

Using Knowledge of the Brain to Address Racism of College Students

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By examining neurological research, which studies how the brain activates when participants are confronted with race, we can learn about the intrinsic racist thoughts we all may have. The interactions between these four areas can inform scientist about ways to disrupt the automatic thoughts individuals may have using behavioral modifications. Methods for altering automatic thoughts include facilitating interaction between people of different races, using the contact hypothesis, and Cognitive Behavioral Therapy. This knowledge can help student affairs professionals diminish the automatic racial bias that humans have when working with our students.

As student affairs professionals we are tasked with creating welcoming communities on our campuses for all students. Throughout the history of human kind there has been a primal fear reaction to those who are different than you (Maroney, 2009). This instinct to fear the “other” had a valid orientation, as when humans lived in tribes those who looked unlike you were more likely to pose a threat than those who looked like you (Maroney, 2009). As human kind has developed and, as Americans, we live in a country in which White people will be in the minority by 2050 (Roberts, 2009), the likelihood that we will interact with someone who is racially or ethnically diverse is increasing every day. The automatic assumption that anyone who does not look like us is no longer a valid fear inducing reaction and, in some cases, it can be harmful.

The Webster's New World Dictionary (n.d.) defines racism as “a belief that race is the primary determinant of human traits and capacities and that racial differences produce an inherent superiority of a particular race.” There are two different types of racism, explicit and implicit. Explicit racism is a conscious belief that race or ethnicity is the most important determinant of human traits and abilities (Bosman, 2012), whereas implicit racism is our brains’ automated response to anything

and anyone perceived as a possible threat or enemy and is not based on conscious belief about racial differences (Phelps & Thomas, 2003). Even more harmful than an implicit racist assumption is when someone has explicit racist beliefs. According to Torres (2009) racism is “a product of the cultural beliefs of a society” and can change over time (p. 505).

Especially prevalent in the news right now are conversations about racial tension on college campuses. Students of color across the country are speaking out against the lack of support and the active racism present on their campuses. Students at the University of Missouri (Mizzou) held protests over racial incidents and the administration’s poor response to them, leading to the president of the university resigning and the chancellor stepping down to a lower position (Criss, 2015). This example is just one where racial tension on a college campus has led to activism. While college campuses are typically hosts of reform and liberalism, they still host students who hold racist ideals. Therefore, it is the duty of student affairs professionals to help all students understand racism, how it manifests itself in different ways, and how to overcome it. They can do this by using information about student development to target their work with individual students to

better educate and influence their reactions to others.

In the last year and a half the concept of racism has once again become a hot topic on college campuses through situations such as the one at Mizzou, a blackface party at UCLA, and threats to students of color at IU over Yik-Yak. We now have a way to closely examine the workings of not only explicit racism but also implicit racism through neural imaging. Previously our society has been dependent on psychological studies to understand racism, and Phelps and Thomas (2003) remind us that the most efficient way to look at human behavior is to combine physiological and neurological approaches rather than using them separately. Since 2000 the practice of using functional magnetic resonance imaging (fMRI) to look at the neurological activation of the human brain when faced with those of one's own and other races has increased and we are learning more about the pathways in the brain that are activated by this interaction.

This study will examine literature on neurological measurements examining racial attitudes and reactions. It will then discuss the racist tendencies of America including the reasoning behind the natural preference towards individuals within the same race and the manifestation on college campuses of racism. Lastly, it will create recommendations for student affairs professionals on ways to decrease racist thoughts and behaviors on campus based on the neurological studies examined.

Literature Review

The 10 studies reviewed were done with participants identifying as either White or Black. When examining this neural research on how we process race group information there were four areas of the brain that are implicated. These are the amygdala, the

anterior cingulate cortex (ACC), the dorsolateral prefrontal cortex (dlPFC), and the fusiform gyrus, commonly known as the fusiform face area (FFA). These areas work together to recognize faces, categorize them, and process how to react to each one. Implicit processing for race group information is done by the amygdala, while the ACC, the dlPFC, and the FFA do explicit processing. There are two stages in processing race stimuli: categorization and reaction. The categorization phase is where the amygdala and the FFA activate and decide if the face in view is from an in-group or out-group. The second phase is the higher order motivations where the ACC and the dlPFC exert control over the lower order processes of the amygdala and FFA. The ACC and the dlPFC react to the immediate feelings and are influenced by personal and societal motivations of the individual (Kubota et al., 2012). This second phase could potentially be engaged intentionally, but more research is needed for this to be conclusive.

