

Developmental Antecedents and Social and Academic Consequences of Stereotype-Consciousness in Middle Childhood

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The present study, which included 124 children ages 5–11, examined developmental antecedents and social and academic consequences of stereotype-consciousness, defined as awareness of others' stereotypes. Greater age and more frequent parent-reported racial socialization practices were associated with greater likelihood of stereotype-consciousness. Children who knew of broadly held stereotypes more often explained hypothetical negative interracial encounters between White actors and Black targets as discriminatory. In addition, among African American and Latino children who knew about broadly held stereotypes, diagnostic testing conditions led to stereotype threat effects on a standardized working memory task. Findings are discussed in terms of the contribution to our understanding of children's developing thinking about and response to stereotypes and related phenomena.

Children actively attend to, interpret, and reason about race as an important feature of the social world (Hirschfeld, 1996; Killen, Lee-Kim, McGlothlin, & Stangor, 2002; Quintana & McKown, 2008). One form of thinking about race is stereotype-consciousness, defined as knowledge that others endorse beliefs about the characteristics of ethnic groups (McKown, 2004; McKown & Weinstein, 2003). In contrast to children's stereotypes, which are their *own* beliefs about the characteristics of ethnic groups, stereotype-consciousness refers to children's knowledge that people other than the child himself endorse such stereotypes, whether or not the child agrees with those stereotypes.

The present study focuses on children's knowledge of others' stereotypes, defined as beliefs about the characteristics of an identifiable group. Prejudice is an emotional response, generally negative, directed toward members of a specific group. Discrimination is negative treatment because of a person's group membership. We recognize important differ-

ences between these concepts. However, previous work suggests that when asked about intergroup biases, children describe an admixture of stereotypes, prejudices, and discrimination (McKown, 2004). An underlying premise of this work, therefore, is that children's knowledge of ethnic stereotypes and their knowledge of related concepts such as prejudice and discrimination develop together.

When children develop stereotype-consciousness, the social world admits of new and consequential interpretations. For example, when children become aware of others' stereotypes, they may interpret negative interracial exchanges as the behavioral expression of stereotypes (Brown & Bigler, 2005). Furthermore, under high-stakes testing conditions, children who are aware of a broadly held negative stereotype about the academic competence of their ethnic group might become concerned that their performance will be interpreted as evidence that they conform to the stereotype. This concern can, in turn, hamper performance in a particular class of self-fulfilling prophecy that Steele and Aronson (1995) called "stereotype threat." To fully understand how race and racial stereotypes influence children's development, then, it is critical to understand when children develop stereotype-consciousness, what factors are associated with the onset of stereotype-consciousness, and how stereotype-consciousness shapes children's interpretations of and response to events.

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What We Know About Stereotype-Consciousness

At what age might children develop stereotype-consciousness? Research on children's social perspective taking (Selman, 1980), theory-of-mind understanding (Flavell, 1999, 2000; Perner & Wimmer, 1985), and person perception (Peevers & Secord, 1973; Rholes & Ruble, 1984) all suggest that between the ages of 5 and 11, children's capacity to infer others' mental states, intentions, beliefs, and psychological characteristics improves dramatically. Stereotype-consciousness by definition involves awareness of others' stereotypes, which are a particular type of mental state. Thus, these lines of research on children's social cognitive development suggest that children should develop stereotype-consciousness in middle childhood.

Consistent with this prediction, research has shown that by early adolescence, most children have developed knowledge of broadly held stereotypes. Quintana and colleagues found that after age 10, children refer to prejudice as a reason someone would not like a person from their ethnic group (Quintana, 1994, 1998; Quintana & Baessa, 1996; Quintana & Vera, 1999). Similarly, Verkuyten, Kinket, and van der Wielen (1997) found that 92% of Dutch children between the ages of 10 and 13 could provide meaningful definitions and examples of discrimination. Quintana and colleagues focused on children's awareness of *prejudice* and Verkuyten et al. focused on knowledge of *discrimination*. Nevertheless, prejudice and discrimination are conceptually related to stereotypes. Thus, it seems likely that early awareness of prejudice and discrimination would coincide with awareness of stereotypes.

