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Judicial Behavioral Realism about Implicit Bias

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INTRODUCTION

Over the past two decades, the rise of implicit social cognition has significantly altered how we think about discrimination and its causes.¹ Legal academics have argued that these new empirical understandings, especially about implicit bias, should influence the law through “behavioral realism.” (Bayern, 2006). The goal of this chapter is not to describe how judges can prevent implicit biases from corrupting their own decisionmaking, a topic I have analyzed elsewhere. (Kang, 2021). Instead, it is to describe how judges have incorporated empirical *findings about implicit bias* into their work as they hear specific cases and interpret the law. On the one hand, as discussed in Part II, a focus on the admissibility of scientific expert testimony reveals mixed results. On the other hand, as explained in Part III, it turns out that admissibility might matter much less than first imagined to the behavioral realism project. I start, in Part I, with a brief introduction to the science.

I. BEHAVIORAL REALISM ABOUT IMPLICIT BIAS

A. Science of Implicit Bias

A “bias” can be defined as a deviation away from a baseline deemed neutral, accurate, or fair. Within social cognition, this can be in terms of an “attitude” or “stereotype” about a social category, such as the elderly, Muslims, or Black men, as compared to some comparator group, such as the young, Christians, or White men. An “attitude” is an overall evaluative valence, which ranges from positive to negative. By contrast, a “stereotype” is a trait or attribute that is probabilistically associated with a category. Interestingly, an attitude and stereotype can cut in opposite directions. For example, we can have a negative attitude towards a group (e.g., Asian men) but still believe in an arguably positive stereotype about them (e.g., technically competent). Conversely, we can have a positive attitude towards a group (e.g., women) but still believe in a negative stereotype (e.g., lacking leadership).

¹ Implicit social cognition examines the mental processes that affect social judgments without conscious awareness or conscious control (see generally Lane et al., 2007).

Decades of social psychological research suggest that attitudes and stereotypes about social categories influence our evaluation of and behavior toward those groups. For instance, if we have a negative attitude towards a group, we may show less welcoming body language. If we hold a stereotype of a group as threatening, we may interpret ambiguous movements in a manner consistent with that expectation.

If a bias is an attitude or stereotype, then what makes it “implicit”? This question is best answered by comparing implicit to explicit. Explicit bias need not be graphic or extreme although it sometimes is. Instead, it’s better to understand “explicit” as being subject to direct introspection. By contrast, an “implicit” bias is an attitude or stereotype that is *much less readily subject to direct introspection*.² In other words, we cannot easily measure our implicit social cognitions simply by asking ourselves for an honest accounting. Instead, we have only a dim awareness and need the assistance of some external instrument.

The most popular instrument—although not the only one (Lai & Wilson, 2021)³—is the Implicit Association Test (IAT) invented in the mid-1990s by Anthony Greenwald based on theoretical work done together with Mahzarin Banaji (Greenwald et al. 1998; Greenwald & Banaji, 1995). The IAT is a series of speeded sorting tasks that measure reaction times depending on the positioning of various stimuli representing either a social category or the measured attitude/stereotype. For example, a race-attitude IAT compares reaction speeds in sorting trials where White male faces are paired on the same response key with positive-affect words (and conversely Black male faces paired with negative-affect words) as compared to trials where Black male faces are paired with positive-affect words (and conversely White male faces paired with negative-affect words) (Lane et al., 2007). If we respond more quickly to the former than the latter, the inference is that we have a more positive attitude toward Whites than Blacks.

Massive amounts of IAT data have been collected online at Project Implicit and at laboratories around the world. They

² Some recent research suggests that implicit social cognitions may be preconscious, subject to some introspection when people are instructed to focus on immediate affective responses. (See generally Hahn & Goedderz, 2020).

³ Providing inventory of instruments, including priming tasks.

reveal a broad consensus that, first, implicit biases (as measured by the reaction time deltas quantified by the IAT) are pervasively held. Second, implicit biases regarding socially sensitive topics, such as attitudes and stereotypes toward social categories, are almost always larger than explicit biases in magnitude (Nosek et al., 2007; Ratliff et al., 2020).⁴ Third, implicit bias correlates positively but weakly with judgment and behavior.

This explosion of knowledge has altered how we understand discrimination. Most important, it refutes the self-flattering narrative of colorblind meritocracy—that we already live in a world where people are judged solely on their merits. Not surprisingly, this empirical refutation has triggered pushback. Some raise terminological objections and are offended by use of phrases such as “implicit *racism*” or “implicit *prejudice*.” For many reasons, including connotative baggage, most scientists don’t use these terms and prefer “implicit *bias*.” In truth, these naming questions are more political controversies than scientific ones. After all, most scientists believe that the underlying mental processes operate without regard to what English-speaking human beings label them.

More important scientific controversy surrounds questions of predictive validity, effect sizes, and external validity. Predictive validity asks whether some psychological construct (implicit bias), measured through some instrument (e.g., the IAT), successfully predicts some outcome variable (e.g., differences in judgment and behavior). Numerous meta-analyses conducted by rival teams have computed a statistically significant correlation between implicit bias scores and discriminatory behavior. In terms of effect sizes, these correlations have the range of Pearson’s $r = 0.10$ to 0.24 ,⁵ which by convention is called “small-to-moderate” (See Greenwald et al., 2009, $r=0.24$ for Black/White bias; Oswald et al, 2013, $r=.15$ on Black/White implicit bias; Kurdi et al., 2019, $r=.10$ for behavior in the combined domains of Black/White, gender, sexual orientation, weight, and disabilities).

