

When, and How, Should Cognitive Bias Matter to Law?

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Introduction

Findings about cognitive bias drawn from behavioral science have been used to justify rejecting stare decisis, changing consumer credit laws, regulating performance-enhancing drugs, revising the doctrine of fiduciary responsibility, and ceasing to treat some juvenile convictions as “strikes” under a “three strikes” law.¹ These arguments share a structure in common:

1. Before considering evidence from behavioral science, we endorse some legal norm.
2. Evidence from behavioral science shows that this legal norm involves, or is influenced by, certain cognitive processes, which we call *biases*.

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1. See *People v. Smith*, 1 Cal. Rptr. 3d 901, 926 (Cal. Ct. App. 2003) (Johnson, J., dissenting) (arguing that because “judges are more likely than juries to develop cognitive biases favoring police at the expense of defendants,” juvenile adjudications without the opportunity for a jury trial should not be treated as “strikes” under California’s “three strikes” law (quoting *Recent Case*: United States v. Smalley, 116 HARV. L. REV. 705, 709 (2002))); Gregory S. Alexander, *A Cognitive Theory of Fiduciary Relationships*, 85 CORNELL L. REV. 767, 769 (2000) (arguing that evidence about cognitive bias gives us reason to re-examine how judges approach the special responsibility of fiduciaries); Goutam U. Jois, *Stare Decisis Is Cognitive Error*, 75 BROOK. L. REV. 63, 64–65 (2009) (arguing that evidence about cognitive bias gives us reason to reject stare decisis); see also Nathalie Martin & Ocean Tama y Sweet, *Mind Games: Rethinking BAPCPA’s Debtor Education Provisions*, 31 S. ILL. U. L.J. 517, 519 (2007) (arguing that evidence about cognitive bias affects which consumer credit laws we should adopt); Gregory Mitchell, *Taking Behavioralism Too Seriously? The Unwarranted Pessimism of the New Behavioral Analysis of Law*, 43 WM. & MARY L. REV. 1907, 1907 (2002) (reviewing proposals for policy change in light of cognitive bias); Joshua H. Whitman, *Winning at All Costs: Using Law & Economics to Determine the Proper Role of Government in Regulating the Use of Performance-Enhancing Drugs in Professional Sports*, 2008 U. ILL. L. REV. 459, 470 (2008) (arguing that cognitive bias should play a part in choices about regulations on performance-enhancing drugs).

3. The effect of biases on the legal norm in question justifies rejecting the norm and adopting an alternative that avoids or minimizes their effect.

A parallel form of argument reaches an opposite conclusion: that the involvement or influence of certain cognitive processes (often dubbed *heuristics* rather than *biases*) supports a legal norm.²

This Article advances the discussion of cognitive bias's relevance to law in two ways. The first is clarifying. Part I differentiates *descriptive* definitions of bias (which do not support treating biases as objectionable influences on law) from *prescriptive* definitions (which do). Part II similarly distinguishes statistical significance from effect size and argues that neither statistical significance nor effect size entails the legal relevance of a bias.

The second way it advances this discussion is substantive. Part III begins by contending that establishing a given bias's relevance to law requires making explicit the normative stance that establishes the bias's relevance. Much existing legal literature on cognitive heuristics and biases wrongly slides from (1) the claim that some bias influences a norm to (2) the claim that the norm should be rejected or accepted. If my argument is correct, the influence of cognitive heuristics and biases on a legal norm neither justifies automatically rejecting nor automatically endorsing that norm. Rather, the evaluation of legal norms in light of their associated biases must proceed case by case. I continue in Parts III and IV by considering whether the effect of some prominent cognitive biases—such as the endowment effect and availability heuristic—on a given legal norm justifies changing that norm.

This Article differs substantially in aim and methodology from existing critical scholarship examining the significance of cognitive bias to law. Legal commentators with training in psychology have alleged that methodological flaws in behavioral scientific research on cognitive bias undermine the legal relevance

2. See Craig S. Lerner, *Reasonable Suspicion and Mere Hunches*, 59 VAND. L. REV. 407, 410 (2006) (discussing the work of German cognitive psychologist Gerd Gigerenzer and noting that "Gigerenzer's provocative claim is not simply that the 'fast and frugal heuristic' is an alternative way of thinking but that it is often preferable: one can generate better results by stripping out many variables and acting *quickly* and on *less* information."); see also GERD GIGERENZER & PETER M. TODD, *SIMPLE HEURISTICS THAT MAKE US SMART* 6 (1999) (presenting an overview of heuristics research).

of this research.³ My critique of case law and legal scholarship that employ research on cognitive bias is different. My claim is that even if research on cognitive bias were technically exemplary, it still could not, on its own, justify changes in legal norms. The legal relevance of cognitive bias requires support from an argument that experimental subjects' divergence from certain models of behavior (for instance, rational-choice economic models) constitutes a normative mistake rather than a normatively defensible deviation from an empirical prediction.⁴

I. Prescriptive and Descriptive Definitions of Bias

At its best, scholarship in psychology is insightful and circumspect about definitions of bias and their implications for policy. The psychologist David Funder, for instance, notes that psychological studies frequently use the term "error" in a technical sense—without intended negative connotations—to simply indicate subjects' deviation from the experimenter's predicted model of behavior.⁵ A research subject's committing an "error" in this technical sense does not constitute her doing anything she *normatively* ought not do.⁶ Indeed, subjects "err" in this sense

3. See Mitchell, *supra* note 1, at 1945–95 (criticizing the experimental design and scientific validity of psychological research on cognitive bias). For a skeptical perspective on Mitchell's approach, see David A. Hoffman, *How Relevant is Jury Rationality?*, 2003 U. ILL. L. REV. 507, 528 (reviewing CASS SUNSTEIN ET AL., PUNITIVE DAMAGES: HOW JURIES DECIDE (2002)) ("[D]ebating whether people are or are not irrational, do or do not provide perfectly predictable punitive verdicts, respect or disrespect jury instructions, in the context of deciding how much power they ought to retain over legal institutions, is likely to prove an ineffective rejoinder to the new paternalism.").

4. Cf. David C. Funder, *Errors and Mistakes: Evaluating the Accuracy of Social Judgment*, 101 PSYCHOL. BULL. 75, 77 (1987) (noting the distinction, and unjustified slippage between "models . . . viewed . . . as theories of how people do make judgments" and models viewed "as standards prescribing how people should make judgments").

5. *Id.* at 78 ("Like so many other common words . . . that psychological jargon has borrowed from ordinary English, the word *error* appears deceptively simple, because its psychological usage is different. In psychology, proper use of the term is technical, not evaluative. . . . The distinction between the two usages is nicely demonstrated in *Funk & Wagnall's Standard College Dictionary* . . . , in which the first definition of error is '[s]omething done, said or believed incorrectly; a *mistake*.' The technical sense is in the fifth definition: '[t]he difference between the observed value of a magnitude and the true or mean value.' (Of course in this context 'true' also has a technical meaning.) Errors demonstrated in the laboratory have this second meaning; they represent departures from the experimenter's standard for a 'true' response that directly reflects the stimulus. Yet even some psychologists seem to be less aware than they should be of the subtle difference between this sort of error and a mistake.") (citation omitted).

6. *Id.* at 75 ("Laboratory research on 'error' in social judgment has largely supplanted research that addresses accuracy issues more directly. Moreover, this

even when they deviate from a normatively unappealing model.⁷ And designing a model with unquestioned normative appeal can be very challenging when dealing with contested social and political judgments.⁸

Funder also makes an observation that is particularly apposite to the application of behavioral science to law. For a model of human behavior to justify a claim about what *legal* norms we should adopt, it must be coupled with claims about how humans *ought* to behave. Yet, as Funder observes, psychologists' models of behavior were historically *descriptive* (describing what subjects *in fact* do), not *prescriptive* (proposing what subjects *ought to do*).⁹ As such, Funder sees psychologists' normative criticism of

research attracts a great deal of attention because of what many take to be its dismal implications for the accuracy of human social reasoning. These implications are illusory, however, because an error is not the same thing as a 'mistake.' An error is a judgment of an experimental stimulus that departs from a model of the judgment process. *If this model is normative, then the error can be said to represent an incorrect judgment.*" (emphasis added).

7. *Id.* at 76 n.2 ("Strictly speaking, any departure of the subject's judgment from the model being tested is an 'error' even if the model postulates a gravely flawed or irrational judgment process. In such situations the nonevaluative, technical meaning of the term *error* becomes clear.")

8. *Id.* at 76–77 ("When the study is of social judgment, the topic of this article, the criterion problem becomes even stickier. The complexity of most social situations makes any degree of certainty and precision in the establishment of 'truth' difficult to come by, and the necessary assumptions are difficult to formulate, much less confirm. If a subject claims that someone is 'friendly' or 'competent' on the basis of his or her acquaintance with that person, for example, on what grounds can we assess whether the subject is right or wrong?"); see also Robert J. MacCoun, *Epistemological Dilemmas in the Assessment of Legal Decision Making*, 23 LAW & HUM. BEHAV. 723, 725–26 (1999) (describing the "correspondence approach," on which "bias or error is established directly by measuring the discrepancy between the judgment and the true state being judged," and noting that "[t]his logic has been quite fruitful in psychophysics, but perhaps less so in social psychology, where we often lack objective measures of the 'true' state of the sociopolitical environment. . . . [T]he question is whether we can ground our evaluations in some objective standards for accuracy.")

9. Funder, *supra* note 4, at 77 (Research on the process of social judgment "does not and was never originally intended to address the external validity or accuracy of personality judgment. . . . [A]n interesting thing happened when psychologists began conducting empirical, process-oriented research based on idealized, normative models. . . . Gradually. . . it became apparent that actual human judgment often deviates from [psychologists'] prescriptions. . . . Simultaneously, these models came to be viewed less as *theories* of how people *do* make judgments and more as *standards* prescribing how people *should* make judgments. As a result, any departure from these models or, more generally, any transformation, biased recall, or other distortion of experimental stimuli began to be taken as an 'error,' or even less ambiguously, a 'shortcoming' or 'fallacy.'"); see also Douglas A. Kysar, *The Jurisprudence of Experimental Law and Economics*, 163 J. INSTITUTIONAL & THEORETICAL ECON. 187, 195 (2007) ("For Kahneman and Tversky, the study of cognitive biases therefore was much like the study of optical illusions: [b]y examining ways in which unobservable processes such as cognition

the “fundamental attribution error,” for example, as reflecting a confusion of description with prescription.¹⁰

Recent applications of behavioral science to law slide from description to prescription in the way that Funder criticizes. For instance, behavioral science research, assuming we accept its methodological validity, shows that humans deviate from a rational-choice economic model of behavior.¹¹ These scientific findings support a criticism that the economic model of rationality *descriptively* misses the mark.¹² But legal scholarship drawing on scientific findings seems—sometimes, even in the same article—to begin with description but slip into prescription, interpreting the science as showing not only that the model fails to accurately describe subjects’ behavior but that subjects’ departure from the model is normatively criticizable.¹³ This conclusion requires the further claim that subjects should adopt the economic model. Yet

or sight go awry under certain stylized conditions, researchers hoped to infer information about how, more generally, such processes are mentally structured. Importantly, although this methodology has widely been interpreted by economists and legal academics to suggest a *normative* policy program[—]one of altering decision environments and otherwise nudging individuals to make decisions that better comport with rational choice ideals . . . no such program was originally envisioned by the proponents of the research.”)

10. Funder, *supra* note 4, at 78 (“The clearest as well as best known example concerns the ‘fundamental attribution error,’ a term that seems to have become firmly entrenched in the literature of social psychology. This error is the putative tendency for people to overestimate the influence of attitudes and personality on behavior, and to underestimate the power of the situation. . . . Discussions of this error have been relentlessly pessimistic; none of its presentations . . . leave any doubt that it may as well have been called the ‘fundamental attribution mistake.’ . . . This error, like many others, is presumed to reflect a flaw in judgment that people would be better off without.”) (citations omitted).

11. See Whitman, *supra* note 1, at 470.

12. *E.g.*, *id.* (“Rational choice theory, the foundation upon which law and economics was built, has been criticized for oversimplifying the factors influencing individuals’ decision-making processes. Much of this criticism arises from experimental evidence showing that actors frequently fail to act ‘rationally’—that is, their actions are not based on subjective comparisons of personal costs and benefits—but instead systematically deviate from rational behavior based on a variety of cognitive biases and mental shortcuts. Thus, while at a broad level rational choice theory remains a helpful model to anticipate human responses to changes in law, behavioral economists assert that these deviations can identify failures in the conventional predictive model.”).

13. *E.g.*, *id.* at 472 (arguing that “legal incentives must operate not only on an individual’s internal cost-benefit calculus, but must also attempt to account for these *innate flaws* in that person’s ability to correctly conduct that calculus”) (emphasis added); *id.* at 495 (asserting that “cognitive biases, including the ‘winner’s bias,’ cause athletes to act socially suboptimally and the government, using the contours of the law, should take an active role in ‘debiasing’ the athletes”).

the methodology of behavioral science aims to describe how we *do* act, not tell us how we *should* act.

