Subliminal priming, racial ambiguity, and implicit bias

A literature Review

Ye Sil Cha

Nyack College

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A'tasha Christian

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The research and methods of measurement to understand unconscious human behavior became mainstream at the end of the 20th century after Mahzarin Banaji, an American psychologist, popularized implicit bias and its implications on the micro-level, individual lives, and the macro-level, society (Drew, 2018). Since then, research has been exploring multiple facets of implicit bias: the formation, maintenance, unconscious use, and consequences (Banaji et al., 2021; Bell et al., 2021; Gupta et al., 2020; Eberhardt et al., 2004; Eberhardt et al., 2003; March et al., 2021; Moskowitz et al., 2012; Orey et al., 2013; Suleiman et al., 2018). Literature has mainly focused on utilizing explicit instruments to measure biases that drive individual behavior as well as institutional decisions affecting entire racial and ethnic groups (Orey et al., 2013). Only recently has society begun to promote deeper and more extensive research exploration of implicit racial bias within the political (e.g., judicial system), the economic (e.g., corporations), and social institutions (e.g., a school). For the purpose of uncovering the covert beliefs driving behavior, research on subliminal priming and responses to racial ambiguity has been gaining investigative interest; however, literature is still scarce. According to Banaji and colleagues, society is "far from that tipping point of knowledge and acceptance when it comes to the idea of systemic racism" (2021, p. 3).

Implicit Bias

Racism is a phenomenon that undeniably exists in everyday interactions and in large societal structures (Banaji et al., 2021). According to Banaji and colleagues' tutorial review, systemic racism cannot be understood without examining individuals, specifically, individual "attitudes (preferences, prejudices), beliefs (stereotypes), and behaviors (discrimination)" (2021, p. 2). The researchers argue that individual minds cannot be separated from society; thus, racism

can be understood as a product of human subjectivity that cultivates and perpetuates racial disparities.

Unconscious racial bias permeates all areas of life, and it has life-altering consequences. In a 2021 study by Bell et al., implicit and explicit bias was measured for the purposes of understanding which bias played a greater role in predicting the adoption frequency of Black children. The team found implicit bias having a "43% larger effect size than explicit bias on willingness to adopt a Black child" (Bell et al., 2021, p. 9). In other words, the relationship between peoples' implicit biases and their less willingness to adopt Black children was stronger than the relationship between peoples' explicit biases and their less willingness to adopt Black children.

Implicit attitudes have also been experienced, witnessed, and documented in these following situations: "judges' sentencing decisions including death sentences, employers' hiring decisions, teachers' evaluations of students, police officers' decisions to respond with shows of force, and people's judgments about another's personality during everyday encounters" as well as practitioners' diagnoses and treatment plans of African American patients (Moskowitz et al., 2012, p. 996; Hausman, 2012; Eberhardt et al., 2006). Similarly, Brown and Lively illustrated the impact of having a Black name on individual identity and experiences within society; these names were often equated with "poverty, limited education, and questionable morality" (2012, p. 669). To emphasize, peoples' attitudes, decisions, overt behaviors, and affect responses were directly related to the unconscious biases toward Black people.

The journal articles of Banaji et al., 2021, Bell et al., 2021, Moskowitz et al., 2012, and Brown and Lively, 2012, provide frameworks for recognizing and analyzing implicit bias in

action and the implications of subjective beliefs in individual lives as well as in larger societal

structures, manifesting as everyday violence and structural violence for ethnic minority groups.

Subliminal Priming

There was great controversy surrounding subliminal priming in the mid to late 1900s;

however, in the 1990s, as researchers regained interest in subliminal stimulation and its ability to

influence subsequent responding, this methodology was further explored using a variety of

subliminal target stimuli (Weignberger & Westen, 2008). Gupta and colleagues explored the

impact of subliminal priming on affective judgment. Consistent with previous studies,

participants demonstrated attention bias; that is, shorter response latency towards the subliminal

prime stimuli and faster reaction time towards the negative stimuli (Gupta et al., 2020). In other

words, the participants could "process information faster when the target stimulus was preceded

by a negative affective prime" (Gupta et al., 2020, p. 28). The major takeaway from this study

was that subliminal priming could be perceived and could influence succeeding cognition and

behavior beyond conscious awareness.

While Gupta et al. focused on the characteristics of a prime (i.e., subliminal,

supraliminal, neutral, and negative), Eberhardt et al. utilized subliminal primes to study the

bidirectional associations between social groups and concepts (2004). The results suggest that

Black male faces facilitated the detection of a weapon while White male faces impeded the

detection of the same weapon even though the face primes appeared and disappeared at a speed

that was too fast for conscious awareness. People made similar associations with crime images to

Black male faces; thus, revealing how neutral stimuli, a gun, could be associated with race,

Black. It was revealed that "critical aspects of visual processing" were influenced through

activating stereotypic associations with subliminal primes (Eberhardt et al., 2004, p. 890). If such

associations can be made unintentionally and quickly, the consequences of such behavior did cost and could cost the lives of more Black people (Correll et al., 2002; Correll et al., 2007; Correll et al., 2014).

