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Our Brains and Difference:

Implicit Bias, Racial Anxiety, and Stereotype Threat in Education

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Perception Institute

Ideally, schools encourage all children and adolescents to achieve their full potential, setting the stage for the next phase of their lives. Yet, research suggests that even those who are firmly committed to values of equality struggle to create environments that nurture all of our children equally across race and ethnicity differences. Perception Institute works with social psychologists, neuroscientists, and others to understand how our brains function around race and other identity factors. We then work with educators to identify steps for institutions and individuals to ensure that our behavior aligns with our values.

Implicit Bias

Advances in neuroscience and social psychology have transformed what we know about how our brains operate. Our conscious brains are often overwhelmed by our unconscious, which is constantly working to absorb and make sense of all of the information around us.

Most of what we know is not formally taught to us. Instead it is a result of our brain's adaptive functioning. We absorb the barrage of cultural messages about aspects of identity such as race, gender, and sexual orientation without conscious awareness. Many of these messages, which come predominantly from television, news sources, and other media, are over-simplified and rooted in stereotypes, yet they serve as the basis for our perceptions of others. As a result, many of our perceptions are biased, and they get in the way of our ability to effectively engage across lines of difference.

Implicit bias is the brain's automatic, instantaneous association of stereotypes and attitudes with particular groups (Dovidio & Gaertner, 2004). These biases exist beyond our conscious awareness and are often contrary to our conscious values and ideals. In fact, implicit bias is a greater predictor of our behavior than our conscious values.

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Those who pride themselves on their objectivity – lawyers, for example – have been shown to be affected by implicit biases. For instance, a research team sent a memo to partners at law firms, asking for feedback on quality (Nextions, 2014). The memo was identical, said to be written by a 3rd Year Associate, Thomas Meyer, who studied at NYU Law School. Half of the partners were told that Meyer was African-American, and half that he was white. The partners' feedback showed stark differences based on race. When they thought he was white, partners said he is a "generally good writer" and that his memo "has potential." When they thought he was black, partners described him as "average at best" and that his memo "needs a lot of work." Most striking, though, is the difference in how many of the seven spelling and grammar errors the partners found. In white Meyer's memo, the partners found, on average, 2.9 of the errors; in black Meyer's memo, they found 5.8. The authors of the study suggest this outcome reflects confirmation bias: the brain observes and absorbs information that affirms our established beliefs while disregarding data that contradicts them. Not only did the partners interpret the same content entirely differently depending on the race of the author, but in doing so, they reinforced their existing racial stereotypes.

Implicit bias is not only evaluative and cognitive—it is also relational. Research shows that our implicit biases are reflected in our body language—we stand further away from and engage in less eye contact with people about whom we have bias (Dovidio, Kawakami, & Gaertner, 2002). Though these behaviors may seem subtle, and we may not even know we are doing them, they are perceptible to the people we are interacting with. As a result, when we don't focus on our body language, our bias seeps through, and we come across as less friendly to others.

OUR BRAINS AND DIFFERENCE

Teachers are not immune to bias. Girls receive less attention and are asked lower level questions than boys (Sadker & Zimmerman, 2009), while white students are asked more questions, and given more encouragement, than students of color (Tenenbaum & Ruck, 2007). Teachers also hold substantially different academic expectations of students of different races (Tenenbaum & Ruck, 2007), and a recent study shows that black students are half as likely as white students to be assigned to "gifted" programs (Grissom & Redding, 2016). Bias is a critical factor in disciplinary practices—for instance, Latino students are suspended at almost twice, and black students at more than three times, the rate of white students for subjective actions such as defiance (Losen & Martinez, 2013).

So, what can we do—as individuals, and as part of an institution—to be sure that our behavior is aligned with our values and not our biases?

First, we must recognize our biases. It may feel counterintuitive, but thinking that we are objective allows our biases to flourish, unchecked. Simply acknowledging the role of bias can shift our behavior. For instance, in a study of medical residents, implicitly biased residents failed to offer the preferred treatment for a particular cardiac condition to black patients—except for those residents who were aware that race sometimes plays a factor in treatment recommendations (Green et al., 2007). This group of residents essentially self-corrected, so even those who held implicit biases offered fair treatment recommendations.