Legal commentators should be clear about whether they define bias descriptively or prescriptively.¹⁴ Employing a prescriptive definition of bias requires an argument that the model from which biased individuals' behavior diverges is normatively privileged.¹⁵ Some legal authors have noted that using "bias" as evidence of legal infirmity requires a normative argument in favor of some models of decision making and against others.¹⁶ This choice between descriptive and prescriptive definitions is not unique to bias: defining other terms that are central to law, such as coercion, also requires choosing between descriptive and prescriptive definitions.¹⁷

Responsibly employing the concept of "bias" when applying behavioral science findings to law can be done in two ways. One is to employ a purely descriptive definition of "bias," where bias constitutes deviation from a model, but the model makes no claim to normative superiority.¹⁸ While purely descriptive definitions of

14. See Robert J. MacCoun, *Biases in the Interpretation and Use of Research Results*, 49 ANN. REV. PSYCHOL. 259, 260 (1998) ("The claim that a social scientist is 'biased' is rarely a neutral observation. In our culture, it can be a scathing criticism, a devastating attack on the target's credibility, integrity, and honor. Rather than coolly observing that 'Professor Doe's work is biased,' we are apt to spit out a phrase like '... is completely biased' or '... is biased as hell.'" (citation omitted)); *id.* at 263 ("[S]ome forms of bias are more forgivable than others; indeed, some seem normatively defensible.").

15. Cf. *id.* at 268 ("[N]ormative justification distinguishes appropriate or defensible biases from inappropriate or indefensible biases; justification is always relative to some normative system . . .").

16. *E.g.*, Kysar, *supra* note 9, at 195 ("[A]lthough even psychologists now engage in a hearty debate regarding whether individuals in the world make 'good' or 'bad' decisions through the use of heuristics, no such debate can fruitfully be undertaken without some basic level of agreement among participants regarding what normative benchmark serves to identify 'good' and 'bad' decision making."); Anthony G. Greenwald & Linda Hamilton Krieger, *Implicit Bias: Scientific Foundations*, 94 CALIF. L. REV. 945, 950 (2006) ("Response bias need not indicate something unwise, inappropriate, or even inaccurate. For example, instructors may vary in their response bias in grading, such that some assign a relatively high grade to average student performance while others assign a lower grade to the same performance. . . . Unless there are established standards that associate specific performances with specific grades, one could not accuse either instructor of being less 'accurate' than the other.").

17. See Peter Westen, "*Freedom*" and "*Coercion*"—*Virtue Words and Vice Words*, 1985 DUKE L.J. 541, 590 (1985) (describing coercion as "having descriptive as well as prescriptive meanings"); see also Kathleen M. Sullivan, *Unconstitutional Conditions*, 102 HARV. L. REV. 1413, 1448 n.142 (1989) (differentiating descriptive and normative definitions of coercion).

18. *E.g.*, MacCoun, *supra* note 14 (distinguishing "appropriate or defensible biases from inappropriate or indefensible biases" and noting that "justification is always relative to some normative system"); Christopher G. Beevers et al.,

bias are frequent in psychology, such an approach is comparatively infrequent in the legal literature. One such example is Gregory Mitchell and Phillip Tetlock's definition of bias as "systematic variation in judgmental tendencies elicited by some attribute or property of a stimulus, such as a person's membership in a particular group."¹⁹ This definition does not treat bias as normatively objectionable in itself: for instance, an instructor who systematically spends more time with her students than with other instructors' students would count as biased according to Mitchell and Tetlock's definition, even though her systematic pattern of concern is normatively unobjectionable.

Another legitimate approach involves explicitly employing and normatively defending a prescriptive definition of bias. Martha Chamallas, for instance, defines cognitive bias as "the use of categories that are themselves shaped or contaminated by confining stereotypes and habitual ways of thinking about nondominant groups in our society."²⁰ The Second Circuit, in a recent case, seems to define cognitive bias similarly.²¹ Individuals exhibiting bias in Chamallas's sense deviate not only from an experimenter's model of behavior, but also from a model of behavior that eschews the use of "confining stereotypes" and habitual assumptions about how minority groups will behave.²² Because habitually employing discriminatory stereotypes and assumptions—unlike merely failing to conform to an experimenter's predictions—is widely agreed to be normatively unacceptable,²³ evidence of bias in Chamallas's sense could justify

Identification of Emotionally Ambiguous Interpersonal Stimuli Among Dysphoric and Nondysphoric Individuals, 33 COGNITIVE THERAPY & RES. 283, 288 (2008) ("Another issue regarding this task is how to define biased emotion identification. Bias was defined as relative to the responses of the non-dysphoric group. We assumed the non-dysphoric group provided normative responses on this task and deviations from these responses reflected a bias. . . . We did consider using a more putatively objective definition of bias.").

19. Gregory Mitchell & Phillip E. Tetlock, *Antidiscrimination Law and the Perils of Mindreading*, 67 OHIO ST. L.J. 1023, 1035 (2006). Note that, although their article is published in a law review, Tetlock and Mitchell both hold doctorates in psychology.

20. Martha Chamallas, *The Architecture of Bias: Deep Structures in Tort Law*, 146 U. PA. L. REV. 463, 467 (1998).

21. See *Back v. Hastings on Hudson Union Free Sch. Dist.*, 365 F.3d 107, 125 n.16 (2d Cir. 2004) ("[S]tereotypes are associated with 'cognitive biases,' which cause people to ignore or exclude information that is inconsistent with a stereotype."); cf. Forensic Science and Standards Act of 2012, H.R. Res. 6106 § 2(3), 112th Cong. (2012) (noting "the importance of preventing cognitive bias").

22. Chamallas, *supra* note 20, at 466–67.

23. See, e.g., David Chang, *Conflict, Coherence, and Constitutional Intent*, 72 IOWA L. REV. 753, 858 (1987) ("Most of contemporary society agree, even in the

change in legal norms. Chamallas's definition of bias, however, excludes many so-called cognitive biases—for instance, loss aversion—because these biases do not involve invidious discrimination against nondominant groups.²⁴

Distinguishing descriptive and prescriptive definitions of bias illuminates two ways arguments can misfire:

1. They attempt to infer prescriptive claims directly from the presence of bias even when bias has been defined descriptively rather than prescriptively; or
2. They fail to be clear about whether a definition of bias is descriptive (like Tetlock and Mitchell's) or prescriptive (like Chamallas's).

Both are all too common. William Eskridge and John Ferejohn go wrong in the first way when they interpret cognitive psychologists as claiming “that rational actors better advance their goals by making accurate rather than biased judgments,”²⁵ and then go on, without argument, to equate bias-influenced judgments with “mental mistakes.”²⁶ As we have seen, psychologists frequently employ a purely technical definition of bias that does not, on its own, support equating biases with normative mistakes. Similarly, Goutam Jois states that if “our common law system, and stare decisis [are] nothing more than reflections of a constellation of correlated cognitive biases. . . . then we are substantially worse off for relying on precedent, in all cases and at all levels, than we would be in a system where each case was approached with a blank slate.”²⁷ Again, this only follows if

forums of rough and dirty everyday politics, that law should not reflect racist attitudes. National majorities, through Congress, have enacted federal legislation prohibiting racial discrimination in many contexts.”); Susan Stefan, “*You’d Have to Be Crazy to Work Here: Worker Stress, the Abusive Workplace, and Title I of the ADA*,” 31 *LOY. L.A. L. REV.* 795, 840 (1998) (“While race discrimination and gender discrimination laws have not eliminated racism and sexism from the workplace, they have established a common understanding that such behavior is unacceptable.”).

24. Chamallas, *supra* note 20, at 466–67.

25. William N. Eskridge, Jr. & John Ferejohn, *Structuring Lawmaking to Reduce Cognitive Bias: A Critical View*, 87 *CORNELL L. REV.* 616, 616 (2001); see also Chester M. Gorski, *Comm. Fut. L. Rep. (CCH)*, at 25 n.67, available at http://www.cftc.gov/ucm/groups/public@lrdispositions/documents/legal_pleading/idgorski082399.pdf (“A cognitive bias creates a filter through which events become distorted because certain values become internalized or certain views become held even in the face of contrary facts.”).

26. Eskridge & Ferejohn, *supra* note 25, at 621; cf. Russell Korobkin, *Possibility and Plausibility in Law and Economics*, 32 *FLA. ST. U. L. REV.* 781, 782 (2004) (using the pejorative language of “susceptibility to cognitive biases”).

27. Jois, *supra* note 1, at 67.

cognitive biases are defined prescriptively. Jois offers no argument that they are.

Christine Jolls, Cass Sunstein, and Richard Thaler make the second mistake in an extremely influential *Stanford Law Review* article.²⁸ Jolls et al. begin with the descriptive claim that people using a heuristic will “make forecasts that are different from those that emerge from the standard rational-choice model.”²⁹ Departures from a rational choice model, however, provide no cause for concern unless people *ought* to employ that model—a claim that would require argument.³⁰ Yet Jolls et al. later slip, without argument, into prescriptively treating the influence of cognitive biases as normatively objectionable.³¹

28. Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1472, 1477–78 (1998).

29. *Id.*; accord Russell Korobkin & Chris Guthrie, *Heuristics and Biases at the Bargaining Table*, 87 MARQ. L. REV. 795, 795 (2004) (“According to the normative model, negotiators should compare the subjective expected value of an agreement to the subjective expected value of non-agreement Once a negotiator has calculated the expected value of each course of action, the negotiator should then select the one that promises the greatest return.”); cf. Dan M. Kahan et al., *Who Fears the HPV Vaccine, Who Doesn’t, and Why? An Experimental Study of the Mechanisms of Cultural Cognition*, 34 L. & HUM. BEHAV. 501, 512 (2010) (summarizing Sunstein’s view and that of Howard Margolis as an “irrational-weigher’ theory” which “holds that individuals, due to various cognitive limitations and biases, are incapable of processing risk information in a manner that promotes their *expected utility*” (emphasis added)); Funder, *supra* note 4, at 77 (discussing a variety of “idealized, normative models of the judgment process,” which “emphasized the logical structure of judgment, and were based on the working assumption that people are perfectly ‘rational’ processors of information”).

30. Compare Korobkin & Guthrie, *supra* note 29, at 795 (arguing that “the interdisciplinary field of ‘decision theory’ offers . . . a normative account (how *should* individuals act)” and defining the normative account as adherence to a rational-choice model), with Amartya K. Sen, *Rational Fools: A Critique of the Behavioral Foundations of Economic Theory*, 6 PHIL. & PUB. AFF. 317, 342 (1977) (criticizing rational-choice theorists for ignoring the legitimate role of “commitment” in individual reasoning: “[c]ommitment sometimes relates to a sense of obligation going beyond the consequences. Sometimes the lack of personal gain in particular acts is accepted by considering the value of rules of behavior. But even within a consequentialist act-evaluation framework, the exclusion of any consideration other than self-interest seems to impose a wholly arbitrary limitation on the notion of rationality.”).

31. Jolls et al., *supra* note 28, at 1501 (“[P]eople’s perceptions are distorted by self-serving bias.”); *id.* at 1524 (“Hindsight bias will lead juries making negligence determinations to find defendants liable more frequently than if cost-benefit analysis were done correctly—that is, on an *ex ante* basis. Thus, plaintiffs will win cases they deserve to lose.”). The latter claim in particular seems like simply a stipulation that tort law should be about cost-benefit analysis and nothing else.

II. Statistical Significance, Effect Size, and Normative Significance

In this Part, I identify another distinction that bears on the normative relevance of bias. An experimental finding of bias can be significant in two different senses: *statistically* (meeting a statistical test of significance) and what I'll call "*sizeably*" (markedly affecting the phenomenon under study).³² Each is compatible with, but does not entail, the other. An effect of infinitesimal size can be statistically significant when the sample under study is very large.³³ Conversely, a sizeable effect can be statistically insignificant if the sample size is very small.³⁴

Some legal scholars have noted that not all statistically significant results are sizeable.³⁵ Encouragingly, some case law has similarly differentiated the two types of significance.³⁶

32. Sarah H. Ramsey & Robert F. Kelly, *Assessing Social Science Studies: Eleven Tips for Judges and Lawyers*, 40 FAM. L.Q. 367, 376 (2006) ("Statistical significance is the likelihood that a researcher is seeing a relationship or effect due to sampling error; in other words, the likelihood that the researcher will be wrong if the researcher believes a true effect exists. Substantive significance has to do with the size of the effect or the strength of a relationship; that is, with regard to decisions that must be made, is the effect large enough to meaningfully influence the decision one is making.").

