1051, 1056 (2000). Critiques of the rationality assumed by law and economics have spun off a rich literature in defense of rational decision making. See, e.g., Gregory Mitchell, *Taking Behavioralism Too Seriously? The Unwarranted Pessimism of the New Behavioral Analysis of Law*, 43 WM. & MARY L. REV. 1907 (2002); Richard A. Posner, *Rational Choice, Behavioral Economics, and the Law*, 50 STAN. L. REV. 1551 (1998).

¹³ See, e.g., Morell E. Mullins, Sr., *Tools, Not Rules: The Heuristic Nature of Statutory Interpretation*, 30 J. LEGIS. 1, 20 (2003).

¹⁴ See, e.g., Tom R. Tyler, *The Social Psychology of Authority: Why Do People Obey an Order to Harm Others?*, 24 LAW & SOC'Y REV. 1089, 1095 (1990).

¹⁵ See, e.g., Lynn M. Lopucki, *Legal Culture, Legal Strategy, and the Law in Lawyers' Heads*, 90 NW. U. L. REV. 1498, 1509 (1996).

¹⁶ See, e.g., Jeffrey J. Rachlinski & Cynthia R. Farina, *Cognitive Psychology and Optimal Government Design*, 87 CORNELL L. REV. 549, 555 (2002); Edward L. Rubin, *Public Choice, Phenomenology, and the Meaning of the Modern State: Keep the Bathwater, But Throw Out That Baby*, 87 CORNELL L. REV. 309, 315-16 (2002).

¹⁷ See, e.g., Theodore Eisenberg & Sheri Lynn Johnson, *Implicit Racial Attitudes of Death Penalty Lawyers*, 53 DEPAUL L. REV. 1539, 1554 (2004) (observing that “judges appear to be just as susceptible as are jurors to three cognitive illusions that hinder accurate decision making: anchoring, hindsight bias, and egocentric bias”).

¹⁸ See Linda Hamilton Krieger, *The Content of Our Categories: A Cognitive Bias Approach to Discrimination and Equal Employment Opportunity*, 47 STAN. L. REV. 1161 (1995); Barbara F. Reskin, *The Proximate Causes of Employment Discrimination*, 29 CONTEMP. SOC. 319, 320-21 (2000); see also discussion *infra* notes 92-96 and accompanying text.

qualities about people because of identity group membership—is one form of heuristic shorthand. But these cognitive heuristics affect perceptions of issues as well as assumptions about people. Some writers have briefly tapped the literature on these cognitive limits and applied it to substantive areas relating to gender, particularly family law.¹⁹ Feminist legal theorists have not systematically investigated the ways decisional heuristics affect popular perceptions of gender and legal decisions that have gendered consequences.

Perhaps feminist legal theorists have steered away from the topic out of concern that if individual human judgment has nonrational tendencies, those tendencies might provide justification for greater restrictions on individual choice and more paternalistic interventions by government.²⁰ Or perhaps probabilistic reasoning errors that have gender consequences have been of less concern than other, more dramatically gendered forms of thinking. Quite probably, feminist legal theorists have simply been more concerned with directly showing gendered patterns of decisionmaking.

Issues of concern to identity theory may be particularly vulnerable to heuristic errors. Given the egocentric biases that researchers have documented,²¹ coupled with the tendencies toward stereotypic classifications,²² when decision makers use simplifying heuristics, they are likely to make mistakes in the direction of their pre-existing biases. The combined effects of these proclivities mean that decision makers are anchored in conventional patterns of thinking and that those patterns contain perceptual biases. What this phenomenon means for feminist theory is that cognitive heuristics may affect perceptions of gender issues in more subtle ways than pure stereotypes based on group membership.

This Article will explore the implications of heuristics for feminist legal theory. Part I introduces the history of heuristics research in cognitive psychology and contemporary understandings of probability and inference errors and motivational biases. Part II traces the applications of the cognitive bias literature by legal theorists. Critics of

¹⁹ See, e.g., Margaret F. Brinig, *Comment on Jana Singer's Alimony and Efficiency*, 82 GEO. L.J. 2461 (1994); Elizabeth S. Scott, *Pluralism, Parental Preference, and Child Custody*, 80 CAL. L. REV. 615 (1992); Elizabeth S. Scott & Robert E. Scott, *Parents as Fiduciaries*, 81 VA. L. REV. 2401 (1995); Karen Servidea, Note, *Reviewing Premarital Agreements to Protect the State's Interest in Marriage*, 91 VA. L. REV. 535, 541-54 (2005).

²⁰ See generally Jeffrey J. Rachlinski, *The Uncertain Psychological Case for Paternalism*, 97 NW. U. L. REV. 1165 (2003).

²¹ See, e.g., Lynn A. Baker & Robert E. Emery, *When Every Relationship Is Above Average: Perceptions and Expectations of Divorce at the Time of Marriage*, 17 LAW & HUM. BEHAV. 439 (1993). See also discussion *infra* notes 56-57 and accompanying text.

²² See, e.g., Krieger, *supra* note 18, at 1204-07; See also Daniel T. Gilbert & J. Gregory Hixon, *The Trouble of Thinking: Activation and Application of Stereotypic Beliefs*, 60 J. PERSONALITY & SOC. PSYCHOL. 509 (1991).

law and economics referred to heuristics research showing patterns of probabilistic errors to challenge the law and economics assumption of universally rational decisionmaking. While identity theorists—critical race theorists and feminists—have consulted the cognitive bias literature regarding stereotypes, they have not explored the more general category of heuristic errors or the ways heuristics and biases combine with conventional approaches to identity issues. The subtlety with which heuristic errors operate makes it difficult to escape or even to see the gendered consequences when errors of probabilistic reasoning combine with stereotypes.

This Article explores the importance of heuristics for identity theories in two directions. The first section of Part III investigates the ways cognitive illusions influence popular perceptions of feminist issues. The second section of Part III traces some of the ways cognitive errors have influenced the development of laws relating to gender issues. Although the patterns of error are by no means relegated only to gender cases, courts unthinkingly invite heuristic errors in cases concerning gender issues.

Part IV asks whether it is possible to educate legal decision makers to avoid heuristic errors, and whether such efforts would be a wise expenditure of resources for feminist legal theorists. It also questions whether reframing issues in terms of cognitive biases would have untoward political and social consequences. This Article concludes that examining heuristic errors that have gendered consequences does reframe inquiries away from looking for intentional gendering, but the resulting understanding is both accurate and useful. Hopefully, this exploration will lead to greater understanding of the cognitive processes of discrimination and the development of tools to combat subconscious cognitive errors. After all, the entire history of the civil rights movement has been a process of obtaining conscious control over subjective and damaging biases.

I. HEURISTICS RESEARCH IN COGNITIVE PSYCHOLOGY

A. *Probability and Inference Errors and Motivational Biases*

In the mid 1970s, cognitive psychologists Amos Tversky and Daniel Kahneman began to study the ways people make decisions under conditions of uncertainty.²³ They posited that because decisionmaking

²³ See, e.g., Daniel Kahneman & Amos Tversky, *On the Psychology of Prediction*, 80 PSYCHOL. REV. 237 (1973); Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCIENCE 1124 (1974), reprinted in *Introduction*, JUDGMENT UNDER UNCERTAINTY, *supra* note 1, at 3.

often involves an abundance of information, time pressures, and an array of possible alternatives, people intuitively and unconsciously use cognitive shortcuts or “heuristics” to make decisions about probabilities. These simplifying heuristics lead to some predictable patterns of decisional errors.

One of the most common heuristic biases is availability—the tendency to estimate the likelihood or frequency of an event occurring based on how readily one can recall an example of it.²⁴ People overestimate the frequency of an event’s happening based on its salience—how dramatic, sensational or otherwise memorable the event is.²⁵ Similarly, they tend to underestimate the probability of less spectacular events happening. So, for example, immediately after an act of terrorism occurs, people will overestimate the likelihood of another such attack, because the image is on their minds.²⁶ On the flip side, people underestimate the probability of dying from ordinary and “unspectacular” diseases, such as hypertension or diabetes, “which claim one victim at a time and are common in nonfatal form.”²⁷

Allowing ease of recall to shape probability evaluations is tied to another phenomenon that law professor Cass Sunstein has called “the alarmist bias.”²⁸ By this, he means that individuals’ probability estimates are overly influenced by their idiosyncratic emotional reactions to risks: “when emotions are intense, calculation is less likely to occur, or at least that form of calculation that involves assessment of risks in terms of not only the magnitude but also the probability of the outcome.”²⁹ Thus, people afraid of flying in airplanes or those who fear dying of cancer will assess the risks of those occurrences as much higher than statistics would warrant.

A related cognitive bias entails errors of representativeness. People develop a mental picture of a person, an object, or an event, and

²⁴ See Tversky & Kahneman, *supra* note 23, at 11 (observing that “a class whose instances are easily retrieved will appear more numerous than a class of equal frequency whose instances are less retrievable”); Tversky & Kahneman, *supra* note 2, at 164; Daniel Kahneman & Amos Tversky, *Availability: A Heuristic for Judging Frequency and Probability*, 5 COGNITIVE PSYCHOL. 207 (1973).

²⁵ See RICHARD NISBETT & LEE ROSS, HUMAN INFERENCE: STRATEGIES AND SHORTCOMINGS OF SOCIAL JUDGMENT 18-19 (1980) (describing the availability heuristic); see also Norbert Schwarz & Leigh Ann Vaughn, *The Availability Heuristic Revisited: Ease of Recall and Content of Recall as Distinct Sources of Information*, in HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT 103 (Thomas Gilovich et al. eds., 2002) [hereinafter HEURISTICS AND BIASES].

²⁶ CASS R. SUNSTEIN, RISK AND REASON: SAFETY, LAW, AND THE ENVIRONMENT 50 (2002).

²⁷ Paul Slovic et al., *Facts Versus Fears: Understanding Perceived Risk*, in JUDGMENT UNDER UNCERTAINTY, *supra* note 1, at 463, 467.

²⁸ Cass R. Sunstein, *Cognition and Cost-Benefit Analysis*, 29 J. LEGAL STUD. 1059, 1070-71 (2000). He has also called this “probability neglect.” Cass R. Sunstein, *Probability Neglect: Emotions, Worst Cases, and Law*, 112 YALE L.J. 61, 67 (2002).

²⁹ Sunstein, *Probability Neglect*, *supra* note 28, at 66-67.

then judge the expected frequency of events of that type occurring or people falling within a category based on how closely a target resembles their mental model.³⁰

The representativeness heuristic is at the heart of stereotyping. For instance, jurors may possess a mental image of the expected demeanor of a criminal and assess the guilt of a defendant based on whether the accused possesses characteristics (such as shifty or furtive behavior) that they think are representative of the category of guilty defendants.³¹ Mistakes in probability judgments occur when people underestimate “the rate at which a characteristic occurs in the underlying population (the ‘base rate’)”³² or “overestimate the correlation between what something appears to be and what something actually is.”³³ Overestimations of the likelihood of plane crashes occur not only because the example is dramatic (and thus available) when people think about deadly accidents, but also because it is a highly representative example of the category.³⁴

The representativeness heuristic can cause baseball scouts to rely on whether a prospect matches their mental picture of a baseball player (in, say, stance or swing), rather than rely on more specific statistical predictors, such as on-base and slugging percentages, or, for pitchers, strikeouts-to-walks or ground-outs-to-fly-outs ratios.³⁵ In short, errors of representativeness affect risk assessments, whereby individuals systematically over and under-estimate risks.

Another cognitive distortion that introduces error is the framing effect. How people respond to an issue depends on how it is presented

³⁰ “Representativeness is an assessment of the degree of correspondence between a sample and a population, an instance and a category, an act and an actor or, more generally, between an outcome and a model.” Amos Tversky & Daniel Kahneman, *Extensional Versus Intuitive Reasoning: The Conjunction Fallacy in Probability Judgment*, 90 *PSYCHOL. REV.* 293, 295 (1983).

³¹ See Chris Guthrie et al., *Inside the Judicial Mind*, 86 *CORNELL L. REV.* 777, 805 (2001).

³² Christopher R. Drahozal, *A Behavioral Analysis of Private Judging*, 67 *LAW & CONTEMP. PROBS.* 105, 111 (2004).

³³ Korobkin & Ulen, *supra* note 12, at 1086.

³⁴ See Ian Weinstein, *Don't Believe Everything You Think: Cognitive Bias in Legal Decision Making*, 9 *CLINICAL L. REV.* 783, 810 n.75 (“Although there is debate about the mechanism, there is strong evidence that people overemphasize predictive power of rare phenomena when the phenomena strongly resemble the category in question.”). Furthermore, in this study:

We overemphasize the rare event because of our cognitive disposition to focus on individual examples whose details match our images of a general case. Tending to disregard whether the individual case is a typical or atypical example of the category, we give too much weight to its vividness. Plane crashes are vivid, highly representative exemplars of a deadly accident, but that does not increase their statistical probability.

Id. at 810.

³⁵ Cass R. Sunstein, *Moral Heuristics and Moral Framing*, 88 *MINN. L. REV.* 1556, 1562 (2004) (citing MICHAEL LEWIS, *MONEYBALL: THE ART OF WINNING AN UNFAIR GAME* 15-20 (2003)).

or “framed” to them: they may strongly prefer one of two functionally equivalent choices depending on the information that is offered. A well-known example of the point is that public opinion survey answers can vary dramatically depending on the specific wording of questions.³⁶ Less obvious examples surface frequently regarding everyday decisions in life. In one study in the medical context, Barbara J. McNeil and colleagues asked three groups of research subjects to imagine they had cancer and had a choice of treatment, either radiation or surgery.³⁷ One group of respondents was told that one year after surgery thirty-two percent of patients had died; another group was told that one year after surgery sixty-eight percent of patients had survived. Presenting the effects of treatment in terms of negative risks increased the percentage of test subjects selecting radiation instead of surgery from eighteen to forty-four percent. The researchers found that experts also demonstrated risk aversion when outcomes were framed as losses. The preferences expressed by the physician subjects in the study were not generally different from those of the graduate student or patient subjects: “In all three populations, the attractiveness of surgery, relative to radiation therapy, was substantially greater . . . when the problem was framed in terms of the probability of living rather than in terms of the probability of dying.”³⁸

Framing effects occur in predictable ways when outcomes are described in terms of gains and losses. Numerous researchers have demonstrated that people are economically loss averse—they dislike losing, and they dislike losing more than they like gaining.³⁹ When deciding between alternatives framed as possible gains, people are risk averse and take the safest option, preferring, for example, a certain gain of \$240 over a 25% chance to gain \$1,000 (and a 75% chance to gain nothing).⁴⁰ Yet, when choosing among alternatives framed as potential losses, people are typically more willing to take risks. When test subjects are offered the choice of a sure loss of \$750 or a 75% chance to

³⁶ Don A. Dillman & James A. Christenson, *Toward the Assessment of Public Values*, 38 PUB. OPINION Q. 206, 209 (1974). An example is the empirical support for Justice Thurgood Marshall’s hypothesis in *Furman v. Georgia*, 408 U.S. 238, 361 n.145 (1972) (Marshall, J., concurring), that if the public “were fully informed” about the racial disparities and sentencing vagaries in the imposition of the death penalty, public support for it would plummet. See Robert M. Bohm, *American Death Penalty Opinion: Past, Present, and Future*, in AMERICA’S EXPERIMENT WITH CAPITAL PUNISHMENT 31-41 (James R. Acker et al. eds., 1998).

³⁷ Barbara J. McNeil et al., *On the Elicitation of Preferences for Alternative Therapies*, 306 NEW ENG. J. MED. 1259 (1982). The subject groups were radiologists, graduate students, and patients from a Veterans Administration Medical Center with chronic medical problems, but not cancer.

³⁸ *Id.* at 1262.

³⁹ Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, in CHOICES, VALUES, AND FRAMES 17, 33 (Daniel Kahneman & Amos Tversky eds., 2003).

⁴⁰ Daniel Kahneman & Amos Tversky, *Choices, Values, and Frames*, in CHOICES, VALUES, AND FRAMES, *supra* note 39, at 1, 6.

lose \$1,000 (and a 25% chance to lose nothing), the overwhelming majority of them prefer to take a chance on losing the greater amount.⁴¹ The loss aversion runs so deep that people are willing to risk a larger possible loss to avoid a guaranteed smaller loss.

Another heuristic that is related to the framing effect—reflecting the same notion that the way data is presented strongly influences perceptions—is the phenomenon of anchoring. Given starting points influence people’s probability judgments.⁴² This bias causes people to overvalue initially provided information. Even if new information later becomes available, people’s perceptions are “anchored” by the initial reference point. For example, Tversky and Kahneman asked one group of high school students to quickly estimate the product of $1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8$ and asked another group to quickly estimate the product of $8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1$. The median estimate for the first group of students was 512, and for the second group, 2250.⁴³ The researchers suggested that the difference in estimates was attributable to the anchoring effect—the initial numbers in the series shaped the students’ computations. A variety of experimental studies demonstrate that the initial amounts requested by plaintiffs’ lawyers overly influence the damage awards of both jurors and judges acting as factfinders.⁴⁴ Of course, when the initial value that serves as a judgmental anchor is simply a random or otherwise unreliable starting point, this randomness (that is then relied on) can radically affect the quality of the decision that is made.