Although this literature review focuses on the experiences of Black lives, the subliminal priming method Suleiman et al. utilized to examine implicit bias within the Jewish and Palestinian Arab community is worth mentioning (2018). In addition to the types of subliminal primes mentioned above (i.e., negative and neutral primes, crime-related object primes, and face primes), name primes also produced biases (Suleiman et al., 2018). Participants rated the "pain of ingroup members as higher as compared to neutral and adversary outgroup members" (Suleiman et al., 2018, p. 443). Participants were shown images of various types of pain (i.e., mechanical, thermal, and pressure) after being subliminally primed with the most common Palestinian-Arab, Jewish, and European names. In spite of the name primes being presented at speeds undetectable to humans, people responded with greater perceived pain (i.e., greater empathy) after being exposed to names most commonly given to members of participants' own social group.

These studies showed how people were highly susceptible to different types of subliminal primes (i.e., words, names, objects, and faces); thus, highlighting the likelihood that biases could be triggered without conscious awareness, ultimately leading to life-altering consequences to minority ethnic individuals (Gupta et al., 2020; Suleiman et al., 2018; Eberhardt et al., 2004).

Racial Ambiguity

A seminal study conducted by Duncan revealed that physical actions committed by a Black individual were judged differently compared to that of a White individual performing the same behavior (1976). If the perpetrator was Black, a shove was labeled as violent and virulent,

especially if the behavior was done to a White victim; however, regardless of the victim's race, if the perpetrator was White, the shove was perceived as playful or dramatic (Duncan, 1976). Although the construct of race itself was not the ambiguous variable, race had a statistically significant impact on peoples' perceptions of ambiguous behavior.

While the research Duncan (1976) conducted compared the relationship between ambiguous behavior and race, Wilson and colleagues investigated the extent to which social labels influence people's perceptions of racially ambiguous bodies, specifically, peoples' judgments about body size (i.e., height, weight, strength, and muscle mass) (2017). When the race of identical target bodies was concealed and simply labeled as White or Black, people perceived the identical bodies differently in terms of size and harm capability. "Non-Black perceivers overestimated young Black men as taller, heavier, stronger, more muscular" than young White men; thus, Black men were perceived as having a greater capacity to inflict harm on another person than a young White man (Wilson et al., 2017, p. 74). Black perceivers also overestimated the overall size of Black bodies, although to a much smaller degree than did White perceivers (Wilson, 2017, p. 74). Essentially, both Black and White participants did not need to personally see the race of the target bodies; rather, a simple social label sufficed, leading both groups of participants to believe that the overall size and physical harm capacity of Black bodies was greater than White bodies.

Similarly, Eberhardt et al. discovered that racial labels influence peoples' perceptions and memories of faces regardless of their belief about human traits (2003). The team discussed two theoretical orientations people hold about traits: entity theorists believe traits are stable and unchanging, and incremental theorists believe traits are flexible and malleable (2003). Interestingly, when racial labels were attached to the racially ambiguous faces, entity theorists

tried to assimilate the face to the label and incremental theorists tried to contrast the face away from the label. While the respondents were affected by the racial labels in different ways, both groups were affected by racial labels nonetheless. The findings suggest that unconscious racial biases were triggered simply by associating a racial label, White or Black, to that of a racially ambiguous face; thus, facilitating stereotype formation and even maintenance.

Rather than manipulating social labels to study peoples' racial perceptions of targets, Young et al. were interested in how racial identity (i.e., self-identified racial label) and racial ambiguity influenced Black and White participants' perceptions of discrimination (2017). The researchers discovered that Black and White perceivers used racial identity and phenotypicality (i.e, racial ambiguity) differently to determine how to racially categorize targets, ultimately affecting the perceivers' decisions to support diversity-related financial aid (Young et al., 2017). For the purposes of determining if the ambiguous target deserved affirmative action support, White perceivers required more cues regarding the target's racial identity and phenotypicality whereas Black perceivers required fewer cues (2017). Due to the saliency of White privilege, everyday discrimination, and systemic racism to Black Americans, Black individuals needed less evidence while White individuals needed concrete evidence of disadvantage to justify financial support (Young et al., 2017, p. 161).

Conclusion

The current literature on implicit bias has primarily focused on examining subliminal priming in relation to the valence of words, individual names, faces, and objects; and racial ambiguity in relation to arbitrarily ascribed racial labels, self-identified racial labels, ambiguous faces and bodies, and ambiguous behavior. Although society has come a long way since the time overt racism was legal (e.g., Jim Crow Laws), many individuals are still struggling to accept,

advocate for, and self-correct implicit biases that drive covert racism today. Racial discrimination is "hidden from view but robustly present"; therefore, additional literature is vital in supporting the existence and consequences of racism (Banaji et al., 2021, p. 10).