⁴ The meta-analytic effect size for implicit bias was Cohen’s $d = .80$ (by convention called “large”) as compared to explicit bias of $d = .51$ (by convention called “medium”).

⁵ The highest estimate ($r=0.24$) would mean that an IAT score predicts approximately 5.6% of the statistical variance in the discriminatory behavior variable.

Some researchers contend that such modest-sized effects amount to noise. Moreover, they challenge whether implicit biases found under laboratory conditions have real-world consequences, which raises external validity objections (see, for example, Mitchell, this volume; Mitchell & Tetlock, 2006, p. 1108-1110). In response, others have explained that even if implicit biases show low correlations, explicit bias measures are even less predictive. For example, implicit attitude scores predict behavior in the Black/White domain at an average correlation of $r=0.24$, whereas explicit attitude scores show lower correlations of average $r=0.12$ (Greenwald et al. 2009). In addition, implicit biases provide a unique contribution to predicting behavior ($\beta = .14$) and do so more than explicit measures ($\beta = .11$) (Kurdi et al., 2019). The surprising finding is that explicit bias measures perform worse in predicting discriminatory behavior, and yet, almost no one objects to inquiring about explicit bias, as in *voir dire*.

Finally, low-level correlations can have significant consequences. For example, in the health and medical context, we regularly alter our behavior based on correlations with comparable or lower effect sizes (see Meyer et al., 2001, table 1). Examples include taking aspirin to reduce chances of death by heart attack ($r=.02$), preventing low-level lead exposure to avoid reduced childhood IQ ($r=.12$), and taking ibuprofen to reduce pain ($r=.14$). Moreover, small differences in treatment and evaluation can accumulate in path-dependent ways over long periods of time and large populations to produce surprisingly large social disparities (Greenwald et al., 2015; Kang et al., 2012; Kang & Banaji, 2006, p. 1073).

One last controversy worth highlighting is how to respond to implicit bias. For example, does “training” or education really help? In addition, some commentators on the political left have expressed anxieties that framing social justice problems in terms of implicit bias misdiagnoses what are better understood as structural phenomena. Worse, they fear a zero-sum game in which attention given to implicit bias necessarily detracts from more valuable structural analyses (Hutchinson, 2014, p. 34, arguing that “implicit bias literature fails to account for the structural dimensions of racism”). (Elsewhere I’ve explained why this is a false choice.) (Kang, 2017; Kang, 2010) By contrast, some on the political right worry that the problem of implicit bias is exaggerated for political purposes and that countermeasures will over-correct (Wax & Tetlock, 2005).

B. Behavioral Realism

What impact should these new findings have on legal doctrine? Many scholars have advocated for “behavioral realism.” Like any school of thought, there are multiple articulations, but in my work, I’ve emphasized a simple three-step process (See, for example, Kang, 2015; Kang, 2012; Kang & Lane, 2010; Lane et al., 2007). First, be on the lookout for a more accurate, upgraded model of human behavior that comes from the sciences, including experimental social psychology. Second, compare that upgraded model to the “commonsense,” legacy understanding embedded within the status quo. A commonsense model always exists even when it is nearly invisible because it seems so obviously true or correct. Third, when the gap between the two models grows too large, close the gap by revising the law to take into account the upgraded model. If that can’t be done, for principled or pragmatic reasons, then lawmakers should articulate transparently the reasons why. All legal decisionmakers should feel this obligation although judges and administrative agencies operate under stronger norms than do legislators to provide reasons for their exercise of lawmaking and law-interpreting powers.

This three-step process, even as applied to sensitive questions of intergroup discrimination, does not demand fealty to any particular theory of corrective or distributive justice. Instead, it relies on pragmatic and, frankly, minimal normative commitments—(1) instrumental rationality (by revising the law with a more accurate, upgraded model of human behavior), and (2) anti-hypocrisy (by prompting revision when we learn that law’s publicly announced objectives are not being well met because they were predicated on an outdated, legacy model). For such modesty, behavioral realism has been criticized as unambitious at least as applied to antidiscrimination law (Bagenstos, 2018, p. 48, suggesting that the political project of implicit bias has failed because it has ignored “arguments about justice, distribution, and the legacy of history”). It has also been called naïve in how it grapples with the nature of empirical disagreement (Girvan, 2015). Still, as demonstrated in Part III, the behavioral realism approach has gained traction, influencing judicial legal reasoning.

II. THE MESS OF EXPERT TESTIMONY

Behavioral realism requires new evidence about human behavior to reach the legal decisionmaker. For example, under

the statutory language of Title VII of the 1964 Civil Rights Act, a factfinder (which is often the jury) must decide whether the defendant took some adverse employment action “because of” the plaintiff’s race, gender, or other protected category (42 U.S.C. § 2000e-2(a)(1)). What if most people, including lay jurors asked to render judgment in a specific case, mistakenly believe that discrimination is caused *solely* by explicit negative attitudes with large magnitude, i.e., old-school prejudice or animus?

