Dr. Jekyll and Dr. Hyde

Summary

The theory that unconscious bias underlies racial disparities of medical care presumes that doctors become an alternative self in the practice of medicine. There is very little evidence to support this colorful proposition.

In the historic third edition of the Diagnostic and Statistical Manual of Mental Disorders (1980), the discussion of Multiple Personality Disorder offered the example of a “quiet, retiring spinster” who becomes a “flamboyant, promiscuous bar habitué on certain nights.” While this florid figure disappeared from DSM-IV and its successors, the idea that the self may contain its own alter remained culturally available, like stock footage. In this tradition, the literature on racial disparities in healthcare argues that many doctors who sincerely abhor discrimination act like someone else when they make clinical decisions, regularly recommending inferior treatments (for example) for black patients. It is because they have no awareness of what they are really doing that these doctors go on believing that they are fair-minded despite the evidence of their own actions. In effect, they practice medicine in a dissociated state.

The theory of unconscious bias arose in the late 20th century even as investigators documented extensive disparities of care for black patients, and to many it seemed to explain those disparities as nothing else could. Hence its enshrinement in 2003 in the report by the Institute of Medicine, *Unequal Treatment*, which has since been cited over 10,000 times. “’Implicit’ stereotypes commonly function in an unconscious fashion.”[[1]](#endnote-1) In particular, under the stress and strain of clinical practice, doctors default to their settings and make decisions that disfavor black patients, albeit unknowingly. Explaining how it is that decent people can conduct themselves less than decently, the theory of unconscious bias allows critics to assign blame for patterns of disparate care without necessarily indulging in prosecutorial rhetoric. “Forgive them, for they know not what they do.”

In formulating the theory of unconscious bias, the authors of *Unequal Treatment* made the critical decision to anchor it in everyday processes. “Subtle and unintentional types of biases exist even among highly educated whites who support egalitarian ideals and are not consciously racially prejudiced. These biases have their origins in normal and pervasive processes associated with social categorization and thus can operate without conscious awareness or control” (pp. 172-73). Emphasis on the normality and universality of unconscious bias obscures the strange things this theory asks us to believe. We are to believe, for example, that as a result of a bias that operates automatically, doctors who “support egalitarian ideals” not only systematically harm black patients but are as unaware of doing so as if they were sleepwalking. How credible is the concept of involuntary decision-making?

The fact is that the authors of *Unequal Treatment* have almost no evidence that clinical practice is driven by bias (let alone unconscious bias), and concede that they use theory to compensate for this lack. “Unfortunately, little research has been conducted to elucidate how patient race or ethnicity may influence physician decision-making and how these influences affect the quality of care provided. In the absence of such research, the study committee drew upon a mix of theory and relevant research to understand how clinical uncertainty, biases or stereotypes, and prejudice might operate in the clinical encounter” (p. 9). Of the smattering of evidence available (including one study that does not concern medical doctors and another that “suffers from very small sample size” [p. 165]), the authors place most weight on a study of cardiac catheterization by Schulman et al., who indeed attribute their findings to bias working beneath the threshold of consciousness.[[2]](#endnote-2)

Appearing in 1999 in the *New England Journal of Medicine*, the Schulman et al. study used videotaped black and white actors to present identical histories and symptoms to a total of 720 physicians. As reported by the media, blacks and women were 40% less likely to be referred for cardiac catheterization than whites or men, a figure strongly suggestive of bias. However, in the ensuing controversy in the pages of the journal, it emerged that black men, white men and white women were actually referred at an identical rate of 90%, and black women at a rate 12% lower.[[3]](#endnote-3) In a comment by the journal’s editors, it further emerged that the findings of the Schulman study “depended largely on the response to the 70-year-old black actress and, to a lesser extent, on the response to the 55-year-old black actress.” The editors conclude that in the study as published “the evidence of racism and sexism was overstated.”[[4]](#endnote-4) Unless we are to believe that the doctors in question harbored a bias against black women but not black men, there is little here to support the theory that doctors unconsciously practice racist medicine.

Since 2003, the dearth of evidence that unconscious bias dictates clinical decisions has changed little. Most of the pertinent studies seek to correlate recommendations for treatment with the results of a subsequent Implicit Association Test (an online exercise that times the speed of associations of race with attributes). In 2017 a review of the literature reported that “the scientific community working in this area agrees that . . . there is currently a lack of good evidence for a direct negative influence of biases” on care.[[5]](#endnote-5) This is not what we would expect if a strong motive operated at once automatically and unconsciously, as the literature on racial disparities has explicitly assumed since *Unequal Treatment*.

