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Examining Racial Bias in Education: A New Approach

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Abstract:

In this paper we propose a new approach to examining racial inequality in education, to better understand the mechanisms by which racial bias can produce unequal outcomes. We argue that social psychological research on implicit racial associations—relatively unconscious associations based on race—is a fruitful area to explore for a greater understanding how racial bias affects children in schools. We highlight the key insights of research on implicit racial associations and its implications for education, especially in classrooms. Further, we identify areas for research on implicit racial associations in education, calling for collaboration between scholars of racial inequality in education and scholars of implicit associations. Studying implicit racial associations in schools is likely to provide a productive new perspective for understanding why and when teachers and other school personnel engage in behaviors that reproduce racial inequality, often in spite of best intentions and commitments to racial equity.

Examining Racial Bias in Education: A New Approach

Education research convincingly shows that teachers treat students differently depending on their ethnic background, and these differences in behavior contribute to racial disparities in achievement and other forms of racial stratification in schools (McKown & Weinstein, 2008; Okonofua, Walton & Eberhardt, 2016; Rubie-Davies, Hattie, & Hamilton, 2006). For example, a meta-analysis by Tenenbaum and Ruck (2007) found that, compared to white students, teachers refer African-American and Latino students to gifted and talented testing less and to special needs testing more, and that teachers use less positive or neutral language when addressing African-American and Latino students. In what follows we contend that consideration of social psychological research on implicit (i.e., relatively unconscious) racial associations will foster a more robust understanding of why and when these differences occur, as well as potential means of reducing their effects. Developing such an understanding is especially urgent given that a majority of public school children today are racial minorities—and their percentage is growing— while a majority of their teachers are white (National Center for Education Statistics, 2015). In what follows we describe what is known about implicit racial associations and how this knowledge may contribute to the understanding of racial disparities in students' school experiences and outcomes. We then offer some areas for further investigation, which we argue will be accomplished most fruitfully through collaborative efforts between scholars of education and scholars of social psychology.

What are implicit racial associations?

Social psychologists make a distinction between implicitly-measured associations and self-reported (i.e., explicit) attitudes (e.g., Blair, Dasgupta & Glaser, 2015). Explicit attitudes are beliefs and evaluations about people and things that individuals knowingly endorse and have complete discretion over whether they disclose. For example, questionnaires or interviewers might ask individuals how positively or negatively they feel about different racial groups. The expression of explicitly negative racial attitudes has dramatically declined over time due to changing norms regarding social appropriateness (Schuman, Steeh, & Bobo, 1997). In contrast, *implicit* associations are the automatic cognitive associations people have between a given social group and certain feelings, concepts, and evaluations. People are generally unaware of their implicit associations or unwilling to endorse them as indicative of their beliefs about those groups (e.g., Blair, Dasgupta & Glaser, 2015; Greenwald, McGhee, & Schwartz, 1998). Individuals also have limited strategic control over their implicit associations. That is, while people can manipulate what they say on a questionnaire asking about the feelings they associate with different groups, their responses to implicit measures are not as pliable. Although there are circumstances in which people can adjust their responses to measures of implicit associations somewhat, these circumstances are limited and such regulation affects implicit measures to a smaller degree than explicit measures (Sherman, et al., 2008).

Because individuals are often unable or unwilling to disclose their implicit racial associations they are typically measured using reaction time techniques borrowed from cognitive psychology. The most frequently used measure is the Implicit Association Test (IAT), in which people are asked to press certain response keys as quickly as they can when they see an image from a particular category or a word that category may or may not be associated with (Greenwald, McGhee, & Schwartz, 1998). The pro-White/anti-Black version of this task

measures people's reaction times when asked to press one response key when they see the face of a Black person or a negative word, and a different response key when they see the face of a White person or a positive word (i.e., stereotype-consistent associations); this is compared to the reaction time when asked to press one response key when they see the face of a Black person or a positive word, or another response key when the see the face of a White person or a negative word (counter-stereotypic associations). Though people taking the IAT often have a sense of what it is assessing, they are generally unsuccessful at faking their scores in order to make a certain impression (e.g., Kim, 2003). There are other measures even more subtle than the IAT in which people are subliminally exposed to White and Black faces before having their reaction times to positive and negative concepts measured (Cameron, Brown-Iannuzzi & Payne, 2012; Dovido, Kawakami, & Gaertner, 2002; Jacoby-Senghor, Sinclair & Shelton, 2015). In such measures people have no conscious awareness that their implicit associations are being assessed.