A behavioral realist approach would want jurors to upgrade their understanding. For instance, in addition to negative attitudes toward outgroups, discrimination may also be caused by positive attitudes towards the ingroup (ingroup favoritism) (see Greenwald & Pettigrew, 2014). Discrimination may also be caused by career-limiting stereotypes instead of negative attitudes (e.g., benevolent sexism). And all these social cognitions may function not only explicitly but also implicitly, largely outside our self-awareness.

A natural way to deliver the upgrade would be for jurors to hear expert testimony (see generally Kang & Lane, 2010 p. 493-494, describing admission of social framework evidence; Borgida & Fiske, 2008). In the federal system, district courts act as gatekeepers under Federal Rule of Evidence 702 (Testimony by Expert Witnesses), which codifies the Supreme Court’s jurisprudence in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (1993) and its progeny (see *Gen. Elec. Co. v. Joiner*, 1997; *Kumho Tire Co., Ltd. v. Carmichael*, 1999). The rule functions like a firewall and permits information from a qualified expert to pass through if:

(a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;

(b) the testimony is based on sufficient facts or data;

(c) the testimony is the product of reliable principles and methods; and

(d) the expert has reliably applied the principles and methods to the facts of the case.

Requirement (d) literally supposes that the expert is applying generalized knowledge “to the facts of the case.” In

other words, the text of the rule assumes what might be called *case-specific application*.⁶

This is not always so. The Advisory Committee Notes to the 2000 amendments to Rule 702 specifically point out that an expert might offer truly *general principles* without any case-specific application:

Yet it might also be important in some cases for an expert to educate the factfinder about *general principles, without ever attempting to apply these principles to the specific facts of the case*. For example, experts might instruct the factfinder on the principles of thermodynamics, or bloodclotting, or on how financial markets respond to corporate reports, without ever knowing about or trying to tie their testimony into the facts of the case. The amendment does not alter the venerable practice of using expert testimony to educate the factfinder on *general principles*.

For such testimony,⁷ the Committee Note emphasizes a different set of requirements:

For this kind of generalized testimony, Rule 702 simply requires that: (1) the expert be qualified; (2) the testimony address a subject matter on which the factfinder can be assisted by an expert; (3) the testimony be reliable; and (4) the testimony “fit” the facts of the case.

Instead of requirement (d), which involves application of general principles to the facts of the case, requirement (4) merely requires that the general principles “fit” the facts of the case. In sum, FRE 702 and the Advisory Committee Notes expressly distinguish between expert testimony that amounts to case-specific application and general principles.

⁶ Commentators have offered different labels (see, for example Jones, 2017, p. 1234, calling this “applied research”; Faigman et al., 2017, p. 1234, “diagnostic testimony”).

⁷ (see for example *Wisconsin v. Dobbs*, 2020, p. 525, calling general principles “exposition testimony”; *Lapsley v. Xtek, Inc.*, 2012, p. 809). One court has called this “cold” expert testimony (*Arizona v. Salazar-Mercado*, 2014, p. 999, admitting such testimony under state analog to FRE 702).

A. The Doctrinal Mess

1. *Samaha v. Washington State DOT* (E.D. Wa. 2012)

Let's focus on general principles testimony. At first glance, one might assume that implicit bias education from a world-class scientist should easily pass through the "general principles" firewall (see, for example Faigman et al., 2008, arguing in favor of admitting "social framework evidence regarding implicit bias so long as the expert does not opine regarding specific facts concerning a specific case). And in the 2012 case of *Samaha v. Washington State Department of Transportation*, the Eastern District of Washington suggested just that. In *Samaha*, a plaintiff raised disparate treatment race discrimination claims under state and federal law. He sought to introduce the testimony of Professor Anthony G. Greenwald, who is the inventor of the IAT, a member of the American Academy of Arts and Sciences, and a recipient of numerous lifetime achievement awards in psychology. Since Greenwald was not asked to review case-specific materials besides the complaint, the testimony was not "case-specific application" as much as it was "general principles" testimony. The District Court explained that all four requirements spelled out in the Advisory Committee Notes were satisfied and admitted his testimony (*Samaha v. Washington State Dep't of Transp.*, 2005, p. *4). This decision should not be surprising. As one court recently put it, "Federal courts of appeals...uniformly interpret Rule 702 to continue to permit the admission of exposition testimony without an expert applying general principles to the specific facts of the case" (*Wisconsin v. Dobbs*, 2020, p. 531, pointing out that state supreme courts have acted similarly).

2. *Jones v. National Council of YMCA* (N.D. Ill. 2014)

But in other cases, testimony from the same expert was blocked. Consider, for example, the 2014 case of *Jones v. National Council of YMCA*. The case involved a class action by Black employees raising claims under federal and state anti-discrimination statutes. As in *Samaha*, the testimony was offered as "general principles" since Greenwald barely addressed specific details about the YMCA. The magistrate judge accepted this framing but held that the evidence was not sufficiently reliable because laboratory IAT findings could not be extrapolated to real-world workplaces (*Jones v. Nat'l Council of YMCA*, 2013, p. *7-*8). In sweeping language, the

magistrate judge wrote “[t]he application of Dr. Greenwald’s cognitive theory on stereotyping to the circumstances at the Y[MCA] is speculative, *without any scientific basis*” (*Jones v. Nat’l Council of YMCA*, 2013, p. *9).

