EDITORIAL

Whether we know it or not, our educational perceptions and decisions are shaped by “race”

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Race is a sensitive subject to most people. Most people think that, because they do not intentionally judge people on their race, they never do. However, everyone has been socialized, in one way or another, to judge people based on race. Often, we do not realize how implicitly held attitudes about race shape the decisions we make. Accordingly, it is of great value to discuss how implicit biases about group membership underpins our judgment. Once we start to discuss these issues, we can begin to see why racial stigmas exist and what we can do as individuals and together as a society to break through this problem.

Perception involves the identification and interpretation of sensory information. However, processing sensory input is influenced by our expectations, knowledge, experience, and subjectivity. This processing happens outside of conscious awareness. As an example, please look at Fig. 1, do you see a young or an old woman (36)? What you see depends on your perspective, on the way your motivations, desires, and fears shape the way you interpret the information, and clues presented in the picture (3, 4, 15, 19, 38). Some of the information or clues are familiar and support your motivations so you shape them into a context you want to see. Other information or clues are unfamiliar and fail to satisfy your motivations or desires, so you choose to ignore them (22). In this context, perspective and motivation are everything, especially when it comes to interpreting situations. This example also illustrates that our interpretation may be different from the interpretation of others, although all interpretations may be equally valid.

This may be analogous to the way we respond to a referee’s call against our team. In this situation, we are highly motivated to point out why the referee is wrong. We are prone to attack the referee and defend our team. However, a referee’s call against our team. In this situation, we are highly motivated to point out why the referee is wrong. We are prone to attack the referee and defend our team. However, a referee’s call is based on deeply rooted reflexes to protect and defend our team. This “motivated reasoning” is the basis for how we consider most situations in our life. We think we are being objective, but our judgments are mainly based on deeply rooted reflexes to protect and defend our tribe and to defeat our opponent (26).

In this context, whether we know it or not, our educational perceptions and decisions are shaped by our tribe, and this seems to also occur when considering “race.” At this point, it is important to note that “race” is not a biological reality but a myth (31). Specifically, for humankind, there is no such thing as biological race. There are different tribes, but not different races; we are all one species. However, despite this reality, reports suggest an implicit bias, discrimination, and racism embedded in our medical education curricula (2). Specifically, a significant portion of the curriculum for first- and second-year medical students contains racially biased information (27). For example, some conditions found in both white people and in people of color are described in the medical literature as a “black” illness (e.g., sarcoidosis) (27). Or cases of cystic fibrosis are overlooked in black patients because it is stereotypically a “white” disease (27). Obsolete physiological data regarding racial differences in number of nephrons and glomerular filtration rate (18), race-specific reference standards for spirometry measurements (7), and others are also common (5, 6, 27).

We have observed the deep negative impact this bias has on students of color and felt compelled to comment. Specifically, consider the case (Fig. 2), written by a friend and colleague of one of the authors. Start with the patient’s name “Willie Johnson.” Does the name sound biased? There was a renowned African-American with the name Willie Johnson (January 25, 1897 to September 18, 1945). Mr. Johnson was a celebrated...
American gospel blues singer and guitarist. In 1977, Carl Sagan and a team of researchers collected 27 songs to represent the human experience for a trip on the Voyager Probe. Among the 27 songs was Johnson’s “Dark Was the Night, Cold Was the Ground” (23). According to Sagan, “Johnson’s song concerns a situation he faced many times: nightfall with no place to sleep. Since humans appeared on Earth, the shroud of night has yet to fall without touching a man or woman in the same plight” (23). The author of the scenario was unaware of Willie Johnson, the celebrated American gospel blues singer and guitarist, but, without knowing it, he selected a name that he felt represented the patient. The patient also smokes, drinks, is obese, eats fried foods, and is too busy to exercise (euphemism for lazy?). Are these examples of an implicit bias? How might this stereotyping affect students of color?

Consider Mr. Johnson’s pathology, hypertension. Although studies have consistently reported a higher prevalence of hypertension in African-Americans than in Caucasians, the reasons for the differences are unknown (21). Biological differences vs. environmental and behavioral differences between whites and blacks are controversial. However, the higher prevalence of hypertension in blacks living in the United States instead of Africa suggests that environmental and behavioral characteristics are the more likely reasons for the higher prevalence of hypertension in blacks living in the United States (11). Despite this, students of color are consistently bombarded with similar hypertension scenarios and subjected to the “slavery hypertension hypothesis,” which is impossible to confirm or refute, but professes that the higher prevalence of hypertension among African-Americans may have resulted from an enhanced ability by surviving slaves to conserve salt, protecting them from fatal salt-depletive diseases, during the Atlantic passage (37). This condition would induce hypertension when the survivors and their descendants consumed the higher sodium content in American compared with African foods (37). The impact of this microaggression of repeating an impossible-to-prove hypothesis on the self-esteem and confidence of people of color is difficult to determine, but has been felt by the authors.