The race IAT has been prominently critiqued on two fronts. First, some question whether the IAT measures individual associations or residual societal associations. Second, some question what the difference between negative versus positive associations toward Whites and Blacks means psychologically (e.g., Arkes & Tetlock, 2004). We contend that this debate is largely definitional and does not detract from the potential importance of implicit association measures in education because, regardless of the etiology of what these measures capture, responses relate to important behavioral outcomes (e.g., Blair, Dasgupta & Glaser, 2015; Jacoby-Senghor et al., 2015; van den Bergh et al., 2010). Moreover, certain critiques are unique to the difference score approach used by the traditional IAT; these can be overcome by using other measures of implicit associations (e.g., Cameron et al., 2012).

How might implicit racial associations affect classrooms?
We highlight four key observations that lead us to believe classrooms are ripe for the effects of negative implicit associations. First, negative implicit associations toward low-achieving groups are a potentially significant contributor to educational inequality not only because they are automatic and difficult to control, but also because they are pervasive. According to a study examining data from millions of people (85% of whom reside in the United States) who voluntarily completed a web-based version of the Implicit Association Test (IAT), approximately 68% of respondents held pro-White/anti-Black implicit associations, with respondents' magnitude of bias tending to be medium to large (Nosek et al., 2007). Further, this tendency is affected by ethnicity and age to a lesser degree than one might assume. Whites, Hispanics, Asians and Native Americans, on average, exhibited pro-White/anti-Black implicit associations with a medium to large effect size; Blacks did not show a preference overall. The effect size also remained consistent across age of respondent, and held even when the pictures of Blacks and Whites people respond to are of children. These findings lead to important questions about teachers' implicit associations. If teachers are like other adults in their implicit associations, we can expect that a majority hold medium to large negative implicit associations about black children and adults.

Second, explicit attitudes and implicit associations are only mildly correlated (e.g., Cameron, Brown-Iannuzzi & Payne, 2012); this may help explain why racial disparities in schools can persist even when genuine, well-motivated efforts are made to reduce them. Even teachers who express egalitarian and justice-oriented views may sometimes act on unconscious biases towards students from stigmatized groups. While previous research on teacher expectations theorizes that expectations can be conscious or unconscious, they are primarily

assessed by asking teachers to report their beliefs explicitly (for notable exceptions, see Kumar, Karabenick, & Burgoon, 2015; Glock & Karbach, 2015). Further, it is difficult to disentangle whether teachers' expectations for particular students are based on students' group memberships per se or valid estimates based on students' past performance (Jussim, Eccles, & Madon, 1996). This criticism does not hold with implicit measures because such tasks measure associations using multiple, generic social category members rather than with teachers' thoughts about particular students. Measures of implicit racial associations may thus provide more insightful analyses of racial bias in teachers' expectations of their students, explaining how teachers, administrators, and parents perpetuate racial inequality in diverse schools "despite the best intentions" (Diamond & Lewis, 2015).

Third, implicit racial associations are likely to affect student outcomes because they consistently correlate with problematic feelings and behaviors that emerge during interracial interactions. Greater implicit prejudice among Whites is associated with reporting fewer Black friends and being less comfortable interacting with Blacks (Aberson, Shoemaker, & Tomolillo, 2004; Towles-Schwen & Fazio, 2003). When actually interacting with Blacks in a lab setting, White college students who are higher in pro-White/anti-Black implicit associations exude less nonverbal friendliness, such as less eye contact and smiling, as well as signs of anxiety, such as hesitation and errors in speech (e.g., Dovido, Kawakami, & Gaertner, 2002; Fazio Jackson, Dunton, & Williams, 1995). Black partners in lab experiments as well as uninvolved observers shown black-white interactions can discern white lab participants' lack of friendliness and discomfort from these non-verbal cues (Dovido, Kawakami, & Gaertner, 2002). This leads to important questions about how teachers' implicit racial associations might impact their interactions with black children, and the consequences of those interactions for students' sense of belonging, academic performance, and relationships with peers observing those interactions. To the extent that extant research on implicit racial associations and interracial interactions generalizes to educational exchanges, we expect implicit racial associations to detract from the warmth and responsiveness of teachers in interracial interactions with students. It is further possible that peers of minority students will not only recognize this disparate treatment, but also emulate it (Willard, Isaac & Carney, 2005). These interactions are likely to result in poorer academic performance, given the importance of positive social relationships in the academic context for students' success (e.g., Gehlbach et al., 2016; Mendoza-Denton et al., 2002; Walton & Cohen, 2007) and possibly even vicious cycles of negative academic outcomes and behavior (Okonofua, Walton, & Eberhardt, 2016).