The Northern District of Illinois adopted the magistrate’s findings in full but went even further. First, the court declined to categorize the testimony as “general principles.” According to the court, Greenwald came too close to opining on the ultimate question of causation, which is case-specific (*Jones v. Nat’l Council of YMCA*, 2014, p. 900). After shoehorning the proffered testimony as “case-specific application,” the court immediately faulted the testimony for not dealing with the case specifics of the YMCA. In a Catch-22, Greenwald’s testimony was rejected for not being what it never claimed to be. Second, and in the alternative, even if the testimony were evaluated as “general principles,” the court repeated the magistrate judge’s concerns about extrapolating laboratory science to real-world environments (*Jones v. Nat’l Council of YMCA*, 2014).⁸ In the end, Greenwald’s testimony was excluded.

3. *Karlo v. Pittsburgh Glass Works* (W.D. Pa. 2015)

A similar result obtained in the 2015 age discrimination case of *Karlo v. Pittsburgh Glass Works, LLC*. Again, Greenwald was offered as the expert. In contrast to *Samaha* and *Jones*, he was asked to review more specifics of the case, including depositions and another expert’s opinion about the defendant’s human resources practices. Accordingly, for this case, it was proper to categorize Greenwald’s testimony as “case-specific application,” which the court seemed to do.

The Western District of Pennsylvania rejected Greenwald’s testimony for three reasons. First, according to the court, the testimony was not based on sufficient facts or data because Greenwald had not specifically visited the plant or spoken to specific employees and managers. In dismissive language, the court wrote “this sort of superficial analysis . . . is not expert material; it is *the say-so of an academic who assumes* that his general conclusions from the IAT would also apply to [Pittsburgh Glass Works]” (*Karlo v. Pittsburgh Glass Works, LLC*, 2015, p. 7).

⁸Instead of articulating this in terms of “reliability” as did the magistrate judge, the court expressed this as a lack of “fit.”

Second, the court rejected Greenwald's methodology as unreliable. The main concern seemed to be that Project Implicit collects data from volunteers (instead of a representative sample)—without realizing that the selection bias probably produces underestimates, not overestimates, of bias (see for example Coutts, 2020, pointing out that the United States contributors to Project Implicit Bias skew younger, more female, and more liberal, all of which tend to be correlated with lower implicit bias scores). The court also repeated that data collected from research subjects “still say[] nothing about those who worked at [Pittsburgh Glass Works]” (*Karlo v. Pittsburgh Glass Works, LLC*, 2015, p. *8).

Finally, the court held that the testimony does not “fit” in the sense that it was not legally relevant. On the one hand, for a disparate treatment theory, the court assumed that *explicit* bias was legally necessary, in which case findings of implicit bias would not matter. On the other hand, for disparate impact, the court pointed out that evidence of any mental state, explicit or implicit, is unnecessary. On these multiple grounds, Greenwald's testimony was excluded.

On appeal, the Third Circuit Court of Appeals applied a deferential standard of review and affirmed the exclusion on narrow grounds. It addressed only the “fit” explanation and pointed out that in a disparate impact claim (which was the only theory remaining on appeal), “plaintiffs are not required to prove that any particular psychological mechanism caused the disparity in question” (*Karlo v. Pittsburgh Glass Works*, 2017, p. 85). The court specifically cautioned “[t]hat is not to say, however, that implicit bias testimony is never admissible . . . We are simply unable here to conclude that the district court abused its discretion. . .” (*Karlo v. Pittsburgh Glass Works*, 2017, p. 85).

B. Lessons from the Mess

These three cases—*Samaha*, *Jones*, and *Karlo*—are not a comprehensive compendium of cases on the admissibility of implicit bias expert testimony. But they nicely illustrate the following points.

First, there is huge variance in whether and how judges admit expert testimony on implicit bias. Recall that Greenwald's testimony was excluded in the 2014 *Jones* case, which was decided in the Northern District of Illinois. But three years later, another judge from the same district admitted roughly similar expert testimony of Destiny Peery in *Martin*

v. F.E. Moran, Inc. (2017). At the time, Peery was an untenured assistant law professor with a PhD in social psychology. There should be no offense in observing the vast difference in their scientific reputations. That, however, did not matter. In *Martin*, the court conveniently distinguished *Jones* by pointing out that Peery's testimony was more "rooted in the facts in the record," without noting that Greenwald's testimony was deliberately designed to be "general principles," not "case-specific application." (*Martin v. F.E. Moran, Inc.*, 2017, p. *8). In any event, Peery's testimony was ruled admissible.

Second, courts have shown analytical sloppiness. For example, they fail to distinguish sharply between "case-specific application" and "general principles" testimony notwithstanding the express distinction made in the Advisory Committee Notes.