Other work provides clues about the age of onset of stereotype-consciousness. Augoustinos and Rosewarne (2001) found that among 5- and 6-year-olds in Australia, children's own stereotypes were highly correlated with the stereotypes they assumed others to have. In contrast, among 8- and 9-year-olds, the correlation between children's own stereotypes and the stereotypes they recognize in the broader culture was much weaker. To assess children's stereotypes, Augoustinos and Rosewarne administered the Preschool Racial Attitudes Measure. To assess stereotype knowledge, they asked children to report what *most* Australians think about a White and a Black target. Using a similar measurement strategy, Enesco, Navarro, Paradela, and Guerrero (2005) found that between second and sixth grades, Spanish and Latin American children's own stereotypes became more weakly corre-

lated with the stereotypes they knew were broadly held by others. Consistent with the literatures on social perspective taking, theory of mind, and person perception, these findings suggest that younger children do not distinguish their own beliefs from others' beliefs, but with age, their own beliefs and the beliefs they understand others to have diverge. More broadly, this suggests that between ages 5 and 11, children develop knowledge of broadly held stereotypes distinct from their own stereotypes.

In a direct assessment of stereotype-consciousness, McKown and Weinstein (2003) used a vignette-based interview to assess two components of children's stereotype-consciousness. First, they assessed children's ability to infer that another individual endorses a stereotype. Second, they assessed children's knowledge of broadly held stereotypes. In the context of a vignette-based interview, very few 6-year-olds were able to infer others' stereotypes. Even fewer knew about broadly held stereotypes. Between the ages of 6 and 10, with increasing age, children became increasingly likely to be able to infer others' stereotypes and to describe broadly held stereotypes. By age 10, most children were able to infer others' stereotypes and knew about broadly held stereotypes. Furthermore, McKown and Weinstein (2003) found that African American and Latino children were more likely to know about broadly held stereotypes than their White and Asian peers.

What We Do Not Know About Stereotype-Consciousness

Together, the studies reviewed suggest that between the ages of 5 and 10, children develop the ability to infer others' stereotypes and they develop knowledge of broadly held stereotypes. It is less clear what individual, family, and community factors influence children's stereotype-consciousness. Furthermore, it remains unclear how stereotype-consciousness shapes children's interpretations of and response to social events. Finally, we know little about whether and how children's developing stereotype-consciousness affects their response to school, where stereotypes about academic ability can be unwittingly reflected in, for example, teachers' expectations (McKown & Weinstein, 2008).

Individual, family, and community correlates. Individual, family, and community forces may be associated with the development of stereotype-consciousness. Previous research has found, for example, that stereotype-consciousness is associated

with child ethnicity. In contemporary American society, negative stereotypes about the intellectual abilities of African Americans and Latinos and positive stereotypes about the abilities of Asian Americans and Whites persist (Bobo, 2001). Perhaps reflecting the salience of stereotypes and prejudice to these groups, McKown and Weinstein (2003) found that between ages of 6 and 10, African American and Latino children are more likely to express knowledge of broadly held stereotypes than White and Asian students. This suggests that the different lived experiences of children from different ethnic groups may influence the age of onset of stereotype-consciousness. It remains unclear, however, what specific experiences are associated with the onset of stereotype-consciousness.

It seems likely that the more parents talk with their children about race and racism, the more knowledge children will develop about many aspects of race relations, including broadly held stereotypes. Research on racial socialization practices specifically suggests that parents' efforts to instill pride in their culture, to prepare them for ethnic bias, and to promote interracial mistrust are different ways parents teach their children about race (Hughes & Chen, 1999). It is possible that preparing children for bias and promoting interracial mistrust can teach children the negative racial perceptions held by outgroup members. Similarly, if instilling cultural pride includes promoting pride in the face of outgroup devaluation, it may attune children to others' negative stereotypes. In this study, we hypothesize that racial socialization practices in particular, not general parenting practices, such as authoritative, authoritarian, and permissive parenting styles (i.e., Baumrind, 1989; Maccoby & Martin, 1983) promote the development of stereotype-consciousness.

Exploring the relation between racial socialization practices and stereotype-consciousness has implications for theory. The racial socialization literature has identified associations between parental talk about race and psychosocial and academic outcomes such as behavior problems (Caughy, O'Campo, Randolph, & Nickerson, 2002), racial identity (Stevenson, 1995), self-efficacy (Bowman & Howard, 1985), and school grades (Bowman & Howard, 1985; Sanders, 1997). Less is known about developmental mechanisms that mediate the association between racial socialization and those outcomes. It may be that frequent racial socialization heightens stereotype-consciousness, which in turn affects children's response to social and academic situations. Exploring the link between racial

socialization and stereotype-consciousness may thus clarify the chain of events leading from racial socialization to social and academic outcomes.

Experiences outside the home are also likely to influence children's ideas about stereotypes. Simons et al. (2002) found that a large percentage of African American children report being the targets of negative treatment because of their race. Exposure to discrimination can in turn negatively affect children's academic performance and mental health (Cooper, McLoyd, Wood, & Hardaway, 2008). It seems likely that in addition to its academic and behavioral consequences, direct and vicarious exposure to discrimination will heighten children's knowledge about the nature of others' stereotypes.