One other mental shortcut is the affect heuristic. It suggests that people often base decisions on affective responses or feelings rather than systematic judgments.⁴⁵ Some affective responses arise

⁴¹ See *id.*; See also Amos Tversky & Daniel Kahneman, *Loss Aversion and Riskless Choice*, in *CHOICES, VALUES, AND FRAMES*, *supra* note 39, at 143, 144.

⁴² Tversky & Kahneman, *supra* note 23, at 14-16. “Anchoring is thought to occur because individuals simply adjust relevant anchors insufficiently and because anchors provide mnemonic cues that trigger a kind of availability.” Rachlinski, *supra* note 20, at 1171.

⁴³ Tversky & Kahneman, *supra* note 23, at 15. The correct answer is 40,320.

⁴⁴ See, e.g., Gretchen B. Chapman & Brian H. Bornstein, *The More You Ask For, the More You Get: Anchoring in Personal Injury Verdicts*, 10 *APPLIED COGNITIVE PSYCHOL.* 519, 525-26 (1996) (reporting findings of a mock jury study that although jurors viewed plaintiffs requesting extremely high amounts of compensation (\$1 billion) as selfish, the requested amount still served as an anchor that had a linear affect on compensation awards); Guthrie et al., *supra* note 31, at 790-92 (presenting judges with a hypothetical personal injury lawsuit with an anchor condition in the form of a \$75,000 jurisdictional minimum awarded damages that averaged \$367,000 lower than the judges presented with the same case but no anchor condition); John Malouff & Nicola S. Schutte, *Shaping Juror Attitudes: Effects of Requesting Different Damage Amounts in Personal Injury Trials*, 129 *J. SOC. PSYCHOL.* 491, 494-95 (1989) (finding an essentially linear relationship between the amount requested and the amount awarded; “when more money was requested for damages by the plaintiff’s attorney, the jurors awarded more”).

⁴⁵ Paul Slovic et al., *The Affect Heuristic*, in *HEURISTICS AND BIASES*, *supra* note 25, at 397. See generally *FEELING AND THINKING: THE ROLE OF AFFECT IN SOCIAL COGNITION* (Joseph P. Forgas ed., 2000).

incidentally from a person's mood or circumstances. On rainy days, for example, study respondents assess their life satisfaction significantly more negatively than on sunny days.⁴⁶ Other feelings—arising from associations connected with the target event—influence evaluations. Research indicates that people have rapid, but largely intuitive, responses to other people, types of products, and situations. Researchers suggest that “affective reactions to stimuli are often the very first reactions, occurring automatically and subsequently guiding information processing and judgment.”⁴⁷ Particularly with respect to decisions that must be made quickly, these emotive evaluations substitute for more reflective assessments. People consult their own emotions (visceral feelings about the goodness or badness of something) and use those as information in reaching a conclusion about an issue.⁴⁸

[R]epresentations of objects and events in people's minds are tagged to varying degrees with affect. People consult or refer to an ‘affective pool’ (containing all the positive and negative tags associated with the representations consciously or unconsciously) in the process of making judgments. . . . Using an overall, readily available affective impression can be far easier—more efficient—than weighing the pros and cons or retrieving from memory many relevant examples, especially when the required judgment or decision is complex or mental resources are limited.⁴⁹

People not only rely largely on intuitive perceptions of risks, they also tend to judge frequencies—make probability assessments—based on these affective responses. So the public is generally much more concerned about high profile (but low probability) hazards—such as risks of death from homicide, lightning, or cancer—than with lower profile (but higher probability) risks—such as those from diabetes or stroke. As a consequence, public sentiments about hazards are determined more by the affective responses to the image of various dangers rather than the actual likelihood of those dangers.

Researchers have also identified a number of other biases that influence decision making. Some of these are motivational rather than cognitive biases, or possess a combination of cognitive and motivational aspects.⁵⁰ One category is a set of “self-serving” biases, including

⁴⁶ Norbert Schwarz & Gerald L. Clore, *Mood, Misattribution, and Judgments of Well-Being: Informative and Directive Functions of Affective States*, 45 J. PERSONALITY & SOC. PSYCHOL. 513, 519-520 (1983).

⁴⁷ Paul Slovic, *What's Fear Got To Do With It? It's Affect We Need to Worry About*, 69 MO. L. REV. 971, 974 (2004) (citing R.B. Zajonc, *Feeling and Thinking: Preferences Need No Inferences*, 35 AM. PSYCHOLOGIST 151 (1980)).

⁴⁸ Norbert Schwarz, *Feelings as Information: Moods Influence Judgments and Processing Strategies*, in HEURISTICS AND BIASES, *supra* note 25, at 534, 536-547.

⁴⁹ Melissa L. Finucane et al., *The Affect Heuristic in Judgments of Risks and Benefits*, 13 J. BEHAV. DECISION MAKING 1, 3 (2000).

⁵⁰ Robert A. Prentice, *The SEC and MDP: Implications of the Self-Serving Bias for*

overconfidence, overoptimism, and egocentrism.⁵¹ People generally overestimate their own abilities (overconfidence) and are unrealistic when predicting outcomes in their own favor (overoptimism).⁵² Most people also tend to believe they are better drivers, more likeable, harder workers, less likely to get divorced, and less susceptible to health risks than other people.⁵³ Egocentrism entails taking excessive credit for successes, but attributing failures to other people, situational circumstances, or bad luck.⁵⁴

In the context of decisions about lawsuits, these self-serving biases can distort litigants' predictions about outcomes. This distortion can result in litigants being unwilling to settle cases, since they inflate their own chances of success at trial.⁵⁵ In the case of judges, self-serving biases lead to ideologically partisan decisions.⁵⁶ An effect of believing one is a resident of Lake Wobegon is a tendency to have little empathy for those perceived as nonresidents.⁵⁷ Other effects of unrealistic self-assessments and overoptimism include the ability to rationalize self-dealing (such as in corporate wrongdoing),⁵⁸ and the manipulative reinterpretation of outcomes to place a positive spin on them.⁵⁹ Various

Independent Auditing, 61 OHIO ST. L.J. 1597, 1616 (2000); Tom Pyszczynski et al., *Maintaining Consistency Between Self-Serving Beliefs and Available Data: A Bias in Information Evaluation*, 11 PERSONALITY & SOC. PSYCHOL. BULL. 179, 185-88 (1985).

⁵¹ See Rachlinksy, *supra* note 20, at 1172-73. See generally Ward Farnsworth, *The Legal Regulation of Self-Serving Bias*, 37 U.C. DAVIS L. REV. 567 (2003).

⁵² Korobkin & Ulen, *supra* note 12, at 1091 (defining the "overconfidence bias" as "the belief that good things are more likely than average to happen to us and bad things are less likely than average to happen to us").

⁵³ Baker & Emery, *supra* note 21, at 443; Ola Svenson, *Are We All Less Risky and More Skillful Than Our Fellow Drivers?*, 47 ACTA PSYCHOLOGICA 143, 145-46 (1981); Neil D. Weinstein, *Unrealistic Optimism About Susceptibility to Health Problems: Conclusions from a Community-Wide Sample*, 10 J. BEHAV. MED. 481, 486-88 (1987).

⁵⁴ Langevoort, *supra* note 10, at 1505; Miron Zuckerman, *Attribution of Success and Failure Revisited, or: The Motivational Bias Is Alive and Well in Attribution Theory*, 47 J. PERSONALITY 245, 254-55 (1979)

⁵⁵ Linda Babcock & George Loewenstein, *Explaining Bargaining Impasse: The Role of Self-Serving Biases*, 11 J. ECON. PERSP. 109, 110 (1997).

⁵⁶ Prentice, *supra* note 50, at 1628-29; see also 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).

⁵⁷ See, e.g., Max H. Bazerman et al., *Why Good Accountants Do Bad Audits*, HARV. BUS. REV., Nov. 2002, at 97, 100 (noting that an absence of familiarity can amplify unconscious biases, and finding that "[p]eople are more willing to harm strangers than individuals they know"); Erica Beecher-Monas, *Corporate Governance in the Wake of Enron: An Examination of the Audit Committee Solution to Corporate Fraud*, 55 ADMIN. L. REV. 357, 381 (2003) ("People have been shown to manipulate statistical inferences in ways consistent with the self-serving bias, and shareholders are the quintessential 'statistical others' in this regard.").

⁵⁸ Marleen A. O'Connor, *The Enron Board: The Perils of Groupthink*, 71 U. CIN. L. REV. 1233, 1294 (2003).

⁵⁹ See David A. Armor & Shelley E. Taylor, *When Predictions Fail: The Dilemma of Unrealistic Optimism*, in HEURISTICS AND BIASES, *supra* note 25, at 334, 343.

forms of in-group (racial, ethnic, and gender) biases are tied to discrimination against members of other identity groups.⁶⁰

B. *Evolutionary Challenges to Cognitivism*

Several researchers in cognitive psychology have questioned whether these mistakes in probability assessment are real or—assuming they are real—have questioned their significance. One line of critique from evolutionary psychologists defends the intuitive strategies. The evolutionary argument is that humans have, over time, adapted a set of cognitive tools that often enable them to make good decisions under time pressure even about problems with complex considerations and about which they have scant information. Gerd Gigerenzer and a number of other researchers propose that in situations where people deliberate about problems with complex variables and vast amounts of data, they use “fast and frugal heuristics” to make rapid and surprisingly accurate judgments.⁶¹ People thus can decide quickly what clothing to wear given the weather, avoid being sickened by unsafe food, determine how to divide resources among children, accurately reason by recognition to estimate the prestige of a university based on name familiarity, or evade unsafe situations by relying on their intuition.⁶² The cognitivists have responded that while mental shortcuts work well much of the time, they afford weak substitutes for more complex methods of reasoning when they are available.⁶³

⁶⁰ See generally SAMUEL L. GAERTNER & JOHN F. DOVIDIO, REDUCING INTERGROUP BIAS: THE COMMON INGROUP IDENTITY MODEL 7 (2000); See also Sheri L. Johnson, *Black Innocence and the White Jury*, 83 MICH. L. REV. 1611, 1640 (1985) (noting that “white subjects consistently display an own-race bias in guilt-attribution decisions as mock jurors in a laboratory setting”); Laurie A. Rudman & Stephanie A. Goodwin, *Gender Differences in Automatic In-Group Bias: Why Do Women Like Women More Than Men Like Men?*, 87 J. PERSONALITY & SOC. PSYCHOL. 494, 494, 507 (2004) (noting that generally “considerable evidence suggests that people who belong to the most socially valued groups strongly and automatically favor their own group,” but concluding on the basis of several experiments that “women’s automatic-group bias is remarkably stronger than men’s” and offering as explanation that women “are raised by their mothers, intimidated by male violence, less enthusiastic about sex, and possess a cognitively balanced gender identity, which bolsters in-group bias for the majority of women”).

⁶¹ See Daniel G. Goldstein & Gerd Gigerenzer, *The Recognition Heuristic: How Ignorance Makes Us Smart*, in SIMPLE HEURISTICS THAT MAKE US SMART 37-58 (Gerd Gigerenzer et al. eds., 1999). Goldstein and Gigerenzer identify tools such as “the recognition heuristic”—“If one of two objects is recognized and the other is not, then infer that the recognized object has the higher value,” *id.* at 41—and the “take the best heuristic,” which, in discriminating between choices, “first tries the cue with the highest validity, and if it does not discriminate, the next best cue, and so on.” *Id.* at 81. The idea that people often rely successfully on instincts and hunches has been popularized by Malcolm Gladwell in *BLINK: THE POWER OF THINKING WITHOUT THINKING* (2005).

⁶² See Goldstein & Gigerenzer, *supra* note 61, at 19, 30.

⁶³ Russell Korobkin & Chris Guthrie, *Heuristics and Biases at the Bargaining Table*, 87

Some psychologists have decried the idea that the mistakes are systematic, and have suggested instead that test subjects simply made computational errors. They argue that people can not be expected to perform perfectly, given the limits of human cognition. In their view, the experimental results showing cognitive inaccuracies demonstrated mere performance errors—“a momentary attention, memory, or processing lapse”—not systematic deviations from the norm.⁶⁴

Others have dismissed deviations from probabilistic rationality based on flaws in the research design—seeing the errors as “more an artifact of the artificiality of the way information is presented in the experiment than a function of inaccurate judgment in normal circumstances.”⁶⁵ Many of the mistakes that occurred under test conditions, they say, resulted from the ways experimenters presented the questions. Gigerenzer, for example, identified a possible weakness of Tversky and Kahneman’s experimental methods, by pointing out that people reached more accurate results if questions were phrased in terms of frequencies rather than probabilities.⁶⁶ He posited that humans intuitively reason better about how often events occur than they do about statistical probabilities.

Even if some of these critiques about study methodology are apt, “there are currently only a very small number of heuristics and biases experiments for which such explanations have been provided.”⁶⁷ Furthermore, although corrections to pragmatic problems in controlled experiments can *improve* the performance of test subjects, the wealth of experimental data show that people make systematic errors in reasoning and assessment of probabilities.⁶⁸ The vast heuristics and biases literature—spanning two decades, hundreds of researchers, and thousands of studies—demonstrates the predictable patterns of errors:

These deviations are far too systematic, both within and across individuals, to be considered randomly distributed. The systematic biases persist in the face of a variety of attempts to increase incentives as well as other motivational factors. The biases are exhibited by experts as well as novices and cannot be dismissed as

MARQ. L. REV. 795, 798-99 (2004).

⁶⁴ Keith E. Stanovich & Richard F. West, *Individual Differences in Reasoning: Implications for the Rationality Debate*, 23 BEHAV. & BRAIN SCI. 645, 646 (2000).

⁶⁵ D. Michael Risinger & Jeffrey L. Loop, *Three Card Monte, Monty Hall, Modus Operandi and “Offender Profiling”*: Some Lessons of Modern Cognitive Science for the Law of Evidence, 24 CARDOZO L. REV. 193, 196 n.10 (2002).

⁶⁶ Gerd Gigerenzer, *How to Make Cognitive Illusions Disappear: Beyond “Heuristics and Biases,”* 2 EUR. REV. SOC. PSYCHOL. 83 (1991).

⁶⁷ Richard Samuels, et al., *Reason and Rationality*, in HANDBOOK OF EPISTEMOLOGY (Matti Sintonen, et al., eds., 1999), available at <http://rucss.rutgers.edu/ArchiveFolder/Research%20Group/Publications/Reason/ReasonRationality.htm>, at 25.

⁶⁸ See generally Thomas Gilovich & Dale Griffin, *Heuristics and Biases: Then and Now*, in HEURISTICS AND BIASES, *supra* note 25, at 1.

random artifacts attributable to trivial, uninteresting, or unrepresentative tasks.⁶⁹

The differences between these schools of thought may be more a matter of optimism and pessimism.⁷⁰ Cognitivist scholars are interested in exploring the types of reasoning errors humans commit, while those pursuing evolutionary explanations are more interested in “cognitive successes”⁷¹—the ways the human mind has adapted a set of useful and efficient decision making strategies.⁷² Despite initial battles about whether cognitive biases were “real,”⁷³ the views on each side should not be portrayed as polar opposites. Tversky and Kahneman concluded that “[i]n general, these heuristics are quite useful, but sometimes they lead to severe and systematic errors.”⁷⁴ Gigerenzer has now moved toward identifying defects in inferential and probabilistic reasoning, such as “illusory certainty” and statistical innumeracy.⁷⁵ The research on decisionmaking behaviors under conditions of uncertainty continues to flourish.⁷⁶

II. COGNITIVE BIASES AND LEGAL THEORY

A. *Initial Applications*

In one of the earliest applications of heuristics to law, law professors Michael Saks and Robert Kidd reviewed these identified types of cognitive biases. They suggested that these patterns of misconception would introduce predictable types of partiality in the ways trial factfinders make decisions—in evaluations of such things as the reasonableness of behavior, causation evidence, and witness

⁶⁹ Eldar Shafir & Robyn A. LeBoeuf, *Rationality*, 2002 ANN. REV. PSYCHOL. 491 (2002), available at 2002 WLNR 9106451.

⁷⁰ See Risinger & Loop, *supra* note 65, at 196 n.10 (“The debate appears to be a debate over whether our cognitive cup is half or more empty, or half or more full, since both sides concede that there are some problems we solve well, and some problems we deal with poorly.”)

⁷¹ Robert A. Prentice, *Chicago Man, K-T Man, and the Future of Behavioral Law and Economics*, 56 VAND. L. REV. 1663, 1719 n.295 (2003).

⁷² See Korobkin & Guthrie, *supra* note 63, at 795, 796 n.5 (2004); Gerd Gigerenzer & Peter M. Todd, *Fast and Frugal Heuristics: The Adaptive Toolbox*, in SIMPLE HEURISTICS THAT MAKE US SMART, *supra* note 61, at 3-34.

⁷³ See Daniel Kahneman & Amos Tversky, *On the Reality of Cognitive Illusions*, 103 PSYCHOL. REV. 582 (1996); Gerd Gigerenzer, *On Narrow Norms and Vague Heuristics: A Reply to Kahneman and Tversky* (1996), 103 PSYCHOL. REV. 592 (1996).

⁷⁴ Tversky & Kahneman, *supra* note 23, at 3.

⁷⁵ GERD GIGERENZER, CALCULATED RISKS: HOW TO KNOW WHEN NUMBERS DECEIVE YOU 14, 37 (2002). See Prentice, *supra* note 71, at 1719.

