The Life and Death of a Medical Study

What happens after an influential medical study is refuted? Perhaps not much. In one revealing case, a study published in 2020 has been cited over 700 times, while its refutation has been cited exactly once over the four months since its open-access publication in the same major journal: an imbalance so grotesque that it mocks the conception of science as a self-correcting enterprise.

Based on a review of records of 1.8 million births in Florida hospitals from 1992 to 2015, the original study by Greenwood et al. found that black newborns attended by white doctors died at twice the rate of those in the care of black doctors—a result that appeared to confirm the progressive portrayal of medicine as a racist institution. Never before, perhaps, had the importance of racial concordance in clinical medicine been demonstrated so dramatically. The invalidation of the Greenwood finding four years later has gone all but unnoticed and has had no effect on the progressive narrative.

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I first learned of the Greenwood study from an editorial deploring "systemic racism" in urology without offering a single example of the biased practice of medicine in that discipline. Write the authors,

> Studies have shown the more insidious effects of racial discrimination, such as chronically high cortisol levels in individuals experiencing weekly discrimination and, conversely, reductions in diabetes and major depression rates when Black individuals move to more affluent and safer neighborhoods. If these examples are not alarming enough, Greenwood and colleagues showed that Black infants have threefold higher mortality when cared for by a white physician than those cared for by a Black physician.

In point of fact, Greenwood et al. found that black newborns attended by black doctors die half, not a third, as often as those attended by white doctors. (Highlighted in a box on the first page of the Greenwood study is the following: "Findings suggest that when Black newborns are cared for by Black physicians, the mortality penalty they suffer, as compared with White infants, is halved.") It is the mortality of black infants in general that runs three times higher than that of white infants. While I spotted that error in real time and realized there was something excessive in the editorialists' rhetoric, the increase in black infant mortality at the hands of white doctors remained shocking.

The Greenwood study appeared in *PNAS* (*Proceedings of the National Academy of Sciences)* on August 17, 2020, with the nation in the throes of protest from coast to coast following the murder of George Floyd by a white policeman on May 25. By an accident of history, an examination of birth records in the state of Florida caught the zeitgeist. The George Floyd summer fell in the middle of the Covid epidemic, and some felt that black distrust of the Covid vaccine itself was understandable in the light of the injuries visited on

black patients by the institution of medicine. As two commentators wrote in the *New England Journal of Medicine* in 2021 in justification of this distrust, "Black women will wait months for an appointment with one of us because they believe a physician who shares their background will care for them in a way that others cannot or will not. . . . Infant mortality is halved when Black newborns are cared for by Black rather than White physicians."

From its beginnings, the literature on racial disparities in medicine leaned to the view that racial concordance between doctors and minority patients translates into better outcomes for the latter. The literature's charter—*Unequal Treatment*, a book-length polemic published by the Institute of Medicine in 2003—theorized but could not actually document effects of this kind, instead relying on presumption and tendentious speculation. As the authors concede,

> 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.

Hence, in the face of inadequate evidence the authors rely on theory as well as that very evidence to suggest how racism "might operate" in clinical medicine. The finding some two

decades later that black newborns attended by black doctors survive at a markedly higher rate seemed to narrow the evidentiary gap in the literature to which *Unequal Treatment* gave rise.

Like *Unequal Treatment*, the literature that evolved from it concerned itself less with old-fashioned race-hatred than unconscious (or "implicit") bias on the part of doctors who abhor racism itself, and of all the harms attributed to such bias, the loss of black infants certainly ranks among the most shocking and unpardonable. What else but entrenched racism could be responsible for the highly disproportionate deaths of black infants in the care of white doctors? And yet if the white doctors responsible for these deaths were driven by unconscious racism, why is it that Greenwood et al. found no difference in mortality between the black and white mothers? Would we not expect doctors impelled by an unconscious, and therefore uncontrollable, animus against black persons to take out their hostility against the mothers as well as the infants?

Inconsistencies like this make no difference to those already convinced that medicine is a racist institution from the roots up. Editorialists in the *New England Journal of Medicine* and elsewhere did not arrive at a wholesale indictment of medicine (and society at large) only after the Greenwood study, but, on the contrary, read that study through the lens of a hostility to endemic racism that was already strong. It seems that at least one of the co-authors of the Greenwood study itself had fully formed ideas about medicine's depravity before the fact.

In a Washington Post article on the Greenwood study published in January 2021, one of the study's co-authors, Rachel Hardeman, attributes the disproportionate death of

black infants in the care of white doctors to “structural racism,” defined as the "normalization and legitimization of an array of dynamics—historical, cultural, institutional and interpersonal—that routinely advantage Whites while producing cumulative and chronic adverse outcomes for people of color." The formidably doctrinaire character of this comment suggests that Hardeman did not arrive at her worldview as a result of her study’s findings but carried fixed ideas about both medicine and society into the study itself. After all, the study did not investigate the history of advantages enjoyed by white people or the history of injuries to people of color. By the same token, if the findings of the study were to fall to the ground, her indictment of structural racism would in all probability remain unchanged. Just as the absence of disproportionate deaths of black mothers in the care of white doctors (a point noted in the Washington Post article) makes no impression on those who interpret the Greenwood study as evidence of systemic racism, so any loss of validity that might befall the Greenwood findings would not alter the worldview of a committed ideologue.