Anyone can visit http://implicit.harvard.edu to take the Implicit Association Test, a computerized tool to assess implicit bias related to race, gender, sexual orientation, and other identity characteristics. Being aware of our biases is a critical step to confronting them.

Implicit Bias	
Increased by:	Not reduced by:
• Stress • Time pressure • Multi-tasking • Ambiguity • Incomplete data • Lack of critical mass	• Good intentions • External motivation • Suppression or avoidance • Perceived objectivity

We know that our implicit biases are not reduced by good intentions, being told by others to reduce our bias, or trying to suppress our bias. What the research shows is that there are

two evidence-based strategies to combating implicit biases: directly reducing our biases and disrupting the link between bias and behavior.

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We can actively combat our biases by attempting to "break the prejudice habit" (Devine, Forscher, Austin, & Cox, 2012). In this process, we identify responses rooted in stereotypes, mentally replace stereotypes with more accurate representations, individuate people by focusing on their personal characteristics beyond their group membership, take others' perspectives in order to better understand their experiences, and actively seek opportunities for contact with people in other groups. These efforts, over time, have been shown to reduce implicit bias.

Reducing our biases will not happen overnight. In the meantime, we can modify our practices to prevent our biases from manifesting in our behavior. Tip #1: slow down. Implicit biases are more influential when we are stressed, under time pressure, or multi-tasking. In these situations, our brains rely upon automatic processes to be more efficient. As discussed, this can result in severely biased decisions. We should also engage in practices to promote fairness: whenever possible, we should use clear criteria for decision-making, such as an objective job description in hiring or a structured rubric for grading assignments. Sometimes it's hard to know whether bias is playing a role in decision-making—using data can reveal disparities, and help to determine whether certain patterns of behavior are leading to those disparate outcomes.

Racial Anxiety

Sometimes, conversations across lines of difference—especially race—are awkward. At Perception Institute, we know that experiencing discomfort does not make us bad people. We also know that this discomfort, which researchers call racial anxiety, can get in the way of our forming strong connections across racial lines.

Racial anxiety is the brain's stress response before or during an inter-racial interaction (Tropp & Page-Gould, 2015). It can be experienced by people of any race, though the concern is different. People of color may be anxious that they will be subject to stereotyping,

Continued from page 5

discrimination, or distant treatment, while white people may worry that they will be assumed to be racist or met with distrust. Not surprisingly, if both people are anxious that an interaction will be negative, it usually is—racial anxiety causes us to avoid eye contact, use less friendly tones of voice, and have shorter interactions (Dovidio, Kawakami, & Gaertner, 2002). And this sets up a negative feedback loop in which both people's fears are confirmed by the behavior of the other. For some of us, racial anxiety leads us to avoid these interactions altogether.

Racial anxiety has important implications for the school context. A white teacher may be less likely to engage in direct eye contact with students of color, students may not choose cross-racial partners in class, and staff may be less effective in communicating with staff of other races. Racial anxiety can play a role in any cross-racial dynamic, getting in the way of the supportive, collaborative environment we are striving for.

While racial anxiety occurs automatically, it is not intractable. A key antidote is simply greater contact between racial groups. With increased interaction, anxiety wanes, as people become more comfortable engaging across race and less worried about being the target of, or being perceived to perpetuate, bias and discrimination (Pettigrew & Tropp, 2008). Greater contact between racial groups also has the added benefit of combating stereotypes and reducing bias. In the education context, increasing the diversity of students and staff, encouraging diverse teams, and affirming interracial friendships

are critical avenues to minimize racial anxiety among all members of the community.

Stereotype Threat

Imagine a girl sitting down to take an exam in an engineering class full of boys, or a foreign-born teacher conducting a lecture, hoping that he doesn't mispronounce any words. In these situations, the brain's cognitive attention is split between the task at hand and concerns about performing in line with a stereotype about oneself. This is known as stereotype threat—and it gets in the way of us achieving our full potential.