⁷⁶ See, e.g., Richard E. Petty, *Multi-Process Models in Social Psychology Provide a More Balanced View of Social Thought and Action*, 27 BEHAV. & BRAIN SCI. 353 (2004).

credibility.⁷⁷ Saks and Kidd argued that given the frailties of common sense or intuitive reasoning, courts should encourage greater mathematical precision, particularly in cases involving sophisticated statistical or quantitative concepts, such as environmental pollution, products liability, or antitrust.⁷⁸ Greater efforts toward more specific probability calculations (such as diagnostic error rates, probability rates for compound occurrences, or base-rate probabilities), they concluded, would lead factfinders toward more accurate conclusions.⁷⁹

Another early effort in identifying “cognitive illusions” and discussing their consequences for legal analysis came from social scientists writing for a law review.⁸⁰ Decision theorists Ward Edwards & Detlof von Winterfeldt reviewed some of the most common errors of probability and inference. They reported that in estimating probabilities of events occurring, test subjects ignore base rates (how frequently events are likely to occur in a given population) and sample size, and thus believe that information drawn from small samples is representative of larger populations (called “a belief in the law of small numbers”).⁸¹ They also noted that people are likely to be overconfident in estimating the accuracy of their own answers regarding probability assessment tasks.⁸² These intellectual errors have significant implications for legal decision makers. Lawyers, clients, witnesses, judges, and jurors all make calculations about such issues as probabilities of success in a lawsuit, causes of accidents, or attribution of injuries that are influenced by these cognitive illusions.

Since then, legal scholars writing in substantive areas as varied as commercial transactions, torts, and employment discrimination have drawn on the research in cognitive psychology to assist in understanding the limitations of human information processing capabilities under a condition of uncertain information—a condition that, of course, encompasses most juridical relations. Law professors began to apply the heuristics literature to various substantive areas, such as the reasons why so many people file for bankruptcy, the ways uncertainty biases influence contract negotiations about future risks, or the ways jurors make decisions about causal responsibility in tort law.⁸³

⁷⁷ Michael J. Saks & Robert F. Kidd, *Human Information Processing and Adjudication: Trial by Heuristics*, 15 *LAW & SOC'Y REV.* 123 (1980).

⁷⁸ *Id.* at 127, 133.

⁷⁹ *Id.* at 154-55.

⁸⁰ Edwards & von Winterfeldt, *supra* note 5. For the original use of the term “cognitive illusions,” see L. Jonathan Cohen, *Can Human Irrationality Be Experimentally Demonstrated?*, 4 *BEHAV. & BRAIN SCI.* 328 (1981).

⁸¹ Edwards & von Winterfeldt, *supra* note 5, at 232-37 (citing Kahneman & Tversky, *supra* note 23).

⁸² *Id.* at 238-42.

⁸³ See, e.g., Douglas G. Baird, *A World Without Bankruptcy*, 50 *LAW & CONTEMP. PROBS.* 173 (1987); Joseph Sanders, *From Science to Evidence: The Testimony on Causation in the*

One of the most frequent applications of the cognitive bias literature occurs in legal theory by those questioning the assumptions of law and economics.

B. *Law and Economics and the Rational Choice Model*

Law and economics dominated the field of jurisprudence in the last three decades of the twentieth century. Decision making in the economic analysis of law is based on the assumption of individual rationality. The model says that humans consider costs and benefits and make rational choices, according to their own preferences, to maximize their individual utilities.⁸⁴ These efficient individual decisions result in a collective maximization of social welfare.

Those challenging law and economics turned to the field of heuristics to question the underlying assumption of universally rational behavior.⁸⁵ The cognitive psychology literature says that people use subconscious habits of decisionmaking that entail biases, behavioral or motivational tilts, mental shortcuts, and predictable patterns of cognitive errors. This phenomenon means that people will make decisions that are not consistently “rational” in the logical-evidentiary sense—decisions that, in the words of law and economics, “fail to maximize their expected utility.”⁸⁶

Theorists differed, of course, on whether this idea of bounded rationality undermined—or just critically refined—the neoclassical model. Those attacking the rational choice model argued that the cognitive psychology literature demonstrates that people often cannot or do not make rational decisions.⁸⁷ Those supporting it simply pointed out that understanding these systematic patterns of errors helps “fine-tune the model to take account of predictable cognitive limitations and biases.”⁸⁸ As the debates raged about the implications of heuristics and

Bendectin Cases, 46 STAN. L. REV. 1, 56 n.256 (1993); Robert E. Scott, *Conflict and Cooperation in Long-Term Contracts*, 75 CAL. L. REV. 2005 (1987).

⁸⁴ JURISPRUDENCE: CLASSICAL AND CONTEMPORARY: FROM NATURAL LAW TO POSTMODERNISM 300 (Robert L. Hayman, Jr., Nancy Levit, & Richard Delgado eds., 2002).

⁸⁵ See, e.g., Robert C. Ellickson, *Bringing Culture and Human Frailty to Rational Actors: A Critique of Classical Law and Economics*, 65 CHI.-KENT L. REV. 23 (1989); Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998); Cass R. Sunstein, *Behavioral Analysis of Law*, 64 U. CHI. L. REV. 1175 (1997).

⁸⁶ Korobkin & Ulen, *supra* note 12, at 1069.

⁸⁷ See, e.g., Larry T. Garvin, *Adequate Assurance of Performance: Of Risk, Duress, and Cognition*, 69 U. COLO. L. REV. 71, 145 (1998) (“Cognitive psychology and experimental economics have found a smorgasbord of cognitive errors, which collectively falsify most of the axioms of rational choice theory.”).

⁸⁸ Anne C. Dailey, *Striving for Rationality*, 86 VA. L. REV. 349, 384 (2000).

biases for the usefulness of law and economics,⁸⁹ other jurisprudential thinkers offered a very different perspective on the importance of heuristics for everyday judgments and behaviors.

C. *Heuristics and Identity Theories in Jurisprudence*

In the mid to late 1980s, critical race theorists began to tap research in psychoanalytic theory and cognitive psychology about the ways humans perceive the world, what forms of persuasion work best with different audiences, and how discrimination operates.⁹⁰ In an extraordinarily influential article, law professor Charles Lawrence explored cognitive research about the ways people categorize based on race.⁹¹ Most discrimination occurs, the research showed, because people subconsciously rely on race and gender stereotypes. Lawrence argued that because unconscious racial motivations are more powerful and much more pervasive than conscious racism, current constitutional equal protection doctrine—which requires proof of discriminatory intent—is ineffective in redressing discrimination.

Feminist legal theorists also relied on social cognition theory to address Title VII antidiscrimination doctrine and the intractability of prejudices. Professor Linda Krieger, for example, explained that stereotypes are one form of heuristic: a shorthand mechanism of processing information about people.⁹² Humans often, and usually unthinkingly, categorize based on race, gender, and ethnicity—characteristics which are visible, as well as historically and culturally important categories.⁹³ People internalize prevailing social stereotypes and tend to interpret facts consistently with the stereotypes. Meanwhile, they discard facts that are stereotype-inconsistent, so that the stereotypes themselves influence recollections of events, perceptions and evaluations of others, and interpretations of situations. An

⁸⁹ See, e.g., Richard A. Posner, *Rational Choice, Behavioral Economics, and the Law*, 50 STAN. L. REV. 1551 (1998); Robert E. Scott, *The Limits of Behavioral Theories of Law and Social Norms*, 86 VA. L. REV. 1603 (2000).

⁹⁰ See Gerald López, *Lay Lawyering*, 32 UCLA L. REV. 1 (1984).

⁹¹ Charles R. Lawrence, III, *The Id, the Ego, and Equal Protection: Reckoning with Unconscious Racism*, 39 STAN. L. REV. 317 (1987).

⁹² Krieger, *supra* note 18, at 1239.

People will divide the natural and social environment into categories; they will use stereotypes, scripts, and schemas to interpret, encode and retrieve information relevant to social judgment. They will rely on the availability and representativeness heuristics to estimate frequency and predict the future. And, because race, ethnicity, and gender have been made salient by our history and by observable patterns of economic, demographic, and political distribution, people will continue to categorize along those lines.

Id.

⁹³ Reskin, *supra* note 18, at 320.

important feature of stereotyping is that the biases it introduces “are cognitive rather than motivational; in other words, they occur independently of decision makers’ group interests or their conscious desire to favor or harm others.”⁹⁴ As Krieger and others have shown, if much discrimination is unconscious, many subtle discriminatory practices remain outside the reach of antidiscrimination laws.⁹⁵

Cognition theory understands mental functions as information processing models. Stereotypical assumptions about people are just one type of automatic cognitive categorizing structure. The errors of stereotyping are tied to errors of salience and representativeness.⁹⁶

Identity theorists have consulted the social cognition literature primarily to focus on the ways humans categorize and stereotype and thus make unconsciously biased decisions about people. They have not tapped related areas of research in cognitive psychology—the study of heuristic errors of probability and motivation. Largely omitted have been the ways other heuristic errors can contribute to discriminatory analysis. Because of the ways other cognitive heuristics operate, they may influence gender issues in more subtle and less detectable ways than pure stereotypic assumptions about people.

The absence of attention to heuristics by feminist legal theorists may have to do with difficulties of applying heuristics to gender topics. Many issues about legal regulations with gender implications are not subject to frequentist or statistical probability analysis, or simply have nothing to do with risk assessments. Some are and do: The probability that a teenage boy will be involved in alcohol related traffic accidents compared to a teenage girl;⁹⁷ the rates at which men and women commit intimate violence;⁹⁸ or the relative frequency of harassment of the two sexes in the workplace.⁹⁹

The comprehension of social situations involving gender issues entails complex variables, where it may be difficult to discern or

⁹⁴ *Id.* at 321.

⁹⁵ Krieger, *supra* note 18, at 1169; *see also* Jody Armour, *Stereotypes and Prejudice: Helping Legal Decision Makers Break the Prejudice Habit*, 83 CAL. L. REV. 733 (1995); Martha Chamallas, *Deepening the Legal Understanding of Bias: On Devaluation and Biased Prototypes*, 74 S. CAL. L. REV. 747 (2001); John F. Dovidio & Samuel L. Gaertner, *On the Nature of Contemporary Prejudice: The Causes, Consequences and Challenges of Aversive Racism*, in *CONFRONTING RACISM: THE PROBLEM AND THE RESPONSE* 3, 5 (Jennifer L. Eberhardt & Susan T. Fiske eds., 1998); Ian Haney López, *Institutional Racism: Judicial Conduct and a New Theory of Racial Discrimination*, 109 YALE L.J. 1717 (2000).

⁹⁶ Krieger, *supra* note 18, at 1193-95, 1200-01.

⁹⁷ *Craig v. Boren*, 429 U.S. 190 (1976).

⁹⁸ Linda Kelly, *Disabusing the Definition of Domestic Abuse: How Women Batter Men and the Role of the Feminist State*, 30 FLA. ST. U. L. REV. 791, 793 (2003) (“By dismissing the possibility of female violence, the framework of legal programs and social norms is narrowly shaped to respond only to the male abuse of women.”).

⁹⁹ *See* EQUAL EMPLOYMENT OPPORTUNITY COMMISSION (EEOC), SEXUAL HARASSMENT CHARGES, EEOC & FEPAS COMBINED: FY 1992-FY 2004, <http://eeoc.gov/stats/harass.html>.

attribute systematic processing errors. Perhaps identity theorists conclude that the superb work that already exists regarding unconscious stigmatizing biases draws on the strand of social cognition theory most directly relevant to discriminatory behavior against race and gender minorities. Feminist and critical race theorists may have avoided the topic of more generalized heuristic reasoning flaws due to worry that a focus on patterns of irrationalism in reasoning would make a case for greater government paternalism.¹⁰⁰ Whatever the reasons, identity theorists have not yet addressed the interplay of stereotypic thinking and heuristic errors.

III. POPULAR AND LEGAL UNDERSTANDINGS OF GENDER

Heuristic errors mingle with gendered perceptions. This mingling is unsurprising, since one of the ways people make shorthand decisions about others is through gender.¹⁰¹ This Part explores the ways courts and commentators at times commit subtle errors of probabilistic reasoning about issues relating to gender. Sometimes, heuristic errors are difficult to see, especially when they are buried in a politically laden position or entwined with other, more blatant forms of stereotyping. At other times, the structure of an argument may contain several varied types of emotive or probabilistic errors. This Part reviews a number of different examples of heuristic errors that have gendered consequences. The first section of this Part delves into the ways public perceptions can be influenced by cognitive errors. The second Part investigates the ways judges either commit or invite heuristic errors in legal decisions.

A. *Heuristic Errors and Public Perception*

1. Errors in Availability and Representativeness

Among the most prominent cognitive errors in public perceptions of gender issues are miscalculations based on availability (ease of recall) and representativeness (gauging probabilities by how closely the facts resemble a model image). An intriguingly gendered example of a representativeness error occurs in an early study done by Tversky and Kahneman, in which the researchers presented a hypothetical character, Linda.¹⁰² Linda was described as a bright, outspoken single 31-year-old

¹⁰⁰ See Rachlinski, *supra* note 20, at 1165.

¹⁰¹ See, e.g., Eugene Borgida et al., *On the Use of Gender Stereotyping Research in Sex Discrimination Litigation*, 13 J.L. & POL'Y 613, 617 (2005).

¹⁰² Amos Tversky & Daniel Kahneman, *Judgments of and by Representativeness*, in

woman, who was formerly a philosophy major and an activist for social justice during her student days.¹⁰³ The problem also said Linda was concerned with discrimination issues and had participated in anti-nuclear demonstrations.¹⁰⁴ The respondents were asked to assign probabilities to various possible situations for Linda, including that she was an elementary school teacher, a social worker, a bank teller, or a bank teller and active in the feminist movement.¹⁰⁵ Eighty-five percent of the test subjects assigned a higher probability rating to the last description “a bank teller and . . . active in the feminist movement” than simply to “a bank teller.”¹⁰⁶ This result is an example of the representativeness heuristic at work.

Specifically, the error is the conjunction fallacy—it is not statistically more probable that a person is a member of a subset (feminist bank tellers) than of the larger set (bank tellers), which logically includes the subset. As a matter of probability, a person is less likely to possess characteristics A and B (bank teller and feminist) than characteristic A (bank teller) alone. What leads people to commit the error is the personal information in the description of Linda. She is described in terms (single female, outspoken, social justice activist) that match one stereotype of a feminist. Those characteristics seem representative of the category “feminist” and that descriptive similarity causes people to focus on that category and neglect statistical probabilities.¹⁰⁷

The laboratory results in the Linda problem show us something about how people think about gender in the real world. Many kinds of gender cases and issues are tried first in the court of public opinion. Popular perceptions of sexual harassment suits, for example, rest on a variety of misconceptions—among others, myths that the harassment is not “real” because it is just teasing or there were no tangible consequences, that the harassment is usually invited by the victim, that men cannot be harassed, or that the victim should take responsibility for ending any harassment.¹⁰⁸ A generalized sentiment is that the law of

JUDGMENT UNDER UNCERTAINTY, *supra* note 1, at 84, 92-93.

¹⁰³ *Id.* at 92.

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ Tversky & Kahneman, *supra* note 30, at 299.

¹⁰⁷ Critics charged that semantic ambiguities in the phrasing of this hypothetical led test subjects to commit the conjunction error. See Ralph Hertwig & Gerd Gigerenzer, *The ‘Conjunction Fallacy’ Revisited: How Intelligent Inferences Look Like Reasoning Errors*, 12 J. BEHAV. DECISION MAKING 275 (1999). Later tests of this proposition, though, proved inconclusive. See Barbara Mellers et al., *Do Frequency Representations Eliminate Conjunction Effects? An Exercise in Adversarial Collaboration*, 12 PSYCHOL. SCI. 269 (2001).

¹⁰⁸ See, e.g., Christine A. Littleton, *Dispelling Myths About Sexual Harassment: How the Senate Failed Twice*, 65 S. CAL. L. REV. 1419, 1422-24 (1992). Littleton identified various myths such as:

Myth #1. Because there was no adverse employment consequence, there was no “real”

sexual harassment has gone too far and that juries are awarding large verdicts for people saying “‘Nice ass’ once, jokingly, by the water cooler.”¹⁰⁹ The specific complaints are that plaintiffs are filing an overabundance of sexual harassment suits and that too many of these are overreaching, frivolous, or even false.¹¹⁰

Empirical information refutes these misconceptions. The legal requirement that sexual harassment must be sufficiently severe or pervasive to “create an objectively hostile or abusive work environment—an environment that a reasonable person would find hostile or abusive”—serves as an exacting limit on trivial claims.¹¹¹ The rate of charge filing with the Equal Employment Opportunity Commission (EEOC) rose from 10,532 claims in 1992 to a high of 15,889 in 1997; since then claims leveled off and then declined to 13,136 in 2004.¹¹² A poll conducted by the *Washington Post* revealed that “[n]early 80 percent of men and women . . . thought that false complaints were common.”¹¹³ Experts estimate the incidence of false claims at fewer than one percent of all claims filed.¹¹⁴

The disjunction between public beliefs and empirical realities rests on a combination of availability and representativeness errors. People consider the unusual or memorable cases that they can recall as representative of the norm. News reports about anomalous or unusual cases fuel these misconceptions. The media has been attentive to extreme cases that fuel perceptions that sexual harassment law has overreached. This exaggeration comes in various forms, such as excessive attention to anomalous cases;¹¹⁵ biting editorials;¹¹⁶ and even

sexual harassment. . . . Myth #2. If there was no effect on work performance, there could not have been any sexual harassment. . . . Myth #3. If he didn’t touch her, he didn’t sexually harass her. . . . Myth #5. A sexual harassment charge is particularly hard to defend against. . . . Myth #6. It is impossible to tell the difference between legitimate flirting and illegal sexual harassment.

