

# Learning (Not) to Talk About Race: When Older Children Underperform in Social Categorization

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The present research identifies an anomaly in sociocognitive development, whereby younger children (8 and 9 years) outperform their older counterparts (10 and 11 years) in a basic categorization task in which the acknowledgment of racial difference facilitates performance. Though older children exhibit superior performance on a race-neutral version of the task, their tendency to avoid acknowledging race hinders objective success when race is a relevant category. That these findings emerge in late childhood, in a pattern counter to the normal developmental trajectory of increased cognitive expertise in categorization, suggests that this anomaly indicates the onset of a critical transition in human social development.

*Keywords:* social development, categorization, regulatory behavior, stereotype knowledge, social norms

In the typical trajectory of cognitive development, children tend to improve on problem-solving tasks as they get older due to, among other factors, superior memory capacity, more effective information processing, and greater facility with categorization processes (Case & Okamoto, 1996; Inhelder & Piaget, 1958; Kail, 2004). Accordingly, it is rarely the case that younger children perform better than older children on any cognitive task. We report one such anomaly in which younger children outperform older children on a social categorization task in which performance efficiency comes at the expense of acknowledging racial difference.

As any parent who has experienced the social discomfort of a child unselfconsciously and publicly pointing out a stranger's race can attest, talking about race—even in the context of an accurate, diagnostic physical description—is often considered normatively inappropriate (Norton, Sommers, Apfelbaum, Pura, & Ariely, 2006). It is clear, however, that children become aware of social categories such as race at a very young age. Infants as young as 6 months old can perceptually discriminate between racial groups (Katz & Kofkin, 1997), by preschool most children can accurately identify others' membership in racial categories (Aboud, 2003), and at the age of 5 children begin to demonstrate knowledge of some social stereotypes (Ambady, Shih, Kim, & Pittinsky, 2001). Awareness of moral and social conventions, however, develops

somewhat later. By 10 years of age, most children have internalized social and moral norms (Piaget, 1932; Turiel, 2006) and can effectively take the perspective of others and engage in self-presentation (Aloise-Young, 1993; Banerjee, 2002; Carpendale & Chandler, 1996; Selman, 1980). These developments are accompanied by a greater understanding of abstract ideas, which in the domain of race include discrimination and the proscription of prejudice (Brown & Bigler, 2005; McKown & Weinstein, 2003; Rutland, 2004; Rutland, Cameron, Milne, & McGeorge, 2005; Verkuyten, Kinket, & van der Wielen, 1997).

The present research examines age group differences in children's tendency to frankly acknowledge versus strategically avoid race. We sought to investigate whether, after approximately 10 years of age, differences emerge in children's performance on a task in which race is a relevant category. Since such differences would coincide with the point at which children possess both knowledge of norms regarding prejudice and the cognitive capacity to regulate behavior, the demonstration of this variation would suggest the need for developmental research elucidating bases of this possible transition. Accordingly, we investigated how children aged 8 to 11 years performed on a social categorization task.

The task was a photo identification game in which describing people by category memberships (e.g., gender, race) facilitates task performance. We expected that older children, by virtue of their being more facile at social categorization, would outperform younger children, except in one key instance: when the race of the individuals pictured was a salient category. In this instance, we expected that older children's desires to follow prevailing social and moral conventions in the United States and to appear unprejudiced (e.g., Gaertner & Dovidio, 1986) would prompt them to forgo the use of this category, even at the expense of task performance. This expectation followed from recent work demonstrating that those adults most concerned with appearing unprejudiced tend to strategically avoid talking about race during social interaction (Apfelbaum, Sommers, & Norton, in press). In short, we hypothesized that at approximately 10 years of age, social concerns regarding the acknowledgment of race would override the traditional age group differences regarding improved performance on

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categorization-based tasks. Such an anomalous pattern of behavior would suggest a critical milestone in human social development, requiring subsequent longitudinal research.