Third, courts sometimes analyze the elements of a legal doctrine superficially as they address the legal relevance or "fit" of implicit bias expert testimony. For example, as did the district court in *Jones*, courts have held that implicit bias is irrelevant to disparate *treatment* claims because such claims require a "discriminatory motive," which is assumed to be a purposeful level of intent. But this is a controversial assumption. After all, the text of many civil rights statutes simply require causation ("because of"), not some self-aware motivation based on an explicit negative attitude or stereotype (see, for example *Kimble v. Wisconsin Dep't of Workforce Development*, 2010).⁹ Consistent with the plain text, many commentators and courts have concluded that *causation* is what's necessary (Krieger & Fiske, 2006; Krieger, 1995). Conversely, courts have also suggested that implicit bias can never be relevant to disparate *impact* claims because mental states don't doctrinally matter. Again, this seems to ignore how implicit bias can illuminate doctrinally relevant facts, such as whether a specific policy can inadvertently cause a disparity (*Watson v. Fort Worth Bank and Trust*, 1988), or how an alternative process (e.g., one with less discretion to

⁹ "Nor must a trier of fact decide whether a decision-maker acted purposively.... Rather, in determining whether an employer engaged in disparate treatment, the critical inquiry is *whether it's decision was affected* by the employee's membership in a protected class" (p. 768-769, emphasis added). See also *Ricci v. DeStefano* (2009), making clear that malevolent or hostile motivations are not required for a disparate treatment claim.

counter implicit bias) could produce less of a disparate impact.

Fourth, the main substantive concern with the science seems to be what David Faigman (2014) has called the G2i (*general* phenomenon to particular *instance* of that phenomenon) problem. Courts are uneasy about admitting evidence of general probabilistic psychological tendencies confirmed by academic research in order to apply it to individual actors in real-world environments. They much prefer specific diagnoses about specific individual actors making specific decisions about specific people. Unfortunately, science doesn't operate this way. For example, a scientific consensus that smoking is correlated to lung cancer may be entirely reliable, but it cannot specify that a specific puff of a specific cigarette triggered a specific mutation on a specific gene within a specific cell of a specific individual to cause a specific cancer in the real world.

What's maddening is the judicial inconsistency about this general-to-specific inference problem, which exists in other domains of knowledge. For instance, courts have admitted "general principles" expert testimony from police detectives who testified about the use of mobile phones and websites to facilitate child prostitution (*United States v. Brinson*, 2014). Let's put aside for the moment that these detectives lack PhD's and have not run carefully designed experiments to test their hypotheses. Even if we are to credit their folk knowledge as expertise, how are we to know that these general tendencies of traffickers, sex workers, and their customers pertain in this particular case? As another example, economists have provided "general principles" expert testimony on antitrust matters, including the nature of cartels (*United States ex. rel. Miller v. Harbert*, 2010, p. 894-896). Again, the skeptic can always ask how can we be certain that in this particular industry, with these particular firms, at this particular moment, the general tendencies of cartels manifested? What about the general practice to admit "general principles" expert testimony on rape trauma syndrome and battered spouse syndrome in order to facilitate a conviction? (see, for example *People v. McCloud*, 2014¹⁰; *Nixon v. United States*, 1999).¹¹ Or the tendencies of children who

¹⁰ Admitting testimony even though "[t]he expert had never met the victim or reviewed any reports about the charged crimes" (p. 1289).

¹¹ "Numerous other courts have likewise held that expert testimony regarding BWS [Battered Woman Syndrome] and other aspects of domestic

suffer child sex abuse? (*People v. Taylor*, 2018).¹² Again, how and why is the science that much more reliable or the G2i problem that much more surmountable in some circumstances than in others?

Given these observations about erratic or poorly reasoned decisions, what recommendations might a behavioral realist make to lawyers seeking to admit expert testimony on implicit bias? I would recommend the following:

- Use a genuine academic expert in implicit bias — although world-class expertise is hardly a guarantee of admissibility.
- Sharply and repeatedly distinguish between “general principles” and “case-specific application” expert testimony.
- Provide only “general principles” testimony in order to alleviate concerns about the G2i inference problem, and make this clear to the court (*United States ex. rel. Miller v. Harbert*, 2010).¹³
- Have the expert testimony preemptively address concerns about predictive validity, effect sizes, and external validity in real-world settings. In legal argument, emphasize that these scientific concerns go to the weight of evidence and not its admissibility.
- Prepare evidentiary materials in the form of witness statements, affidavits, and depositions that describe the defendant’s specific actions, behaviors, practices, policies, and procedures such that a factfinder could apply the expert’s “general principles” testimony to these evidentiary materials in order to logically draw their own inferences and conclusions (see Kang et al., 2012, p. 1154, recommending strategy of offering general expert

violence is admissible where the expert has not examined the complaining witness and has not testified that she is a battered woman or suffers from BWS.” (p. 592).

¹² “[S]uch expert testimony is admissible, like testimony as to other psychological syndromes, because it helps to explain behavior of victims that might be puzzling to the jury” (p. 263).

¹³ Vindicating the strategy of only providing general principles and declining to provide a case-specific application (p. 598).

testimony in conjunction with another fact witness personally familiar with case specifics).¹⁴

On a fair reading of our evidence laws, these steps should maximize the chances of admissibility. But it would be naïve to think they provide any guarantee of admissibility (see Jones, 2017, p. 1235-1238, arguing that sometimes the proffered evidence is criticized as too uncertain, sometimes too certain). We have, in the end, reached a sobering conclusion. If we seek to upgrade the model of discrimination for jurors via expert testimony, the rules of evidence unevenly applied by trial court judges can present an inconsistent and sometimes impenetrable firewall.