¹⁰⁹ Lawrence Grobel, *Playboy Interview: David Duchovny*, PLAYBOY, Dec. 1998, at 63, 70.

¹¹⁰ “In a *Time*/CNN poll earlier this year, more than half of men and women agreed that ‘[w]e have gone too far in making common interactions between employees into cases of sexual harassment.’” Cathy Young, *Groping Toward Sanity: Why the Clinton Sex Scandals Are Changing the Way We Talk About Sexual Harassment*, REASON, Aug./Sept. 1998, available at <http://reason.com/9808/fe.young.shtml>.

¹¹¹ See *Harris v. Forklift Sys., Inc.*, 510 U.S. 17, 21 (1993).

¹¹² EEOC, SEXUAL HARASSMENT CHARGES: FY 1992-FY 2004, *supra* note 99.

¹¹³ Young, *supra* note 110.

¹¹⁴ See John W. Whitehead, *Eleventh Hour Amendment or Serious Business: Sexual Harassment and the United States Supreme Court’s 1997-1998 Term*, 71 TEMP. L. REV. 773, 776 (1998).

¹¹⁵ Deborah Zelesne, *Sexual Harassment Law in the United States and South Africa: Facilitating the Transition from Legal Standards to Social Norms*, 25 HARV. WOMEN’S L.J. 143, 147 (2002) (noting the attention given to *MacKenzie v. Miller Brewing Co.*, No. 94-CV-010871 (Wis. Cir. Ct. July 1997), *rev’d*, 608 N.W.2d 331 (Wis. Ct. App. 2000), *aff’d*, 623 N.W.2d 739 (Wis. 2001), in which a jury awarded over \$26 million to a male executive who was wrongfully terminated for recounting a risqué *Seinfeld* episode to a female employee); accord Andrea A. Curcio, *Rule 412 Laid Bare: A Procedural Rule That Cannot Adequately Protect Sexual*

popular novels, plays, and movies.¹¹⁷ When public opinion questions the validity of sexual harassment suits, it can “sow the seeds of backlash against protecting women from genuinely harmful forms of hostile work environment harassment,”¹¹⁸ and lead to disposal of cases before they reach juries,¹¹⁹ minimalist jury awards,¹²⁰ and decisions that shield employers from vicarious liability.¹²¹

As one example of several different types of heuristic errors, consider the media attention given to the rescue of Army Pfc. Jessica Lynch, and the debate it generated about women in military service. The capture of Lynch and the killing of Pfc. Lori Piestewa by Iraqi forces in 2003 gripped media headlines for months. Conservatives seized on this single event to argue that putting women “in harm’s way” constituted violence against women,¹²² created dangers to unit morale and men’s health because it elicited “male protectiveness,”¹²³ and was a method of “enacting the agenda of the radical feminist movement.”¹²⁴ Although women are already prohibited from serving in combat roles, the Lynch episode prompted an effort by House Republican leaders to bar women from combat-support units—a move that could make women ineligible for over 20,000 jobs.¹²⁵ Some made the empirical argument that women are more susceptible to being injured on the front lines because they lack the strength and endurance to defend themselves.¹²⁶ That Lynch needed rescuing provided the argument that the presence of women undermined combat effectiveness.

Feminist legal theorists can criticize these efforts to further restrict the employment and advancement possibilities for women for a host of

Harassment Plaintiffs from Embarrassing Exposure, 67 U. CIN. L. REV. 125, 162 n.253 (1998) (citing editorials about hypersensitive plaintiffs, groundless claims, and typical workplace banter).

¹¹⁶ See, e.g., Kingsley Browne, *Harassment Law Chills Free Speech*, DETROIT NEWS, July 9, 2002, at 7A.

¹¹⁷ See, e.g., MICHAEL CRICHTON, *DISCLOSURE* (1994); DAVID MAMET, *OLEANNA* (1994).

¹¹⁸ Vicki Schultz, *Reconceptualizing Sexual Harassment*, 107 YALE L.J. 1683, 1792 (1998) (citing cases).

¹¹⁹ See Theresa M. Beiner, *Let the Jury Decide: The Gap Between What Judges and Reasonable People Believe is Sexually Harassing*, 75 S. CAL. L. REV. 791, 808 (2002).

¹²⁰ L. Kathleen Chaney, *Employment Practices Liability Insurance*, 30 COLO. LAW. 125, 126 (2001) (comparing median jury awards for sexual harassment suits—\$38,500—with those for age discrimination, \$219,000; race discrimination, \$147,799; gender discrimination, \$106,728; disability discrimination, \$100,345; and pregnancy discrimination, \$87,500).

¹²¹ See, e.g., *Faragher v. City of Boca Raton*, 524 U.S. 775 (1998); *Burlington Indus., Inc. v. Ellerth*, 524 U.S. 742 (1998); *Gebser v. Lago Vista Indep. Sch. Dist.*, 524 U.S. 274 (1998).

¹²² Cathy Young, *Should Women Fight Wars?*, BOSTON GLOBE, May 30, 2005, at A11.

¹²³ Mackubin Thomas Owens, *GI Jane, Again*, NAT’L REV., June 6, 2005, at 22.

¹²⁴ George Wallace, *Emasculating the Military*, NEW AM., May 30, 2005, at 21.

¹²⁵ Cokie Roberts & Steven Roberts, *Despite Rules Restricting Women, the Army Has Found Ways To Insert Them Into Units In Combat Zones*, CHI. SUN-TIMES, June 3, 2005, at 51.

¹²⁶ Kathleen Parker, *Myth of Equality Aids the Enemy*, May 31, 2004, KANSAS CITY STAR, at B5.

egalitarian reasons,¹²⁷ but the proposed legislation as well as the columns and editorials written about Lynch succumb to several heuristic flaws as well. Of course, Iraq has no front lines, so the empirical argument was based on an artificial distinction. But the statistics that are known belie the argument that women are more likely to be injured in a war zone. Women make up close to 15 percent of active duty military personnel in this country; 9,000 female soldiers are deployed in Iraq.¹²⁸ Of the 1,647 U.S. soldiers killed in the Iraq war, 35—only 2 percent—have been women.¹²⁹

The empirical claims neglected the base rates at which the event of female soldiers' dying in the war was actually occurring. Pundits and lawmakers made the salience error of substituting the single, vivid, emotional—and statistically unusual—image of Lynch in lieu of statistical probability evidence. In short, “[o]pponents of women in the military . . . were eager to use Lynch’s story to write off the female warrior as a feminist myth.”¹³⁰

Ultimately, what the Army learned from situations like these was the need to provide additional combat training for soldiers in support units.¹³¹ That lesson, however, is not at the forefront of popular impressions about the capture of American soldiers in Iraq. Two and a half years after the event, Jessica Lynch—the woman who needed rescuing—is the affective image that has endured. What quickly faded from public memory was that on March 23, 2003, the Iraqis captured not only Lynch, but also one other American woman, Spec. Shoshana Johnson, and four American men, Spec. Edgar Hernandez, Pfc. Joseph Hudson, Pfc. Patrick Miller, and Sgt. James Riley.¹³² The next day, the Iraqis forced down the helicopter flown by Chief Warrant Officers David S. Williams and Ronald D. Young Jr., and captured them. While Lynch was separated from the others because of her injuries, and her rescue effort was separate, on that same date, U.S. Marines also freed the other seven POWs.¹³³ When partisan commentators use “the Lynch episode” to make arguments about the safety of female soldiers in war zones, they focus on the fact that a female soldier needed saving and

¹²⁷ Roberts & Roberts, *supra* note 125 (prohibiting women from combat is “significant in terms of [career] advancement for women in the Army. Combat jobs often lead to promotions faster than others, and the idea that women are not suited for them implies second-class status.”).

¹²⁸ Andrea Stone, *Panel’s Decision Reheats Women-In-Combat Debate*, USA TODAY, May 20, 2005, at 7A.

¹²⁹ *Saving Private Jane*, CHI. TRIB., June 4, 2005, at C22.

¹³⁰ Young, *supra* note 122.

¹³¹ Chuck Crumbo, *War Makes Recruiting Women Tough*, COLUM. STATE, May 22, 2005, at A1.

¹³² *Mother, Fathers, Brothers Held By Iraq*, SEATTLE TIMES, Mar. 25, 2003 at A6.

¹³³ John W. Gonzalez, *America At War; Joyful Return; Rescued POWs Coming Home Soon*, U.S. SAYS, HOUS. CHRON., Apr. 18, 2003 at A25.

overlook the fact that a number of male soldiers did too.¹³⁴ This entails a representativeness error of disregarding the prevalence of an event in evaluating the significance of it.

2. Salience Errors

The political spin on the capture and rescue of Jessica Lynch is by no means unique. Commentators often use single images or episodes to make policy arguments about gender issues, even if those most vivid or unusual examples are not representative of statistical patterns—a salience error. In fact, it is often the novelty or unusual features of the antecedent event that makes it distinctive and readily available to memory. Take, for instance, an early representation of feminists as “bra-burners.” In 1968, in a protest outside the Miss America Pageant by members of the New York chapter of the National Organization for Women “a few women tossed some padded brassieres in a trash can.”¹³⁵ These were accompanied by some girdles, curlers, cosmetics, and several copies of *Cosmopolitan* and *Playboy*.¹³⁶ “No one actually burned a bra that day—as a journalist erroneously reported. In fact, there’s scant evidence of undergarment pyrotechnics at any women’s rights demonstration in the decade.”¹³⁷ While the political statement at this isolated event almost four decades ago was akin to the burning of a draft card, the popular image of feminists as “bra-burners, man-haters, sexists, and castrators . . . as well as overly sensitive and humorless” has endured.¹³⁸ This single media event characterized the movement.

Extreme images and cases can influence decision makers to make salience errors. Anti-abortion strategies have centered on emotive imagery for years. The icon of the anti-abortion crusade has been presenting “the fetus as a fully formed ‘preborn baby.’”¹³⁹ This visual image has extended from protestors outside clinics carrying fetuses in jars and posters displaying grisly photographs of aborted fetuses, to vans with pictures of fetuses plastered on their sides roaming college

¹³⁴ Nancy Ehrenreich, *Disguising Empire: Racialized Masculinity and the “Civilizing” of Iraq*, 52 CLEV. ST. L. REV. 131, 137 (2005).

¹³⁵ SUSAN FALUDI, BACKLASH: THE UNDECLARED WAR AGAINST AMERICAN WOMEN 75 (1992).

¹³⁶ RUTH ROSEN, THE WORLD SPLIT OPEN: HOW THE MODERN WOMEN’S MOVEMENT CHANGED AMERICA 168 (2001).

¹³⁷ FALUDI, *supra* note 135, at 75.

¹³⁸ Leslie Bender, *A Lawyer’s Primer on Feminist Theory and Tort*, 38 J. LEGAL EDUC. 3, 3 (1988).

¹³⁹ CYNTHIA R. DANIELS, AT WOMEN’S EXPENSE: STATE POWER AND THE POLITICS OF FETAL RIGHTS 9 (1993).

campuses, to the anti-abortion “documentary,” *The Silent Scream*, to graphic images on web sites of dismembered fetuses.¹⁴⁰

The images move from public discourse to the realm of regulation. Abortion opponents believe that fewer women would have abortions if they viewed ultrasound videos, and they have lobbied legislatures in numerous states to compel pregnant women to view those images. Indiana requires doctors performing abortions to inform patients that they can see an ultrasound picture of their fetus.¹⁴¹ A bill just passed by the Michigan House of Representatives requires pregnant women seeking abortions to undergo ultrasounds before they can obtain the procedure. While the law does not compel women to view the ultrasounds, it does require doctors to offer women the opportunity to see the images.¹⁴²

The recent national debate about “partial birth abortion” (itself an attempt to frame the issue by suggesting that birth is involved in the process) illustrates the ways in which an affective image can undermine objective assessments of empirical realities and lead to policymaking based on errors of salience. Abortion opponents framed the debate about the dilation and extraction procedure (D & X) as the paradigm case of killing close to full-term infants.¹⁴³ Choice advocates recognized that the matter is an emotionally charged but statistically fringe issue. In contrast to the paradigm image promoted by abortion opponents, women do not zip down to the local Planned Parenthood for an abortion in their eighth month of pregnancy. The overwhelming majority of abortions are performed before viability. Approximately 90 percent of all abortions in this country occur during the first trimester of pregnancy, with almost the entire remaining 10 percent occurring in the second trimester.¹⁴⁴ An estimated .01 percent of the more than one million abortions each year involve the D & X method.¹⁴⁵ In short, the images do not correspond to the numbers.

In 2000, in *Stenberg v. Carhart*,¹⁴⁶ the Supreme Court struck down a law criminalizing D & X abortions, in part due to its vagueness, in

¹⁴⁰ See generally Steven G. Gey, *The Nuremberg Files and the First Amendment Value of Threats*, 78 TEX. L. REV. 541 (2000); Rosalind Pollack Petchesky, *Fetal Images: The Power of Visual Culture in the Politics of Reproduction*, 13 FEMINIST STUDIES 263 (1987).

¹⁴¹ Amanda Paulson, *Efforts to Curb Abortion Proliferate at State Level*, CHRISTIAN SCI. MONITOR, June 13, 2005, at 1.

¹⁴² H.B. 4446, 93d Leg., 1st Reg. Sess. (Mich. 2005).

¹⁴³ See, e.g., Douglas Johnson, *The Partial-Birth Abortion Ban Act: Misconceptions and Realities*, Nov. 5, 2003, <http://www.nrlc.org/abortion/pba/PBAa1110403.html>.

¹⁴⁴ *Stenberg v. Carhart*, 530 U.S. 914, 923-24 (2000); see also Alan Guttmacher Institute, *Induced Abortion in the United States*, May 18, 2005, http://www.agi-usa.org/pubs/fb_induced_abortion.html (showing in chart form that only 1.4% of all abortions occur after 21 weeks of gestational age).

¹⁴⁵ *Stenberg*, 530 U.S. at 928.

¹⁴⁶ *Id.* at 914.

part because of the rarity of the procedure, and in part because it lacked an emergency exception for the health of a pregnant woman.¹⁴⁷ In reaching its conclusions, the *Stenberg* Court carefully examined the statistical information regarding the prevalence and safety of various abortion methods and gave considerable weight to numerous scientific studies regarding mortality and complications risks.¹⁴⁸ Three years later, a conservative Congress and President respectively passed and signed into law the Partial Birth Abortion Ban Act (PABA), which embraces the imagery rather than the statistics.¹⁴⁹

Cases on the constitutionality of the 2003 PABA are wending their way through the lower federal courts. The four federal district courts and two federal appellate courts evaluating the PABA have all relied on the “substantial medical authority” cited in *Stenberg* to determine that the Act is unconstitutional in failing to contain an exception for the health of the mother.¹⁵⁰ Several of those courts also held that the PABA imposes an undue burden on a woman’s right to choose abortion because it encompasses procedures other than dilation and extraction, and is not specific regarding gestational age of the fetus.¹⁵¹ While the federal courts are making decisions about the federal D & X abortion statute based on empirical information, the gruesome imagery is still influential with the public.¹⁵²

¹⁴⁷ *Id.* at 914, 923-24, 930, 934, 939-45.

¹⁴⁸ *Id.* at 923-30.

¹⁴⁹ Pub. L. No. 108-105, § 2, 117 Stat. 1201 (to be codified at 18 U.S.C. § 1531). Section (1) of the Act states:

A moral, medical, and ethical consensus exists that the practice of performing a partial-birth abortion—an abortion in which a physician deliberately and intentionally vaginally delivers a living, unborn child’s body until either the entire baby’s head is outside the body of the mother, or any part of the baby’s trunk past the navel is outside the body of the mother and only the head remains inside the womb, for the purpose of performing an overt act (usually the puncturing of the back of the child’s skull and removing the baby’s brains) that the person knows will kill the partially delivered infant, performs this act, and then completes delivery of the dead infant—is a gruesome and inhumane procedure that is never medically necessary and should be prohibited.

¹⁵⁰ See *Carhart v. Ashcroft*, 331 F. Supp. 2d 805, 1004 (D. Neb. 2004), *aff’d sub nom* *Carhart v. Gonzales*, 413 F.3d 791 (8th Cir. 2005), *cert. granted*, 74 U.S.L.W. 3471 (U.S. Feb. 21, 2006) (No. 05-380); see also *Richmond Med. Ctr. for Women v. Hicks*, 301 F. Supp. 2d 499 (E.D. Va. 2004), *aff’d*, 409 F.3d 619 (4th Cir. 2005); *Nat’l Abortion Fed’n v. Ashcroft*, 330 F. Supp. 2d 436 (S.D.N.Y. 2004); *Planned Parenthood Fed’n of America v. Ashcroft*, 320 F. Supp. 2d 957 (N.D. Cal. 2004).

¹⁵¹ See *Planned Parenthood Fed’n of America v. Ashcroft*, 320 F. Supp. 2d 957 (N.D. Cal. 2004).