As it happens, the founders of the IAT itself—Banaji, Greenwald and Nosek—took part in trials which, in sum, index the “lack of good evidence” for the influence of unconscious bias on clinical practice. In 2007 Green and colleagues, including Banaji, published a positive study of the influence of implicit bias on recommendations for treatment of acute coronary syndrome (in clinical vignettes).[[6]](#endnote-6) Appearing as it did within a few years of *Unequal Treatment*, this study may have reinforced the presumption of plausibility that attached to the theory of unconscious bias. However, the first successful study of the impact of this bias on treatment decisions was also the last.

The following year Sabin and colleagues, including Greenwald, published a study using similar methods, but addressed to pediatricians, which found indistinguishable recommendations for black and white patients except in the case of urinary tract infections, for which black but not white patients received the ideal treatment. The study report notes that its results conflict both with its own hypothesis and the findings of Green et al.[[7]](#endnote-7) As if taking a second run at their target, Sabin and Greenwald re-analyzed the data and in 2012 reported positive findings for one of four conditions, as well as a paradoxical association of higher bias scores with better treatment of ADHD in children of both races.[[8]](#endnote-8) Nosek, for his part, co-authored a 2014 study (also using vignettes) in which IAT scores failed to correlate with recommendations for total knee replacement. (This study has garnered 146 citations, as compared to the 1686 recorded by the Green study.) Again, we would not find this trail of results if unconscious bias were as pervasive, systematic and insidious as theorists lead us to believe.

The Nosek study concludes, “The conditions predicting when implicit biases will predict behavior or not are not yet fully understood,” which appears to means that we are not only unable to predict clinical behavior from unconscious bias, we cannot even begin to do so.[[9]](#endnote-9) With studies of the influence of bias on clinical decisions going nowhere, the trend has shifted toward analysis of the clinical encounter, on the theory that bias skews communication with minority patients, which in turn leads to decreased adherence and, eventually, poor outcomes. In this context, unconscious bias is said to manifest itself in such symbolic forms as “closed” body postures, excessive blinking, and telltale patterns of speech. Setting the focus on such behavioral signals takes us a long way from the theory that unconscious bias dictates treatment.

By general agreement, extraordinary claims require extraordinary evidence. Despite the oft-repeated argument that unconscious bias is rooted in ordinary “social cognition,” it remains hard to believe that doctors practice medicine with no more notion of what they are doing than if they had become an alternative self. Two decades after *Unequal Treatment*, the advocates of this exotic theory have still not assembled a body of convincing, let alone extraordinary, evidence in its support. Whatever the explanations for persistent disparities of care may be, they do not include unconscious bias.

1. Brian Smedley, Adrienne Stith, Alan Nelson, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care* (Washington, DC: National Academies Press, 2003), p. 172. [↑](#endnote-ref-1)
2. Kevin Schulman, Jesse Berlin, William Harless et al., “The Effect of Race and Sex on Physicians’ Recommendations for Cardiac Catheterization,” *New England Journal of Medicine* 340( 1999): 618-66. [↑](#endnote-ref-2)
3. Lisa Schwartz, Steven Woloshin and H. Gilbert Welch, “Misunderstandings About the Effects of Race and Sex on Physicians’ Referrals for Cardiac Catheterization,” *New England Journal of Medicine* 341 (1999): 279-83. [↑](#endnote-ref-3)
4. Letter by Gregory Curfman and Jerome Kassirer, *New England Journal of Medicine* 341 (1999): 287. [↑](#endnote-ref-4)
5. Chloë Fitzgerald and Samia Hurst, “Implicit Bias in Healthcare Professionals: A Systematic Review,” *BMC Medical Ethics* (2017) 18: 19: 14. [↑](#endnote-ref-5)
6. Alexander Green, Dana Carney, Daniel Pallin . . . Mahzarin Banaji, “Implicit Bias among Physicians and its Prediction of Thrombolysis Decisions for Black and White Patients,” *Journal of General Internal Medicine* 22 (2007): 1231-38. [↑](#endnote-ref-6)
7. Janice Sabin, Frederick Rivara and Anthony Greenwald, “Physician Implicit Attitudes and Stereotypes about Race and Quality of Medical Care,” *Medical Care* 46 (2008): 678-85. [↑](#endnote-ref-7)
8. Janice Sabin and Anthony Greenwald, “The Influence of Implicit Bias on Treatment Recommendations for 4 Common Pediatric Conditions: Pain, Urinary Tract Infection, Attention Deficit Hyperactivity Disorder, and Asthma,” *American Journal of Public Health* 102 (2012): 988-95. [↑](#endnote-ref-8)
9. M. Norman Oliver, Kristen Wells, Jennifer Joy-Gaba, Carlee Beth Hawkins, Brian Nosek, “Do Physicians’ Implicit Views of African Americans Affect Clinical Decision Making?” *Journal of the American Board of Family Medicine* 27 (2014); 177-88. [↑](#endnote-ref-9)