III. THE IRRELEVANCE OF EXPERT TESTIMONY

Then again, maybe expert testimony doesn't matter as much as we presume, especially if we move away from how specific cases are decided to general legal interpretations. After all, in doctrinal evolution, the more important legal decisionmaker is not jury but judge. And it turns out that there are essentially no firewalls insulating a judge's mental model of discrimination. To be sure, expert testimony in specific cases can still influence what judges know and how they might decide cases in bench trials, motions for summary judgment, or motions for judgment as a matter of law. But expert testimony may play only a trivial role in the overall evolution of judicial "common sense" of how discrimination actually works.

A. Exiting *McCleskey*

In the 1987 case of *McCleskey v. Kemp*, the United States Supreme Court was confronted with statistical evidence of gross racial disparities in capital punishment. Applying *federal* constitutional law, the Court nevertheless found no Eighth Amendment violation. In its own words:

McCleskey asks us to accept the likelihood allegedly shown by the [statistical] study as the constitutional measure of an unacceptable risk of racial prejudice influencing capital sentencing decisions. This we decline to do.

* * *

¹⁴ For other factors that lead to persuasive scientific testimony, see Sevier (in this volume) Part III.E.

At most, the [statistical] study indicates a discrepancy that appears to correlate with race. Apparent disparities in sentencing are an inevitable part of our criminal justice system. . . . Where the discretion that is fundamental to our criminal process is involved, we decline to assume that what is unexplained is invidious.

[W]e hold that the [statistical] study does not demonstrate a constitutionally significant risk of racial bias (*McCleskey v. Kemp*, 1987, p. 308).

In the 2018 case of *Washington v. Gregory*, the Supreme Court of the State of Washington confronted similar statistical evidence of gross racial disparities in capital punishment. Applying state constitutional law, did the Washington Supreme Court follow *McCleskey*'s lead? Surprisingly, no. *Gregory* found a way to exit *McCleskey*'s orbit and struck down its death penalty laws as unconstitutional.

Why was statistical evidence that was unpersuasive in 1987 in federal court persuasive in state court three decades later in 2018? Of course, any competent lawyer could distinguish the cases. For example, one could point to differences in the quality of the two statistical reports in terms of data, methodology, and findings; differences between federal and state constitutional provisions; differences in political orientations of the judges; or even differences in what judges had for breakfast on the day of decision. But consider also the intriguing possibility that the Washington Supreme Court had embraced behavioral realism. It referenced, for instance, new understandings of juvenile offenders "supported by scientific and sociological studies about the differences between juveniles and adults" (*Washington v. Gregory*, 2018, p. 633). The court also cited cases mentioning the importance of revising "in light of 'advances in the scientific literature'" (*Washington v. Gregory*, 2018, p. 633). In its clearest endorsement of behavioral realism, the court explained: "where new, objective information is presented for consideration, we must account for it. Therefore, Gregory's constitutional claim must be examined in light of the newly available evidence presented before us" (*Washington v. Gregory*, 2018, p. 633).

Of course, no statistical analysis is ever immune from methodological critique. When confronted with this reality, the Washington Supreme Court conceded the imperfections and the existence of opposing expert opinion. Still, the court "decline[d] to require indisputably true social science to

prove that our death penalty is impermissibly imposed based on race” (*Washington v. Gregory*, 2018, p. 634). The court emphasized another plain reality — the reality of racial bias:

Given the evidence before this court and our *judicial notice of implicit* and overt racial bias against black defendants in this state, we are confident that the association between race and the death penalty is not attributed to random chance. We need *not* go on a fishing expedition to find evidence external to [the statistical] study as a means of validating the results. Our case law and history of racial discrimination provide ample support (*Washington v. Gregory*, 2018, p. 635, first emphasis added).

What followed was a long string citation of authority. Among them were a prior Washington case *State v. Saintcalle* (2013, addressing *Batson* challenges),¹⁵ a 2011 state task force report on race and criminal justice (Task Force on Race and Washington’s Criminal Justice System, p. 17-21), and an amicus brief of 56 former and retired Washington state judges prepared by the ACLU of the State of Washington (2018)—all of which referenced legal and empirical analyses of implicit bias. What’s critical is that this information did not pass through any *Daubert*-like firewall. Instead, the information just flowed. And on the basis of that information, the court officially acknowledged many things, including the reality of implicit bias. And with this upgraded model—not only of history and structure but also social cognitions—the court explained that a perfect statistical analysis was unnecessary to conclude that race mattered in death penalty decisions. Statistics alone was not enough in 1987 to change legal doctrine, but statistics *plus implicit bias* sufficed in 2018.¹⁶

B. The Freedom of Legislative Facts

Why was the finicky firewall in cases like *Samaha*, *Jones*, and *Karlo* entirely bypassed in *Gregory*? The formalistic answer turns on the distinction between “adjudicative” and

¹⁵ *Saintcalle* cited to the task force report, which cited to legal scholarship on behavioral realism (see, for example *State v. Saintcalle*, 2013, p. 335 n.3, citing Kang & Lane, 2010).