33. Robert F. Kelly & Sarah H. Ramsey, *Assessing and Communicating Social Science Information in Family and Child Judicial Settings: Standards for Judges and Allied Professionals*, 45 FAM. CT. REV. 22, 32 (2006) ("[B]ecause statistical significance is strongly influenced by the size of the sample used in analyses, large samples may yield statistically significant findings that are inconsequential in terms of the size of the effect of one variable on another."); see also Siu L. Chow, *Significance Test or Effect Size?*, 103 PSYCHOL. BULL. 105, 106 (1988) (noting the effect of sample size on statistical significance and its potential to mask the relevance of effect size).

34. E.g., Michael D. Maltz, *Deviating from the Mean: The Declining Significance of Significance*, 31 J. RES. CRIME & DELINQ. 434, 439-40 (1994) (discussing an experiment with a small sample size that lacked statistical significance nonetheless gave doctors at the time good reason, because of the large effect size, to believe that citrus fruit cured scurvy).

35. E.g., Catherine Barnard & Bob Hepple, *Indirect Discrimination: Interpreting Seymour-Smith*, 58 CAMBRIDGE L.J. 399, 407 (1999) ("Statistical significance tests were devised to solve the problem of small sample sizes, but once there is a very large sample (e.g. the national labour force), then statistical significance tests are misleading. Where the sample is large, then the question is whether the differences are substantially or practically important."); Ramsey & Kelly, *supra* note 32, at 376; Kelly & Ramsey, *supra* note 33, at 32; Maltz, *supra* note 34, at 440 ("Statistical significance does not imply substantive significance, and most researchers know this—but this does not stop them from implying that it does. In other words, there are (conceptually) Type I and Type II errors that distinguish statistical significance from substantive significance: not all statistically significant findings are substantively significant, and not all substantively significant findings are statistically significant.").

36. E.g., *Thornburg v. Gingles*, 478 U.S. 30, 53-54 (1986) (differentiating the claims that "the correlation between the race of the voter and the voter's choice of

However, in the particular arena of work on bias and the law, some experiments that find statistically significant bias are consistent with an ultimate determination that the effect or pervasiveness of the bias is small.³⁷ Furthermore, many scholars considering the relevance of bias to legal practice have conflated statistical significance and effect size.³⁸

It is also worth noting that neither statistical significance nor effect size reliably entail a third type of “significance”—relevance to our choices about social or legal norms.³⁹ A bias that lacks statistical significance or has only an infinitesimal effect size might seem obviously irrelevant to law. But on many plausible normative perspectives, such as motive utilitarianism,⁴⁰ Kantianism,⁴¹ and Aristotelian virtue ethics,⁴² the presence of a psychological motivation with only an infinitesimal or statistically uncertain effect can make a normative difference.

certain candidates was statistically significant” and that “the degree of racial bloc voting was ‘so marked as to be substantively significant, in the sense that the results of the individual election would have been different depending upon whether it had been held among only the white voters or only the black voters’” (citation omitted)); *Waisome v. Port Auth.*, 948 F.2d 1370, 1376 (2d Cir. 1991) (noting that a disparity did not justify a finding that defendants violated Title VII of the Civil Rights Act because “though the disparity was found to be statistically significant, it was of limited magnitude,” and stating that “statistical significance tells nothing of the importance, magnitude, or practical significance of a disparity”).

37. *E.g.*, Mitchell, *supra* note 1, at 1952 (discussing a case where “the statistically significant difference was attributable to only fifteen percent of the subjects changing their choices Although this fifteen percent of the population may be a statistically significant number of respondents displaying inconsistency or ‘error’ . . . should we in this instance label the normative principle descriptively incorrect on the basis of this rather small, internally inconsistent minority?”).

38. *Id.* at 1955–57 n.89 (collecting examples).

39. See Carolyn J. Hill et al., *Empirical Benchmarks for Interpreting Effect Sizes in Research*, 2 CHILD DEV. PERSP. 172, 172 (2008) (“We argue that effect sizes should . . . be interpreted with respect to empirical benchmarks that are relevant to the intervention, target population, and outcome measure being considered.”); Michelle M. Mello, *Using Statistical Evidence to Prove the Malpractice Standard of Care: Bridging Legal, Clinical, and Statistical Thinking*, 37 WAKE FOREST L. REV. 821, 836–45 (2002) (noting that statistical significance is neither necessary nor sufficient for legal significance).

40. See Robert Merrihew Adams, *Motive Utilitarianism*, 73 J. PHIL. 467, 470 (1976) (“[T]he consequences of any acts one is . . . led to perform are not always the only utility-bearing consequences of being influenced, to a given degree, by a motive.”).

41. *E.g.*, IMMANUEL KANT, *GROUNDWORK OF THE METAPHYSICS OF MORALS* 14 (Allen W. Wood ed. & trans., Yale Univ. Press 2002) (1785) (stating that an action only has “authentic moral worth” when an agent “does the action without any inclination, solely from duty”).

42. *E.g.*, ARISTOTLE, *NICOMACHEAN ETHICS* 80 (W.D. Ross trans., Oxford Univ. Press 1980) (c. 384 B.C.E.) (“[V]irtuous actions are . . . done for the sake of the noble.”).

That normative significance requires neither statistical significance nor effect size is particularly relevant to the law of implicit racial bias. Gregory Mitchell has asserted that there is little reason to be worried about rare or infinitesimal biases.⁴³ Some case law likewise denies the legal significance of biases that have only negligible effects.⁴⁴ If we adopt a consequentialist stance, which only legally regulates behavior when it leads to bad outcomes, we will conclude—with Mitchell—that the law should not address implicit racial biases that have only infinitesimal effects. But if we adopt a stance that draws on motive-utilitarian, Kantian, or Aristotelian insights, we may conclude that the law should address implicit racial biases even if swamping factors prevent the biases from producing bad effects.

Such a nonconsequentialist stance might morally differentiate (1) cases where psychological processes *internal* to the agent, such as shame or self-control, prevent implicit racial bias from producing bad effects, from (2) cases where *external* factors prevent implicit biases from producing bad effects. On this view, a criminal *attempt* that failed because of external factors but was motivated in part by implicit bias could be classifiable as a hate crime, even though less culpable than a failed attempt motivated by *intentional* racism.⁴⁵

43. Mitchell, *supra* note 1, at 1958 (“If the deleterious effects of cognitive biases found in the laboratory are not substantial or widespread, then little justification exists for system-wide reforms to address these biases.”).

44. Mitchell & Tetlock, *supra* note 19, at 1038–39 (“Courts typically require that the adverse action against the plaintiff rise above what Dean White calls ‘de minimis’ discrimination. Thus, many subtle acts by managers or co-workers that psychologists would label discriminatory do not rise to the level of illegal discrimination unless accompanied by some tangible effect or unless they cumulatively create a hostile work environment.”); *cf.* *Waisome v. Port Auth.*, 948 F.2d 1370, 1376 (2d Cir. 1991) (finding that if “two additional [B]lack candidates passed the written examination the disparity would no longer be of statistical importance,” a statistically significant disparity did not justify a legal judgment against defendant).

45. Attempts can constitute hate crimes. *See, e.g.,* *People v. Duggan*, No. B218451, 2011 WL 1335187, at *7 (Cal. Ct. App. 2d Dist. Apr. 8, 2011) (enhanced sentencing for a defendant who “attempts to commit a felony that is a hate crime”); *Andrews v. State*, 930 A.2d 846, 855 (Del. 2007) (“Any person who commits, or attempts to commit, any crime as defined by the laws of this State, and who *intentionally . . . [s]elects the victim because of the victim’s race, religion, color, disability, sexual orientation, national origin or ancestry, shall be guilty of a hate crime.*” (emphasis added)); *People v. Assi*, 877 N.Y.S.2d 231 (App. Div. 2009) (holding that attempted arson constituted a hate crime). So, too, can motivation by implicit bias. *See* J. Rebekka S. Bonner, *Reconceptualizing VAWA’s “Animus” for Rape in States’ Emerging Post-VAWA Civil Rights Legislation*, 111 *YALE L.J.* 1417, 1425 (2002) (“[W]ith this new intermediate animus standard, the possibility still existed that a VAWA defendant need not have been conscious of the motive of bias in committing the violence: [t]he civil rights remedy could have been read to

III. Normatively Justifiable Biases

In this Part, I will explore cases where behavior that could be classified *descriptively* as biased does not meet a *prescriptive* definition of bias, because although the behavior diverges from the experimenter's preferred model, it nonetheless accords with another normatively justifiable model.⁴⁶ I begin with a non-legal example about the developmental psychology of moral reasoning, and then continue by discussing a variety of legal examples, including fiduciary responsibility, omission bias, the endowment effect, and confirmation bias.

A. Two Models of Moral Development

Carol Gilligan's influential criticism of Lawrence Kohlberg's theory of moral reasoning demonstrates how behavior that diverges from an experimenter's model can nonetheless be normatively acceptable.⁴⁷ Kohlberg's model defines six categories of moral reasoning, and treats "higher" stages of reasoning as normatively superior.⁴⁸ Gilligan's response is that an alternative, equally appealing model of human behavior can vindicate some conduct Kohlberg's model of human behavior regards as inferior.⁴⁹

Gilligan's argument examines the responses of two study subjects, Amy and Jake, to the "Heinz dilemma," in which "a man named Heinz considers whether or not to steal a drug which he

permit the use of circumstantial evidence of implicit bias motivation rather than requiring explicit indicia of intent.").

46. Cf. Funder, *supra* note 4, at 82 ("Many other frequently demonstrated errors may reflect adaptive processes in the real world."). In this Part, I consider whether biases may in fact be consistent with *normative* reasons (with an agent's acting rightly or justly), whereas Funder considered whether such biases are adaptive, i.e. consistent with *prudential* reasons (with an agent's acting in her own interest). Cf. Mark Kelman, *Saving Lives, Saving From Death, Saving From Dying: Reflections on 'Over-Valuing' Identifiable Victims*, 11 YALE J. HEALTH POL'Y L. & ETHICS 51, 62 (2011) (discussing the assertion that "subjects who seemingly fail to meet ends ascribed to them by experimenters actually are consciously or semi-consciously meeting a separate, less obvious end").

47. See CAROL GILLIGAN, IN A DIFFERENT VOICE 18 (1982) (explaining that "the very traits that traditionally have defined the 'goodness' of women, their care for and sensitivity to the needs of others, are those that mark them as deficient in moral development" according to Kohlberg).

48. Lawrence Kohlberg, *The Claim to Moral Adequacy of a Highest Stage of Moral Judgment*, 70 J. PHIL. 630, 630 (1973) (endorsing "the claim that a higher or later stage of moral judgment is 'objectively' preferable to or more adequate than an earlier stage of judgment according to certain *moral* criteria").

49. GILLIGAN, *supra* note 47, at 25 ("Adding a new line of interpretation, based on the imagery of the girl's thought, makes it possible not only to see development where previously development was not discerned but also to consider differences in the understanding of relationships without scaling these differences from better to worse.").

cannot afford to buy in order to save the life of his wife.⁵⁰ Jake approaches the dilemma “as a conflict between the values of property and life, . . . discerns the logical priority of life[,] and uses that logic to justify his choice,”⁵¹ which is that Heinz should steal the drug. Jake’s approach, which shows “his ability to bring deductive logic to bear on the solution of moral dilemmas, to differentiate morality from law, and to see how laws can be considered to have mistakes” places him “on Kohlberg’s scale, [at] a mixture of stages three and four.”⁵² In contrast, Amy argues that “if Heinz and the druggist had talked it out long enough, they could reach something besides stealing,” and so refuses to conclude that a conflict between values exists.⁵³ Gilligan believes that Amy’s responses, “when considered in the light of Kohlberg’s definition of the stages and sequence of moral development . . . appear to be a full stage lower in maturity than those of the boy,” because they would reflect “an inability to think systematically about the concepts of morality or law, [and] a reluctance to challenge authority or to examine the logic of received moral truths.”⁵⁴

Gilligan, however, proposes an alternative to Kohlberg’s view, one that captures the normative value of Amy’s reasoning. Gilligan believes that Amy’s

world is a world of relationships and psychological truths where an awareness of the connection between people gives rise to a recognition of responsibility for one another, a perception of the need for response. Seen in this light, her understanding of morality as arising from the recognition of relationship, her belief in communication as the mode of conflict resolution, and her conviction that the solution to the dilemma will follow from its compelling representation seem far from naive or cognitively immature.⁵⁵

Gilligan does not conclude that Kohlberg’s model is mistaken; rather, she argues that her model represents a reasonable

50. *Id.*

51. *Id.* at 26.

52. *Id.* at 27.

53. *Id.* at 29.

54. *Id.* at 30.