## Method

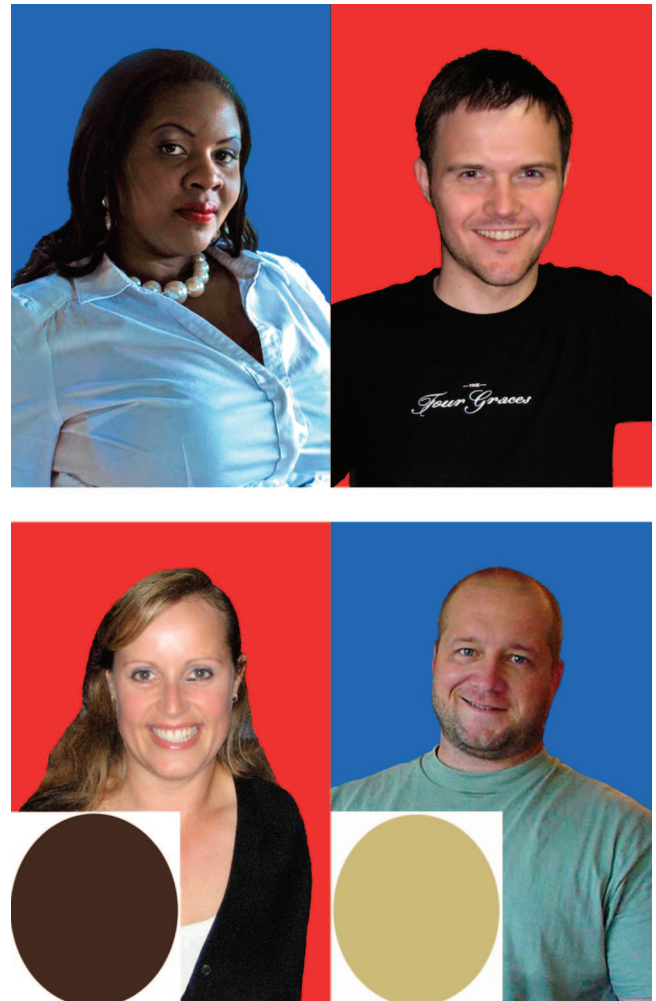
### *Participants and Design*

We recruited 101 children from three suburban public elementary schools that serve middle-class and upper middle-class families outside Boston, Massachusetts. The sample comprised two contiguous age groups: 8- and 9-year-olds ( $M = 9.26$  years,  $SD = 0.40$ ) and 10- and 11-year-olds ( $M = 10.75$  years,  $SD = 0.38$ ). The younger age group included 51 children (26 girls), and the older age group included 50 children (25 girls). Participants were randomly assigned to a race-relevant or race-neutral condition, yielding a 2 (age group: younger vs. older)  $\times$  2 (task type: race-relevant vs. race-neutral) between-subjects design. Participants were predominantly White (86.1%)<sup>1</sup> and none was Black; each child received a small gift for participating.

### *Materials and Procedure*

Parents of third, fourth, and fifth graders were informed of the study via letters sent home by school administrators. Upon receipt of parental consent, individual children who provided verbal assent participated in a quiet location, separate from other children. The only information they received prior to testing was that they would be “playing matching games.” The experimental task—adapted from an analogous task used to gauge adults’ willingness to mention race (Apfelbaum et al., in press; Norton et al., 2006)—was an interactive photo identification exercise similar to a children’s board game. Children sat in front of an array of forty 4  $\times$  6-in. (10.16  $\times$  15.24-cm) photographs of people (cropped above the waist) arranged in 4 rows of 10. Photos in the array differed in many respects but only varied systematically on 4 dimensions. For the race-relevant condition, these dimensions were background color (red/blue), gender (male/female), weight (fat/thin), and race (Black/White). Participants assigned to the race-neutral condition viewed photos that varied on the same dimensions, except that all of their photos depicted White individuals. Instead, a dark brown or off-white, head-sized oval sticker was appended to the bottom-left corner of each photo, reestablishing a fourth dimension on which the array varied systematically. The sticker colors were not arbitrary—the dark brown was a composite blend of the Black individuals’ actual skin tone from the race-relevant array, while off-white stickers displayed the average White skin tone from the same array. Thus, the race-relevant and race-neutral photo arrays displayed virtually identical perceptual information, but only in the former condition was this information tied to the social category of race (see Figure 1 for sample photos).