¹⁵² Poll data indicate that a significant majority of Americans would vote to make partial birth abortion illegal except to save the life of the woman. Los Angeles Times Poll, Jan. 30-Feb. 2, 2003, <http://www.pollingreport.com/abortion.htm> (57% of 1,385 adults); Quinnipiac University, Supreme Court Nominee Should Speak Up on Abortion, U.S. Voters Tell Quinnipiac University National Poll, July 27, 2005, <http://www.quinnipiac.edu/x11385.xml?ReleaseID=820> (76% of a sample of 920 nationally registered voters).

3. Framing Effects

Framing effects occur not just with predictive issues or questions of probability; they also arise with respect to moral issues.¹⁵³ It is axiomatic that framing influences alters perceptions of issues of concern to feminism. These gendered framing effects occur in public portrayals, where slight changes in phrasing can result in dramatic differences in outcome. As an example, popular opinions of feminism are vulnerable to framing effects. If people are asked whether they are feminists, roughly two-thirds will say no.¹⁵⁴ If people are asked whether they support equal rights for women, the numbers reverse and more than seventy percent will say yes.¹⁵⁵

Of course, “framing the question”—or strategically influencing choices according to the phrasing of issues—is a technique taught in law schools and used by lawyers on a daily basis.¹⁵⁶ Feminist legal theorists are acutely aware of framing effects. In the early years of feminist legal theory, scholars observed that courts often framed issues in gender-neutral terms, which completely omitted gender-based experiences, effects, and injuries. Feminists developed the methodological technique of “asking the woman question”¹⁵⁷—reframing an issue or changing the conceptual lens to create an awareness of the gender implications of various policy decisions. Feminist theory teaches that gender consciousness is vital in eradicating sex inequality.¹⁵⁸

When are semantic shifts appropriate to produce different outcomes and when do they lead to irrationality? In one sense, perhaps any intentional use of framing effects is about manipulation of preferences—much as advertisers try to create a market for food products by labeling them as 75 percent fat-free, instead of 25 percent

¹⁵³ Cass R. Sunstein, *Group Judgments: Statistical Means, Deliberation, and Information Markets*, 80 N.Y.U. L. REV. 962, 1045 (2005) (“The framing of options affects judgments not only on factual questions but on moral ones as well, including, for example, the disputed issue of moral obligations to members of future generations.”); see also Sunstein, *Moral Heuristics*, *supra* note 35.

¹⁵⁴ See NANCY LEVIT, *THE GENDER LINE: MEN, WOMEN, AND THE LAW* 124 (1998) (citing various polls).

¹⁵⁵ *Id.* at 125.

¹⁵⁶ Francis J. Mootz, III, *Nietzschean Critique and Philosophical Hermeneutics*, 24 CARDOZO L. REV. 967, 1029 (2003) (“[A]droitly framing the question is an important part of argumentation, often taught to students in advocacy courses as a technique for increasing their ability to be persuasive in pursuit of the pre-determined goal of victory for their client.”).

¹⁵⁷ Katherine T. Bartlett, *Feminist Legal Methods*, 103 HARV. L. REV. 829, 837 (1990) (defining this method as “identify[ing] the gender implications of rules and practices which might otherwise appear to be neutral or objective”).

¹⁵⁸ See Mari J. Matsuda, *When the First Quail Calls: Multiple Consciousness as Jurisprudential Method*, 14 WOMEN’S RTS. L. REP. 297 (1992).

fat.¹⁵⁹ But a difference exists between reframing that is explicit, self-explanatory, and self-conscious, and framing that is intended to induce bias through manipulation or coercion.¹⁶⁰ In other words, the demonstration of framings that is intended to equip people with understandings about perceptual lenses differs from framings intended to directly, but subliminally, introduce bias.

B. *Heuristic Errors and the Law*

Understandings of judgmental errors based on heuristics are just beginning to work their way into reported cases. In the past two decades, courts have incorporated studies and data from cognitive psychology in a wide range of criminal, torts, and discrimination cases.¹⁶¹ These have included discussions in informed consent cases of how the framing phenomenon—based on different descriptions of the risks of a medical procedure—affects patient choice.¹⁶² In a heroin smuggling case that included probabilistic estimates of the amounts actually imported, a judge self-reflectively attempted to account for the known anchoring bias of decision-makers by adjusting the defendant's sentence toward the low end of the guidelines.¹⁶³ An appellate court noted in a products liability case against the manufacturer of an amusement park ride that the district court's omission in jury instructions of the employer's conduct improperly framed the choices about causation in a way that created a salience error and necessitated a new trial.¹⁶⁴ Similarly, an appellate court used the concept of salience

¹⁵⁹ See Jon D. Hanson & Douglas A. Kysar, *Taking Behavioralism Seriously: Some Evidence of Market Manipulation*, 112 HARV. L. REV. 1420, 1451 (1999).

¹⁶⁰ See Kahneman & Tversky, *supra* note 40, at 1, 10 ("Formulation effects can occur fortuitously, without anyone being aware of the impact of the frame on the ultimate decision. They can also be exploited deliberately to manipulate the relative attractiveness of options.")

¹⁶¹ See, e.g., *Johnson v. Zema Sys. Corp.*, 170 F.3d 734, 745 (7th Cir. 1999) (employer's lack of self-awareness of the process of race and gender stereotyping); *McCorquodale v. Balkcom*, 721 F.2d 1493, 1498 (11th Cir. 1983) (assessment of juror demeanor in death-qualification process); *Barnes Group, Inc. v. Connell Ltd. P'ship*, 793 F. Supp. 1277, 1293 (D. Del. 1992) (using ideas of association, recognition and recall in a trademark dilution case); *People v. Beaver*, 725 P.2d 96, 99 (Colo. Ct. App. 1986) (accuracy of eyewitness identification); *Lemmerman v. Fealk*, 534 N.W.2d 695 (Mich. 1995) (validity of repressed memory syndrome in childhood sexual abuse case); *White v. State*, 916 P.2d 291, 293 (Nev. 1996) (Rose, J., dissenting) (reliability of eyewitness identification); *People v. Smith*, 784 N.Y.S.2d 923 (N.Y. 2004) (eyewitness misidentification); *Weatherred v. State*, 963 S.W.2d 115 (Tex. Ct. App. 1998) (eyewitness identification and accuracy).

¹⁶² *Roybal v. Bell*, 778 P.2d 108, 116-17 (Wyo. 1989).

¹⁶³ *United States v. Shonubi*, 895 F. Supp. 460, 486-87 (E.D.N.Y. 1995).

¹⁶⁴ *Allen v. Chance Mfg. Co., Inc.*, 873 F.2d 465, 470 (1st Cir. 1989); see also *Backes v. Valspar Corp.*, 783 F.2d 77 (7th Cir. 1986) (although the court acknowledged that lay people may give excessive causal weight to coincidences, it determined that an expert's affidavit regarding the connection between consumption of contaminated water and various health problems family

to criticize a trial court for trying to accommodate a witness' schedule by permitting jurors to hear a live direct examination of a witness, and then replaying for those jurors a taped cross-examination of that witness.¹⁶⁵

Commentators have observed that cognitive biases affect the ways both judges and jurors decide cases.¹⁶⁶ What has not been explored are the less obvious ways courts commit or invite heuristic errors that have gendered consequences. This section illustrates several examples of courts using—or encouraging factfinders to use—heuristics that are likely to yield gendered results.

1. Framing Effects

In assessing whether laws discriminate on the basis of sex, one familiar path courts take is to frame the issue as being about something other than gender. An early effort toward workplace accommodation of pregnancy was the attempt to obtain disability coverage for maternity leaves. In *Geduldig v. Aiello*,¹⁶⁷ the Supreme Court held that California's state-sponsored disability insurance plan's exclusion of pregnancy as a covered disability did not violate the Equal Protection Clause. The plaintiffs argued that discrimination based on pregnancy constituted sex discrimination under Title VII. The Court rejected the plaintiffs' claim, ruling that pregnancy-related classifications were not necessarily gender-based.

California's denial of pregnancy disability benefits was not a sex-based distinction because of the way the Court framed the classes of people affected. Even though 100 percent of the people harmed by the exclusion were women, the distinction, in the Court's view, was not between men and women: "The program divides potential recipients into two groups—pregnant women and nonpregnant persons. While the first group is exclusively female, the second includes members of both sexes."¹⁶⁸ Although Congress enacted the Pregnancy Discrimination Act of 1978 in response to *Geduldig* and a later case which echoed its reasoning—saying that discrimination on the basis of pregnancy is discrimination on the basis of sex¹⁶⁹—courts continue to rely on

members suffered was sufficient to survive summary judgment).

¹⁶⁵ *Traylor v. Husqvarna Motor*, 988 F.2d 729, 734 (7th Cir. 1993).

¹⁶⁶ See, e.g., Guthrie et al., *supra* note 31; Chris Guthrie et al., *Judging by Heuristic Cognitive Illusions in Judicial Decision Making*, 86 JUDICATURE 44 (July-Aug. 2002).

¹⁶⁷ 417 U.S. 484 (1974).

¹⁶⁸ *Id.* at 497 n.20; see also *id.* at 496-97 ("There is no risk from which men are protected and women are not. Likewise, there is no risk from which women are protected and men are not.").

¹⁶⁹ 42 U.S.C. § 2000e(k) (2000); see also *General Elec. Co. v. Gilbert*, 429 U.S. 125 (1976).

Geduldig's framing that distinctions based on pregnancy are not gender-based.¹⁷⁰

A similar framing that neglected gender considerations occurred in *Personnel Administrator v. Feeney*,¹⁷¹ where the Supreme Court viewed a hiring preference for veterans as gender neutral. Even though almost all women (98 percent) did not qualify for the preference because they were not veterans, the Court reasoned that because the preference disadvantaged numerous men as well (46 percent were nonveterans), the law did not discriminate based on sex. Professor Rob Verchick has compared the *Feeney* concept of discrimination—no gender discrimination exists if legislation also harms the supposedly favored group—with the concept of discrimination the Supreme Court applies in negative commerce clause cases—the existence of favored group members in the net of discrimination does not inoculate the government activity.¹⁷² In *C & A Carbone, Inc. v. Town of Clarkstown*,¹⁷³ a solid waste disposal ordinance prevented all out-of-state businesses and all but one of in-state businesses from access to a local market. Unlike its reasoning in *Feeney*, the Court ruled in *Carbone* that the discrimination against out of state residents could be remedied even though some businesses that were harmed were in the favored group.¹⁷⁴ Perhaps the Court is more willing to protect business interests than the interests of vulnerable identity groups, although this reasoning seems less than persuasive.¹⁷⁵ In any event, if an issue is framed as not facially discriminatory because it addresses some status other than gender, the reasoning can immediately omit both context and consequences: the historical discrimination against women entering military service and contemporary workplace discrimination.

¹⁷⁰ See, e.g., *Bray v. Alexandria Women's Health Clinic*, 506 U.S. 263, 272 n.3 (1993) (citing approvingly the reasoning in *Geduldig* in deciding that antiabortion protestors did not discriminate based on sex but on pregnancy); Candace Saari Kovacic-Fleischer, *Litigating Against Employment Penalties for Pregnancy, Breastfeeding, and Childcare*, 44 VILL. L. REV. 355, 381 (1999) (discussing courts' denial of breastfeeding leaves and physical accommodations by essentially "comparing women and men who breastfeed. . . . Although there may be women and men who have children and do not breastfeed them, there are no men who have children and do breastfeed, just as there are no men who become pregnant.").

¹⁷¹ 442 U.S. 256, 281 (1979).

¹⁷² Robert R.M. Verchick, *The Commerce Clause, Environmental Justice, and the Interstate Garbage Wars*, 70 S. CAL. L. REV. 1239, 1284-85 (1997).

¹⁷³ 511 U.S. 383 (1994).

¹⁷⁴ *Id.* at 391. See Verchick, *supra* note 172, at 1285:

Using the logic of *Feeney*, the existence of burdened "insiders" (nonveteran men in *Feeney*, nonselected local facilities in *Carbone*) should have insulated Clarkstown from charges of discrimination. Yet the *Carbone* majority concluded that because the law treated at least one inside facility differently, the law explicitly discriminated on the basis of geography.

¹⁷⁵ See Verchick, *supra* note 172, at 1285.

Just as framing issues in gender neutral terms can make inequalities recede from view, framing the outcome in a claim of workplace discrimination as being about some other positive social value can impel a court to overlook evidence of rampant inequality. This practice harkens back to the initial experiments on the influence of cancer treatment choices according to framing their efficacy in terms of survival rates instead of mortality rates.¹⁷⁶

Consider the way defendant Sears Roebuck successfully structured the issue defending against a wage discrimination suit. In *EEOC v. Sears, Roebuck & Co.*,¹⁷⁷ the Equal Employment Opportunity Commission filed a systemic disparate treatment suit against Sears on behalf of a group of women working for the company in noncommissioned sales jobs. The EEOC used multiple regression analyses that controlled for age, education, and qualification differences among applicants to establish a strong statistical case that the women were underrepresented among the company's commissioned sales force. Sears hired men for higher paying commission jobs—selling appliances, furnaces, building supplies, and hardware—and relegated women to lower-paying noncommissioned jobs, such as selling apparel, bedding, and cosmetics.

Sears's defense was that female sales applicants lacked interest in the commission sales positions because they involved competition, high pressure, and irregular hours. The company offered survey evidence showing women preferred the more feminine tasks of selling accessories and houseware, and said that it just accepted women's pre-existing preferences.¹⁷⁸ The trial court accepted this "lack of interest" defense, holding that women's under-representation in commission sales positions resulted from their own job preferences.¹⁷⁹ Once the court framed the inquiry in terms of women's preferences and choices in their applications, it overlooked the importance of the employer's hiring and testing practices in shaping those preferences. For example, in rating job applicants Sears used a "vigor" scale—and interviewers rated applicants on that scale according to a set of questions that included whether job applicants had ever played football, liked to hunt, swore often, and had a low-pitched voice.¹⁸⁰

That framework, focusing on applicants' interests, completely disregarded the employer's activities, such as its interview practices, explanation of job opportunities, absence of training for commission sales products, and wage structure that made selling dresses a lower

¹⁷⁶ See *supra* notes 37-38 and accompanying text.

¹⁷⁷ 628 F. Supp. 1264 (N.D. Ill. 1986), *aff'd*, 839 F.2d 302 (7th Cir. 1988).

¹⁷⁸ *Id.* at 1308.

¹⁷⁹ *Id.* at 1308-09.

¹⁸⁰ *Id.* at 1300 n.29.

paying job than selling fences. Once the court framed the issue of women's entering noncommissioned sales jobs simply as a matter of their private choices, it unsurprisingly concluded that women naturally gravitated toward "the softer side of Sears." The "choice" or "lack of interest" defense framed in *Sears* is now a well-entrenched defense strategy in Title VII wage discrimination cases. One study showed that over a two-decade period, employers using this defense succeeded more than 40 percent of the time.¹⁸¹

Framing issues in one way—and ignoring other dimensions of a problem—is only one aspect of how heuristics can affect deliberative processes in ways that have gendered consequences. Recent research on cognitive errors demonstrates that group deliberations are even more vulnerable to these errors than those of individuals: "Groups have been found to amplify, rather than to attenuate, reliance on the representativeness heuristic; to fall prey to even larger framing effects than individuals; to show more overconfidence than group members; to be more affected by the biasing effect of spurious arguments from lawyers."¹⁸² The characteristics of group decision-making mean that courts need to be particularly attentive to framing effects, and the gendered consequences they can create, in the context of jury instructions. Jury instructions can be legally appropriate, but still have dramatically different decisional effects based on slight changes in phrasing.¹⁸³ Researchers have investigated the influence of these cognitive errors in criminal cases,¹⁸⁴ but not yet in gender cases.

2. Anchoring

When people are asked to assess uncertain numbers, they often use as their initial value a number that is suggested to them, even if it is unrelated to the subject matter of the numeric question.¹⁸⁵ The suggested or candidate answers presented to a decisionmaker have an "anchoring effect" on that person's ultimate determination. Decision makers reason by adjusting away from that initial value, even if it is an arbitrary or extreme one. Behavioral research also shows that people do

¹⁸¹ Vicki Schultz & Stephen Petterson, *Race, Gender, Work, and Choice: An Empirical Study of the Lack of Interest Defense in Title VII Cases Challenging Job Segregation*, 59 U. CHI. L. REV. 1073, 1097 (1992).

¹⁸² Cass R. Sunstein, *Group Judgments: Statistical Means, Deliberation, and Information Markets*, 80 N.Y.U. L. REV. 962, 991-92 (2005).

¹⁸³ Darryl K. Brown, *Regulating Decision Effects of Legally Sufficient Jury Instructions*, 73 S. CAL. L. REV. 1105, 1112-13 (2000).

¹⁸⁴ See, e.g., Stephen P. Garvey et al., *Correcting Deadly Confusion: Responding to Jury Inquiries in Capital Cases*, 85 CORNELL L. REV. 627, 628-33 (2000).