55. *Id.* Note that Gilligan does not believe that the two models necessarily map onto a gender difference. *See, e.g., id.* at 25 (“The choice of a girl whose moral judgments elude existing categories of developmental assessment is meant to highlight the issue of interpretation rather than to exemplify sex differences per se.”).

alternative.⁵⁶ Her proposal, she believes, could be complementary to Kohlberg's, rather than either being better than the other.⁵⁷

Gilligan's critique teaches us something important about bias's relevance to law: bias's relevance to law depends on the normative superiority of the model from which the biased behavior in question systematically deviates. Absent evidence of such normative superiority, we should constantly remain aware of the possibility of a "new line of interpretation:" an alternative model of behavior that deviates from the experimenter's model but normatively justifies the pattern of behavior in question.⁵⁸

B. Cognitive Bias and Fiduciary Responsibility

Moving from psychology to legal practice, consider Gregory Alexander's claim that "[c]ognitive factors lead courts to analyze fiduciary relationships, at least those that are property-based, differently than they evaluate contractual relationships."⁵⁹ Alexander goes on to assert that "[i]n cases involving alleged breaches of fiduciary duties, courts tend to use a top-down mode of cognitive analysis; whereas in cases of alleged contractual breaches, they employ a bottom-up cognitive method."⁶⁰

56. *Id.* at 31 ("[T]he arrangement of these answers as successive stages on a scale of increasing moral maturity calibrated by the logic of the boy's response misses the different truth revealed in the judgment of the girl. To the question, 'What does he see that she does not?' Kohlberg's theory provides a ready response, manifest in the scoring of Jake's judgments a full stage higher than Amy's in moral maturity; to the question, 'What does she see that he does not?' Kohlberg's theory has nothing to say. Since most of her responses fall through the sieve of Kohlberg's scoring system, her responses appear from his perspective to lie outside the moral domain.").

57. *Id.* at 33 ("The contrasting images of hierarchy and network in children's thinking about moral conflict and choice illuminate two views of morality which are complementary rather than sequential or opposed. But this construction of differences goes against the bias of developmental theory toward ordering differences in a hierarchical mode.").

58. *Id.* at 25 ("Adding a new line of interpretation, based on the imagery of the girl's thought, makes it possible not only to see development where previously development was not discerned but also to consider differences in the understanding of relationships without scaling these differences from better to worse."); cf. Mark Kelman, *Behavioral Economics as Part of a Rhetorical Duet: A Response to Jolls, Sunstein, and Thaler*, 50 STAN. L. REV. 1577, 1579 (1998) (arguing for a greater recognition of the "degree to which stories about behavior, whether rational actor stories or 'richer' behavioral ones, are essentially interpretive tropes rather than full-blown verifiable or falsifiable theories," and greater recognition "that behavioral and mainstream economics can both best be used as *approaches* to data that are inexorably ambiguous in their implications").

59. Alexander, *supra* note 1, at 768.

60. *Id.*

According to Alexander, top-down approaches are “theory-driven,” while bottom-up approaches are “data-driven,” and “[t]he most important consequence of the difference between these two approaches is that courts are more likely to hold fiduciaries liable for losses to beneficiaries than they are to hold ordinary contracting parties liable for losses their counterparties may experience.”⁶¹

Here, however, is an alternative way of interpreting Alexander’s findings: courts’ different modes of cognitive analysis for fiduciary and contractual breaches simply reflect that they approach fiduciary duties using *nonconsequentialist* norms, which treat a breach as a wrong over and above any economic inefficiency, whereas they apply *consequentialist*, economic norms to ordinary contractual duties.⁶² This possibility is further supported by Alexander’s description of fiduciary duties as governed by what he calls “the fiduciary role-schema.”⁶³ Alexander goes on to state that “courts possess a fairly well-developed schema of the fiduciary role, but have not developed a comparable schema for ordinary contracting parties”⁶⁴—which, again, could simply involve courts being nonconsequentialist about fiduciaries but consequentialist about ordinary contracts.

After introducing the fact that courts treat fiduciaries and counterparties differently, Alexander states that “[t]he fiduciary role-schema often makes courts more likely to over-interpret behavior of fiduciaries than in the case of conventional contracts.”⁶⁵ It’s not clear what Alexander means by “over-interpret.” If he means that courts interpret fiduciary behavior more than they interpret conventional contract behavior, this is true but unsurprising: applying nonconsequentialist norms involves attending to details of behavior that consequentialist norms treat

61. *Id.*

62. *Id.*

63. *Id.* at 768–69 (“The judicial tendency to apply top-down cognitive processes in cases involving property fiduciaries stems principally from a cognitive phenomenon called the schema. Legal scholars, including those working in BDT [behavioral decision theory], have thus far overlooked this phenomenon. A schema is a cognitive [sic] bias that the psychological literature defines as ‘a cognitive structure that represents knowledge about a concept or type of stimulus, including its attributes and the relations among those attributes.’ More simply, a schema is a fuzzy-edged, but still relatively clear, preconceived image that the observer has of a particular situation or person.”).

64. *Id.* at 769.

65. *Id.*

as unimportant.⁶⁶ Conversely, if he means that courts interpret fiduciary behavior more than they *ought to*, this is surprising but unsupported. Only if we presuppose that fiduciaries should be treated like ordinary counterparties can we conclude that interpreting fiduciary behavior more stringently is normatively criticizable.

Alexander demurs at first from arguing that adopting the fiduciary role-schema is normatively inappropriate.⁶⁷ However, by the end of the article, he treats judges' employment of theory-driven (as opposed to "data-driven") analysis as a mistake.⁶⁸ The arguments he offers for this conclusion, however, are extremely tendentious, and seem at bottom no more than a bare normative assertion that we should become consequentialists about fiduciaries' responsibilities. He states that "because fiduciaries, like parents and masters, are expected to protect their charges when beneficiaries experience losses, judges are apt to blame the responsible fiduciary."⁶⁹ But, while Alexander gives us ample reason to believe what we already know—that judges *do* treat fiduciaries differently from ordinary contracting parties—he gives us no reasons to believe that judges *should* treat fiduciaries and nonfiduciaries similarly. He asserts that "we should expect greater accuracy in determining liability in judicial decisions on contract claims than on breach-of-fiduciary-duty claims. This discrepancy results because courts employ a more data-driven mode of analysis in contract cases that is relatively uninfluenced by knowledge structures like role-schemas."⁷⁰ This claim about "accuracy" is a non sequitur—given Alexander's earlier admission that role-schemas are not inherently undesirable, why believe that they will lead judges astray in fiduciary duty cases?

A successful argument against the fiduciary role-schema would have to offer and defend a normative definition of accuracy,

66. See Seana Valentine Shiffrin, *The Divergence of Contract and Promise*, 120 HARV. L. REV. 708, 751–52 (2007) (proposing an approach to contract law that would "affirm and support . . . public declarations of equal status," and prioritizing this moral goal over economic goals: "that such a system also tends to create efficient systems of economic exchange is an important side benefit that may affect many of our decisions about how to structure the institution, but only in ways complementary to our other moral purposes").

67. Alexander, *supra* note 1, at 771 ("Schemas are neither inherently desirable nor undesirable; they simply are.")

68. *Id.* at 785 ("Not all courts fall prey to cognitive errors when dealing with claims against fiduciaries. Sometimes, the analysis is more data-driven and leads to accurate decisions. Yet, cognitive error likely creeps into judicial analysis in contract cases as well as fiduciary cases.")

69. *Id.* at 778.

70. *Id.*

and contend that the fiduciary schema leads to inaccuracy under that definition. Absent such argument, treating the fiduciary schema as inaccurate seems no more justified than holding that, for instance, subjecting people engaged in abnormally dangerous activities to strict liability rather than negligence liability produces “inaccurate” results. The idea behind strict liability is that the nature of certain actions can subject actors to a different standard of liability.⁷¹

Alexander also charges judges with holding fiduciaries to an overly high standard because they are influenced by a “hindsight bias” when they evaluate fiduciaries’ actions: this hindsight bias causes judges to hold fiduciaries liable for harms that could not have been foreseen *ex ante*.⁷² Again, consider strict liability in tort. A fairness-based justification for strict liability does not rest strict liability on the claim that the strictly liable party miscalculated the likely costs and benefits of her actions: rather, it bases her liability on the nature of the activity in which she engaged.

Furthermore, a certain amount of “normative risk”—the risk that even someone acting reasonably *ex ante* will incur rectificatory obligations *ex post*—may well be inescapable.⁷³ The plausibility of normative risk presents a reason to reject, for example, what David Hoffman calls the “Rule of Law” picture,

71. See, e.g., *In re Hanford Nuclear Reservation Litig.*, 521 F.3d 1028, 1049 (9th Cir. 2008) (holding that defendants’ activity in developing an atomic bomb was abnormally dangerous and so supported strict liability); *Commander Oil Corp. v. Barlo Equip. Corp.*, 215 F.3d 321, 330 (2d Cir. 2000) (“Central to the *Rylands v. Fletcher* theory of strict liability is the underlying fairness of imposing on the beneficiaries of an ultra-hazardous activity the ultimate costs of that activity.”); see also WILLIAM L. PROSSER, *HANDBOOK OF THE LAW OF TORTS* 522 (4th ed. 1971) (noting that one possible basis for “plac[ing] the absolute responsibility for preventing the harm upon the defendant” is that “his conduct is regarded as fundamentally anti-social”); George P. Fletcher, *Fairness and Utility in Tort Theory*, 85 *HARV. L. REV.* 537, 542 (1972) (seeing strict liability as justified by the rationale “that a victim has a right to recover for injuries caused by a risk greater in degree and different in order from those created by the victim and imposed on the defendant—in short, for injuries resulting from nonreciprocal risks”).

72. Alexander, *supra* note 1, at 783.

73. See Aditi Bagchi, *Managing Moral Risk: The Case of Contract*, 111 *COLUM. L. REV.* 1878, 1888 (2011) (“When a reasonable risk results in great harm to another, however, it is the insight of the concept of moral luck and related literature that one is nevertheless morally on the hook, or at least regarded as such by both oneself and others. The result is that even when one acts reasonably, one acts knowing that one may commit wrongs, or at least incur negative responsibility.”); cf. Julie Tannenbaum, *Emotional Expressions of Moral Value*, 132 *PHIL. STUD.* 43, 55 (2007) (arguing that someone driving in an *ex ante* reasonable manner may still commit a “morally inadequate act” if he hits and kills a pedestrian whose presence he could not have foreseen).

which “requires that parties be able to determine, at the time when they are acting, the ultimate legal cost of that action with some certainty.”⁷⁴ Normative risk, which the “eggshell plaintiff” rule exemplifies, implies that some legal costs are not predictable in advance.⁷⁵

C. Additional Justifiable Biases

Other “biases” or “cognitive limitations” that legal scholars have criticized are in fact consistent with normatively defensible models of human conduct, just as I have argued that fiduciary responsibility is. In this Subpart, I examine several, though no doubt others exist.

1. Omission Bias

Some have criticized the “omission bias,” which treats actions as more significant than omissions.⁷⁶ But, as Douglas Kysar argues, the omission bias can be an acceptable influence on legal norms:

First, a general—and testy—point about the omission bias: [t]here is no such thing as an omission *bias*. Only strict impartial consequentialist-utilitarians such as the

74. Hoffman, *supra* note 3, at 519; see also Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption From Law and Economics*, 88 CALIF. L. REV. 1051, 1097 (2000) (“Jolls, Sunstein, and Thaler have suggested that the [hindsight] bias might be avoided by shielding juries from evidence concerning what action the defendant actually took until after jurors have determined what decision would have been reasonable *ex ante*.”).

75. Hoffman, *supra* note 3, at 520. The “eggshell plaintiff” rule holds tort defendants liable for harms to plaintiffs even if those harms are in part attributable to the plaintiffs’ unusual and unforeseeable vulnerabilities. Dan B. Dobbs et al., *DOBBS LAW OF TORTS* § 206 (2d ed. 2011). The canonical eggshell plaintiff case is *Vosburg v. Putney*, 50 N.W. 403 (Wisc. 1891). See also *Jenson v. Eveleth Taconite Co.*, 130 F.3d 1287, 1294–95 (8th Cir. 1997) (endorsing the “eggshell plaintiff” rule in cases of emotional harm and collecting similar cases from other circuits); *Benn v. Thomas*, 512 N.W.2d 537, 538 (Iowa 1994) (upholding the eggshell plaintiff rule and stating that it “requires the defendant to take his plaintiff as he finds him, even if that means that the defendant must compensate the plaintiff for harm an ordinary person would not have suffered”).