Fourth, teachers tend to work under conditions that heighten the negative impact of implicit associations, potentially increasing their impact in the classroom. In schools, teachers make quick, micro-decisions constantly, amidst working conditions that are highly stressful and cognitively demanding; this is particularly the case in the low-resourced schools which disproportionately serve minority youth. These are precisely the kinds of situations in which implicit associations have their greatest effect. Implicit associations have a stronger impact when people are unable or unwilling to devote cognitive resources to their behaviors and decisions, instead relying on gut reactions (Cameron, Brown-Iannuzzi & Payne, 2012; Olson & Fazio, 2009). Working under the conditions that many teachers of working class and poor black and Latino children face—lacking the support of colleagues and financial resources, and teaching large numbers of students—may enhance the impact of implicit racial associations on teachers' behaviors, with negative implications for their minority students. For example, teachers are likely to initiate referrals to special education testing and disciplinary action in moments of

cognitive overload when they are balancing multiple demands and therefore are like to be more susceptible to the influence of implicit biases.

There are some lab-based studies in which Whites who are high in implicit pro-White/anti-Black associations are actually able to appear even friendlier and more engaged during inter-racial interaction than their less biased peers (Shelton, Richeson, Salvatore & Trawalter, 2005). However, this is only the case when such Whites are able and willing to devote cognitive resources to positively regulating their behavior (Mendes & Koslov, 2013). Unfortunately, the demands placed on teachers, particularly those in under-resourced schools, allow for very little diversion of cognitive resources toward attenuating negative implicit associations. In addition, lab-based studies show that greater pro-White/anti-Black implicit associations among Whites are associated with a greater tendency to experience cognitive depletion subsequent to an inter-racial interaction (e.g., Richeson & Trawalter, 2005). So when teachers are momentarily able to counteract their implicit racial associations, they may have less energy for other teaching tasks. Given the cognitive resources necessary to mitigate implicit bias, one might also ask whether teachers high in implicit bias and serving predominantly minority youth burn out faster than those who do not experience the same cognitive depletion in interracial situations.

Emergent research on implicit racial associations in the classroom

Researchers are beginning to demonstrate the impact of implicit racial associations in learning contexts. In a laboratory analog of dyadic teaching exchanges using college student participants, researchers found that greater implicit pro-White/anti-Black racial associations among White instructors predicted lower performance on a test of the material being taught for Black but not for White students (Jacoby-Senghor, Sinclair & Shelton, 2015). The study found that high-biased instructors, as rated by objective coders who were unaware of students' race, were more anxious and gave less clear and engaging lessons to Black students than did low-biased instructors. To confirm that lesson quality contributed to the impaired performance of Black students, non-Black students in a follow-up study watched a video of the lessons originally given to Black students and took the same test. The non-Black students in the second study performed identically to their Black counterparts. Another lab-based study showed that White college students who are less apt to implicitly associate Blacks (compared to Whites) with intelligence expect Black peers to be less academically inclined, and judge their work accordingly (Amodio & Devine, 2006). Outside of the lab, researchers are beginning to investigate implicit associations in education. Van den Bergh and her colleagues (2010) found that Dutch elementary school teachers' pro-Native Dutch/anti-Turkish-Moroccan implicit associations were associated with lower expectations of their Turkish and Moroccan students, which in turn predicted lower academic performance for these students. Another study measuring teachers' implicit racial associations—this time with respect to Whites and Arabs in the United States—found that teachers with pro-White/anti-Arab implicit associations were less likely to attempt to enact a culturally-responsive classroom and to facilitate the resolution of inter-ethnic conflicts in the classroom (Kumar et al., 2015). More work examining teachers' implicit attitudes about different ethnic and racial groups of young people, and the relationships of those attitudes with expectations, expressed warmth, attention to students, grades, and referrals to gifted and special education will further our understanding of how schools might produce racial inequality.