An experimenter sat facing the participant, holding a single target photo from the array. This target photo was one of two photos, randomly selected from the array at the outset of the study. Participants were instructed to ask yes/no questions to narrow the array down to the single target photo held by the experimenter. Their primary goal—to use the fewest questions necessary—was explicitly stated twice during the course of the instructions and then repeated a third time moments before the task began. Thus,



*Figure 1.* Stimuli in the race-relevant condition varied by race (top panel), while stimuli in the race-neutral condition varied by sticker color (bottom panel). Clockwise from the top left, photographs are from, respectively, <http://www.flickr.com/photos/habesha/2468652885/sizes/o/>, <http://flickr.com/photos/exalthim/2563788154/sizes/o/>, <http://www.public-domain-photos.com/people/man-6-4.htm>, and <http://flickr.com/photos/technowannabe/164515893/sizes/o/>. The bottom right photo is in the public domain; all other photos are adapted according to a Creative Commons license (<http://creativecommons.org/licenses/by/2.0/>).

participants were clearly aware that their objective was to strive for performance efficiency, an effort facilitated by acknowledgment of categorical differences in race or sticker color. While the experimenter turned on the video camera, children familiarized themselves with the array until they felt prepared to begin the interaction. After completing the task, children completed a manipulation check that asked them to indicate whether they noticed that the photos in the array varied by race or sticker color.

<sup>1</sup> Non-White (6 Asian, 6 biracial, and 2 Latino) participants were included in the reported analyses. Results did not significantly differ when analyses were restricted to White participants only.

### Dependent Measures

There were two primary outcomes of interest. We examined between-groups differences in objective performance, based on the total number of questions needed to complete the task, and the frequency with which participants asked questions about categorical differences in race or sticker color, depending on the condition to which they had been assigned.

## Results

### Performance

Scores reflecting the total number of questions asked (with lower values denoting better performance) were submitted to a two-way analysis of variance. This analysis indicated a main effect of task type such that participants in the race-relevant condition ( $M = 7.86$ ,  $SD = 1.82$ ) performed relatively less efficiently than participants in the race-neutral condition ( $M = 6.64$ ,  $SD = 1.37$ ),  $F(1, 97) = 15.53$ ,  $p < .001$ ,  $r = .37$ . The main effect of age group was not significant ( $F < 1$ ).

As displayed in Figure 2, these effects were qualified by a significant Age Group  $\times$  Task Type interaction,  $F(1, 97) = 8.17$ ,  $p < .005$ ,  $r = .28$ . In the race-neutral condition, as expected, participants in the older group ( $M = 6.17$ ,  $SD = 1.07$ ) outperformed participants in the younger group ( $M = 7.04$ ,  $SD = 1.48$ ),  $t(97) = 1.94$ ,  $p = .05$ ,  $r = .19$ . In the race-relevant condition, however, this pattern was reversed as participants in the younger group ( $M = 7.38$ ,  $SD = 1.10$ ) outperformed participants in the older group ( $M = 8.30$ ,  $SD = 2.22$ ),  $t(97) = 2.10$ ,  $p < .04$ ,  $r = .21$ . Such a pattern is remarkable considering that, by virtue of being older and thus, more cognitively mature, older children ought to outperform their younger counterparts (as they did in the race-