76. E.g., Jon Hanson & Kathleen Hanson, *The Blame Frame: Justifying (Racial) Injustice in America*, 41 HARV. C.R.-C.L. L. REV. 413, 425 (2006) (listing “omission bias” among the “motivated attributions . . . [that] produce a distorting frame that allows us to perceive justice in the face of oppression, coercion, and injustice.”); Daniel M. Isaacs, *Baseline Framing in Sentencing*, 121 YALE L.J. 426, 445 (2011) (“[T]he omission bias may cause judges to inadequately adjust sentences from the baseline, because judges may prefer the harms caused by passively applying the default sentence over the harms caused by actively altering it.”); Robert A. Prentice, *Chicago Man, K-T Man, and the Future of Behavioral Law and Economics*, 56 VAND. L. REV. 1663, 1726–28 (2003) (listing omission bias among the “illusions” to which even experts can fall prey).

psychologist Jonathan Baron regard these effects as indicative of bias. For others, including what is probably the majority of moral philosophers, longstanding conventions such as the act-omission distinction are an essential, indeed ineliminable aspect of moral reasoning.⁷⁷

As Kysar points out, analyses like Baron's redescribe a normative stance, nonconsequentialism, as what Alafair Burke calls an "information-processing bias."⁷⁸ Nonconsequentialist reasoning that employs an act-omission distinction will indeed diverge from what a consequentialist model of human behavior predicts. But this gives us no reason to criticize nonconsequentialist reasoning as "biased" in a pejorative sense unless the consequentialist model is *normatively* superior—a claim that is deeply contested and for which legal scholars invoking cognitive bias generally provide no support.⁷⁹ As such, a broad, descriptive definition of the omission bias—e.g., Baron's definition of omission bias as "the bias toward harm caused by omissions when that is pitted against harm caused by acts"⁸⁰—cannot support legal or policy prescriptions without additional normative argument. Prescriptive use of omission bias should be restricted, as Jeffrey Rachlinski and his co-authors do, to cases where the action-omission distinction is agreed to be morally irrelevant.⁸¹

77. Kysar, *supra* note 9, at 191–92; see also Mitchell N. Berman, *Replay*, 99 CALIF. L. REV. 1683, 1720 n.84 (2011) ("[I]t is far from clear when omission bias is a genuine cognitive error or irrational as opposed to a substantive moral judgment.").

78. Alafair Burke, *Neutralizing Cognitive Bias: An Invitation to Prosecutors*, 2 N.Y.U. J.L. & LIBERTY 512, 515 (2007).

79. See Govind C. Persad, *Risk, Everyday Intuitions, and the Institutional Value of Tort Law*, 62 STAN. L. REV. 1445, 1450–52 (2010) (defending the relevance of a nonconsequentialist act/omission distinction to law); cf. Kelman, *supra* note 46, at 56 (critiquing the "mainstream intuition among fundamentally utilitarian 'policy wonks' that subjects who spend more to save an identified life than they would choose to spend to prevent the death of an unidentified person are, at core, the poster children for the persistence of irrationality and error").

80. Jonathan Baron, *Value Analysis of Political Behavior—Self-Interested : Moralistic :: Altruistic : Moral*, 151 U. PA. L. REV. 1135, 1161 (2003).

81. Jeffrey J. Rachlinski et al., *Inside the Bankruptcy Judge's Mind*, 86 B.U. L. REV. 1227, 1242 (2006) ("[I]n situations where acts and omissions are morally equivalent, people who judge 'harmful commissions as worse than the corresponding omissions' commit the so-called 'omission bias.'" (emphasis added)(citation omitted)); cf. Colin Camerer et al., *Regulation for Conservatives: Behavioral Economics and the Case for "Asymmetric Paternalism,"* 151 U. PA. L. REV. 1211, 1224 (2003) (describing the "omission/commission bias" as "the tendency to care much more about errors of commission than about errors of omission, even when there is no obvious normative reason to draw a distinction" (emphasis added)); Ken Levy, *Killing, Letting Die, and the Case for Mildly Punishing Bad Samaritanism*, 44 GA. L. REV. 607, 647 n.80 (2010) ("[O]mission bias' . . . means that we tend irrationally to favor omissions over positive actions even in contexts where there is actually no moral distinction between them.").

(However, on the very next page, Rachlinski et al. go on, without argument, to tendentiously classify as “omission bias” subjects’ evaluation of an active lie as morally worse than a material omission.⁸²)

2. Familiarity Bias

Some have criticized the view that personal relationships generate special obligations as reflecting a “‘familiarity’ bias, under which [p]eople are more willing to harm strangers than individuals they know, especially when those individuals are paying clients with whom they have ongoing relationships.”⁸³ At least one administrative law decision has similarly characterized this pattern of concern as an objectionable cognitive bias.⁸⁴ Yet there are strong normative arguments that giving greater weight to the interests of nearby people, salient people, and intimates can be normatively acceptable.⁸⁵ The normative relevance of

82. Rachlinski, *supra* note 81, at 1243. For a moral argument differentiating different forms of deception, see, for example, Collin O’Neil, *Lying, Trust, and Gratitude*, 40 PHIL. & PUB. AFF. 301, 325–33 (2012) (differentiating “deceit by communication” from “covert deceit”).

83. James Fanto, *Whistleblowing and the Public Director: Countering Corporate Inner Circles*, 83 OR. L. REV. 435, 464 n.96 (2004) (quoting Max H. Bazerman et al., *Why Good Accountants Do Bad Audits*, HARV. BUS. REV., Nov. 2002, at 100); see also Iris H-Y Chiu, *Securities Intermediaries in the Internet Age and the Traditional Principal-Agent Model of Regulation: Some Observations From European Union Securities Regulation*, 2 VA. L. & BUS. REV. 307, 346–47 (2007) (“In an online context, depersonalization of the client-intermediary relationship causes bilateral information asymmetry. Depersonalization, however, also removes certain social and cognitive pressures for client reliance. Professors Donald Langevoort and Robert Prentice have written at length on how personalization of relations with brokers creates cognitive biases on the part of the investor towards the broker, and hence reliance on the broker.”); Neal R. Feigenson, *Sympathy and Legal Judgment: A Psychological Analysis*, 65 TENN. L. REV. 1, 52 (1997) (“[A]n empathy-based morality, as Martin Hoffman has argued, is too prone to be biased by the salience and source of the stimulus. A cry of pain may arouse more empathic distress than a facial grimace; a friend’s or relative’s cry more than a stranger’s.”).

84. Chester M. Gorski, Comm. Fut. L. Rep. (CCH) nn.67, 70, available at http://www.cftc.gov/ucm/groups/public/@lrdispositions/documents/legal_pleading/idgorski082399.pdf (defining bias as distortion, and then asserting that “an employment relationship may also lead to a cognitive bias” in part because “staff tend to empathize with the organization, its goals and its views”).

85. For a discussion of friendship as a normatively defensible basis for action, see David O. Brink, *Impartiality and Associative Duties*, 13 UTILITAS 152, 153 (2001), arguing that “[o]ur intuitions about associational duties . . . admit of a philosophical rationale at least as plausible as anything the consequentialist has to offer.” See also Samuel Scheffler, *Relationships and Responsibilities*, 26 PHIL. & PUB. AFFAIRS 189, 195 (1997) (suggesting an argument that justifies special responsibilities to friends). For a discussion of nearness and vividness, see FRANCES M. KAMM, *INTRICATE ETHICS* chs. 11–12 (2007), arguing that nearness to a rescuee can strengthen one’s duties to rescue. See also FRANCES M. KAMM,

friendship and familiarity finds support in the case law of tort and contract.⁸⁶

Eskridge and Ferejohn similarly criticize the “availability heuristic” for giving greater weight to vivid information and to the interests of friends, reserving particular criticism for “pro-life conservatives [who] are open to stem cell research because they have relatives suffering from the targeted diseases,” whom they charge are in the grip of availability and representativeness heuristics.⁸⁷ However, responses that weigh vivid information highly could be a normatively defensible emotional response to particularly meaningful or culturally important risks.⁸⁸ Indeed, “worldview bias” seems simply to be the unavoidable result of having any normative commitments at all.⁸⁹

3. Endowment Effect

The “endowment effect” involves people who hold property evaluating that property as more valuable than others do.⁹⁰ Some

MORALITY, MORTALITY VOL. 2: RIGHTS, DUTIES, & STATUS 233 (2001) (“[I]t may be because I actually have vivid knowledge that I have reason to act. It might be morally monstrous to be able to ignore such knowledge, whereas it might not be monstrous to be able to ignore the pale (even complete) propositional knowledge.”).

86. See, e.g., *Farwell v. Keaton*, 240 N.W.2d 217, 222 (Mich. 1976) (holding defendant had an affirmative duty to aid plaintiff because the two “were companions on a social venture. Implicit in such a common undertaking is the understanding that one will render assistance to the other when he is in peril if he can do so without endangering himself.”); *Frowen v. Blank*, 425 A.2d 412, 418 (Pa. 1981) (finding that friendship between parties to a contract involved a “confidential relation” that produced obligations of fairness); see also Ethan J. Leib, *Friendship and the Law*, 54 UCLA L. REV. 631, 685–94 (2007) (discussing legal obligations that flow from friendship).

87. Eskridge & Ferejohn, *supra* note 25, at 621–24 (criticizing as biased a tendency to “overgeneralize from dramatic and emotionally striking events”).

88. Dan M. Kahan, *Two Conceptions of Emotion in Risk Regulation*, 156 U. PA. L. REV. 741, 756 (2008) (“Because all persons of all cultural persuasions have a stake in forming an evaluation . . . that appropriately expresses their values, there’s no reason to view anyone’s response to . . . vividness . . . as biased rather than rationally informed by emotion.”).

89. Regina F. Burch, *Worldview Diversity in the Boardroom: A Law and Social Equity Rationale*, 42 LOY. U. CHI. L.J. 585, 592 (2011) (“Worldview bias may create misperception of risks on corporate boards and lead to biased corporate decision making.”); *id.* at 592–93 (“Cultural cognition studies suggest that individuals conform their assessment of risk to their vision of an ideal society—their cultural viewpoint or worldview.”).

90. See *Altria Group, Inc. v. U.S.*, 694 F. Supp. 2d 259, 269 n.3 (S.D.N.Y. 2010) (defining the endowment effect); *Abrahamson v. Bd. of Educ. of Wappingers Cent. Sch. Dist.*, 01 CIV. 10859 (CM), 2002 WL 1354711 (S.D.N.Y. June 21, 2002) (discussing “behavioral studies showing that people tend to find it more difficult to give up money that they are used to receiving than to choose not to receive money that they do not already have”); J. Thomas Rosch, Comm’r, Fed. Trade Comm’n, Remarks Before the Vienna Competition Conference, Behavioral Economics:

have criticized the endowment effect as a mistake.⁹¹ But the endowment effect may reflect the normatively defensible entanglement of personal property with selfhood, a view associated with Hegel and more recently with Margaret Radin.⁹² Similarly, a recent Tenth Circuit concurrence by Judge Michael McConnell treats the endowment effect as providing a reason to disfavor preliminary injunctions that disturb the status quo, rather than as a criticizable bias counting against such injunctions.⁹³

4. Bias in Favor of Tradition

The “systematic bias” in favor of tradition may simply be Burkean conservatism, which sees adherence to tradition as a mode of respect.⁹⁴ Describing deference to tradition as a bias

Observations Regarding Issues That Lie Ahead (June 9, 2010), available at 2010 WL 2382327 at *2 (describing the prevalence of the endowment effect).

91. Jois, *supra* note 1, at 63 (describing the endowment effect as leading people to “overvalue existing entitlements”); see also PENN. PUB. UTILITY COMM’N, INVESTIGATION OF PENNSYLVANIA’S RETAIL ELECTRICITY MARKET: INTERMEDIATE WORK PLAN (2011), available at 2011 WL 6838044 (describing “status quo bias and customer inertia, customer behaviors, the changing of which is one of the main focus areas of this investigation”).

92. See Elizabeth Hoffman & Matthew L. Spitzer, *Willingness to Pay vs. Willingness to Accept: Legal and Economic Implications*, 71 WASH. U. L.Q. 59, 90 (1993) (“One could also reconstruct prospect theory and the endowment effect as a new explanation of why WTA exceeds WTP by relying on Margaret Radin’s adaptation of Hegel’s theory of property. Radin posited that property may become bound up with an individual’s personality to such an extent that the person regards the property as part of his self.”); see also Darien Shanske, *What the Original Property Tax Revolutionaries Wanted (and It Is Not What You Think)*, 1 CAL. J. POL. & POL’Y 1, 9 (reviewing ISAAC WILLIAM MARTIN, *THE PERMANENT TAX REVOLT: HOW THE PROPERTY TAX TRANSFORMED AMERICAN POLITICS* (2008)) (“It is important to note that the justification that Radin finds in Hegel for the informal privilege [that protects one’s home in a distinctive way] does not simply explain the informal privilege as a matter of cognitive science (as an example of the ‘endowment effect’), but justifies it.”).

93. *O Centro Espirita Beneficente Uniao Do Vegetal v. Ashcroft*, 389 F.3d 973, 1015–16 (10th Cir. 2004) (McConnell, J., concurring), *aff’d and remanded sub nom. Gonzales v. O Centro Espirita Beneficente Uniao do Vegetal*, 546 U.S. 418 (2006).