Now please compare the two cases presented to first-year medical students (Figs. 3 and 4). Many students of color were negatively impacted by what several perceived as examples of covert racism, while Caucasian students and faculty appeared unaware of the hidden stereotyping. You be the judge: do these two diverse responses represent “motivated reasoning”?

Martha Theresa (Fig. 3) is a sympathetic, hardworking, middle school teacher, who does not smoke or use recreational drugs, eats well, drinks red wine (on the weekend), and lives with her husband. In contrast (Fig. 4), Willie Johnson (there is that name again) is an African-American from Detroit, Michigan, who smokes, has an irregular eating habit of “fast foods and pre-packaged foods,” lives alone, and has a “history of poorly controlled hypertension, in part due to medication noncompliance.” Mr. Johnson “cannot recall” his medications or side effects. Importantly, Mr. Johnson’s problems appear to be a response to his behavior, while Mrs. Theresa’s do not. Are these examples of an implicit bias? Consider the negative impact this stereotyping has on students of color? If students

Case 1

Willie Johnson is a 49-year old African American male with a lifelong history of hypertension and obesity. The patient reports that he consumes 3-5 alcoholic beverages per day, and has smoked 2 packs of cigarettes a day for the last 20 years. His diet consists largely of fried foods or red meat and he indicates that he is too busy to exercise.
read or hear the same thing often enough, sooner or later they begin to believe what they hear or read, whether it is true or not. This is an example of the Forer effect or “acceptance phenomenon,” which describes the general tendency of humans “to accept almost any bogus personality feedback” (35).

Also consider that minority students have a higher rate of medical school withdrawal and dismissal, as well as lower pass rates on the U.S. Medical Licensing Examination Step 1 test (1, 9). This has a major impact on our nation’s health, because minorities receive less and lower quality healthcare than do Caucasians (2, 14, 32, 34). However, healthcare is improved when it is provided by someone of the same ethnic and cultural background (8, 10, 33). Furthermore, underrepresented minority students have reported less supportive social and less positive learning environments (25). Minority students have also expressed that perceptions of their race have negatively impacted their medical school training at higher rates than nonminority students (13). Our motivated reasoning may prevent us from acknowledging that the hidden bias in the medical school curriculum contributes to these concerns. However, it is important to at least consider this possibility, because providing a welcoming and safe environment may have the result of retaining more minority students, and, by extension, improving the health care of minority populations.

Through simple inattention and negligence, we can foster environments in which tribalism flourishes. In this environment, people who do not experience injustice seem unaware of people who do. When attempting to understand our behavior, it can be helpful to examine the situation from a survival point of view (20). All of our behaviors are tribal and designed for survival. Our brains evolved for survival. We are social animals who depend on our tribes for safety and survival. This goal dominates how we behave, think, and act, and how we treat each other.

It seems reasonable to conclude that, if we want to improve this situation, we must change our mindset and abandon the need to protect and defend our tribe. We can start this process by acknowledging that we are all biased. Becoming aware of

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**Case 2**

Martha Theresa is a 60-year-old woman who visits your clinic complaining of fatigue, general weakness, and frequent muscle cramping. She is a hardworking, middle school social studies teacher who expresses frustration at not being able to keep up with the pace of her job. She recently experienced an increase in constipation and weight gain.

Mrs. Theresa has a history of rheumatoid arthritis for which she takes NSAIDs intermittently and Methotrexate which has successfully managed her condition. She is healthy, does not have any past surgical history, allergies or any other medications. She eats a well-balanced diet, exercises moderately, drinks 1-2 glasses of red wine on the weekend, does not smoke or use any recreational drugs. She is sexually active with her husband.

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**Case 3**

Willie Johnson is an 80-year-old African American from inner city Detroit, Michigan, who was brought to the emergency department by his daughter. He lives alone and has a history of poorly controlled hypertension, in part due to his medication noncompliance. He states problems tolerating many medications, but cannot recall what medications these are and what the side effects have been. He has a 65 year history of smoking (60 packs/year) and is a weekend drinker. He has irregular eating habits frequently consisting of fast food and pre-packaged foods and does not get regular exercise.
our own biases will help us mitigate them throughout our daily lives. However, simply being aware of our biases is not enough. We need to change our mind-set from protecting and defending our tribe to a search for understanding. Understanding may arise from exploring and accepting counterstereotypic examples of other tribes and contrasting negative stereotypes with specific positive examples. This may require that we seek specific information about members of other tribes and acknowledge their contributions. Considering the perspective of other groups (16) and engaging in positive interactions with other tribes is also essential to understanding (17). Achieving this will help us ignore these deeply ingrained reflexes, rooted in evolutionary biology, to defeat the opponent and allow us to see the world as clearly as we possibly can.

DISCLOSURES

No conflicts of interest, financial or otherwise, are declared by the authors.

AUTHOR CONTRIBUTIONS

D.M.J., H.L.L., and S.E.D. conceived and designed research; D.M.J., H.L.L., and S.E.D. drafted manuscript; D.M.J., H.L.L., and S.E.D. edited and revised manuscript; D.M.J., H.L.L., and S.E.D. approved final version of manuscript; H.L.L. and S.E.D. prepared figures.

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