Implicit associations beyond the classroom

While this discussion has emphasized teacher behaviors and decision-making, findings on the influence of implicit associations on policy preferences may also shed light into the policy-making process in education outside of the classroom. We know that educational policies frequently negatively affect students of color, such as decisions to track classes that inevitably place a disproportionate number of black and Latino youth in low tracks. Pro-White/anti-Black implicit associations have been shown to predict political decision-making such as Americans' actual likelihood of voting for Barack Obama versus John McCain in the 2008 presidential election above and beyond the effect of traditionally influential predictors in this domain such as age, party identification, ideology and explicit candidate preference (Payne et al., 2010). Implicit racial associations also predict support for policies said to be developed by President Obama but not the same policies when said to be developed by President Bill Clinton. Given these findings, we might ask whether implicit associations are correlated with decisions about dress codes, disciplinary codes, curricula, and whether to track classes, to name a few examples.

There is also evidence that implicit racial associations relate to hiring. Rooth (2010) found that while all Swedish employers are less likely to call back an Arab job applicant than a Swedish one with the same qualifications, employers high in implicit bias toward Arabs are even less likely to do so. Consideration of implicit racial associations in educational contexts may help explain the factors that shape the appointment of staff in education whether through hiring decisions or through election to school boards, despite the conscious intentions of their appointers, who may hold very positive *explicit* racial associations. At a time when many schools are struggling to diversify a teaching force that is predominantly white for a predominantly minority student body, scholars should also investigate the extent to which implicit biases shape hiring and retention of teachers of color.

A research agenda for implicit racial associations in education

The discussion above identifies myriad ways implicit racial associations may contribute to racial inequality in school settings. For this reason, we encourage collaboration between scholars of education and social psychology to analyze how such associations may affect teacher-student relationships and other aspects of the educational context, as well as how to attenuate these biases and their impact. Social psychologists can provide theoretical insight on the operation, measurement and mitigation of implicit associations as well as a historical emphasis on how individual-level phenomenon and processes intersect with situational demands. Education researchers can provide insight into how schools function and how students learn best, as well as the sources of educational inequality most likely to be influenced by implicit racial associations. They also have vital practical awareness of how potential interventions would be experienced and implemented on-the-ground. In addition to being multi-disciplinary, research in this area would be best served by taking a multi-method approach, as virtues of different methods optimally intersect with the challenges of such a potentially broad line of inquiry differently. Lab-based research is well-positioned to establish causality, efficiently vet novel hypotheses and provide initial evidence of the feasibility of interventions before they are implemented in the field. Work in the field (i.e., actual education settings) that combines quantitative and ethnographic orientations is best poised to balance precision, scalability and openness to the complexities and richness of classroom dynamics. Perhaps most importantly, the insights gleaned from different methods should combine to develop informed, targeted knowledge and interventions.

We suggest four avenues for future research. First, additional studies of teacher implicit associations and their relationship to student achievement (e.g., van den Bergh et al., 2010) are needed to analyze the pathways between implicit racial associations and student outcomes. For example, the relationship between teacher's implicit racial associations and student's sense of belonging, student's self-efficacy, teacher expectations, curricular decisions, referrals to disciplinary action, special education testing, or honors courses, evaluations of student work, and more should be explored. Furthermore, the relative importance of educators' implicit racial associations compared to other drivers of racial inequality in education such as poverty, teacher training, and school funding, as well as how these drivers interact with educators' implicit racial associations to shape student outcomes should be established. For example, it is important to know whether educators' implicit racial associations contribute to student achievement over and above societal forces such as poverty. It also may be the case that educators' implicit biases detract from the outcomes of students whose situation is already precarious due to circumstances such as poverty or having poorly trained teachers, but not students who have sources of support that can compensate for interpersonal challenges in school. This kind of work can be done by adding implicit measures, such as the IAT, to multivariate studies of student achievement such as the National Center for Education Statistics' Education Longitudinal Study. Researchers should also conduct ethnographic studies of classrooms led by teachers with varying levels of implicit racial associations, paying attention to cultural processes in classrooms such as teachers' and students' meaning-making.