94. Compare Jois, *supra* note 1, at 64 (“[T]he data provide compelling evidence of humans’ tendencies to prefer existing social systems and status quo endowments and a simultaneous subconscious ‘priming’ to justify those existing defaults. If this is true, then the Anglo-American legal system, with its emphasis on stare decisis and adherence to precedent, exacerbates this human shortcoming.”), Korobkin & Ulen, *supra* note 74, at 1114–15 (“Like the status quo bias, the power of tradition results from the utility that individuals derive from conforming to a shared family, group, or community practice, rather than from the inherent value of a behavior.”), and Marybeth Herald, *Transgender Theory: Reprogramming Our Automated Settings*, 28 T. JEFFERSON L. REV. 167, 182 (2005) (“The next phase in tackling gender discrimination must involve the challenging problem of unconscious bias that limits our openness to new information. Making sure that the information is

therefore seems to simply talk past the Burkean perspective rather than normatively engaging it.⁹⁵

5. Epistemic Biases

“[C]onfirmation” biases, which involve excessive confidence that information corroborates one’s own preexisting views, are often criticized.⁹⁶ But such biases may simply reflect individuals giving more weight to their own beliefs *merely because* they are their own—an epistemically respectable position.⁹⁷ Conversely, the “expert-deference bias” that Eskridge and Ferejohn criticize could be interpreted as reasonable epistemic modesty: people often act appropriately when they defer to expert judgment.⁹⁸

6. Framing Effects and Violations of Rational Choice

Some have argued that law should be concerned about the psychological effects of unchosen options, which lead subjects choosing between options to violate the rational-choice norm that

available is only part of the battle. Courts must also break loose from straitjacketed views of human intimacy.”), with EDMUND BURKE, REFLECTIONS ON THE REVOLUTION IN FRANCE 141 (1790) (“By this unprincipled facility of changing the state as often, and as much, and in as many ways as there are floating fancies or fashions, the whole chain and continuity of the commonwealth would be broken. No one generation could link with the other.”).

95. Cf. Jois, *supra* note 1, at 74 (reconstructing Burke as claiming that “the past ought to be bellowed [sic] not merely because it was probably correct, but also because failure to do so demonstrated a lack of respect for one’s forebears”).

96. See Korobkin & Ulen, *supra* note 74, at 1093; see also *Ex parte* Robbins, 360 S.W.3d 446, 476 n.16 (Tex. Crim. App. 2011) (Cochran, J., dissenting) (“[F]orensic scientists must carefully guard against cognitive bias and natural, but scientifically inappropriate, overconfidence in their scientific opinions.”), *cert. denied*, 132 S. Ct. 2374 (2012).

97. See Adam Elga, *Reflection and Disagreement*, in SOCIAL EPISTEMOLOGY: ESSENTIAL READINGS 158, 165 & n.18 (Alvin I. Goldman & Dennis Whitcomb eds. 2011) (describing and noting adherents of, though not endorsing, what he calls “the *extra weight view*, according to which one should give one’s own assessment more weight than the assessments of those one counts as epistemic peers”).

98. Compare Eskridge & Ferejohn, *supra* note 25, at 622 (worrying that a committee “might tend to defer to experts” and describing such deference as “the expert-deference bias”), and *id.* at 624 (describing conservatives who support stem-cell research because they “credit the medical researchers who made great claims for the fruits of the research” as influenced by “expert bias”), with Stephen John, *Expert Testimony and Epistemological Free-Riding: The MMR Controversy*, 61 PHIL. Q. 496, 514 (2010) (arguing, in the context of debates about mandatory childhood vaccination, that “we sometimes have fairness-based reasons to defer to expert testimony”), and Scott Brewer, *Scientific Expert Testimony and Intellectual Due Process*, 6 YALE L.J. 1535, 1634–58 (1998) (proposing “a model of rational epistemic deference to experts”).

irrelevant alternatives should not affect choices.⁹⁹ However, the Nobel Prize economist Amartya Sen persuasively argues that social norms can make it intelligible and defensible to take apparently irrelevant alternatives into account.¹⁰⁰ For instance, etiquette can make it normatively appropriate to take a medium-sized piece of cake when a large piece is present, but a small piece when only it and the medium-sized piece are present.¹⁰¹ Even though the large piece remains unchosen, it appropriately affects the choice between alternatives. Sen also observes that an unchosen option can cast other options in a different light: a law-abiding citizen may happily attend a new friend's tea party rather than stay home, but stay home if the friend offers a choice between a tea party and a cocaine party.¹⁰² And an unchosen option can affect other options' expressive meaning: fasting and starving both involve not eating, but fasting requires the availability of other (unchosen) options.¹⁰³ These choices, Sen argues, reflect genuine normative differences rather than normatively irrelevant "framing effects" of the sort behavioral scientists discuss.¹⁰⁴

7. Self-confirming Biases

Finally, some biases may be defensible in cases where what we believe determines what is true, and having certain beliefs makes a better outcome true rather than a worse one. This is because our beliefs about social facts may affect what those facts turn out to be.

99. Jon D. Hanson & Douglas A. Kysar, *Taking Behavioralism Seriously: The Problem of Market Manipulation*, 74 N.Y.U. L. REV. 630, 734 (1999) (treating as worrisome the fact that "the introduction of an irrelevant third option has been shown to affect the preferences that some individuals have for original options"); see also Gregory Mitchell, *Libertarian Paternalism Is an Oxymoron*, 99 NW. U. L. REV. 1245, 1265 (2004) ("[A]dding a new option to a choice set can cause individuals to reverse their preferences between options A and B, in violation of the invariance and dominance axioms.").

100. Amartya Sen, *Internal Consistency of Choice*, 61 ECONOMETRICA 495, 501 (1993) (discussing how a set of choices are affected by underlying objectives or values).

101. *Id.*; see also Bruce Chapman, *Rational Choice and Categorical Reason*, 151 U. PA. L. REV. 1169, 1177–78 (employing a similar example to Sen's).

102. Sen, *supra* note 100, at 502.

103. *Id.*

104. Amartya Sen, *Maximization and the Act of Choice*, 65 ECONOMETRICA 745, 752 n.20 (1993) ("The influence of 'framing' arises when essentially the same decision is presented in different ways, whereas what we are considering here is a real variation of the decision problem, when a change of the menu from which a choice is to be made makes a material difference. There is, in fact, no inconsistency here, only menu dependence of preference rankings.").

The philosopher Sally Haslanger offers an excellent example of a self-confirming belief. In the case she discusses, teenage girls' belief that crop tops are cute does not track an *independent reality* about fashion: rather, it *makes it the case* that crop tops are cute, because cuteness is a matter of social reality.¹⁰⁵ Given that crop tops are cute because girls believe they are cute, it is accurate for the girls to go on believing that they are. But it would be better for the girls to not believe that crop tops are cute, and such a belief (if widely adopted) would also make itself true.¹⁰⁶ So the girls should not approach the question of what to believe assuming that their collective evaluation measures a fixed social reality; rather, they should realize that their collective approach to the question influences the answer.¹⁰⁷

The economist Glenn Loury makes a similar point to Haslanger's in discussing racialized evaluations of employees.¹⁰⁸ If employers believe that Black workers are likely not to put in much effort, they are more likely to fire them during the training period.¹⁰⁹ But if Black workers are more likely to be fired during the training period, they have less incentive to work hard during that period.¹¹⁰ This makes the employers' bias against Black workers empirically justified, but by virtue of the bias's causal effects rather than its corresponding to an independent reality.¹¹¹ (Of course, the discriminatory nature of this bias undermines its normative justification.)

Optimism bias may function like the beliefs Haslanger and Loury discuss: believing that you are more likely to succeed than you in fact (absent your beliefs about your own success) statistically are may influence your likelihood of success.¹¹² While

105. Sally Haslanger, *But Mom, Crop Tops Are Cute! Social Knowledge, Social Structure, and Ideology Critique*, 17 PHIL. ISSUES 70, 70 (2007).

106. *Id.* at 73 ("[I]t is true that *p* so you should believe *p*; but believing *p* makes it true, and it would be better if *p* weren't true; so you shouldn't believe *p*.")

107. *Id.* at 87.

108. GLENN LOURY, *THE ANATOMY OF RACIAL INEQUALITY* 29–30 (2002).

109. *Id.* at 30.

110. *Id.*

111. *Id.* at 30–31.

112. See Donald C. Langevoort, *Behavioral Theories of Judgment and Decision Making in Legal Scholarship: A Literature Review*, 51 VAND. L. REV. 1499, 1506 (1998) ("Indeed, some biases create self-fulfilling prophecies by prompting others to [sic] behave in a more favorable fashion. In this sense, using the term irrationality may convey an unnecessarily pejorative connotation.")

this might not make the belief factually true *ex ante*, it might make optimism bias normatively defensible.¹¹³

D. *Bias and the Danger of Manipulation*

That more than one model of behavior is *normatively defensible* does not imply that any model is immune to manipulation. If a manipulator knows our model of behavior, he can structure incentives to appeal to us, but this is true both for behavior in accord with a rational-choice model and for behavior in accord with other models. Jon Hanson and Douglas Kysar worry that cognitive deviations from the economic model expose individuals to manipulation: “because individuals tend to prefer cooperating with those they view as behaving cooperatively or fairly, manufacturers will benefit from cultivating an appearance of cooperation and fairness. . . . irrespective of actual manufacturer behavior.”¹¹⁴ But manufacturers could equally take advantage of individuals adhering to the economic model, and thereby seeking low prices, through bait-and-switch advertising.¹¹⁵ Once unscrupulous manufacturers know how we behave, they can employ deception effectively, regardless of which model of behavior we adopt.

Nor are the alternative models I suggest immune from normative criticism. Many, even perhaps most, normatively reasonable models of human behavior remain subject to normative criticisms.¹¹⁶ But legal norms do not need to be grounded in

113. Cf. Korobkin & Ulen, *supra* note 74, at 1071 n.66 (“Further, it might be adaptive for firms to suffer from decision-making biases if such biases are closely linked to other traits—confidence, optimism, forcefulness, for example—that provide a competitive advantage.”). Note, however, that Korobkin & Ulen are proposing a *prudential* (self-interested) justification for optimism bias, not a *normative* justification.

114. *Id.* at 737. For a recent example of what Hanson and Kysar may have feared, see *Koh v. S.C. Johnson & Son, Inc.*, No. C-09-00927 RMW, 2010 WL 94265, at *1 (N.D. Cal. Jan. 6, 2010), denying motion to dismiss plaintiff’s complaint that defendant engaged in “so-called ‘greenwashing,’ the practice of making one’s products seem more environmentally friendly than in actuality,” by labeling their products with a misleading “Greenlist” label.

115. See *Tashof v. F.T.C.*, 437 F.2d 707, 709 & n.3 (D.C. Cir. 1970) (affirming FTC findings that defendant “employed a ‘bait and switch’ maneuver with respect to sales of eyeglasses,” by advertising glasses for \$7.50 but not selling glasses at that price).

116. For criticism of partiality to friends and intimates, see, for example, Richard J. Arneson, *Consequentialism vs. Special-Ties Partiality*, 86 *MONIST* 382 (2003). For criticism of giving more weight to one’s own belief merely on the ground that it is one’s own, see, for example, Elga, *supra* note 97, at 168. For criticism of Burkean conservatism, see, for example, David A. Strauss, *Tradition, Precedent, and Justice Scalia*, 12 *CARDOZO L. REV.* 1699, 1711–12 (1990).

models immune from criticism; rather, the *plausibility* of an alternative model can still be enough to make a legal norm grounded on that model defensible.

IV. Normatively Unjustifiable Biases

While some conduct that appears biased from one point of view is consistent with a different but reasonable model of human behavior, other conduct is inconsistent not only with experimenters' predictions but with *any* normatively defensible model. The influence of biases inconsistent with any defensible model serves to make a legal practice normatively arbitrary and thus objectionable. In this Part, I review and discuss some examples of unjustifiable bias.

A. *The Reiteration Effect*

"[T]he reiteration effect—where confidence in the truth of an assertion naturally increases if the assertion is repeated"¹¹⁷ may exemplify an unjustifiable bias. Unlike the view that whether an action constitutes an act of care is relevant to its normative evaluation, or the view that fiduciaries have a greater responsibility than nonfiduciaries, there does not seem to be a reasonable normative theory or perspective into which the reiteration effect fits. (We might say that, even though people may be *influenced* by the reiteration effect, no one *endorses* that influence when making a "considered judgment."¹¹⁸) In most cases, it is very hard to see how any reasonable model of human behavior would treat the number of times a claim is repeated as a legitimate influence on the evaluation of the claim. As such, the influence of the reiteration effect on, for instance, prosecutors' decisions about whether to prosecute serves to introduce a lottery element into the question of whether a given defendant is prosecuted.¹¹⁹ Such a lottery seems contrary to the normative aims of the justice system.

117. *Id.*

118. See JOHN RAWLS, A THEORY OF JUSTICE 42 (rev. ed. 1999) ("Considered judgments are simply those rendered under conditions favorable to the exercise of the sense of justice, and therefore in circumstances where the more common excuses and explanations for making a mistake do not obtain.")