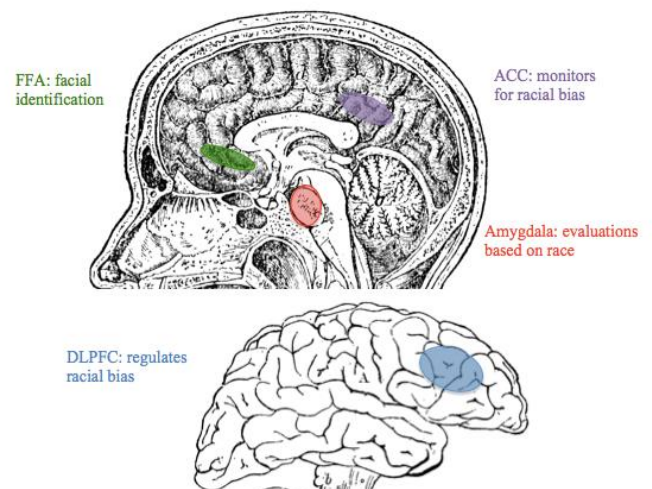


Figure 1. The brain regions associated with racial recognition.

Implicit Processing

The amygdala is a small structure that is important for emotional learning and memory. It expresses learned memories in physiological ways (Phelps & Thomas, 2003; Stanley, Phelps & Banaji, 2008), and is key in fear response (Ambady & Bharucha, 2009; Kubota, Banaji & Phelps, 2012; Moule, 2009; Phelps & Thomas, 2003; Stanley et al., 2008). The amygdala will activate without our conscious direction, meaning we have no control over what it is activated by. The studies reviewed showed that the amygdala was activated differently for White participants and Black participants depending on the faces they were shown.

In the Phelps and Thomas (2003) study the White participants had statistically significant activation of the amygdala when shown Black faces, and when Black participants were shown White faces their activation was not significantly over baseline. This was supported by the Maroney (2009) and Kubota et al. (2012) studies, which both highlighted the greater fear response for faces from an out-group as compared to those within an in-group. Even though we are not able to consciously influence the amygdala, its response can be modified by familiarity and experience (Phelps & Thomas, 2003; Stanley et al., 2008), meaning that if we spend more time with people from out-groups we will not react as strongly to them. This could explain the lessened amygdala activation response in Black participants, as Black individuals are more commonly exposed to out-groups than White participants are.

Explicit Processing

The ACC, dlPFC, and the FFA are influenced by our conscious minds. The ACC and the dlPFC monitor our systems and engage executive control when there is a conflict between an automatic reaction, such

as the one our amygdala has when seeing a face from an out-group, and the conscious intentions most of us have to treat all people with respect and kindness (Kubota et al., 2012; Stanley et al., 2008). Even though the amygdala and the dlPFC are not directly connected the dlPFC is able to influence the amygdala when it senses activation (Stanley et al., 2008). Participants in a study by Kubota et al. (2012) who had increased internal motivation to be unprejudiced in their response to others had amplified activity in their ACC.

The FFA can differentiate between faces and non-face items, as well as between familiar and unfamiliar faces (Kubota et al., 2012). The left hemisphere looks at categorical visual processes, like Black vs. White, and the right hemisphere works with the ability to recognize individual faces (Phelps & Thomas, 2003). When looking at imaging from experiments there is greater activation in the FFA for in-group faces than out-group faces (Phelps & Thomas, 2003). The recruitment of the FFA emphasizes the use of race specific information rather than individuating information (Golby et al., 2001; Kubota et al., 2012; Phelps & Thomas, 2003).

Methods

This study looked at 10 neurological articles focused on how the brain activates when participants in studies were confronted with race. The study of racism using neurological methods is relatively new, and these articles were found by exploring research done by Elizabeth Phelps, a pioneer in relationships between race and the brain. Suggestions for how to combat these unconscious actions were given by examining the neurological responses to the socially constructed phenomenon of race. Taking these methods of combatting these responses and connecting them to the work

that student affairs professionals already do with college student development enabled the recommendations for new creative ways to work with students on eliminating racist attitudes and behaviors.

Discussion

Although explicit bias has decreased in America (Kubota et al., 2012; Phelps & Thomas, 2003), implicit racism is still thriving. As stated in the introduction, there are two different kinds of racism, explicit and implicit. Race and racism are socially constructed, and we are able to influence them through developmental experiences, such as those encountered at college (Torres, 2009).