¹⁶ The Washington Supreme Court has also demonstrated behavioral realism in altering its approach to “*Batson*” challenges of racial discrimination in jury selection (see General Rule 37 and *Washington v. Jefferson*, 2018).

“legislative facts.” This infelicitously named distinction, originally drawn by Kenneth Culp Davis in 1942, has been codified in Federal Rules of Evidence 201.¹⁷ According to the committee notes, adjudicative facts are “simply the facts of the particular case,” the facts “concerning the immediate parties” that would typically go to the jury in a jury trial (Federal Rule of Evidence 201, Committee Note to Subdivision (a)). Such facts must be decided by the factfinder on the basis of admitted evidence, which could include expert testimony that passes through the relevant evidentiary firewall. (As the rule explains, if the facts are truly undisputed, a court can take judicial notice of even adjudicative facts in the manner prescribed in FRE 201.)

By contrast, legislative facts are “those which have relevance to legal reasoning in the lawmaking process . . . in the formulation of a legal principle ruling by a judge or court . . .” (Federal Rule of Evidence 201, Committee Note to Subdivision (a)). And for such facts, judges operate with almost no constraints on sources consulted, materials considered, and quality controls applied. As expressly stated, the stringent requirements laid out for judicial notice in FRE 201 apply “to adjudicative facts only, not a legislative fact” (Federal Rule of Evidence 201). And the committee notes make plain that “[n]o rule [of evidence] deals with judicial notice of ‘legislative’ facts” (Federal Rule of Evidence 201, Committee Note to Subdivision (a)). In short, the answer to the question I posed above is that in *Gregory*, the Washington Supreme Court was not finding adjudicative facts, which must pass through a *Daubert*-like evidentiary firewall. Instead, it upgraded its model of discrimination by downloading legislative facts, which simply bypass any such firewall.

This distinction between adjudicative and legislative facts was more explicitly addressed in the case *Connecticut v. Santiago* (2015), which also struck down the state’s death penalty. One of the dissents argued that the majority had relied on “contested and slanted extra-record materials” (*Connecticut v. Santiago*, 2015, p. 138). No doubt the dissent was also calling out the concurring opinion, which extensively discussed how implicit bias could influence capital

¹⁷ David Faigman provides an alternative typology. In his terms, adjudicative facts are called “case specific facts.” And legislative facts are subdivided into doctrinal facts (facts used when lawmaking) and reviewable facts (facts used when applying the law) (Faigman, 2008, p. 43-62).

sentencing (*Connecticut v. Santiago*, 2015, p. 95-96, quoting Kang & Lane, 2010). The majority replied that consulting extra-record materials was standard operating procedure and that “appellate courts tasked with determining the content of law and policy may take notice of constitutional and legislative facts such as historical sources and scientific and sociological studies” (*Connecticut v. Santiago*, 2015, p. 127).

The upshot of cases like *Gregory* and *Santiago* is that unless judges are supervising a jury’s finding of adjudicative facts, they are essentially unrestricted in downloading an upgraded model of human behavior that informs their legal analysis. This new information may come from experts but need not come through expert testimony. Instead, it can enter the judge’s understanding through lectures, trainings, conferences, podcasts, videos, secondary sources, amicus briefs, and idiosyncratic research done by the judges themselves. Moreover, this is standard operating procedure (Gorod, 2011, p. 42; Pierce, 2002, § 10.5), regularly followed in even significant constitutional cases (Larsen, 2012, p. 1262). Of course, to be persuasive, judges will prefer citing or referring to credible academic or government sources instead of cocktail conversations or a reddit post.

C. More Examples

Gregory and *Santiago* are not outliers. There are many other examples of judges applying an upgraded model of discrimination that bypassed any expert testimony firewall. Let me provide a few examples that focus on the interpretation of ambiguous civil rights statutes.

1. Recognizing Disparate Impact Liability in the Fair Housing Act

Sometimes courts have used an upgraded model of discrimination to interpret the meaning of an ambiguous civil rights statute. For example, in the 2015 case of *Texas Department of Housing & Community Affairs v. Inclusive Communities Project, Inc.*, the Supreme Court addressed whether the Fair Housing Act countenanced a disparate *impact* theory of liability. The Supreme Court went through typical interpretive moves, such as drawing on analogies with Title VII’s disparate impact theory. But at a key moment of its reasoning, the Court explained: “Recognition of disparate impact liability under the FHA also plays a role in uncovering discriminatory intent. It permits plaintiffs to counteract *unconscious*

prejudices and disguised animus that escape easy classification as disparate treatment. In this way disparate impact liability may prevent segregated housing patterns *that might otherwise* result from covert and *illicit stereotyping*” (*Texas Dep’t of Housing & Community Affairs v. Inclusive Communities Project, Inc.*, 2015, p. 540).

In other words, the Justices in the majority had internalized an upgraded model of discrimination that appreciated how implicit social cognitions (what the court calls “unconscious prejudices” and maybe also “illicit stereotyping”) could exacerbate housing segregation. On the basis of this upgraded model, the Court felt comfortable interpreting the ambiguous statutory phrase “because of” to include disparate impact liability (Fair Housing Act, § 3604(a), § 3605(a)).