Second, while most of the research on implicit associations has measured implicit associations to Whites and Blacks, schools, as American society, are much more racially complex, and studies of implicit racial associations in education should recognize that complexity. Latinos are the largest minority group in the United States today, and Asian Americans are the fastest-growing group, with the largest numbers of immigrants coming to the US from India and China every year (Jensen, 2015). Research on teachers' implicit associations about Asians, Latinos, and Native Americans may reveal, too, the effects of other forms of implicit bias. These studies may reveal how different kinds of implicit racial associations—for example, as foreign, as Muslim, or as without legal status—may shape teacher behaviors toward students of particular ethnic groups. Relatedly, scholars should also consider how the intersection of race and gender may shape the impact of implicit biases in schools. We know that race-gender stereotypes affect minority girls and boys in very different ways, despite many teachers' professed beliefs in gender equity, for example (Lopez, 2002).

Third, to the extent the relationship between educator's implicit bias and student outcomes is firmly documented, researchers should embark on work seeking to mitigate any negative consequences implicit negative associations may have in the classroom. An ever-increasing body of research shows that relatively small, cost-effective, social-psychologically-minded interventions can have significant consequences for student outcomes and engagement (Yeager & Walton, 2011). Thus far these interventions are aimed at providing students with tools that insulate them from concern about being subject to different expectations or behaviors due to their group membership. However, interventions informed by the research on implicit racial associations could also focus on teachers and other adults' biases and consequent behaviors in addition to students' reactions to those biases and behaviors. For example, interventions could adapt strategies identified in the literature on improving implicit racial associations to reduce teacher bias. Devine and colleagues (2012) showed that a 45 minute interactive presentation describing implicit racial associations, their potential consequences and a number of established

techniques for improving them (e.g., taking the perspective of stigmatized group members, imagining counter-stereotypic examples) reduced college students' implicit pro-White/anti-Black bias for at least two months. Though a gender-based version of this intervention did not affect medical faculty members' implicit male/female associations, it did improve their motivation to be unbiased and both male and female faculty members' sense that they belong in the department and their research is valued (Carnes et al., 2015). A similar intervention could be done with teachers to see if it affects their implicit associations and interactions with racial minority students, as well as minority students' outcomes. Interventions could also utilize environmental, procedural or motivational strategies to reduce the circumstances that foster reliance on implicit racial associations. For example, if individuals are more apt to rely on implicit associations when cognitive resources are low, perhaps reducing class size or the number classes an instructor much teach will reduce such reliance. Other successful interventions approaches have focused on changing individuals' mindsets for thinking about and interacting with minorities. Plant and colleagues (2010) showed that non-Black individuals who focused on strategies to approach positive, egalitarian outcomes had better interpersonal interactions with a Black confederate than those who focused on avoiding a negative, prejudiced outcome. Okonofua and colleagues (2016) demonstrated that simply encouraging teachers to be empathic in disciplining minority students steeply reduced suspension rates. Perhaps implicitly biased teachers could be taught to effectively manage the negative outcomes linked with their racial associations with minimal, but psychologically informed trainings.

Finally, the aforementioned avenues of inquiry would be enhanced by consideration of how relevant processes unfold over time. As discussed, seemingly small psychological interventions aimed at students can have a surprisingly large impact because they likely initiate recursive processes through which improvements beget additional improvements (Yeager & Walton, 2011). Like these interventions, changing educators' implicit racial associations may initiate a series of recursive processes in schools that improve classroom climate for, and performance of, racial minority students. For example, teachers who have to spend less energy regulating their implicit racial associations may have warmer interactions with their racial minority students and more cognitive resources to dedicate to the craft of teaching well. Success from these affordances may further improve teachers' implicit racial associations, thus sustaining change over time. Moreover, the improved climate and instruction may fortify minority students' sense of belonging in the classroom, mitigate their experiences of stereotype threat, increase their engagement, and enhance their academic outcomes. This psychological unburdening and academic success should scaffold future success. Peers who observe the improved interactions and outcomes may experience improved implicit racial associations themselves (Willard, Isaac & Carney, 2005). In addition, extended contact between teachers and students as the school year unfolds may change teachers' implicit attitudes over time, to the extent that teachers are able to individuate their students through their ongoing relationship. Scholars should investigate when and how teachers' growing relationships with their students attenuate negative racial attitudes and their impact on students.

In sum, integrating research on implicit racial associations and current understandings of racial inequalities in education has the potential to strengthen our knowledge in each arena, and to identify novel strategies for increasing the fairness and effectiveness of educational settings. Collaboration between social psychologists and scholars of education will provide important insights into the relationship between individual mechanisms of racial bias, often implicit, and

structural and cultural forces shaping the lives of children. We hope that this initial collaboration will spark more, with a rich, cross-disciplinary research agenda.

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