119. Robert Aronson & Jacqueline McMurtrie, *The Use and Misuse of High-Tech Evidence by Prosecutors: Ethical and Evidentiary Issues*, 76 FORDHAM L. REV. 1453, 1483 (2007) (discussing how the "reiteration effect—where confidence in the truth of an assertion naturally increases if the assertion is repeated—makes it increasingly difficult over time for police and prosecutors to consider alternative perpetrators or theories of a crime").

The above is not to say that the influence of the reiteration effect *could never be* normatively justified. For instance, some psychologists have argued that basing bets on whether a given player will win a Wimbledon match simply on whether the player is known to the bettor (the “recognition heuristic”) would lead to a higher proportion of successful bets than betting based on the player’s ranking or seeding.¹²⁰ Perhaps, similarly, in some limited circumstances where little other information is present, whether an assertion is repeated could be among the best available predictors of its truth.¹²¹ Were prosecutors in such circumstances, the reiteration effect might seem normatively acceptable.¹²² However, evidence law frequently directs us to rule out certain influences on grounds of justice, even if permitting them would reduce the chance that a guilty person goes free.¹²³ This may reflect a concern that convictions be based on evidence that is epistemically reliable rather than fortuitously true.

B. Tunnel Vision

The prevalence of “tunnel vision,” in which investigators and prosecutors hone their sights on one suspect, and then search for evidence inculcating him, to the neglect of exculpatory evidence or the consideration of alternative suspects,¹²⁴ seems like reason for normative concern. While “tunnel vision” commitments could be normatively defensible outside a legal context—think, for example, of spousal or parental commitments¹²⁵—the prosecutorial role, in contrast to the spousal or parental roles, should not allow such commitments to individuals.¹²⁶

120. Sascha Serwe & Christian Frings, *Who Will Win Wimbledon? The Recognition Heuristic in Predicting Sports Events*, 19 J. BEHAV. DECIS. MAKING 321, 330 (2006).

121. *Id.* (“Whenever the recognition heuristic was applicable, nearly all decisions were consistent with it.”).

122. Aronson & McMurtrie, *supra* note 119, at 1483.

123. See, e.g., John L. Barkai, *Accuracy Inquiries for All Felony and Misdemeanor Pleas: Voluntary Pleas but Innocent Defendants?*, 126 U. PA. L. REV. 88, 99 (1977) (arguing that “[t]hrough policy decisions to employ such concepts as the presumption of innocence, reasonable doubt, burden of proof, and the exclusionary rules of evidence, the criminal justice system has been designed to ensure that as many factually innocent defendants as possible will be protected from conviction, even though those policy decisions result in some factually guilty defendants being found legally innocent”).

124. Burke, *supra* note 78, at 517.

125. See Harry Frankfurt, *The Importance of What We Care About*, 53 SYNTHESE 257, 268 (1982).

126. Cf. Feigenson, *supra* note 83, at 54 (“[N]o acceptable legal or moral theory makes the similarity of the decision-maker to the litigant or the likability of the litigant relevant to the substantive justice of the outcome.”).

The normative indefensibility of “tunnel vision” biases in legal contexts supports a variety of “debiasing” measures,¹²⁷ in whose implementation behavioral science can be tremendously helpful.

C. Discriminatory Bias

As Chamallas’s definition of bias¹²⁸ indicates, biases that track social categories—such as implicit racial or sex bias—represent a normatively indefensible form of bias.¹²⁹ Anthony Greenwald and Linda Krieger discuss the difference between discriminatory bias and familiarity bias:

[T]he intuition that biases in favor of one’s smaller ingroups (such as family and friends) are acceptable typically does not extend to believing that biases favoring one’s larger ingroups (one’s race, sex, ethnicity, religion, or age group) are appropriate. Is there a boundary encompassing ingroups toward which favorable biases can be considered acceptable? The illegality of some kinds of biased behavior toward certain groups (regardless of one’s membership)—such as those defined by race, sex, ethnicity, religion, and age—provides a non-psychological boundary.¹³⁰

Implicit associations involving social category membership do not automatically imply normatively objectionable bias.¹³¹ However, when implicit associations correlate with attitudes and behavior that exacerbates existing patterns of social disadvantage—such as refusal to hire ethnic and religious minorities or willingness to shoot unarmed Black men—this suggests that implicit associations represent part of a normatively indefensible model of behavior.¹³²

127. Burke, *supra* note 78, at 523–28.

128. See *infra* Part I.

129. Chamallas, *supra* note 20, at 467.

130. Greenwald & Krieger, *supra* note 16, at 951.

131. Compare Mitchell & Tetlock, *supra* note 19, at 1072–90 (suggesting that implicit associations between racial minorities and negative terms may not translate into negative attitudes toward minorities, but instead may reflect sympathy with minorities, the greater salience of outgroup members, differences in cognitive processing speed, or implicit recognition of cultural and societal associations between minorities and negative terms), with Jerry Kang & Kristin Lane, *Seeing Through Colorblindness: Implicit Bias and the Law*, 58 UCLA L. REV. 465, 479–81 (2010) (criticizing these and other alternative explanations of implicit associations).

132. Kang & Lane, *supra* note 131, at 481–90 (collecting evidence that implicit associations correlate with these and other examples of discriminatory behavior).

D. Environmental Priming

Other examples of unjustifiable bias may include the effect of holding a hot or cold cup of coffee on judgments of interpersonal warmth or friendliness,¹³³ and the effect of judges' hunger and exhaustion levels on parole decisions.¹³⁴ Particularly given the effect size of the last result, the importance of the decision at stake, and the apparent normative irrelevance of the biasing factor, the studies appear to provide a strong case for a debiasing intervention. (However, behavioral scientists are currently debating the scientific validity of "priming" studies like the above in light of concerns about their replicability.¹³⁵)

V. Unjustifiable Bias as Negligence

Should we blame legal decision makers whose decisions reflect the influence of an unjustifiable bias? Alafair Burke argues that "a discursive shift toward a cognitive explanation for prosecutorial decision making" should lead us not to fault prosecutors for their bias-influenced decisions.¹³⁶ I am unpersuaded. If prosecutors are—or *should be*—aware of the influence of normatively unjustified biases on their decision making, and if they could either de-bias themselves or resign to allow less biased prosecutors to take over, they are culpable to some degree when their biased decisions lead to the conviction of innocent defendants. As such, the "narrative trend that increasingly depicts prosecutors as victims of cognitive accidents

133. Lawrence E. Williams & John A. Bargh, *Experiencing Physical Warmth Promotes Interpersonal Warmth*, 322 SCI. 606, 606 (2008); see also Curtis E.A. Karnow, *Similarity in Legal Analysis and the Post-Literate Blitz*, 15 GREEN BAG 2D 243, 250 (2012) (citing Williams & Bargh, *supra*) ("We associate the warmth of a hot drink with warm people and so like people better when we hold a warm cup of coffee, but we must reject mere association as a basis for decision.")

134. Shai Danziger, Jonathan Levav & Liora Avnaim-Pesso, *Extraneous Factors in Judicial Decisions*, 108 PNAS 6889, 6890 (2011) ("We find that the likelihood of a favorable ruling is greater at the very beginning of the work day or after a food break than later in the sequence of cases."); see also Zoë Corbyn, *Hungry Judges Dispense Rough Justice*, NATURE NEWS (Apr. 11, 2011), www.nature.com/news/2011/110411/full/news.2011.227.html (reporting a statement by Prof. Robert MacCoun of UC Berkeley that this result is "a particularly striking one because the biasing factor is seemingly innocuous and so patently irrelevant to the case at hand" and a statement by Prof. Jeffrey Rachlinski of Cornell University worrying about the technical soundness of the study procedure).

135. See, e.g., Alison Abbott, *Disputed Results a Fresh Blow for Social Psychology*, NATURE NEWS (Apr. 30, 2013), <http://www.nature.com/news/disputed-results-a-fresh-blow-for-social-psychology-1.12902> (reporting concerns of Nobel Prize behavioral scientist Daniel Kahneman and others about "a growing number of failures to replicate results").

136. Burke, *supra* note 78, at 515.

as opposed to purposeful or reckless wrongdoers¹³⁷ is oversimplified. The law recognizes at least one level of *mens rea*—negligence—between reasonable conduct and intentional wrongdoing. If a driver is aware, or should be aware, that driving after drinking alcohol will greatly increase the likelihood of a car accident, he is not an innocent victim of the accident: rather, he is culpable even though he is not a purposeful (and perhaps not even a reckless) wrongdoer.¹³⁸ “Cognitive accidents” are no different. While it may be helpful to distinguish negligence as a result of uncorrected bias from intentional wrongdoing, negligence is still a basis for fault.¹³⁹

Whether biased prosecutors deserve blame raises the further question of whether an inappropriate decision that stems from a cognitive bias is better or worse than an inappropriate decision that stems from an actively invidious influence, such as conscious racism. Conscious racism seems to involve a more serious form of disrespect than unconscious bias does. However, invidious unconscious bias may be particularly troubling because its operation is not apparent to the biased actor. This may make it more difficult to ameliorate.¹⁴⁰

137. *Id.*

138. *E.g.*, *Begay v. United States*, 553 U.S. 137, 145 (2008) (noting that “[t]he conduct for which the drunk driver is convicted (driving under the influence) need not be purposeful or deliberate” and crediting dissenting circuit judge’s observation in the case under appeal that “drunk driving is a crime of negligence or recklessness, rather than violence or aggression”); *Leocal v. Ashcroft*, 543 U.S. 1, 11 (2004) (noting the “merely accidental or negligent conduct involved in a DUI offense”).

139. See Linda Hamilton Krieger, *The Content of Our Categories: A Cognitive Bias Approach to Discrimination and Equal Employment Opportunity*, 47 STAN. L. REV. 1161, 1245 (1995) (“[S]ocial cognition theory suggests that the nondiscrimination principle would be more effective in reducing intergroup bias were it understood as prescriptive duty to identify and control for errors in social perception and judgment which inevitably occur, even among the well-intended. Accordingly, I agree with David Oppenheimer’s suggestions that a negligence approach to discrimination and equal employment opportunity would further Title VII’s purpose.”).

140. See *State v. Rose*, 46 A.3d 146, 156 (Conn. 2012) (“[A] defendant’s appearance in identifiable prison clothing does something substantially worse than inject improper evidence into the case, namely, it causes jurors to deliberate under a cognitive bias. Because this bias is subtle and ever present, jury instructions may not be adequate to cure it.”); see also Nathan A. Frazier, *Amending for Justice’s Sake: Codified Disclosure Rule Needed to Provide Guidance to Prosecutor’s Duty to Disclose*, 63 FLA. L. REV. 771, 799–800 (2011) (“Unlike other causes of prosecutorial non-disclosure, cognitive bias arguably poses the most serious threat to the criminal justice system because it not only affects every single prosecutor, but more importantly, human awareness alone cannot eliminate its presence.”).

Conclusion

I hope in this Article to have illuminated some useful distinctions between different definitions of bias, and to have differentiated some justifiable biases from unjustifiable ones. I also hope to have shown that the normative implications of cognitive bias are more complex than they might have initially seemed. I conclude by focusing on this last point.

Many who consider the normative implications of cognitive bias seem to assume that decisions or actions influenced (or, at least, *substantially* influenced) by a cognitive bias are normatively criticizable or endorsable on that basis alone. Matthew Adler suggests that behavioral scientists Daniel Kahneman and Amos Tversky fall into this category: “Tversky, Kahneman and others working in this tradition generally seem to see the heuristics and biases they identify as *departures* from rationality—as deviations from the true norms of choice, embodied in [decision theory], and the true norms of judgment, embodied in probability theory.”¹⁴¹ Adler observes, however, that “prospect-theoretic choice, and probability judgments driven by representativeness, availability, or anchoring and adjustment, could really be part of the correct procedural component of the correct normative framework, whatever Tversky and Kahneman think.”¹⁴² And, indeed, as Adler observes, Gerd Gigerenzer seems to believe that prospect theory is part of the correct normative framework.¹⁴³

However, I would suggest that Gigerenzer, Kahneman, and Tversky are all mistaken to the extent that they treat the influence of a heuristic or bias as *in itself* relevant to the normative evaluation of a practice. Rather, that a legal practice involves employing a heuristic neither reliably counts for or against that practice. (And, I suspect—contrary to the hopes or fears of some—a legal norm’s connection with a heuristic or bias does not reliably entail a connection with a political viewpoint.¹⁴⁴

141. Matthew D. Adler, *Bounded Rationality and Legal Scholarship*, in *THEORETICAL FOUNDATIONS OF LAW AND ECONOMICS* 137, 150 (Mark D. White ed., 2008).