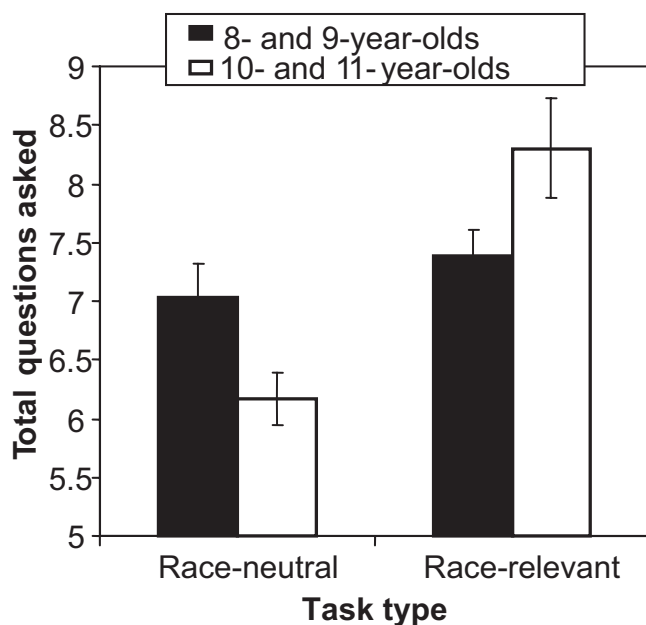


Figure 2. Total questions needed to complete the task as a function of task type and age group, where fewer questions asked indicates better performance. Error bars represent standard error.

neutral condition). Not only did presentation of a race-relevant task negate this inherent performance gap, but it reversed it. These results support the hypothesis that, at approximately 10 years of age, children's tendency to regulate the appearance of prejudice is powerful enough to undermine performance on a task rooted in basic cognitive skills.

### Acknowledgments of Difference

We further investigated this shift in behavior by assessing the frequency with which participants acknowledged race or sticker color. Our a priori definition for the acknowledgment of race included specific references to racial groups such as *Black*, *African American*, *White*, or *Caucasian*, as well as race-related terminology (e.g., "Does your person have brown skin?"). Similarly, we recognized any acknowledgment of a perceptual difference between sticker types (e.g., "Does your person have a brown sticker?"). We then recoded these measures as a single variable—acknowledgment of difference—to allow for analysis across experimental condition.

As displayed in Figure 3, in the race-neutral condition, chi-square analysis indicated that the frequency with which participants acknowledged difference (i.e., in sticker color) was high and virtually identical among younger children ( $M = 77.8%$ ,  $SD = 42.4$ ) and older children ( $M = 78.3%$ ,  $SD = 42.2$ ), suggesting that participants believed that color was a useful category for completing the task. However, in the race-relevant condition, while a full 76.5% ( $SD = 42.8$ ) of children in the younger group acknowledged difference (i.e., race), only 37.0% ( $SD = 45.8$ ) of the older group did so,  $\chi^2(3, N = 101) = 14.23$ ,  $p < .005$ ,  $\phi = .38$ . A planned contrast confirmed that the older group's reluctance to ask about race represented a marked divergence in behavior relative to the general pattern displayed by participants in the other three conditions,  $\chi^2(1, N = 101) = 14.48$ ,  $p < .0001$ ,  $\phi = .38$ . When acknowledgment of race was measured with even more conservative coding criteria—explicit use of the terms *Black* and *African American*—an equally compelling result emerged: While 33.3% ( $SD = 46.3$ ) of participants in the younger group asked questions including the terms *Black* and *African American*, not a single participant in the older age group (0%) did so,  $\chi^2(1, n = 51) = 10.67$ ,  $p = .001$ ,  $\phi = -.46$ .<sup>2</sup> The final self-report measures confirmed that every participant reported noticing differences (either based on race or sticker color) in the array.

In sum, these findings lend support to the proposed performance difference between children younger and older than 10 years of age, as the majority of older children in a race-relevant setting avoided mentioning race, even though doing so undermined their

<sup>2</sup> As a comparison, we investigated children's mention of two other stigmatized social categories depicted in the photo array: gender and weight. Chi-square analyses (collapsing across race-relevant and race-neutral conditions) indicated no significant differences between younger and older age groups for mention of gender,  $\chi^2(1, N = 101) = .21$ ,  $p < .65$ , or weight,  $\chi^2(1, N = 101) = .20$ ,  $p < .74$ . Thus, this strategy of avoidance seems particularly relevant to race-related considerations, a conclusion likely driven by the extreme social undesirability of being stigmatized as a racist in the United States (Sommers & Norton, 2006).