Consider the use to which the Greenwood study was put by Supreme Court justice Ketanji Brown Jackson in her dissent in the 2022 case of Students for Fair Admissions v. Harvard. In support of the proposition that diversity is a great social good, Justice Jackson observes that “For high-risk Black newborns, having a Black physician more than doubles the likelihood that the baby will live, and not die.” It is as if excluding some from Harvard in the interest of including others had become a matter of life and death. Like a rhetorical flourish, the Greenwood study serves to add urgency to Jackson’s argument in favor of affirmative action. The argument itself stands without it and would not suffer in the least if

the finding that racial concordance saves the lives of black newborns turned out to be fallacious.

And so it did.

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To the hundreds who cited the Greenwood study in the medical literature and to those (including the Washington Post and CNN) who pumped its findings into general circulation, it may well have seemed that nothing but racism could possibly explain the glaring disproportion of black newborns who die in the care of white doctors. Had Greenwood et al. not analyzed the birth records microscopically? It turns out their analysis was not microscopic enough. Working with the same data set (provided by Greenwood, it should be noted), Borjas and VerBruggen discovered that when the risk factor of very low birth weight is taken into account, the disparity between infant deaths associated with white and black doctors approaches zero and loses statistical significance. Black newborns in the care of white doctors do die disproportionately, not because the doctors are racists but because black newborns of dangerously low weight—specifically, under 1500 grams—are disproportionately attended by white doctors (presumably in intensive care units). In the tradition of *Unequal Treatment*, Greenwood et al. supplemented inadequate data with social-psychological theorizing and reached a foregone, if dramatic, conclusion. Borjas and VerBruggen, publishing their findings in the same journal (that is, *PNAS*), corrected this error in September 2024.

And yet what changed as a result of the refutation of the most important medical study of racial concordance ever to see the light of day?

Greenwood et al. conclude, "Prior work suggests stereotyping and implicit bias contribute to racial and ethnic disparities in health. Taken with this work [that is, the Greenwood study itself], it gives warrant to hospitals and other care organizations to invest in efforts to reduce such biases." Following the refutation of their findings, did Greenwood et al. infer that the crusade "to reduce such biases" had lost some of its "warrant"? Were they led to question the evidence-base of the "prior work" on unconscious bias in medicine? Did those who cited the Greenwood findings as proof of racism moderate their rhetoric when the study lost its evidentiary value? In all cases, no.

In an amicus brief submitted in support of the respondents in the Students for Fair Admission case, a number of military dignitaries affirmed the importance of diversity in positions of military leadership, arguing that "this finding aligns with social science research documenting the beneficial effects of gender or racial concordance in some situations." They proceeded to cite "the dramatic decline of infant mortality rates of Black newborns when they are treated by Black doctors," as demonstrated by the Greenwood study. Setting aside the associative reasoning that joins infant mortality, military leadership, and college admissions in a single polemic, are we to imagine that the dignitaries felt that their case was diminished or that the ground had been cut out from under them when they learned, after the fact, that the findings of the Greenwood study were spurious? Their claims regarding the virtues of diversity, or whatnot, never stood on

the evidence of the Greenwood study in the first place. Their use of Greenwood was rhetorical.

An opportunistic attitude toward evidence is built into the anti-racist literature, beginning with *Unequal Treatment* (which is cited in the Greenwood study itself, unsurprisingly). Throughout *Unequal Treatment* there runs a sort of overwhelming presumption that American medicine is polluted with unconscious racial bias, despite a lack of direct evidence and despite the existence of other credible explanations for disparities of care and outcome. The result is a peculiar rhetoric of insinuation, which does not cite evidence so much as it floats the possibility of its existence, as in this characteristic passage, highlighted in the original:

> Indirect evidence indicates that bias, stereotyping, prejudice, and clinical uncertainty on the part of healthcare providers may be contributory factors to racial and ethnic disparities in healthcare. . . . Ambiguities in the interpretation of clinical data, barriers to patient-provider communication, and gaps in evidence of the efficacy of clinical interventions contribute to uncertainty, and therefore may promote the activation of prejudice and stereotypes. However, few studies have attempted to assess these mechanisms, and therefore direct evidence bearing on the possible role of these factors, especially prejudice, is not yet available.

While managing to sound scientific, the authors spew clouds of innuendo and express themselves in statements whose value is approximately zero. Imagine if they had said:

> Indirect evidence indicates that bias, stereotyping, prejudice, and clinical uncertainty on the part of healthcare providers may or may not be contributory factors to racial and ethnic disparities in healthcare. . . . Ambiguities in the interpretation of clinical data, barriers to patient-provider communication, and gaps in evidence of the efficacy of clinical interventions contribute to uncertainty, and therefore may or may not promote the activation of prejudice and stereotypes.

All I have done is change "may" to "may or may not," which comes to the same thing.

Because the immense literature on racial disparities in medicine relies heavily on the review of medical records, the Greenwood fiasco—which resulted from exactly that—stands as a warning to the literature itself. The message appears not to have been received. After all, if evidence that may or may not materialize fails to materialize, it amounts to a non-event. It's as if nothing happened at all. The refutation of the Greenwood study was a tree that crashed in the forest unheard.

Indeed, the study continues to be cited, as if it survived its own invalidation. In the first few days of 2025 alone—some four months after the exposure of its error—it has been cited eight times.

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