¹⁸⁵ See *supra* notes 42-44 and accompanying text.

not make appropriate adjustments away from their starting points.¹⁸⁶ For instance, studies have documented that when participants spin a wheel of fortune and it lands on a number, say 32 or 67, and they are then asked an unrelated question—if the percentage of African countries represented in the United Nations is higher or lower than the number they spun—the irrelevant number sways their judgment.¹⁸⁷ In another study, researchers asked subjects to write the final four digits of their social security numbers and then to estimate whether the number of physicians listed in the local telephone book was higher or lower than the number they had just written down.¹⁸⁸ The estimates the test subjects provided correlated strongly with their individual social security numbers. In law, numerous studies show that plaintiffs' arbitrarily inflated damage requests elevate juries' awards.¹⁸⁹

This reluctance to abandon initial reference points—even if they are flawed or arbitrary—influences a host of legal decision makers in ways that have gendered results. As one example, consider agencies engaged in regulating risks. Environmental justice scholars have demonstrated that when agencies set environmental standards of acceptable risk levels, they may not consider the effects of environmental toxins on various sub-populations.¹⁹⁰ Anchoring effects, stemming from the assumption that the human afflicted by toxins is an average male,¹⁹¹ skew regulatory decisions about risks in a variety of gendered ways.

Since most epidemiological studies about workplace toxins were conducted on male industrial workers, risk assessments are anchored to the average male physique and ignore physiological differences in vulnerability to environmental threats. These include sex-specific diseases, differential exposure since women perform much more cleaning work than men and suffer disproportionate exposure to domestic chemicals, or different health impacts from the same contaminants.¹⁹² The anchoring effect may cause decision makers to

¹⁸⁶ Tversky & Kahneman, *supra* note 23, at 14-16.

¹⁸⁷ See Gretchen B. Chapman & Eric J. Johnson, *Incorporating the Irrelevant: Anchors in Judgments of Belief and Value*, in HEURISTICS AND BIASES, *supra* note 25, at 120, 120.

¹⁸⁸ Timothy D. Wilson et al., *A New Look at Anchoring Effects: Base Anchoring and Its Antecedents*, 125 J. EXPERIMENTAL PSYCHOL. 387 (1996).

¹⁸⁹ See Chapman & Bornstein, *supra* note 44, 522-27 (1996); see also Chapman & Johnson, *supra* note 187, at 137.

¹⁹⁰ Robert R. Kuehn, *The Environment Justice Implications of Quantitative Risk Assessment*, 1996 U. ILL. L. REV. 103, 151; Cass R. Sunstein, *Cognition and Cost-Benefit Analysis*, 29 J. LEGAL STUD. 1059, 1095 (2000).

¹⁹¹ See Robert W. Collin, *Review of the Legal Literature on Environmental Racism, Environmental Equity, and Environmental Justice*, 9 J. ENVTL. L. & LITIG. 121, 170 (1994).

¹⁹² Staci Jeanne Krupp, *Environmental Hazards: Assessing the Risk to Women*, 12 FORDHAM ENVTL. L.J. 111, 116, 120 (2000). See also Samara F. Swanston, *Race, Gender, Age, and Disproportionate Impact: What Can We Do About the Failure to Protect the Most Vulnerable?*, 21 FORDHAM URB. L.J. 577, 599-602 (1994).

underestimate the damage the toxins can have on different populations; it can also distribute environmental hazards disproportionately toward minority and vulnerable communities.

Examples abound where regulatory agencies charged with determining when occupational, environmental or dietary pollutants present acceptable levels of risk focus on the carcinogenic properties of a substance and omit other adverse health effects, such as fertility impairments or other reproductive consequences.¹⁹³ Finally, numerous studies demonstrate gender differences in risk-acceptance: women, because of vulnerability to a host of risks (such as physical violence) or socialization, may care more about risks, perceive risks as larger, or be less willing to tolerate them, than men.¹⁹⁴ In short, initial impressions about certain environmental risks and willingness to tolerate those risks, and an absence of adjusting the impressions in light of subsequent information, can result in gender-biased assessments in risk-policy decisions.

The anchoring phenomenon may extend into the non-numeric realm as well. Rape laws, for example, suffer a variety of anchoring (and representativeness) errors. The very definition of rape—which requires intercourse, some kind of forcible compulsion (in some states this means resistance on the part of the victim), and nonconsent—is intended to protect defendants against false accusations.¹⁹⁵ These requirements rest on several antiquated notions: that nonconsent needs to be clear and silence can be considered tantamount to consent; that women say no when they mean yes; and that women often “lie about their nonconsent to sexual activity for various reasons, such as discovery of their activity by family or others, a desire to coerce the alleged attacker into marriage, and so on.”¹⁹⁶ Differential penalties for marital rape are anchored in traditional beliefs about women as property.¹⁹⁷ Even today most states provide reduced penalties for rape occurring within marriage or refuse to punish it at all unless the rape causes serious physical injury.¹⁹⁸ Special evidentiary rules, such as the

¹⁹³ See, e.g., Valerie J. Watnick, *Our Toxics Regulatory System and Why Risk Assessment Does Not Work: Endocrine Disrupting Chemicals as a Case in Point*, 2004 UTAH L. REV. 1305.

¹⁹⁴ Paul Slovic, *Trust, Emotion, Sex, Politics, and Science: Surveying the Risk Assessment Battlefield*, 1997 U. CHI. LEGAL F. 59, 68 (“Several dozen studies have documented the finding that men tend to judge risks as smaller and less problematic than do women.”).

¹⁹⁵ This is still the prevailing common law and Model Penal Code view. See, e.g., VA. CODE ANN. § 18.2-61(a) (Michie 2002); MODEL PENAL CODE § 213.1 (1980).

¹⁹⁶ John Dwight Ingram, *Date Rape: It's Time for "No" to Really Mean "No,"* 21 AM. J. CRIM. L. 3, 12 (1993).

¹⁹⁷ NANCY LEVIT & ROBERT R.M. VERCHICK, *FEMINIST LEGAL THEORY: A PRIMER* 179-80 (NYU Press 2006) (“In early Anglo-American law . . . [t]his notion of women as property also meant that men could never be guilty of raping their wives, since men could treat their possessions, or ‘chattel,’ in nearly any way they wanted.”).

¹⁹⁸ Caroline Dettmer, Comment, *Increased Sentencing for Repeat Offenders of Domestic Violence in Ohio: Will This End the Suffering?*, 73 U. CIN. L. REV. 705, 717 n.102 (2004).

requirement of a fresh complaint or corroboration requirements,¹⁹⁹ rest on myths about typical complainant and victim behavior and assume that laws must weed out a large number of lying victims.²⁰⁰ As with anchoring in the numeric realm, the starting point for legislative and judicial definitions of rape rests on antiquated ideas that both blame and impose heavy proof requirements on victims. Unsurprisingly, this initial position affects where contemporary rape laws wind up—in treating this crime less seriously than comparable crimes of violence against men.²⁰¹

One difficulty in examining anchoring in legal decisions is that precedent itself serves an intentional anchoring function.²⁰² Precedents provide stability, particularly in constitutional adjudication. They give judges a starting point from which to begin their thinking about a case, even if they do not squarely address the precise situation before the court. Not all precedents, of course, are entitled to the same authoritative respect.²⁰³ If precedent concerns procedural or evidentiary matters, it may be given less weight than constitutional rulings.²⁰⁴

A majority of states continue to punish marital rape less severely than other rape by imposing lesser penalties or by eliminating the exemption only for first degree rape. . . . Astonishingly, in some states a man still cannot be prosecuted for raping his wife unless the couple is legally separated or living apart.

Leah Riggins, *Criminalizing Marital Rape in Indonesia*, 24 B.C. THIRD WORLD L.J. 421, 428-29 (2004) (“Some states require a couple to be living separately at the time of the rape, some recognize marital rape only if it involves physical force or serious physical harm, and others provide reduced penalties for marital rape.”).

¹⁹⁹ Michelle J. Anderson, *The Legacy of the Prompt Complaint Requirement, Corroboration Requirement, and Cautionary Instructions on Campus Sexual Assault*, 84 B.U. L. REV. 945, 976-77 (2004).

²⁰⁰ See, e.g., DEBORAH L. RHODE, *SPEAKING OF SEX: THE DENIAL OF GENDER INEQUALITY* 125 (1997) (stating that “the overwhelming consensus in . . . research relying on government data is that false reports account for only about 2 percent of rape complaints”); Louise F. Fitzgerald, *Science v. Myth: The Failure of Reason in the Clarence Thomas Hearings*, 65 S. CAL. L. REV. 1399, 1404 (1992) (“[R]eliable statistics demonstrate that approximately one to two percent of rape charges are found to be false.”).

²⁰¹ See Louis J. Virelli, III & David S. Leibowitz, “*Federalism Whether They Want It or Not*”: *The New Commerce Clause Doctrine and the Future of Federal Civil Rights Legislation After United States v. Morrison*, 3 U. PA. J. CONST. L. 926, 963 n.227 (2001).

²⁰² Compare RONALD DWORKIN, *TAKING RIGHTS SERIOUSLY* 116-17 (1978) (maintaining that ideal judges “must construct a scheme of abstract and concrete principles that provides a coherent justification for all common law precedents and, so far as these are to be justified on principle, constitutional and statutory provisions as well”) with Ronald Dworkin, *The Arduous Virtue of Fidelity: Originalism, Scalia, Tribe, and Nerve*, 65 FORDHAM L. REV. 1249, 1263 (1997) (offering several virtues that could, in appropriate cases, trump fidelity to the rule of law, including justice and legal pragmatism).

²⁰³ As Third Circuit Court of Appeals Judge Ruggero Aldisert observed, “[t]here are precedents, and there are precedents . . . All . . . do not have the same bite.” Ruggero J. Aldisert, *Precedent: What It Is and What It Isn’t; When Do We Kiss It and When Do We Kill It?*, 17 PEPP. L. REV. 605, 630-31 (1990).

²⁰⁴ Donald H. Ziegler, *Gazing into the Crystal Ball: Reflections on the Standards State Judges Should Use to Ascertain Federal Law*, 40 WM. & MARY L. REV. 1143, 1190-91 (1999).

Similarly, issues that are presented obliquely or decided *sub silentio* are accorded less precedential value.²⁰⁵

When precedents are based on discredited theories, they should be overruled.²⁰⁶ Legal theorists have developed a rich body of literature on the extent to which judges should be constrained by precedent in various types of cases.²⁰⁷ An area for future exploration is the extent to which judges trying to apply correct principles of political morality are influenced by the anchoring phenomenon.

3. Affective Errors

Decision researchers are increasingly acknowledging the role of motivational biases in the choices people make.²⁰⁸ One of the strongest of these reactions is affect. When people encounter issues (or people or animals or any number of products), they often have immediate emotional reactions to them.²⁰⁹ They then allow these affective impressions or pre-existing preferences to serve in lieu of a more reasoned assessment of the thing, or person or matter before them.²¹⁰

People evaluate issues by thinking of images—which are typically marked by positive or negative associations—and then applying those mental pictures and their accompanying “visceral signal[s] . . . because these images can be consulted more quickly and with less effort than [sic] it would take to form a judgment through normative routes.”²¹¹ Examples of this tendency occur daily as manufacturers from all industries—from cigarettes to fast foods, over-the-counter drugs to infant formula, automobiles to guns—appeal to consumers’ affective responses through their advertisements.²¹² When the affect heuristic

²⁰⁵ *Id.* at 1192.

²⁰⁶ *See, e.g.*, *Bowers v. Hardwick*, 478 U.S. 186 (1986), *overruled by* *Lawrence v. Texas*, 539 U.S. 558 (2003); *Plessy v. Ferguson*, 163 U.S. 537 (1896), *overruled by* *Brown v. Bd. of Educ.*, 347 U.S. 483 (1954).

²⁰⁷ *See, e.g.*, Larry Alexander, *Constrained By Precedent*, 63 S. CAL. L. REV. 1 (1989); Frederick Schauer, *Precedent*, 39 STAN. L. REV. 571 (1987).

²⁰⁸ *See* Finucane et al., *supra* note 49, at 2; *see also supra* notes 45-53 and accompanying text.

²⁰⁹ Cass R. Sunstein, *Hazardous Heuristics*, 70 U. CHI. L. REV. 751, 769 (2003).

²¹⁰ Daniel Kahneman, *A Perspective on Judgment and Choice: Mapping Bounded Rationality*, 58 AM. PSYCHOLOGIST 697, 710 (2003).

²¹¹ Shafir & LeBoeuf, *supra* note 69.

²¹² *See* Hanson & Kysar, *supra* note 159, at 1463 (arguing that some manufacturers’ manipulations of consumer behavior should create liability).

The manufacturers of Contac cold medicine, for instance, conducted a survey of 800 consumers that revealed that people feel widespread anxiety over losing their jobs. The manufacturers quickly designed an advertising campaign featuring a construction worker wading through a rainstorm, saying that he needed to take Contac in order to get to work that day. Staring into the camera, the worker added the ominous message, “No work, no pay.”

Id.; *see also* Note, *The Elephant in the Room: Evolution, Behavioralism, and Counteradvertising*

takes over, people engage in emotionally charged probability and risk assessment.

For instance, studies have compared the views of professional toxicologists with members of the lay public when both groups are asked to evaluate the risks of various chemical or environmental hazards.²¹³ One question asked respondents whether they agreed or disagreed with the following statement: “If you are exposed to a toxic chemical substance, then you are likely to suffer adverse health effects.”²¹⁴ Among professional toxicologists, 53.7 percent disagreed with the statement, while only 9.3 percent of the public disagreed. Another statement—“There is no safe level of exposure to a cancer-causing agent”—yielded similar results.²¹⁵ Among toxicologists, 27.7 percent strongly disagreed and 47 percent disagreed, while among lay respondents, 6.6 percent strongly disagreed and 28.1 percent disagreed.²¹⁶ An overwhelming 88 percent of toxicologists disagreed or strongly disagreed with the statement, “If you are exposed to a carcinogen, then you are likely to get cancer,” while only 47.7 percent of members of the public disagreed or strongly disagreed with it.²¹⁷ Researchers concluded that members of the public have an “all or nothing” view of risks—viewing all risks as either safe or dangerous. With little appreciation of dose-response sensitivity, varying levels of carcinogenicity, or statistical probabilities of danger, non-specialists base their perceptions of safety on affective or emotive judgments. In short, people use their emotional responses to risks to assess probabilities of those risks occurring.

The affect heuristic induces errors of judgment when people substitute their feelings for more reflective considerations. This heuristic goes beyond the failure to systematically calculate risks and benefits. While feelings may serve as useful cues, when emotions are charged and judgments are shaped exclusively according to visceral reactions, humans neglect probabilities, overreact to dangers, and base decisions on fears. Studies show that when people are frightened, “they are more likely to engage in negative stereotyping of members of other social groups.”²¹⁸

in the Coming War Against Obesity, 116 HARV. L. REV. 1161, 1168 (2003) (“For example, McDonald’s exploits the affect heuristic by advertising a family-friendly environment and generating positive associations that may cause consumers to devalue their perceptions of the risks arising from unhealthy diets.”).

²¹³ Nancy Kraus et al., *Intuitive Toxicology: Expert and Lay Judgments of Chemical Risks*, in *THE PERCEPTION OF RISK* 285, 290 (Paul Slovic ed., 2000).

²¹⁴ *Id.*

²¹⁵ *Id.*

²¹⁶ *Id.*

²¹⁷ *Id.*

²¹⁸ Sunstein, *supra* note 35, at 1565.

If courts do not take into consideration this tendency toward affective reactions, they are likely to construct doctrines that endorse affective evaluations of situations rather than cognitive processes that more thoughtfully evaluate evidence such as risks, utilities, probabilities, and social science data. As an example, consider what follows when a legal doctrine is architected in a way that encourages jurors to indulge in affective responses.

In *Oncale v. Sundowner Offshore Services, Inc.*,²¹⁹ the Supreme Court held that plaintiffs could sue under Title VII for same-sex sexual harassment. While the Court recognized that harassment could occur between persons of the same sex, it emphasized that the plaintiff “must always prove that the conduct at issue was not merely tinged with offensive sexual connotations, but actually constituted ‘discrimina[tion] . . . because of . . . sex’” and cautioned that Title VII should not become a “general civility code.”²²⁰

Justice Scalia’s majority opinion says that factfinders should evaluate the “surrounding circumstances, expectations, and relationships” and “the social context” in which the alleged harassment occurs, and offers the following example to illustrate the point:

A professional football player’s working environment is not severely or pervasively abusive, for example, if the coach smacks him on the buttocks as he heads onto the field—even if the same behavior would reasonably be experienced as abusive by the coach’s secretary (male or female) back at the office.²²¹

The opinion concludes that juries should use “common sense” and “appropriate sensitivity to social context” to distinguish when conduct is sexual harassment and when it is simply “teasing,” “roughhousing” or “male-on-male horseplay.”²²²

Oncale represents a mix of imprecise judging standards and an inducement toward cognitive biases, including both stereotyping and emotional assessment. The majority opinion in *Oncale* engages in a combination of setting up the archetype of acceptable “teasing, roughhousing, and horseplay” and then issuing the invitation toward affective error. The mental representation that is evoked by Justice Scalia’s language is a large category of humans playfully interacting at work. Factfinders are invited to use their own “common sense” to consider how closely the case at hand resembles the sizable arena of teasing and horseplay. The guidance the Court gave for jurors to determine when behavior crosses the line from rough and tumble fun to sex discrimination rests on a fairly unrepresentative exemplar (the

²¹⁹ 523 U.S. 75 (1998).

²²⁰ *Id.* at 81 (emphasis omitted).

²²¹ *Id.* at 81.