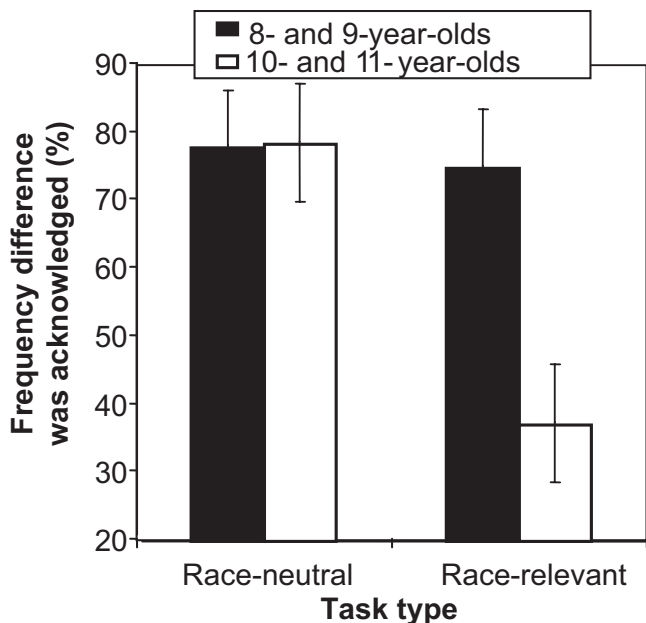


Figure 3. Frequency with which color difference was acknowledged as a function of task type and age group. Error bars represent standard error.

task performance. Indeed, analyses provided evidence that acknowledgment of difference in the race-relevant setting mediated the performance decrements exhibited by older versus younger children.<sup>3</sup> And more generally, the negative relationship between acknowledgment of difference and total questions asked across conditions,  $r(99) = -.27, p < .01$ , indicates that participants who avoided acknowledging race or sticker color did so at the expense of objective success on the task.

### Discussion

While previous research has demonstrated the potential for younger infants to outperform older infants in several domains, including language discrimination (Weikum et al., 2007; Werker & Tees, 1984), music perception (Hannon & Trehub, 2005), and face perception (Kelly et al., 2005; Pascalis, de Haan, & Nelson, 2002), such a counterintuitive pattern of behavior has seldom been documented in older children. The most notable exception has been demonstrated in the classic problem-solving exercise involving functional fixedness, wherein adults and older children perform worse than younger children on tasks that require them to utilize tools in a manner atypical of their traditional function (Duncker, 1945; German & Defeyter, 2000). We suspect that just as increased knowledge of the typical function of tools sets the stage for the anomaly of functional fixedness, so, too, may increased knowledge regarding racial stereotypes and norms predict the tendency for older children to avoid race. Indeed, in a follow-up task administered to the present sample, participants' responses to a measure of stereotype knowledge indicated that their awareness of racial stereotypes was negatively associated with the tendency to acknowledge race in the earlier race-relevant photo task,  $r(44) = -.33, p < .03$ ; no such relationship existed among participants in the race-neutral version,  $r(48) = .13, p < .37$ .<sup>4</sup> In other words, children who exhibited greater awareness of racial stereotypes

tended to be the ones who were most likely to avoid mentioning race in the categorization task. To the extent that such knowledge of racial stereotypes relates to a more general understanding of contemporary race-related norms, it may represent one factor that sets the stage for the behavioral effects presented here.

In short, though cross-sectional, our work is consistent with the presence of a developmental anomaly: that a consequence of increased understanding of norms pertaining to race is the tendency to avoid acknowledging race altogether. To the extent that these results are pertinent to age changes as well as age group differences, they suggest that at some point after mastering categorization and generalization across classes of stimuli, children learn that by applying these same principles to people—describing others on the basis of skin color—they risk appearing prejudiced and might receive social sanctions (Pollock, 2004; Schofield, 1989). While such labeling of people may be both correct as a category extension and useful for distinguishing people from one another, mentioning race is often considered inappropriate in social discourse (Norton et al., 2006). As a result, it may be that younger children who have not yet internalized such social conventions and concerns about appearing prejudiced are able to outperform older children on a task for which the acknowledgment of race is a relevant consideration. Though these findings cannot

<sup>3</sup> We used a series of regression analyses (Baron & Kenny, 1986) to test the prediction that acknowledgement of difference would mediate the relationship between age group and performance in the race-related condition. Given our relatively small sample size for this type of analysis, the most appropriate model was a bias-corrected bootstrap mediation (Efron & Tibshirani, 1993; Preacher & Hayes, 2004; Shrout & Bolger, 2002). Using 1,000 resamples, these analyses revealed that age group was a positive predictor of total questions ( $\beta = .26, p = .07$ ), a relationship that was reduced when acknowledgment of difference was added as a predictor ( $\beta = .16, p = .28$ ). This indirect effect was statistically significant (95% confidence interval: .0045, 1.11), indicating that acknowledgment of difference mediated the relationship between age group and task performance.