The human race has developed in a way in which we prioritize cooperation and social learning, which requires that we trust each other rather than have instinctual distrust (Brewer, 1999). By trusting our in-group, or those who look like us, instinctively we have an automatic distrust of out-groups. However, this distrust does not mean we automatically view out-groups with hostility. This categorization of those around us based on skin color or facial features into a race is not genetically supported and serves a purely social role. We are able to view out-groups with indifference, sympathy, and even admiration as long as we prefer our distinct in-group (Brewer, 1999). The situations in which in-group and out-group relationships are more hostile are those in which there is competition over limited resources or political power (Brewer, 1999). This could be inclusive of a college campus in which there are limited financial resources to assist students as well as high stakes to achieve both in and out of the classroom. Another way in-group and out-group relations are active in a college campus is if there are two significant subgroups, such as Students of

Color and White students. When there is division like this, the probability of social comparison and conflict of interest rise, and negative attitudes towards the out-group will heighten (Brewer, 1999; Phelps & Thomas, 2003). When looking at studies even those who consciously believed they were unbiased towards people of another race were influenced by cultural stereotypes (Phelps & Thomas, 2003).

College students are at a time in their lives when they are still developing neurologically and are faced with new, and sometimes scary, surroundings. In order to appreciate difference students need to have the developmental capacity to realize their internal values, not view difference as a threat, and view relationships as mutually beneficial rather than acting only for their pleasure (Baxter-Magolda, King, Taylor & Wakefield, 2012). This self-awareness and being able to internally generate belief systems is called self-authorship, and it is a very complex state to reach (Baxter-Magolda et al., 2012).

When encountering an unexpected person or situation there is a fear response initiated by the amygdala, but in many people this bias is usually overridden in a nanosecond (Moule, 2009). This is a response of subtle racism. Brewer (1999, p. 438) defines subtle racism as “the absence of positive sentiments towards [minority out-groups]” but not necessarily the presence of strong negative attitudes. In this case out-groupers are more likely to be assumed to have provoked aggression and less likely to receive the benefit of the doubt in comparison to a member of the in-group. Brewer (1999) discusses if in-group love and out-group hate are related and if a sense of belongingness and loyalty to one’s in-group requires hostility towards out-groups. We know that development of familiarity and preference for ones in-group develop much earlier than any attitudes towards out-

groups, and multiple studies indicate that the positive attitudes towards our in-groups do not correlate to bias or negativity towards out-groups (Brewer, 1999).

College students who are close to self-authorship, or who have achieved it are typically very rare, and are often of marginalized identities (Baxter-Magolda et al., 2012). The exposure to out-groups and their beliefs at a high level that these marginalized students have experienced is key to the development of their own internal belief systems. One side effect of being a marginalized student is a potential sense of being powerless, which can force one into submission by internalization of majority beliefs about their group, causing them to believe stereotypes about themselves (Torres, 2009).

Brewer (1999) talks about the tolerance for difference and when moral order is seen as absolute there can be a moral superiority that will be incompatible with tolerance. This moral superiority is often seen in majority students who have never had to think about what it means to have privilege and how it is oppressing others. They believe that they deserve the things they get, including networking, resources, and the benefit of the doubt. As student affairs professionals it is up to us to encourage our students to be open to differences with themselves and others, and to engage throughout their school community.

Since the beginning of racial identity development theory there has not been as much work on the identity development of White students as an identity group as there has been with racial minorities. All early identity development was done on White students but without acknowledging being White as an identity for these students. This in itself is indicative of racism within our society, as the majority group does not feel the need to examine their own development as it is “normal”. It is important to research

and understand how all students develop and understand difference in order to create a more welcoming environment (Torres, 2009). Even those students who do not believe they are racist most likely still have racist tendencies.

The White Identity Development Model (WIDM) created by Helms in 1995 is the most researched theory on White identity development (Evans, Forney, Guido, Patton, Renn, 2010; Torres, 2009). The processes that Helms’ WIDM discuss are inclusive of how to make meaning of racist thoughts dealing with both cognitive and affective states (Torres, 2009). It is important to recognize that even if a person has racist thoughts, they may not understand them as racist (Torres, 2009). This is demonstrated in a study by Stanley et al., (2008) which is predictive of indirect race bias. The study looked at pain empathy in participants and found that participants who had a higher probability of being racist from a test they took had lower pain empathy for people of another race. There is also a greater recognition and empathy for faces in pain from in-group members (Ambady & Bharucha, 2009; Forgiarini, Gallucci, & Maravita, 2011). The bias towards your own race is part of a process designed to make the immense flow of information from the external world easier to comprehend. By categorizing visible attributes, such as race, we can utilize a fewer number of neurons and make quicker sense out of our surroundings (Forgiarini et al., 2011).