²²² *Id.* at 81-82.

football coach smacking the buttocks of his player or his secretary).²²³ If people tend to reason by assessing probabilities that situations fit into categories, the substitution of a prototypical example for a set of criteria invites a factfinder to assess how closely the episode in question matches the prototype.²²⁴ Few cases of sexual harassment will match the egregious example given by Justice Scalia. This framing of the problem initiates a consideration of “social context” that accepts as normative a work environment that encourages instances of playfulness.

Furthermore, the invocation of common sense knowledge (particularly when the filter constructed by the Supreme Court is that of “teasing,” “roughhousing” and “horseplay” as acceptable workplace behaviors) suggests that judges and jurors substitute their pre-existing feelings for systematic or logical approaches to evidence. A number of courts have accepted the *Oncale* invitation to dismiss claims that they think fit the model of teasing and horseplay.

In *Davis v. Coastal International Security, Inc.*,²²⁵ the D.C. Circuit Court of Appeals used the “teachings of *Oncale*” to find that the male victim of a harassment campaign by male co-workers was not the victim of sexual harassment. That campaign included defendants grabbing their own crotches, making kissing gestures, using vulgar comments referring to oral sex, slashing tires, and making death threats, among other things. The court held that Title VII did not apply because the behaviors did not amount to expressions of sexual desire or discrimination based on sex.²²⁶ The court referred to the *Oncale* football coach example and noted that if “female plaintiffs [had been] subjected to comments and gestures like those at issue in this case,” they would have a good Title VII claim.²²⁷ Similarly, in *E.E.O.C. v. Harbert-Yeargin*,²²⁸ two male plaintiffs claimed that their supervisor repeatedly touched their genitals (for one of the plaintiffs, this occurred several times each day), taunted them, and stalked them. A number of witnesses confirmed that this inappropriate genital-grabbing occurred often and that management never disciplined the offenders. After a trial at which the supervisor admitted “goosing” male employees but testified he never would have treated female employees that way and a jury found for the plaintiffs, the company argued on appeal that the facts

²²³ See Rebecca K. Lee, *Pink, White, and Blue: Class Assumptions in the Judicial Interpretations of Title VII Hostile Environment Sex Harassment*, 70 BROOK. L. REV. 678, 687 (2005) (noting that the example “focuses on a male-centered professional sport that is hardly representative of most work environments”).

²²⁴ Daniel Kahneman & Shane Frederick, *Representativeness Revisited: Attribute Substitution in Intuitive Judgment*, in *HEURISTICS AND BIASES*, *supra* note 25, at 49, 73.

²²⁵ 275 F.3d 1119, 1122-24 (D.C. Cir. 2002).

²²⁶ *Id.* at 1124.

²²⁷ *Id.* at 1126. It also endorsed the project manager’s statement that both the plaintiff and defendants should have “act[ed] like grown men.” *Id.*

²²⁸ 266 F.3d 498 (6th Cir. 2001).

presented an *Oncale* “horseplay” situation. Two judges on the panel from the Sixth Circuit agreed with the company regarding one of the plaintiffs’ claims and thought this behavior was simply “the classic example of men behaving badly.”²²⁹ *Davis* and *Harbert-Yeargin* are not atypical of lower court readings of *Oncale*.²³⁰

Another court, the United States District Court for the District of Wyoming, in *Sisco v. Fabrication Technologies, Inc.*,²³¹ found that a supervisor who harassed an effeminate male oil field worker did not discriminate based on sex. Among other things, the supervisor referred to the plaintiff as a “cumguzzler,” told the plaintiff to “suck my dick,” urinated on the plaintiff’s clothing, exposed himself to the plaintiff, “and attempted to rub his genitals against Mr. Sisco.”²³² Despite the court’s observation that the supervisor’s conduct was “more than boorish—it [was] bestial,” it concluded that the harassment of the plaintiff—although perhaps harassment based on a gender stereotype—was not harassment on the basis of sexual desire or differential treatment of males and females, and thus was not remediable by Title VII.²³³ While numerous courts and commentators have evaluated the meaning of “based on sex” under Title VII, the *Sisco* court simply consulted its own “common sense” instead of the cases thoughtfully reflecting whether discrimination based on gender stereotypes should be actionable under Title VII.²³⁴

Other courts have invoked their “common sense” to turn *Oncale*’s “sensitivity to social context” into different norms for white and blue collar jobs. These courts have “seized upon *Oncale*’s vague ‘common sense’ directive to argue that workplace culture is part of the social context and should be taken into account when evaluating harassment claims.”²³⁵ For instance, in *Williams v. General Motors Corp.*,²³⁶ a

²²⁹ *Id.* at 522.

²³⁰ *See, e.g.*, *Hamm v. Weyauwega Milk Products, Inc.*, 332 F.3d 1058, 1061, 1063 (7th Cir. 2003) (responding to the plaintiff’s allegations—which included, among other things, co-workers calling him a “faggot,” a “bisexual,” and “a girl scout,” threatening him, yelling obscenities at him, damaging his vehicle, soaking him with a water hose, and threatening “to shove the water hose up [the plaintiff’s] ass”—the court cited *Oncale* and mentioned the difficulty of separating the offensive conduct targeted toward the plaintiff “from the significant amount of horseplay that occurred at the Weyauwega plant”); *Jones v. Potter*, 301 F. Supp. 2d 1, 9 (D.D.C. 2004) (citing the *Oncale* football coach example and finding that a single episode of male on male sexual assault, even coupled with other sexually charged incidents, was not sufficiently severe and pervasive to amount to a hostile environment).

²³¹ 350 F. Supp. 2d 932 (D. Wyo. 2004).

²³² *Id.* at 936.

²³³ *Id.* at 940.

²³⁴ *Id.* at 939. For examples of cases thoughtfully reflecting on whether Title VII reaches harassment based on gender stereotypes, see *Nichols v. Azteca Rest. Enters., Inc.*, 256 F.3d 864, 874-75 (9th Cir. 2001), and *Higgins v. New Balance Athletic Shoe, Inc.*, 194 F.3d 252, 261 n.4 (1st Cir. 1999).

²³⁵ *Lee, supra* note 223, at 687. Cases pre-dating *Oncale* first introduced this idea. *See, e.g.*, *Gross v. Burggraf Constr. Co.*, 53 F.3d 1531, 1538 (10th Cir. 1995) (“In the real world of

female parts supplier at a car manufacturing plant filed a hostile environment harassment suit complaining that co-workers constantly used foul language. The claims included that one said “I’m sick and tired of these fucking women”; that, among other incidents, a supervisor greeted her by saying “Hey slut”; that another supervisor stared at her breasts and said “You can rub up against me any time”; and that she was subjected to working excessively long hours, denied breaks, and denied overtime. Two judges of the three judge panel criticized the district court’s grant of summary judgment to the employer by noting that the trial judge disaggregated the individual incidents rather than looking to see if they cumulatively constituted a sexually hostile environment.²³⁷

The dissenting judge, citing the *Oncale* buttocks smack example, chastised the majority for “forc[ing] a heightened level of civility upon the blue collar workplace.”²³⁸ The dissenter approved the trial judge’s analysis in “very logically group[ing]” the incidents, “most having nothing to do with sexual harassment, into four common sense, manageable types,” including “(1) Foul Language in the Workplace; (2) Mean or Annoying Treatment by Co-Workers; (3) Perceived Inequities of Workplace Treatment; and (4) Sexually-Related Remarks.”²³⁹ The dissenting judge’s common sense indicated to him that “[t]he shop floor is a rough and indelicate environment in which finishing school manners are not the behavioral norm.”²⁴⁰

In another case, *Ocheltree v. Scollon Products, Inc.*,²⁴¹ a panel of the Fourth Circuit Court of Appeals (in a ruling later vacated by an en banc rehearing), citing *Oncale*, noted that the coarse atmosphere at a costume manufacturing plant pre-dated the plaintiff’s hiring. The working environment into which the plaintiff entered was rife with

construction work, profanity and vulgarity are not perceived as hostile or abusive. Indelicate forms of expression are accepted or endured as normal human behavior.”). See generally Rebecca Brannan, Note, *When the Pig Is in the Barnyard, Not the Parlor: Should Courts Apply a “Coarseness Factor” in Analyzing Blue-Collar Hostile Work Environment Claims?*, 17 GA. ST. U. L. REV. 789, 791-92 (2001).

²³⁶ 187 F.3d 553 (6th Cir. 1999).

²³⁷ *Id.* at 559-562.

²³⁸ *Id.* at 572 (Ryan, J., dissenting).

²³⁹ *Id.* at 570 (Ryan, J., dissenting).

²⁴⁰ *Id.* at 571 (Ryan, J., dissenting). The majority, to its credit, held:

We do not believe that a woman who chooses to work in the male-dominated trades relinquishes her right to be free from sexual harassment; indeed, we find this reasoning to be illogical, because it means the more hostile the environment, and the more prevalent the sexism, the more difficult it is for a Title VII plaintiff to prove that sex-based conduct is sufficiently severe or pervasive to constitute a hostile work environment. Surely women working in the trades do not deserve less protection from the law than women working in a courthouse.

Id. at 564.

²⁴¹ 308 F.3d 351, 356-57 (4th Cir. 2002), *vacated on reh’g en banc*, 335 F.3d 325 (4th Cir. 2003), *cert. denied*, 540 U.S. 1177 (2004).

vulgar language, sexually explicit jokes, discussions of sexual exploits, and lewd behaviors. Thus, the panel found that the plaintiff essentially accepted the risks of the job and had no claim for harassment. Although the *Ocheltree* court intoned the *Oncale* requirement to examine the “social context” in which the alleged harassment occurs,²⁴² its response is an essentially visceral interpretation of social context. This common sense construction that insists on tolerance of sexually hostile environments because the behaviors are commonly accepted in a particular line of work²⁴³ runs counter to the idea that Title VII is intended to eradicate cultures of harassing behavior, perhaps particularly in male-dominated occupations.²⁴⁴ In short, the cases demonstrate that an invitation to use so-called common sense, rather than carefully reasoned legal frameworks, encourages judges to consult their own affective responses.

The *Oncale* decision is far from the only one in which courts commit or invite affective error. Consider, for instance, a portion of the dissent in *Romer v. Evans*.²⁴⁵ In *Romer* the Supreme Court invalidated a voter-enacted amendment to the Colorado Constitution that precluded the enactment of laws designed to protect gays, lesbians and bisexuals from discrimination. In dissent, Justice Scalia, joined by Chief Justice Rehnquist and Justice Thomas, chastised the majority for enacting special treatment for sexual minorities.²⁴⁶ The affective image employed by the dissenters was that gays and lesbians are affluent and have disproportionate political power. They stated that “because those who engage in homosexual conduct tend to reside in disproportionate numbers in certain communities, . . . have high disposable income, . . . and, of course, care about homosexual-rights issues much more ardently than the public at large, they possess political power much greater than their numbers, both locally and statewide.”²⁴⁷

²⁴² *Id.* at 353.

²⁴³ *See, e.g.,* *Barbour v. Browner*, 181 F.3d 1342, 1344, 1348-49 (D.C. Cir. 1999) (reversing a jury verdict in favor of the plaintiff, Barbour, an Environmental Protection Agency security staff member, who alleged that other “employees consistently treated her with disrespect,” supervisors undermined her by directing a subordinate to delay responding on a project Barbour had assigned him, engaged in various acts of rudeness, and questioned her judgment; the appellate court observed: “Barbour’s protestation is like to that of a waitress who complains that her customers are sometimes rude: treatment that would be objectionable in other contexts is an inevitable part of the job.”).

²⁴⁴ *See* Lee, *supra* note 223, at 723-24.

²⁴⁵ 517 U.S. 620 (1996).

²⁴⁶ *Id.* at 638 (Scalia, J., dissenting).

²⁴⁷ *Id.* at 645-46. This could also be seen as an error of salience (the fashion-conscious, materialistic gay man one sees in movies and on television). The *Oncale* dissenters are not the only judges conjuring up the image of gays and lesbians as rich and politically powerful. *See, e.g.,* *Ben-Shalom v. Marsh*, 881 F.2d 454, 466 n.9 (7th Cir. 1989) (“Homosexuals are not without political power. *Time* magazine reports that one Congressman is an avowed homosexual, and that there is a charge that five other top officials are known to be homosexual.”).

The reality for sexual minorities is, of course, empirically much different from that portrayed by the *Romer* dissenters. In actuality, same-sex households earn less than opposite-sex households.²⁴⁸ Lesbians, gay men, bisexuals and the transgendered have long been forced into social and political invisibility. Apart from a few scattered state statutes, judicial decisions, or municipal ordinances that ban discrimination based on sexual orientation,²⁴⁹ few laws grant sexual minorities any protection. In fact, Congress overwhelmingly enacted the federal Defense of Marriage Act (DOMA) and forty-one states have either mini-DOMAs or constitutional amendments barring same-sex marriage.²⁵⁰ These numbers indicate that far from being a “relatively privileged special interest group,” sexual minorities are politically powerless.²⁵¹ The legal reality is that in the vast majority of states, lesbians, gay men, and bisexuals can lawfully be subjected to discriminatory practices: precluding them from marrying, barring them from adopting children, making them subject to discrimination in employment or housing, and disqualifying them from over one thousand economic and legal benefits available to straight individuals.²⁵²

Romer is certainly not the only case in which judges have reasoned from archetypes. Until recently in sodomy cases, courts suggested “that it is the rare gay male who is not a predator, pied piper, Whore of Babylon, or defiler of the public space.”²⁵³ In immigration cases, affective anti-immigrants sentiments are perpetuated by court-constructed images of “the archetypal ‘good’ alien . . . [who] is a white, European, healthy, heterosexual, self-sufficient refugee, arriving alone in search of political asylum, [while] . . . black, poor Caribbean migrants arriving in large numbers, many afflicted with HIV . . . fare poorly in our courts.”²⁵⁴

Some jurisprudential thinkers who favor practical reason believe that the affective reactions of judges are a form of efficient decision

²⁴⁸ GARY J. GATES & JASON OST, *THE GAY AND LESBIAN ATLAS* 37, fig.5.4 (2004). (comparing median household incomes).

²⁴⁹ See, e.g., CAL. FAM. CODE § 297(b)(6)(B) (2004); VT. STAT. ANN. tit. 15 §§ 1201-1207 (2004); *Goodridge v. Dept. of Pub. Health*, 798 N.E.2d 941, 961 (Mass. 2003).

²⁵⁰ See 28 U.S.C. § 1738C (2000); DOMA Watch, <http://www.domawatch.org/stateissues/index.html> (last visited Sept. 27, 2005).

²⁵¹ Nancy J. Knauer, *Science, Identity and the Construction of the Gay Political Narrative*, 12 *LAW & SEXUALITY* 1, 71-72 (2003).

²⁵² Letter from Barry R. Bedrick, Ass. Gen. Counsel, Gen. Accounting Office, to Rep. Henry J. Hyde, Chairman Comm. on Judiciary (Jan. 31, 1997), available at <http://www.gao.gov/archive/1997/og97016.pdf>, Jan. 31, 1997 (listing 1,049 benefits available to married couples and denied to sexual minorities).

²⁵³ Larry Catá Backer, *Constructing a “Homosexual” for Constitutional Theory: Sodomy Narrative, Jurisprudence, and Antipathy in United States and British Courts*, 71 *TUL. L. REV.* 529, 536 (1996).

²⁵⁴ Harold Hongju Koh, *The “Haiti Paradigm” in the United States Human Rights Policy*, 103 *YALE L.J.* 2391, 2422 (1994).

making.²⁵⁵ Yet these common sense interpretations or patterns of reasoning from archetypes or images usually invoke a set of pre-existing beliefs, often acquired by assimilation, generally unconsciously and largely in unquestioned ways. Their assumption is that common sense is common to all people and that everyone possesses it in abundance.

There are really no acknowledged specialists in common sense. Everyone thinks he's an expert. Being common, common sense is open to all. . . . Indeed, its tone is even anti-expert, if not anti-intellectual: we reject . . . special powers in this regard. There is no esoteric knowledge, no special technique or peculiar giftedness, and little or no specialized training—only what we rather redundantly call experience and rather mysteriously call maturity—involved.²⁵⁶

“Common sense” is an empty phrase. It's in the eye of the beholder, and is thus unassailable. The encouragement toward “common sense” reasoning diverts attention away from other, more productive and more critically evaluative modes of thought.²⁵⁷

In fact reliance on archetypal reasoning or common sense reasoning encourages affective errors. Common sense thinkers find truth in consensus. Generally accepted beliefs are those that survive over time, and their persistence alone sufficiently verifies them.²⁵⁸ Common sense thinking is retrospective—affirming received observations—with little prospective ability. Thus, in many ways, common sense is self-validating, admitting of no other theories “with sufficient authority to discredit the bulk of observational common sense judgments.”²⁵⁹ Common sense reasoning discourages deep study and veers away from reflective analysis. It is thus an intellectually weak method of analysis that simply relies on and replicates conventional thinking.

²⁵⁵ Richard A. Posner, *Emotion Versus Emotionalism in Law*, in *THE PASSIONS OF LAW* 309, 322-23 (Susan A. Bandes ed., 1999).

²⁵⁶ Clifford Geertz, *Common Sense as a Cultural System*, 33 *ANTIOCH REV.* 5, 24-25 (1975).

