Racism is the manifestation of White supremacy and antiracism is the answer

Philosophers have long conceded, however, that every man has two educators: that which is given to him, and the other that which he gives himself. Of the two kinds, the latter is by far the more desirable. Indeed all that is most worthy in man he must work out and conquer for himself. It is that which constitutes our real and best nourishment. What we are merely taught seldom nourishes the mind like that which we teach ourselves.

— Carter G. Woodson (2005), *The Mis-Education of the Negro*

We all came into the space of education because we were excited about and had a passion for learning and teaching. I believe that as educators we should model life-long learning. The learning I invite you to in this editorial may be difficult to comprehend if you did not grow up as an African American in this country. The issues I will explore here affect and influence all aspects of my daily life and the lives of our African American students. I am going to challenge you and ask you to lean into your motivation for learning and moving the engineering field forward. So, for White people in particular, I openly invite you to reflect on your "privilege" and how it is operationalized in the engineering culture as you read this editorial. I purposefully provide a variety of resources to illustrate the range of information sources that support the facts presented here, and I encourage you to read these and others as you continue your learning. The goal of this editorial is to extend Woodson’s challenge to my White engineering colleagues to educate yourselves on unexplored Whiteness and unintended support of White supremacy within the context of OUR engineering education culture.

1 | THE EXCLUSION OF BLACKS FROM THE FIELD OF ENGINEERING

Blacks, both historically and currently, are intentionally excluded from the field of engineering (Slaton, 2010). Their contributions to science and engineering have been either ignored or outright stolen (Van Sertima, 1983). Inventions created by enslaved Black people belonged to their master, and grandfather clauses allowed even those created by children of enslaved people to be inaccurately credited to slave owners (Khan, 1995), with no intellectual credit or financial compensation for the actual inventors. This physical exclusion and intellectual exploitation of the Black genius is ever-present in the engineering culture. For example, how many scholars of color are published in our premier engineering education journal(s) and why are issues of diversity, equity, and inclusion largely untapped or incognito from this journal (Benson, 2020)? Further, the Black experience of isolation in engineering is still commonly associated with people of color in engineering education. For example, I am the only African American engineering faculty member at my university, and my isolation is not unique. This kind of isolation leaves faculty of color in very tenable, vulnerable positions. White supremacy has influenced and continues to bias higher education based on deeply rooted systemic racist policies; engineering is no exception.

This systematic exclusion of Black engineers is an issue that has not been addressed with the level of intention and seriousness that it requires. Black students with degrees in engineering comprise 3.86–4.14% of all U.S. engineering graduates (National Center for Science and Engineering Statistics, 2019). The percentage of degree attainment for doctoral degrees drops to below 1% in some years and reaches a mere 3% in others (Roy, 2019). This translates to an incredibly small pool of potential Black engineering faculty. In the United States, there are 15 ABET-accredited engineering programs at Historically Black Colleges and Universities (HBCUs). Together they graduate on average one fifth of the
Black engineers in the country and constitute 22.6% of the undergraduate institutions for Black engineering doctorate recipients. This means that HBCUs do more than their fair share of ensuring Black engineering students have opportunities to graduate and move on to graduate education in the field, despite fewer resources. The failed responsibility for graduating a meaningful share of Black engineers lies with the 797 ABET-accredited programs in the United States at predominately White institutions.

2 | RACISM AND WHITE SUPREMACY

Institutionally sanctioned White supremacy is the foundation of the United States, and racism is the manifestation. This White supremacy is ingrained in engineering through both the hidden epistemology—the myth of meritocracy—and blatant racist behaviors of exclusion (Douglas Brown, 2015). Meritocracy is the fundamental belief we live in a non-discriminatory social system that rewards talent and a strong work ethic (Cech, 2013). The myth of meritocracy or the meritocracy ideology in engineering diminishes the community’s responsibility to address systemic inequalities and ignores documented historical racism. Examples of historical racism in the United States include African enslavement, the antebellum south, and the genocide of Native Americans. Later social and political movements—the Civil War, the Reconstruction, and Jim Crow laws—maintained White supremacy in the United States. These movements established the racist ideology of White supremacy as the norm in American culture (Kendi, 2016), and their underpinnings justified the use of violence and waves of terror (Anderson, 2016).

White supremacy is the institutional belief that White people are superior to those of all other races—especially the Black race—and should therefore dominate society (DiAngelo, 2016). White supremacy has always maintained the sanctity of Whiteness and that White people should possess greater access to resources and power than members of other groups (Martinot & Sexton, 2003). White supremacy in the United States was based on the doctrine of scientific or biological racism (e.g., the Eugenics Society) and relied on pseudoscientific arguments that are not based on what is recognized today as credible scientific research (i.e., research conducted with disciplinary standards of inquiry) (Kendi, 2019).