Within Helms’ WIDM there are two phases. The first is the abandonment of racism, which moves from being oblivious to racism to understanding that it exists and that the individual plays a part in it (Evans et al., 2010). The second phase is the evolution of a nonracist identity, and involves constant work to disable their racism and understand how their privilege affects others (Evans et al., 2010). Within the second phase people

begin to see themselves as racial individuals, and the racism and privilege they automatically receive with being White. Most college-aged students will be in the first phase but some individuals might be approaching the second.

Recommendations

There are ways to use what we have learned about the brain from neurological studies and what we know about college student development to attempt to decrease racial bias on college campuses. These include things such as facilitating interaction between people of different races, using the contact hypothesis, and understanding how people process race so student affairs professionals can increase challenges to these thoughts.

Facilitating interactions between people of differing identities, including race, are one of the High-Impact Practices outlined by the Association of American Colleges and Universities (AAC&U). These practices are pathways to student success, and include collaborative learning, which promotes personal development and a greater openness towards diversity (Kilgo, Sheets & Pascarella, 2015). There is indication from both neurology and student affairs that when we create relationships with people who are different from us there is a weakening of the fear of those who are in an out-group (Evans et al., 2010; Kilgo et al., 2015; Maroney, 2009; Stanley et al., 2008). This could be because of the contact hypothesis or due to activation in the right hemisphere, which focuses on individualization and tends to recognize our in-group or people we are close with from an out-group.

The contact hypothesis is the theory that positive intergroup contact reduces negativity towards out-groups (Maroney, 2009). This ties in with the idea that when students interact more with people who have

different identities they will become more familiar with them, and begin to have less fear towards the out-group as a whole. There is also an indication that higher levels of interracial dating align with lower fear-conditioning bias (Maroney, 2009). Getting to know more people from an out-group could also create a higher probability that the right hemisphere would be used when viewing a face from the out-group. In experiments the race of the face the participant was viewing influenced the ability to distinguish individual characteristics of each face. For example, a Black participant viewing a Black face will be able to distinguish between it and another face at a later time, but if they viewed a White face they would not be able to as easily distinguish between that White face and another White face. More exposure to out-groups would lower the activation of the FFA and allow the dlPFC and ACC to do less work to correct the racially biased impulses we have.

There is also a proposal that just knowing you have a bias towards a group will cause you to carefully consider your reactions and attitudes towards that group (Moule, 2009). This correlates with the information from Stanley et al. (2008) on the process of the dlPFC and its role directing racial impulses from the amygdala to more aligned beliefs of the social consciousness. When we acknowledge our bias we are able to openly work to better ourselves, and can more efficiently compete tasks (Moule, 2009). Acknowledging our bias is an important step within the WIDM, and without this we will not be able to disable the racism within ourselves, or the broader society.

Limitations

The studies reviewed only examined reactions from Black and White participants, and thus created a limitation on assigning these results to other racial or ethnic groups. Although we can use these results to inform the work we do with other racial or ethnic groups, we have to be aware that there are potentially other factors influencing the behaviors of these students. The studies reviewed were also all neurologically based, and they did not address how to combat beliefs and attitudes using psychological knowledge. This review is meant to examine the neurological findings about race, and is not meant to be exclusive of previous studies using psychological methods.

Conclusion

It is difficult to address our racist responses to others, as you must first acknowledge that racism exists in society in order to recognize it within oneself (Torres, 2009). Only then can you push yourself to understand how you are a part of that perpetuation. As student affairs professionals we can attempt to understand how people process and evaluate those from social groups other than their own, which will allow us to have more insight into prejudicial actions and how to reduce these (Kubota et al., 2012). In the future, by teaming up with neurologists we could attempt to recognize those students who are

having difficulty interacting with those of a different race, and change the effect of race preferences using imaging at the moment of negative activation of the amygdala (Kubota et al., 2012). Currently, we could use the methods in the recommendations section or team up with counseling services to utilize Cognitive Behavioral Therapy (CBT) for those cases where there is an unconscious bias towards others that is affecting campus climate. CBT utilizes emotion regulation through talk-therapy and has demonstrated a more lasting effect than other therapies (Kubota et al., 2012).

The most important thing to remember when working with college students is that demonstrating a behavior, whether on a brain scan or in a conversation, does not mean that the individual is hardwired for that behavior (Kubota et al., 2012; Phelps & Thomas, 2003; Stanley et al., 2008). We can work with students to change how they think and interact with others, not only on a college campus, but also for the rest of their lives. This research demonstrates that even those people who feel that they have unbiased views about race have an innate fear of those who are different. As individuals we should take it upon ourselves to create a welcoming community for all. We should each seek out interactions with people who are different from us in order to have the contact needed to reduce the biased thoughts we automatically have. We all have work to do in order to become more just individuals and, overall, a just society.

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