²⁵⁷ See, e.g., Nancy Levit, *Practically Unreasonable: A Critique of Practical Reason*, 85 *NW. U. L. REV.* 494, 502 (1991) (“Indeed, the unquestioning acceptance of certain ‘common sense’ beliefs is necessary to their perpetuation. Because common sense is concerned with cultural transmission and replication, it is conservative in orientation and method.”); Michael J. Saks & Robert F. Kidd, *Human Information Processing and Adjudication: Trial by Heuristics*, 15 *LAW & SOC'Y REV.* 123, 127 (1980-81) (noting that “in many contexts decision makers’ intuitive, common-sense judgments depart markedly and lawfully (in the scientific sense) from the actual probabilities”).

²⁵⁸ See, e.g., RICHARD POSNER, *THE PROBLEMS OF JURISPRUDENCE* 115 (1990).

²⁵⁹ Keith Campbell, *Philosophy and Common Sense*, 63 *PHILOSOPHY* 161, 173 (1988).

IV. EDUCATING DECISION MAKERS ABOUT HEURISTICS

This final Part discusses the prospects for informing decision makers about cognitive errors. It first touches on some of the difficulties in even identifying heuristic errors or situations that pose greater opportunities for heuristic mistakes. Second, this Part evaluates the state of “debiasing” experiments in the cognitive literature—studies that specifically address techniques to reduce heuristic biases. Finally, this Part analyzes the effects that attention to heuristics might have on gender bias.

A. *Identification of Heuristic Errors*

The project to illuminate heuristic errors in legal reasoning presents some difficulties. One is the problem of tracing reasoning errors to heuristic footfaults. For example, as discussed above, reasoning from precedent can be seen as a form of anchoring, and good lawyers use framing as a method of persuasion.²⁶⁰ Anchoring errors become clear over time and a pattern of decisions, but not just with a snapshot of an individual case. So if heuristic errors become apparent only in the process of rule development, it may be problematic for a judge to identify heuristic frailties when the judge is focusing on a discrete set of facts and reaching only a single rule outcome.

Another related difficulty with heuristics is the absence of a standard for measuring the errors. If evolutionary psychologists are accurate, some forms of intuitive or heuristic reasoning are “cognitive successes,”²⁶¹ whereas cognitivists point out that intuitive reasoning is generally a weaker form of reasoning that succumbs to systematic errors.²⁶² The dividing line, for example, between experiential reasoning that is rational and experiential reasoning that succumbs to representativeness errors is hard to assess. Affective or emotive responses may be useful in decisionmaking because they prompt compassion.²⁶³ Conversely, as demonstrated above, decisionmaking that is guided purely by affect tends toward retrospective, conventional reasoning that embraces the visceral peculiarities of the decisionmaker.²⁶⁴

²⁶⁰ See *supra* notes 156-157 and accompanying text.

²⁶¹ See *supra* note 71 and accompanying text.

²⁶² See *supra* note 63 and accompanying text.

²⁶³ See Gigerenzer & Todd, *supra* note 72, at 31-32.

²⁶⁴ See *supra* notes 207-51 and accompanying text. The thesis in this Article itself may be subject to the framing error—are these identified flaws really logical flaws in probability analysis or simply the result of a portrayal?

Heuristics can save time or create a presumption for an action where action is needed but where information is uncertain, which may be good things. The cost of using heuristic devices is that sometimes it will give the wrong answer. A strict utilitarian might find these costs tolerable in the aggregate (if the benefits from using mental shortcuts outweigh the costs), but a rights-based or virtue-based ethicist will find them intolerable. The trouble is that in the area of discrimination, the cost is the trampling of individual rights and distributional unfairness. This is an area that calls for greater exploration to understand when heuristics are useful and when they are dangerous.

Identification of heuristic errors in legal cases seems itself a hindsight process of examining prior decisions and their outcomes. The greater challenge is to prophylactically avoid heuristic mistakes in cases that are complex and multi-dimensional. The next Part considers whether training decision makers about systemic patterns of information processing can inoculate them to some degree against heuristic errors.

B. *Debiasing*

The early psychological literature regarding the possibilities for overcoming cognitive biases or training to avoid heuristic errors was not encouraging. While some researchers found that formal statistical training reduced the commission of errors in probabilistic reasoning,²⁶⁵ many others found that general introductions to biases, or descriptions of them, had a limited impact in lessening the biases.²⁶⁶

More recent research in debiasing training demonstrates that more precise techniques in encouraging self-analysis of specific cognitive biases have better prospects of success. For example, just teaching people the theory of base rates has only a minimal effect on the tendency to ignore base rates and focus on more specific pieces of information.²⁶⁷ On the other hand, encouragement toward the cognitive mapping of problems (such as decision trees or representational graphs) offers more promise in overcoming framing and probability biases.²⁶⁸

One debiasing strategy has proven effective in countering a variety of biases. This strategy—sometimes referred to in shorthand as

²⁶⁵ See, e.g., NISBETT & ROSS, *supra* note 25, at 291.

²⁶⁶ See generally Baruch Fischhoff, *Debiasing*, in JUDGMENT UNDER UNCERTAINTY, *supra* note 1, at 422, 440.

²⁶⁷ See, e.g., Baruch Fischhoff & Maya Bar-Hillel, *Focusing Techniques: A Shortcut to Improving Probability Judgments?*, 34 ORG. BEHAV. & HUM. PERFORMANCE 175 (1984).

²⁶⁸ See Gerard P. Hodgkinson et al., *Research Notes and Commentaries: Further Reflections on the Elimination of Framing Bias in Strategic Decision Making*, 23 STRATEGIC MGMT. J. 1069 (2002); Marie Christine Roy & F. Javier Lerch, *Overcoming Ineffective Mental Representations in Base-Rate Problems*, 7 INFO. SYS. RES. 233 (1996).

“consider the opposite”²⁶⁹—is based on the idea that a number of cognitive biases are caused by “the tendency to neglect contradicting evidence.”²⁷⁰ The strategy also suggests that specific instruction in considering alternative beliefs or positions will minimize the entrenched thinking that leads to both probability and self-serving or motivational errors.²⁷¹ Experimental studies have shown that asking subjects to give specific thought to opposing positions or arguments on the other side, “ameliorate[s] the adverse effects of several biases, including the primacy or anchoring effect, biased assimilation of new evidence, biased hypothesis testing, the overconfidence phenomenon, the explanation bias, the self-serving bias, and the hindsight bias.”²⁷² Teaching people to consider alternative possibilities or courses of action can encourage some individuals to generalize those techniques and apply them to later situations that require probability assessments.²⁷³

One concern about debiasing in the realm of legal decisionmaking is that judges might come to have excessive confidence in their own decisional abilities and be resistant to impartiality training.²⁷⁴ Professors Gregory C. Sisk and Michael Heise suggest that judges have an incentive to respond when presented with the social science research about frailties in judging behaviors.²⁷⁵ Judges are conscientious, they argue, and strive toward the ideals of fair and accurate decisions; and information about heuristic errors can promote greater self-awareness about decisionmaking. Programs and brochures from various state and

²⁶⁹ Charles G. Lord et al., *Considering the Opposite: A Corrective Strategy of Social Judgment*, 47 J. PERSONALITY & SOC. PSYCHOL. 1231 (1984).

²⁷⁰ Asher Koriat et al., *Reasons for Confidence*, 6 J. EXP. PSYCHOL.: HUMAN LEARNING & MEMORY 107 (1980).

²⁷¹ See, e.g., Stephanos Bibas, *Plea Bargaining Outside the Shadow of Trial*, 117 HARV. L. REV. 2463, 2523-24 (2004) (“Psychologists have repeatedly found that considering the opposite reduces overconfidence, biased information assimilation, biased hypothesis testing, and excessive perseverance of beliefs. This technique is effective because it tears people away from anchors favorable to their own positions and makes contrary anchors more accessible and salient.”).

²⁷² Gregory Mitchell, *Libertarian Paternalism Is an Oxymoron*, 99 NW. U. L. REV. 1245, 1256 n.40 (2005); see also Laura J. Kray & Adam D. Galinsky, *The Debiasing Effect of Counterfactual Mind-Sets: Increasing the Search for Disconfirmatory Information in Group Decisions*, 91 ORG. BEHAV. & HUM. DECISION PROCESSES 69 (2003).

²⁷³ Edward R. Hirt et al., *Activating a Mental Simulation Mind-set Through Generation of Alternatives: Implications for Debiasing in Related and Unrelated Domains*, 40 J. EXPERIMENTAL SOC. PSYCHOL. 374, 381-82 (2004) (observing that people whose need for structure is low—those who do not require predictability and can tolerate ambiguity—will spontaneously transfer the technique of considering additional alternatives to other domains). *But see* Lawrence J. Sanna & Norbert Schwarz, *Integrating Temporal Biases: The Interplay of Focal Thoughts and Accessibility Experiences*, 15 PSYCHOL. SCI. 474, 479 (2004) (generating an abundance of alternatives can magnify the hindsight bias).

²⁷⁴ See, e.g., David A. Dana, *A Behavioral Economic Defense of the Precautionary Principle*, 97 NW. U. L. REV. 1315, 1333 (2003) (“experts tend to have one bias to a greater degree than non-experts—overconfidence in their own judgments”).

²⁷⁵ See Gregory C. Sisk & Michael Heise, *Judges and Ideology: Public and Academic Debates About Statistical Measures*, 99 NW. U. L. REV. 743, 776 n.197, 777 (2005).

federal judicial conferences indicate that judges are beginning to tap social cognition theory to explore the nature of stereotyping and unconscious prejudices, but that attention to heuristics specifically is a rarity.²⁷⁶ The wealth of state and federal judges' organizations in existence and conferences held indicate significant opportunities for education about heuristic errors. The debiasing literature indicates that this training would need to be in terms of specific strategies (such as "consider the opposite") to be effective, rather than merely as exhortations to be less biased or more impartial.

CONCLUSION

One hazard of heuristics is that an encouragement to think about issues in terms of rational processing errors might undermine a focus on issues as being about gender. This Article has proceeded on the assumption that attention to heuristic errors will generally benefit the feminist project because it will illuminate conventional thinking that could otherwise succumb to inaccurate probability assessments or stereotypes. It might be objected that reframing issues away from gender and toward probabilistic reasoning may undermine political consensus-building. One argument could be that identity issues attract people in ways that syllogistic reasoning discussions do not.²⁷⁷ Feminists might not want decision makers to see heuristic errors with gendered consequences simply as flaws in probability reasoning. Or it might be argued that viewing decisions as empirically poorly reasoned could undermine methods of consciousness-raising and make persuasive personal details recede in importance.²⁷⁸ A stronger version of this argument is that attributing discrimination to common cognitive biases may strip people of responsibility for discriminating.

²⁷⁶ See, e.g., NATIONAL JUDICIAL COLLEGE, COURSE CATALOG 3 (2005) (listing courses on "Ethics, Bias and the Administrative Law Judge," "Integrating Cultural, Race and Gender Issues into Judicial Education," and "Building a Bias-Free Environment in Your Court"); Diana Eagon, *Minnesota Conference Wrap-Up*, 24 NAWJ COUNTERBALANCE 1 (Winter 2003) (discussing speakers on unconscious prejudice); Kathleen Sikora, *New Models in Fairness Education: Social Cognition*, National Ass'n of State Judicial Educators, Summer 2001, at <http://nashe.unm.edu/archives/summer01> (describing training to avoid gender and race biases in decisionmaking). A rare offering of a lecture specific to heuristics is mentioned in Paul Biderman, *Teaching Judging in Law Schools*, 20 NASJE NEWS Q. (Spring 2005), at http://nasje.unm.edu/current-newsletter/01_news.htm (mentioning the offer of a U.S. Magistrate to give a law school seminar lecture on heuristics).

²⁷⁷ See generally Richard Delgado, *Storytelling for Oppositionists and Others: A Plea for Narrative*, 87 MICH. L. REV. 2411 (1988).

²⁷⁸ One feminist strategy has been to make the personal political. See, e.g., CATHARINE A. MACKINNON, *FEMINISM UNMODIFIED* 100 (1987).

Many theorists have remarked that feminism is a house of many rooms and have urged the recognition that a variety of disparate efforts can promote feminist goals.²⁷⁹ Looking at the gendered effects of various processes of reasoning would seem to advance a variety of feminist objectives. Feminist epistemology, while recognizing that knowledge is often situated and perspectival,²⁸⁰ is concerned with various facets of truth-telling and representational accuracy. Feminists have continually sought experiential knowledge.²⁸¹ They are committed to accuracy in representations of the social worlds that women and men inhabit, and have long been concerned that rational analysis be as bias-free as possible.²⁸²

The methods used in the feminist project can also be tested for heuristic errors. As an example, the representativeness heuristic presents a double edged sword for feminist legal theory. Recognizing the error in the Linda problem or in the Lynch example²⁸³—that greater details, while narratively appealing, can make the probability of an event's being representative less likely—offers a powerful analytical tool. However, one technique of feminist methodology, storytelling, can be subject to the same examination. Critics have challenged the use of narrative form in legal scholarship for offering unrepresentative examples.²⁸⁴ Yet, as numerous feminist legal theorists have recognized, the better reasoned and more analytically powerful uses of narratives tie the individual examples to larger patterns of statistical occurrences.²⁸⁵ Some theorists have also recognized that narratives are offered for various purposes, sometimes to reveal experiences unfamiliar to numerous readers,²⁸⁶ or sometimes simply to provoke awareness that

²⁷⁹ See, e.g., Adrienne D. Davis & Joan C. Williams, *Foreword, Symposium: Gender, Work & Family Project Inaugural Feminist Legal Theory Lecture*, 8 AM. U. J. GENDER SOC. POL'Y & L. 1, 3 (1999) (urging the creation of "room for a variety of feminist projects that are seen as mutually reinforcing, rather than mutually exclusive"); Mary Ann Glendon, *Feminism Is a House With Many Rooms: Women's Role in a Family Should Be Honored*, KANSAS CITY STAR, Sep. 10, 1995, at J4 (noting that "[t]he new feminism is a house with many rooms, inclusive rather than polarizing, open-minded rather than dogmatic").

²⁸⁰ See Martha Chamallas, *Feminist Constructions of Objectivity: Multiple Perspectives in Sexual and Racial Harassment Litigation*, 1 TEX. J. WOMEN & L. 95, 95 (1992).

²⁸¹ See, e.g., Margaret Jane Radin, *The Pragmatist and the Feminist*, 63 S. CAL. L. REV. 1699, 1707 (1990).

²⁸² See, e.g., Catharine A. MacKinnon, *Points Against Postmodernism*, 75 CHI.-KENT L. REV. 687, 690 (2000).

²⁸³ See *supra* notes 102-107, 122-31 and accompanying text.

²⁸⁴ Suzanna Sherry & Daniel A. Faber, *Telling Stories Out of School: An Essay on Legal Narratives*, 45 STAN. L. REV. 807 (1993) (criticizing the use of atypical stories).

²⁸⁵ See, e.g., Elizabeth M. Schneider, *Particularity and Generality: Challenges of Feminist Theory and Practice in Work on Woman-Abuse*, 67 N.Y.U. L. REV. 520, 521 (1992); Robert R.M. Verchick, *In a Greener Voice: Feminist Theory and Environmental Justice*, 19 HARV. WOMEN'S L.J. 23, 50 (1996).

²⁸⁶ Kathryn Abrams, *Hearing the Call of Stories*, 79 CAL. L. REV. 971, 1022 (1992).

any experience is open to multiple interpretations.²⁸⁷ These are conversations for a later day. The thesis here is simply that feminists should begin to investigate the ways heuristic errors can combine with conventional thinking to reinforce traditional views of gender.

This Article does not assume that if judges could eliminate heuristic errors, they would automatically issue less gender-biased or more gender-appropriate decisions. Even a movement toward better empirical reasoning is no guarantee of egalitarian outcomes.²⁸⁸ The eradication of cognitive errors would, however, promote greater accuracy in decision making. If an exploration promotes equality, self-conscious criticism, and greater rationality, it is generally one that comports with the ideals of feminism.²⁸⁹ The etymology of the word “heuristics” itself provides the invitation. From the Greek origin, heuristics means “serving to find out or discover.”²⁹⁰ The sweep of the feminist movement has always been, in essence, a quest to raise the problems of neglected people, and raise issues to the level of observation and discussion. Indeed, one of the paramount lessons of feminist legal theory is to overcome silence and “to question everything,”²⁹¹ so that our society might discover its unchallenged biases, its lurking prejudices—and, seeing them clearly, cast them away unflinchingly.

²⁸⁷ Robert L. Hayman, Jr. & Nancy Levit, *The Tales of White Folk: Doctrine, Narrative, and the Reconstruction of Racial Reality*, 84 CAL. L. REV. 377, 427 (1996).

²⁸⁸ Witness the different empirical positions taken by feminists in the *Cal Fed* litigation. Lucinda M. Finley, *Transcending Equality Theory: A Way Out of the Maternity and the Workplace Debate*, 86 COLUM. L. REV. 1118 (1985); Herma Hill Kay, *Equality and Difference: The Case of Pregnancy*, 1 BERKELEY WOMEN'S L.J. 1 (1985).

²⁸⁹ See Nancy Levit, *Defining Cutting Edge Scholarship: Feminism and Criteria of Rationality*, 71 CHI.-KENT L. REV. 947 (1996).

²⁹⁰ See Goldstein & Gigerenzer, *supra* note 61, at 25.

²⁹¹ Heather Ruth Wishik, *To Question Everything: The Inquiries of Feminist Jurisprudence*, 1 BERKELEY WOMEN'S L.J. 64 (1985).