> *"Stereotype threat is the brain's impaired cognitive functioning when a negative stereotype about our identity is activated."*

Stereotype threat is the brain's impaired cognitive functioning when a negative stereotype about our identity group is activated (Steele & Aronson, 1995). Even without conscious awareness, we have a psychological stress response to the situation. The result is usually underperformance on the task—and often, confirmation of the stereotype we are unconsciously worried about.

Stereotype threat has been shown to lead to the underperformance of black and Latino students across several subjects, and the underperformance of female students in

science, technology, engineering, and math (STEM) fields. In fact, researchers conclude that due to stereotype threat, conventional measures of academic performance significantly underestimate the ability of stereotyped groups. In concrete terms, this translates to a difference of 62 points on the SAT (Walton & Spencer, 2009). Thus, stereotype threat may be a critical factor in disparities in academic achievement.

Stereotype threat among staff can also affect students' outcomes. White staff are often subconsciously battling the stereotype that white people are racist. Research shows that white teachers give less critical feedback to black and Latino students because they fear that negative comments will be perceived as race-based (Harber et al., 2012). Similarly, a study found that white advisors fail to warn black students about the academic challenge of a rigorous course load, whereas they appropriately steer white and Asian American students away from taking on too much (Crosby & Monin, 2007). These instances of false praise undermine, rather than encourage, students' academic growth.

Teachers and staff of color may experience stereotype threat about their job performance, whether while at the front of the classroom, participating in staff meetings, or interacting with school leadership. This threat is exacerbated when the school community is predominantly white. In all of the scenarios discussed, the fear of confirming negative stereotypes undermines our ability to bring our best selves to our work, whether academically or professionally.

While stereotype threat is largely an internal phenomenon, there are key practices we can all engage in to reduce its likelihood for ourselves and others. A simple step is to remove triggers for stereotype threat on tasks, such as moving demographic questions to the end of an exam or not dividing heterogeneous classrooms based on gender (Danaher & Crandall, 2008). Researchers suggest proactively fostering identity-safe settings and social belonging, so that salient identity markers do not lead to feelings of exclusion (Walton & Cohen, 2011).

Promoting a "growth mindset"—that abilities are learnable rather than fixed—is critical to preventing stereotype threat (Dweck, 2006). A growth mindset yields a twofold positive result. It promotes students' academic development, and it reduces the likelihood that an instance of poor performance will be internalized as stereotype-confirming evidence. The growth mindset can also be applied to diversity and inclusion efforts: emphasizing that we can all learn to navigate difference more effectively, and making a misstep does not mean we are incapable of behaving more thoughtfully in the future.

Finally, a fundamental strategy to combating stereotype threat, for teachers and administrators alike, is giving feedback that simultaneously communicates high expectations and confidence that the individual can meet them. This method, called "wise criticism," reduces the uncertainty about whether the nature of feedback, especially when it's very

positive or very negative, is related to race (Cohen, Steele, & Ross 1999). Rather, the feedback focuses on current behavior and its relation to high, yet achievable, expectations. Thus, wise criticism is motivating, encouraging, and when warranted, appropriately critical.

Conclusion

Despite a deep commitment to fairness, many of us have struggled to understand what stands in the way of equality. The research discussed here helps to explain how our brain's automatic functioning may prevent us from living out our values. Informed by the science, we can build systems that allow us to be our best selves, and that promote the full potential of all students. Understanding how our brains navigate race makes it easier to openly embrace difference and create environments that are welcoming to all students, faculty, staff, and parents. ●

Tips for Inclusive School Environments

- Embrace differences
- Increase diversity at all levels
- Use clear hiring and grading criteria

- Encourage diverse teams
- Foster social belonging
- Use wise criticism

Perception Institute is a consortium of researchers, advocates, and strategists that uses cutting-edge mind science research to reduce discrimination and other harms linked to race, gender, and other identity differences. Turning research into remedies, Perception Institute crafts real-world solutions for everyday relationships. The Perception team can be reached at contact@perception.org.

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WANT MORE?

Perception Institute will be speaking at CSEE's Early Education Conference in NYC on March 10, 2017, and at CSEE's Difference Event in Washington, DC, spring 2017. For more information, visit **csee.org/events**.

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