VIEWPOINT

# Modern Day Drapetomania: Calling Out Scientific Racism

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The COVID-19 pandemic has highlighted structural racism and health inequity in American society. As the nation reckons with its history of racial injustice, the medical and scientific communities need to directly confront the legacy of scientific racism in research, medical education, clinical practice, and health policies.

"Race" is a sociopolitical construct created as a system of governance that classifies people into a social hierarchy based on invented biological demarcations, thus justifying slavery, oppression, and the exploitation of people of African descent.[1] Since the eighteenth century, European and American physicians and scientists have explained the differences between Blacks and Whites on the basis of the perceived inherent physical, sociocultural, intellectual, and spiritual inferiority of Black people, justifying their dehumanization and subjugation. Normal responses to enslavement were pathologized, with Dr. Samuel Cartwright identifying *Drapetomania* in 1851 as the disease of an enslaved person running away.[2] He proceeded to describe Black persons as having smaller brains and blood vessels which account for their "indolence" and "barbarism." Accordingly, they should be kept in a "state of submission, awe, and reverence as ordained by God" and the treatment for their ailment was whipping. Similar pseudoscientific theories flooded the literature, misinformed medical and scientific practice, and bolstered the economic practice of American chattel slavery. Polygenism, for instance, posited that people sprang from numerous sources and that "races" could be categorized and ranked. Charles Darwin, of *On the Origin of Species* fame, situated Black people between a classic Nordic ideal and the orangutan on the evolutionary ladder.[3] The eugenics movement of the early 1900s drew strength from this thinking and enabled such heinous violations as forced sterilizations and the German Third Reich's attempts to create a superior Aryan race.

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The belief that differences in disease outcomes are due to genetic differences between racialized groups still plagues contemporary medicine and science and unfortunately continues to be funded, published, taught, and practiced. In 2003, the Human Genome Project showed that race had no genetic basis and that human beings are 99.9% identical genetically.[4] Yet, the use of race to measure human biological differences stubbornly persists and, consequently, these structures and systems are absolved of responsibility, reinforced, and perpetuated.

A recent report by Bunyavanich and colleagues which purports that a relatively higher expression of transmembrane serine protease 2 (TMPRSS2) in Black individuals may contribute to their higher burden of COVID-19[5] is an example of contemporary scientific racism. It falls prey to the premise that observed differences in outcomes among racialized populations are due to genetic differences, a common error in medicine which often conflates "race" and genetic ancestry, by incorrectly using the former as a proxy for the latter. An article discussing race, genetics, and congenital heart disease by Mullen and colleagues is another example of scientific racism where the authors engage in racial essentialism. They related racial disparities in congenital heart disease (CHD) to "genetic disparities"[6], stating that the racial disparities in CHD incidence and mortality is a "mystery" despite studies highlighting the role of disparate social determinants of health[7], conflating "race" and "ethnicity," incorrectly defining race, and explicitly stating that "...individuals belonging to different "races" are assumed to differ at the genome level"[6]. In the course of their review, the authors lumped "minorities" (Blacks and Hispanics) into one genetic grouping and made reference to a "minority genome." Although the paper highlighted the role of maternal health conditions including gestational diabetes mellitus, environmental exposure to air pollutants and pesticides, and smoking as risk factors for CHD, it failed to connect these factors to structural and systemic racial injustices that drive exposure to these risk factors through their impact on housing, wealth, education, criminal justice, and healthcare.[6] Predictably, the authors' conclusions were to correct racial CHD disparities with genetic technology instead of interrogating the systemic injustices that produce those disparities in the first place.

In failing to explicitly acknowledge race as a social construct, authors like Bunyavanich, Mullen, and colleagues allow their findings to be portrayed as evidence of "biological

racial differences," despite the findings of the Human Genome Project that also indicate that there is such genetic heterogeneity within individual racialized groups that any two random individuals from any one racialized group are almost as different genetically as any two random individuals from any two different racialized groups.[4] A person who identifies as "hite" in America (an identity that has been legally re-defined multiple times throughout American history) may have Italian, Middle Eastern, African, or Asian ancestry. So, too, a person who identifies as "Black." The conflation of race and ancestry, rooted in the false belief of racial essentialism, pervades the entire scientific enterprise informing grant funding criteria, study design, statistical analyses, peer review, and the editorial process in publishing.

Racism, not race, is the vector of disease and health disparities. Racist policies, such as redlining and the "war on drugs" and "war on crime," inform systems of housing, education, criminal justice, health, and the economy and determine a community's exposure to the social and environmental factors that drive health disparities through direct effects, chronic toxic stress, and epigenetic mechanisms. This is the contemporary version of pathologizing Blackness and normal responses to chronic intergenerational trauma, oppression, and exploitation. It reinforces the bogus theory of supposed Black inferiority.

It is the modern *Drapetomania*.

It is past time to cease and desist from perpetuating race-based science and to deliberately disrupt contemporary scientific racism. For Black lives to matter in medicine and science, Black bodies need to be de-pathologized and humanized. This means improving scientific integrity by properly interpreting race-related findings within the context of structural racism and integrating the intersectionality of gender, sexuality, class, and migration.

Funding to study the role of structural racism in the evaluation, treatment, and prevention of disease and other outcomes related to health disparities is critical. As we navigate the challenges surrounding the equitable distribution of COVID-19 vaccines and build institutional trustworthiness, it is paramount that we engage in equitable partnerships with Black, Indigenous, People of Color (BIPOC) communities at every level. The scientific and medical communities should acknowledge their historical and contemporary roles in the creation of disparate outcomes in minoritized communities through structural and scientific racism. All communities should also reflect on how they have benefitted from systems of oppression within and outside the academy as well as how current practices across the scientific landscape perpetuate historical harms. One such practice is our use of race correction in clinical algorithms such as the atherosclerotic cardiovascular disease (ASCVD) risk calculator, spirometry, and breast cancer surveillance consortium risk calculator, which lead to lower-quality care provided to and poorer outcomes in Black patients. It is also necessary to educate researchers, educators, practitioners, authors, reviewers, and editors who may explicitly or implicitly espouse and disseminate scientific racism and challenge them to develop more accurate indicators or proxies for genetic diversity than a dangerous social invention.

By so doing and in the spirit of professional humility, we can dismantle scientific racism in the norms, policies, processes, and practices of our current research, clinical practice, public health, and medical education systems. Then, we can demonstrate our trustworthiness and build equitable partnerships with BIPOC communities as we provide quality and humanizing care to all members of the human family.

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