The issue to be explored as a gap in the literature is how subliminal primes, specifically help-related words (e.g., support, aid, assist) and abandon-related words (e.g., leave, desert, ditch) influence peoples' perceptions of racially ambiguous faces. How might implicit biases influence participants' perceptions of racially ambiguous targets if primes are presented beyond conscious awareness? How might these results shed light on peoples' helping behavior with respect to their implicit racial biases towards racially ambiguous victims in need of aid?

References

Banaji, M. R., Fiske, S. T., & Massey, D. S. (2021). Systemic racism: Individuals and interactions, institutions and society. *Cognitive Research: Principles and Implications*, *6*.

Bell, S. B., Farr, R., Ofosu, E., Hehman, E., & DeWall, C. N. (2021). Implicit bias predicts less willingness and less frequent adoption of black children more than explicit bias. *The Journal of Social Psychology*.

Brown, A. F., & Lively, J. T. (2012). "Selling the Farm to Buy the Cow." *Journal of Black Studies*, *43*(6), 667–692.

Correll, J., Hudson, S. M., Guillermo, S., & Ma, D. S. (2014). The police officer's dilemma: A decade of research on racial bias in the decision to shoot. *Social and Personality Psychology Compass*, *8(5)*, 201–213.

Correll, J., Park, B., Judd, C. M., & Wittenbrink, B. (2002). The police officer's dilemma: Using ethnicity to disambiguate potentially threatening individuals. *Journal of personality and social psychology, 83(6), 1314.*

Correll, J., Park, B., Judd, C. M., & Wittenbrink, B. (2007). The influence of stereotypes on decisions to shoot. *European Journal of Social Psychology, 37(6),* 1102 – 1117.

Drew, A. (2018). Mahzarin Banaji and the Implicit Revolution. *APS Observer*. https://www.psychologicalscience.org/observer/implicit-revolution

Duncan, B. L. (1976). Differential social perception and attribution of intergroup violence: Testing the lower limits of stereotyping of Blacks. *Journal of Personality and Social Psychology*, *34*(4), 590–598.

Eberhardt, J. L., Dasgupta, N., & Banaszynski, T. L. (2003). Believing is seeing: The effects of racial labels and implicit beliefs on face perception. *Personality and Social Psychology Bulletin*, *29*(3), 360–370.

Eberhardt, J. L., Davies, P. G., Purdie-Vaughns, V. J., & Johnson, S. L. (2006). Looking Deathworthy: Perceived Stereotypicality of Black Defendants Predicts Capital-Sentencing Outcomes. *Psychological Science*, *17*(5), 383–386.

Eberhardt, J. L., Goff, P. A., Purdie, V. J., & Davies, P. G. (2004). Seeing Black: Race, Crime, and Visual Processing. *Journal of Personality and Social Psychology*, *87*(6), 876–893.

Gupta, P., Chatterjee, S., Palit, R., & Ray, D. (2020). Subliminal priming: Its impact on affective judgement. *IAHRW International Journal of Social Sciences Review*, *8*(1–3), 26–30.

March, D. S., Gaertner, L., & Olson, M. A. (2021). Danger or dislike: Distinguishing threat from negative valence as sources of automatic anti-Black bias. *Journal of Personality and Social Psychology*, *121*(5), 984–1004.

Moskowitz, G. B., Stone, J., & Childs, A. (2012). Implicit Stereotyping and Medical Decisions: Unconscious Stereotype Activation in Practitioners' Thoughts About African Americans. *American Journal of Public Health*, *102*(5), 996–1001.

Orey, B. D., Craemer, T., & Price, M. (2013). Implicit Racial Attitude Measures in Black Samples: IAT, Subliminal Priming, and Implicit Black Identification. *PS: Political Science & Politics*, *46*(03), 550–552.

Suleiman, R., Yahya, R., Decety, J., & Shamay-Tsoory, S. (2018). The impact of implicitly and explicitly primed ingroup–outgroup categorization on the evaluation of others pain: The case of the Jewish–Arab conflict. *Motivation and Emotion*, *42*(3), 438–445.

Weinberger, J., & Westen, D. (2008). RATS, We Should Have Used Clinton: Subliminal Priming in Political Campaigns. *Political Psychology*, *29*(5), 631–651.

Wilson, J. P., Hugenberg, K., & Rule, N. O. (2017). Racial bias in judgments of physical size and formidability: From size to threat. *Journal of Personality and Social Psychology, 113*(1), 59–80.

Young, D. M., Sanchez, D. T., & Wilton, L. S. (2017). Biracial perception in black and white: How Black and White perceivers respond to phenotype and racial identity cues. *Cultural Diversity and Ethnic Minority Psychology*, *23*(1), 154–164.