142. *Id.*

143. *Id.* at 152 (“A body of recent work on bounded rationality has focused on ‘noncompensatory’ heuristics. Much of this scholarship has been undertaken by Gerd Gigerenzer, who is notable for his endorsement of heuristics as rational. He sees their use, not as a deviation from rationality, but as a rational response to computational demands.”).

144. Compare Hoffman, *supra* note 3, at 528 (worrying that behavioralists’ attempts to reach normative conclusions “rely on a conception of the Rule of Law which has been statistically proven to be more appealing to white men than to minorities and women”), and Adler, *supra* note 141, at 141 (worrying that the

For instance, conservative Justice Clarence Thomas rejects the very *stare decisis* norm that situationist scholars allege reflects conservatism.¹⁴⁵) Instead, the normative evaluation of a heuristic's or bias's use depends on its connection with *some* reasonable normative perspective, where reasonableness may in turn depend on an "overlapping consensus" of the reasonable normative theories.¹⁴⁶

I am not rejecting the possibility that heuristics and biases can be normatively criticizable or endorsable.¹⁴⁷ What I am arguing is that these criticisms or endorsements must come by way of *normative argument*: behavioral science does not and cannot show on its own that biases or heuristics are either desirable or objectionable.¹⁴⁸ Discussions of cognitive bias must do

behavioral scholarship of Cass Sunstein and others gives corporations a strategic advantage over ordinary citizens), with Adam Benforado & Jon Hanson, *The Great Attributional Divide: How Divergent Views of Human Behavior are Shaping Legal Policy*, 57 EMORY L.J. 311, 315 n.3 (2008) (stating that "situationism . . . understands that the naïve psychology . . . undergirding our laws and institutions is largely inaccurate" and noting the near-identity between situationism and "behavioral realism"), and *id.* at 383 ("This section argues that a major part of what it means to call a person 'liberal' is to designate that individual as relatively sensitive to situation. And, conversely, the label 'conservative' is often meant to designate a person as relatively dispositionist.").

145. Compare Jois, *supra* note 1, at 8 (arguing that *stare decisis* is conservative), with CASS R. SUNSTEIN, RADICALS IN ROBES 76 (2005) (quoting Justice Scalia's claim that Justice Thomas rejects *stare decisis*).

146. See RAWLS, *supra* note 118, at 340 (defining an "overlapping consensus" as arising when multiple reasonable normative perspectives stably endorse a set of values).

147. Cf. Hoffman, *supra* note 3, at 512–13 (describing scholars who conclude "that there is no way to distinguish rational from irrational behavior—both words essentially state conclusions based on the speaker's perspective of how people should act").

148. See Andrew B. Coan, Response and Reply, *Well, Should They? A Response to If People Would Be Outraged by Their Rulings, Should Judges Care?* 60 STAN. L. REV. 213, 230 n.83 (2007) ("It should be emphasized that [cascades and systematic biases] are not, by definition, pejorative terms. There are good cascades, and even good systematic biases, but they must be assessed as such on the merits."); see also Feigenson, *supra* note 83, at 50 ("It can be argued that partiality in itself does not necessarily make decisions unjust, if the bias in question is one of which we approve. Sympathy would remain a worthwhile component of legal judgment if it biased decisions in ways that match legally or morally acceptable grounds to prefer one outcome to another. Difficulties would arise only if sympathy biased judgment in ways we consider unfair."); *id.* at 64 ("In sum, sympathy biases person-judgment favorably to the object of sympathy. This alone does not make sympathetic judging objectionable, if the bias were one we would accept on legal or moral grounds."). My denial that biases are good or bad in themselves makes me sympathetic with the Cultural Cognition Project's approach (at least on Adam Benforado's reconstruction) rather than either the perspective of Benforado and his colleagues or the perspective Benforado identifies with the "Naive Realist." See Adam Benforado, *Frames of Injustice: The Bias We Overlook*, 85 IND. L.J. 1333, 1346 (2010) (noting that for the Cultural Cognition Project, "different attributions

more than offer a promissory note to support their normative conclusions or to reject alternatives.¹⁴⁹ And without normative foundations, more empirical work will not solve the problem.¹⁵⁰

Some might look to another branch of science in search of a basis for endorsing heuristics that does not rest on normative theory—perhaps our evolutionary makeup entails that we cannot help but employ, and therefore should normatively endorse, certain intuitive heuristics.¹⁵¹ John Mikhail edges close to making such a claim when he chides Richard Posner for ignoring the “hypothesis of many cognitive scientists that the sense of justice is one cognitive domain where ‘children look like geniuses, knowing

simply reflect different shared identities,” whereas for Benforado et al. and the Naïve Realist, attributions are “accurate” to the extent they reflect a situationist model (Benforado et al.) or “our own” attributions (the Naïve Realist)); see also Dan M. Kahan et al., *Fear of Democracy: A Cultural Evaluation of Sunstein on Risk*, 113 HARV. L. REV. 1071, 1073 (2006) (“If risk disputes are really disputes over the good life, then the challenge that risk regulation poses for democracy is less how to reconcile public sensibilities with science than how to accommodate diverse visions of the good within a popular system of regulation.”); Burch, *supra* note 89, at 613 (“A normative implication is that not all risk variation is risk bias to be mitigated. ‘If fact and value are intertwined, then cultural cognition is not bias—it is moral perception.’” (quoting Dan Kahan, *The Cultural Cognition of Risk: Theory, Evidence and Implications*, WALTER INST.: THE CULTURAL COGNITION PROJECT AT YALE L. SCH. (Oct. 8, 2009), <http://mediasite.video.ufl.edu/Mediasite/Play/e16374d0980344fa911266bf40b60314>)).

149. See Hoffman, *supra* note 3, at 528–29 (describing behaviorists’ failure to support the move from empirical claims to a normative conclusion); Coan, *supra* note 148, at 225 n.58 (“Sunstein suggests that [perhaps judges] . . . theory of interpretation permits them to ‘consider certain judgments to be “biases” in a constitutionally relevant sense.’ But this is not just a way around the problem of judicial cognitive bias, it is a way around the whole epistemic argument. The theory of interpretation is doing all the work.” (citation omitted)).

150. See Jerry Kang & Mahzarin R. Banaji, *Fair Measures: A Behavioral Realist Revision of “Affirmative Action,”* 94 CAL. L. REV. 1063, 1065 (2006) (“We . . . recognize that empirical findings cannot replace values, and by themselves, do not dictate any single course of action.”). Jolls et al., *supra* note 28, thus miss the point when they attempt to respond to Kelman’s normative critique with a call for more empirical work: “Kelman is right to emphasize the importance of sorting out possible alternative explanations and of understanding what kinds of effects are at work in different settings. Our basic point is that we have important empirical issues here, and no reason to think that we are left only with ‘interpretive tropes’ or ‘dances.’ Dancing has its place, but in this context, people should stop dancing and get to work.” *Id.* at 1607.

151. *E.g.*, MARC HAUSER, MORAL MINDS, at xx (2006) (“It is clear that in the arena of medicine, as in so many other areas where moral conflicts arise, the policy wonks and politicians should listen more closely to our intuitions and write policy that effectively takes into account the moral voice of our species.”). Although many of Hauser’s empirical results proved to have been based on fabricated data, see Findings of Research Misconduct, 77 Fed. Reg. 54,917–18 (Sept. 6, 2012), his normative claim here does not appear to directly rely on those results.

things they have not been taught.”¹⁵² But what Mikhail overlooks is that whether children look like moral geniuses or moral incompetents depends on *which moral arguments we endorse*. That children adhere to a nonconsequentialist “universal moral grammar”¹⁵³ gives Posner no reason to abandon his consequentialist law-and-economics stance, unless Posner also accepts the additional—and implausible—normative principle that children’s adoption of a set of moral principles gives others normative reason to endorse the same principles.

Meanwhile, if Mikhail is right that *adults* inescapably act in accord with universal moral principles, this may be more relevant—assuming an “ought implies can” hypothesis—to choices about legal norms.¹⁵⁴ But such a finding still would not end the debate. As the distinguished political philosopher G.A. Cohen argued, a norm (e.g., rewarding greater talent with higher income) can still be unjust even if it is the only norm consistent with inescapable and universal features of human psychology (e.g., our inability to work hard without incentives).¹⁵⁵ Mikhail’s universal moral grammar might therefore reflect a universal feature of human nature without thereby being normatively correct. Cohen’s argument offers a basis for a law-and-economics sympathist like Posner to criticize Mikhail’s conclusion even if Mikhail’s universal moral grammar proves universal in practice.¹⁵⁶ Even were Posner himself to act in accordance with Mikhail’s postulated principles—

152. John Mikhail, *Law, Science, and Morality: A Review of Richard Posner’s The Problematics of Moral and Legal Theory*, 54 STAN. L. REV. 1057, 1097 (2002) (quoting STEVEN PINKER, *THE LANGUAGE INSTINCT* 419 (1994)).

153. *Id.* at 1088.

154. Cf. Eskridge & Ferejohn, *supra* note 25, at 625 n.33 (“There is a special sense in which cognitive science may contribute to criticizing the ends of governmental policies. Insofar as the Kantian slogan[—]ought implies can[—]is accepted, cognitive psychology may show that some governmental ends are impermissible because agencies cannot administer means to achieve them (because of cognitive biases). Such a demonstration would be exceedingly difficult, however, because it entails evaluation of all possible means to reach the end in question.”).

155. G.A. COHEN, *RESCUING JUSTICE AND EQUALITY* 155 (2008) (denying that an “insurmountable” inability could not be a cause of injustice and instead holding that “even an unavoidable inequality remains unjust” if the inequality has a “morally arbitrary” cause). Cohen’s argument therefore denies the Kantian ought-implies-can slogan that Eskridge and Ferejohn discuss, *supra* note 154. David Estlund offers a similar argument in *Human Nature and the Limits (If Any) of Political Philosophy*, 39 PHIL. PUB. AFF. 207, 208 (2011), rejecting the view that “[a] normative political theory is defective and thus false if it imposes standards or requirements that ignore human nature—that is, requirements that will not, owing to human nature and the motivational incapacities it entails, ever be satis•ed.”

156. This is itself interesting, given that Posner and Cohen could hardly be further apart in their beliefs about justice in general and distributive justice in particular.

as he would if they were truly universal—he might still reject these principles' status as moral norms.¹⁵⁷

That cognitive heuristics and biases, *as such*, are neither reliably endorsable nor reliably rejectable should ultimately be unsurprising. Notwithstanding our divergent views about *stare decisis* or risk regulation, we have all abandoned—or at least we should abandon—the Cartesian belief that our decisions issue from some unearthly realm.¹⁵⁸ That our decisions are subject to myriad physical, psychological, and neurological influences both from within and without should neither reassure nor disturb us: on one very plausible view, we can be fully and robustly responsible for our decisions even while those decisions are the product of internal and external influences.¹⁵⁹ Being reassured or disturbed requires answering a further, normative question: which influences are *normatively defensible*, and which are *normatively corrosive*? Once we have a preliminary answer to the normative question, behavioral science can help us design norms that emphasize the defensible influences and avoid the corrosive ones.¹⁶⁰ But behavioral scientists, though they can describe *how* we reason about the normative question, have no special expertise in answering it.¹⁶¹ That question we must answer for ourselves.

157. I am grateful to Adam Kolber for prompting this clarification.

158. Cf. Stephen Morse, *Brain Overclaim Syndrome and Criminal Responsibility: A Diagnostic Note*, 3 OHIO ST. J. CRIM. L. 397, 405 (2006) (“The discovery that the brain, including a brain abnormality, played some causal role in the production of what is undeniably human action does not lead to any legal conclusions about responsibility.”); see also Selim Berker, *The Normative Insignificance of Neuroscience*, 37 PHIL. PUB. AFF. 293, 327 (2009) (“The appeal to neuroscience provides no new traction on this old debate [between consequentialists and nonconsequentialists].”). *Contra* Martin & Tama y Sweet, *supra* note 1, at 528–29 (appealing to neuroscientific research to justify claims about cognitive bias).

159. Cf. Mark Kelman, *Law and Behavioral Science: Conceptual Overviews*, 97 NW. U. L. REV. 1347, 1386 (2003) (“Few people who believe in individual responsibility for choice will find the social psychology literature nearly as unsettling as the psychologists believe it should be. At the general level, most people who believe in blaming acknowledge the notion that the behavior an individual manifests is in some sense a product of circumstances.”).

160. Here I agree with Ferejohn and Eskridge, *supra* note 25, at 625: “[r]ecall that we do not believe cognitive psychology makes an independent contribution to thought about the overall norm against which government decisions ought to be measured. Its contribution is not to thinking about the ends of politics, but rather to thinking about the means by which decisions are reached.”

161. Cf. Kysar, *supra* note 9, at 195 (“Because such a task [i.e. establishing a normative benchmark for good decision making] is not normally thought of as the proper province of social science, it is therefore important to distinguish between positive and normative uses of psychology and experimental economics. Conflating the two may lead both to bad science and to bad policy.”).