2. Clarifying Disparate Treatment Liability under Title VII

Here’s another example regarding the proper interpretation of the phrase “because of” in Title VII. In the 2010 case *Kimble v. Wisconsin Dep’t of Workforce Development*, plaintiff raised a disparate treatment discrimination claim. Before the rise of implicit social cognition, it would be natural to think of disparate *treatment* as requiring a self-aware purpose to discriminate, especially to distinguish disparate treatment from disparate *impact* theories of liability. After all, back then, this was our commonsense mental model for discrimination. But the plain text of the statute does not specify self-awareness or purposeful intent. Instead, it merely requires “because of”—a causal connection between the adverse employment action and the plaintiff’s protected social categories. In other words, Title VII is textually open to a disparate treatment theory that goes beyond purposeful discrimination (*Kimble v. Wisconsin Dep’t of Workplace Development*, 2010).¹⁸

With this broader reading of the text, the Eastern District of Wisconsin applied an upgraded model of discrimination as it weighed the evidence in a bench trial. It observed that “when the evaluation...is highly subjective, there is a risk that supervisors will make judgments based on stereotypes of which they *may or may not be entirely aware*” (*Kimble v.*

¹⁸ “Nor must a trier of fact decide whether a decision-maker acted purposefully or based on stereotypical attitudes of which he or she was partially or entirely unaware” (p. 768).

Wisconsin Dep't of Workplace Development, 2010, p. 775-776). It noted that because of the ordinary process of categorical thinking, a supervisor may use stereotypes “*whether or not* the supervisor is *fully aware* that this is so” (*Kimble v. Wisconsin Dep't of Workplace Development*, 2010, p. 776).

On what scientific basis did the court make these claims? It did not cite any expert testimony that was fought over; instead, it cited to a wide variety of secondary literature, including law review articles embracing behavioral realism, as the source of this upgraded understanding (*Kimble v. Wisconsin Dep't of Workplace Development*, 2010, p. 776).¹⁹ And on this basis, the court held that the plaintiff had made his *prima facie* case, that the defendant was not an especially credible witness, and that a disparate treatment violation had in fact taken place.

3. Interpreting “Biased” in a State Policing Act

In the 2019 case *Kansas v. Gill*, a Kansas appellate court had to interpret a state law that prohibited “racial or other biased-based policing” (Kan. Stat. Ann. § 22-4609) which was (unhelpfully) defined as “the unreasonable use of race...by a law enforcement officer in deciding to initiate an enforcement action” (Kan. Stat. Ann. § 22-4606(d)). In this case, a police officer approached two Black men in an SUV because they were “staring hard” at him, which approach led to the officer’s smelling marijuana and discovering drugs. The trial court found that the police officer had used race unreasonably, and the majority of the Court of Appeals affirmed.

Invoking a legacy model of discrimination, the dissent framed the case provocatively: “Before we brand an officer of the law...a racist, there ought to be evidence supporting such a serious charge” (*Kansas v. Gill*, 2019, p. 1288, Powell, J., dissenting). But the majority responded that “*no one here is branding [the officer] a racist*” (*Kansas v. Gill*, p. 1286, emphasis added). Instead, invoking an upgraded model of discrimination, the majority articulated the question presented as whether the officer “let racial bias—*conscious or unconscious*—affect his initiation of enforcement action” (*Kansas v. Gill*, 2019, p. 1286-1287, emphasis added). It observed that the statute itself did not require “exceptionally horrific or despicable race-based behavior”; to the contrary, the

¹⁹ Citing articles appearing in the Behavioral Realism Symposium (Bayern, 2006).

“[l]egislature recognized that racial bias is not always overt, it is often *subtle*” and that federal law enforcement leadership had publicly recognized that “all people have some form of *unconscious racial biases*” (*Kansas v. Gill*, 2019, p. 1287, emphasis added).

These cases are not offered as a full population or a representative sample of cases mentioning implicit bias. Different cases could have been highlighted to tell different stories. But my general point seems clear. Courts have revised the law in significant ways, for example to walk away from our fixation on purposeful discrimination in various civil rights laws. They have done so by deploying an upgraded model of discrimination that incorporates implicit social cognition. Finally, that upgraded model did not require information to penetrate some expert testimony firewall. Instead, it simply required judges to have learned about and agree with this new model; if they need authority to cite, secondary sources in the legal and scientific literatures suffice. Seen in this light, behavioral realism about implicit bias has already been influential.

CONCLUSION

This chapter asked whether the rise of implicit social cognition had an impact on law’s evolution, in particular through increased behavioral realism. We started with a focus on jurors deciding specific cases and realized that for them, an upgraded model of discrimination may require expert testimony. Unfortunately, the rules of evidence operated as finicky firewalls blocking even basic science education from world-class scientists. But when we shifted our focus to judges evolving and interpreting the law, we realized that the rules of evidence did not much matter. In this role, judges are empowered to update their model of discrimination through information that bypasses any expert testimony firewall. And this is largely what has happened. As the science of implicit bias has been translated and popularized, judges have internalized a more realistic model of discrimination. And with this upgraded understanding, they have already altered law’s trajectory.

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