3 | VIOLENCE AGAINST PEOPLE OF COLOR

Rooted in White supremacy, violence against people of color, particularly Blacks, is embedded within the American dream (Martinot, 2007). This is evidenced by the dehumanization of African Americans, labeled as three fifths of a human being in the U.S. Constitution (Pope, 2016). The social experiment of “how to make a slave” explains the critical role of violence in controlling African descendants (Morrow, 2003). The goal was to keep the body—used for manual labor—strong, while destroying the mind and culture of Africans (Kendi, 2016). Slave catchers formed the earliest versions of the modern police force, and they ushered in the lynching culture (Wood & Donaldson, 2008). (For more on lynching culture, see Page, 1904.) Widespread violence against Blacks was prevalent during the early 1900s (e.g., race riots [i.e., massacres] in Tulsa, Oklahoma; East St. Louis, Illinois; Elaine, Arkansas; Durham, North Carolina; and Wilmington, Delaware) and was supported publicly when President Woodrow Wilson screened the film, Birth of a Nation, in the White House. Additionally, African Americans were often jailed or executed for inciting a public riot when White mobs formed and massacred hundreds of African American citizens.

4 | VIOLENCE AGAINST WOMEN OF COLOR AND BLACKS IN THE MILITARY

Black, Hispanic, and Indigenous women have been subjected to particularly heinous acts of violence, ranging from institutionally sanctioned rape to a variety of sexual assaults. For example, although various organizations, resources, and laws have been created to find missing women in general, the utilization of those resources is inexplicably low regarding the safe recovery of Black girls and women (Moss, 2019). Ida B. Wells, one of the early Black feminists, used the horrors of lynching to show that White supremacy and patriarchy are intimately linked (Duster, 2008). The deaths of Black women like Sandra Bland and Breonna Taylor and the thousands of “missing” Black girls, all too familiar to the Black community, are largely ignored by White America.
In the same way, most Americans do not acknowledge the violence against Black people who serve in the military. Black men were often lynched for wearing a military uniform in their hometowns—a fact particularly relevant when we turn to engineering, a field heavily influenced by the military (Equal Justice Initiative, 2017). Through U.S. military and industrial influence, engineering normalized White heterosexual masculinity and physical violence, and these hazing traditions still permeate the engineering culture today.

This social acceptance of violence by White Americans against Black Americans persists, as evidenced by racist policies in every area of daily life, including housing, banking, education, and health care. Recent FBI reports provide evidence that members of the KKK religious organization infiltrated and took over police unions across the nation (Johnson, 2019). As a result of this history and the current violence against people of color, the murders of George Floyd and countless others have been tolerated within the American White supremacist culture.

5 | ANTIRACISM IN ENGINEERING EDUCATION

The method for combating White supremacy is antiracism, but it cannot just be a conceptual or intellectual stance. Antiracism is the active dismantling of White supremacy and institutional racism. It requires intentional individual and institutional action and dismantling of privilege. Antiracism must occur with Black, Latinx, and Indigenous people who face overt and covert racism in their lives (Lawrence & Dua, 2005). Specifically, engineering educators must move beyond being unengaged bystanders of White supremacist culture and create race-based interactions based on equity and inclusion from a stance of antiracism.

Taking an antiracist position in engineering education requires learning and action in multiple categories. It requires engineers to invest in the psychology of how they view, think about, and conduct themselves with people of another race. This requires first shifting from simple empathy to self-reflection and identification with one’s own racial-ized identity and second, actively disengaging with the Whitening of the lived experiences of Black engineers. Further, it requires the defense of Black consciousness (Bonnett, 2000) and identity development of colleagues and students.

6 | CREATING AN ANTIRACISM COMMITMENT

Prove your antiracism commitment by ensuring more Black engineering students graduate every year. Create a culture where there is no tolerance for micro- or macro- racist actions by students, administration, faculty, or staff. Whenever possible, ensure that your faculty and staff of color are in leadership roles—and not just diversity, equity, and inclusion roles—but leadership roles based on their scholastic contributions and service excellence. Acknowledge the ways in which our racist culture was built around maintaining White supremacist society (Bonilla-Silva, 2006). Concede the racism in our research methodologies (Zuberi & Bonilla-Silva, 2008) and truly learn from the existing research about and by people of color in engineering.

Numerous studies on racial microaggressions demonstrate the prevalence of daily trauma that people of color in engineering experience—regardless of rank or geographic location. We sit in buildings and classrooms named after vicious slave owners and confederate military officers. Despite people of color being present in the classroom, indifferent faculty lean on engineering’s objectivity to discount their perspective or non-Eurocentric interpretation of scientific facts. The faculty and students of color must be more than present; they must be included meaningfully in the work of engineering education and engineering broadly for the field to demonstrate an antiracist position. Their talent, perspectives and capabilities cannot be silenced if the field is to move forward and toward racial balance (i.e., interest convergence) as suggested by Bell (1980)).

Addressing the racism and White supremacy at the foundations of our culture will help us take a critical look at how the interlocking systems of oppression exist within the myth of meritocracy in engineering. In this moment of moral recalibration, reciprocity, and atonement, how will fate, the universe, the gods, your descendants, and most importantly, my African ancestors identify you?

ACKNOWLEDGMENT
I would like to acknowledge the following scholars for their support or review of the editorial: Drs. Lauren Thomas Quigley, Joy A. Howard, and Sarah Militz-Frielink.
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