<sup>4</sup> After the categorization task described above, participants were led through a photo album, each page of which contained a different pair of photos of male children. In consecutive fashion, participants were asked to select the child in each pair most likely to have exhibited 1 of 13 narrated behavioral episodes. Nine target episodes described behaviors that typify prevalent negative racial stereotypes, while four nonstereotypical fillers described race-neutral behaviors. For stereotypical episodes, we always displayed one photo of a child belonging to the racial group targeted by the stereotype, and the second photo was randomly selected. The second photo was chosen from among three racial groups (Black, Asian, or White), with the stipulation that the photo chosen did not belong to the same racial group as the target photo. This ensured that participants who belonged to one of the racial groups in the pair were not always making a decision that involved an ingroup/outgroup choice. Results did not differ among children who saw two outgroup members or one ingroup and one outgroup member. For filler episodes, the racial composition of the pairs was randomized. Participants' selections regarding each of the nine target episodes were then combined to form a single index of negative stereotype knowledge. No significant difference emerged in stereotype knowledge between age groups,  $t(94) = 0.60, p < .56$ . In addition to significant negative relationship between the acknowledgment of race and stereotype knowledge reported in the text, an even more robust relationship emerged when considering just the terms *Black* or *African American*,  $r(44) = -.44, p < .005$ , as the tendency to avoid these terms was even more strongly associated with knowledge of racial stereotypes.

be extrapolated to behavior exhibited by Black children—an important consideration for future study—the data presented here are sufficiently provocative to merit longitudinal research investigating such interpretations and, more generally, the possibility of substantive transitions over the course of development.

The present findings also speak to broader issues regarding the development of intergroup attitudes and relations. The extant literature typically reports a decrease in biased intergroup attitudes as children increase in age, yet there is no agreed upon explanation for why this pattern emerges. Some suggest that this decline reflects a genuine decrease in prejudice resulting from increased perspective taking during the acquisition of concrete operations (Aboud, 1988; Doyle & Aboud, 1995; Doyle, Beaudet, & Aboud, 1988), yet others suggest it represents an increasing desire to adhere to societal norms and engage in self-presentation (Nesdale, 2004; Rutland, 2004). To the extent that our findings indicate a possible transition at 10 years of age—by some accounts the earliest point at which children possess both the cognitive skills to perspective take and autonomous motivation to respond to social norms (Brown & Bigler, 2005; Crandall, Eshelman, & O'Brien, 2002; Rutland et al., 2005)—they suggest an integrative account by which some degree of both capacities are necessary to explain the decrease in biased intergroup attitudes. Indeed, while children younger than 10 years of age may already possess the cognitive tools needed to engage in such regulation, the present study suggests that only when integrated with emerging motivations to adhere to social norms can these skills be harnessed for strategic purposes. Such an interpretation carries with it important practical implications, namely that interventions aimed at improving intergroup relations by promoting genuine egalitarianism (as distinct from simply controlling prejudice) might be particularly relevant to children around 10 years of age.

In closing, some may herald the emergence of the tendency to avoid acknowledging race as evidence of progress made toward social equality—the realization that race doesn't matter. Children do notice race, however, and failing to acknowledge as much may have negative social consequences in addition to the performance deficits identified herein (Katz, 2003; Richeson & Nussbaum, 2004; Schofield, 2007). Regardless, the anomaly in task performance demonstrated in the present study may point to the onset of an important transition in human social development at 10 years of age, when internalized social and moral norms begin to regulate behavior, even when such regulation comes at a cost.

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