Social consequences. A second issue that remains open is the social consequences of stereotype-consciousness. In an influential review paper, Brown and Bigler (2005) articulated a developmental model of factors that lead children to interpret negative interracial exchanges as acts of discrimination. Among the factors in their model, Brown and Bigler argued that the more knowledge children develop about broadly held stereotypes, the more likely they are to interpret instances of negative interracial interaction as reflecting racial discrimination. Imagine, for example, a child who sees a White teacher give negative feedback to a Black child. According to the Brown and Bigler model, if the child who witnesses this interaction has learned that many White people think Black people are not smart, she will be more likely to interpret the specific teacher-student interaction as an act of discrimination. Brown (2006) found that even young children sometimes make attributions to discrimination when judging vignettes in which a teacher treats a student negatively. It remains an open question how children's knowledge of broadly held stereotypes influences their interpretations of these events.

Academic consequences. Another important issue is how stereotype-consciousness affects children's response to academic performance situations. The literature on stereotype threat suggests that when members of a stereotyped group are in a situation in which they become concerned about being judged on the basis of a stereotype, this can affect their performance in the stereotyped domain (Steele & Aronson, 1995). Among African American adults, for example, stereotype threat can interfere with academic performance in testing situations characterized as diagnostic of ability (Steele & Aronson, 1995). Stereotype threat also has been shown to hamper math performance among

women (Spencer, Steele, & Quinn, 1999), memory among the elderly (Chasteen, Bhattacharyya, Horthota, Tam, & Hasher, 2005), and even athletic performance among White males (Stone, Lynch, Sjomeling, & Darley, 1999).

A key premise of stereotype threat theory is that *concern about confirming others' stereotypes* initiates a cascade of events leading to a self-fulfilling prophecy. Except when stereotyped beliefs are expressed overtly, then, for a situation to evoke stereotype threat, a person must have knowledge of the prevailing stereotypes that pertain to his or her group. Stereotype-consciousness thus appears to be a necessary condition for the propagation of stereotype threat effects in children. This is particularly true when cues that a stereotype may be applied are not explicit. For example, in testing situations, children may understand that their performance will be interpreted as diagnostic of their ability. In this situation, neither race nor stereotypes are directly invoked. However, multiple experiments with adults and one experiment with children have demonstrated that diagnostic testing conditions induce stereotype threat effects. Given contemporary norms against the overt expression of stereotypes, it seems likely such indirect cues will be more prevalent at school than the explicit expressions of stereotyped beliefs.

McKown and Weinstein (2003) found that among African American and Latino children who had knowledge of broadly held stereotypes, and particularly stereotypes about low academic ability, when the conditions of testing were described as diagnostic of academic ability, their performance was worse than when the same task was described as a problem-solving task. For White and Asian students, and for African American and Latino students who were *not* aware of broadly held stereotypes, how the test was described did not affect test performance. This suggests that when children from ethnic groups stereotyped as having low ability become aware of stereotypes about their group, they become susceptible to stereotype threat. It remains unclear what cognitive processes are negatively affected by stereotype threat when children become aware of broadly held stereotypes.

Goals and Hypotheses

One goal of this study was to examine the relation between individual child, family, and community factors and children's stereotype-consciousness. With regard to individual child factors,

this study examined the hypothesis that children from academically stereotyped ethnic groups—African Americans and Latinos—demonstrated knowledge of stereotypes earlier and at every age more frequently than children from academically nonstereotyped ethnic groups. With regard to family factors, in this study, we evaluated the hypothesis that more frequent parent-reported racial socialization practices, but not parent-reported general parenting practices, was associated with greater likelihood of children's stereotype-consciousness. With regard to community factors, this study examined the hypothesis that greater self-reported exposure to discrimination was associated with greater likelihood of stereotype-consciousness.

A second goal of this study was to examine the social and academic consequences of stereotype-consciousness. First, we examined the hypothesis that children who have developed knowledge of broadly held negative stereotypes would more likely than children without such knowledge explain negative interracial interactions as expressions of racial discrimination, particularly when there is a White actor and a Black target. Second, we examined the relation between stereotype-consciousness and response to testing conditions. This study employed a well-validated test of working memory capacity as the performance task. The specific hypothesis tested was that when children from academically stereotyped ethnic groups become aware of broadly held stereotypes, they become vulnerable to stereotype threat effects that are induced by characterizing a working memory task as diagnostic of ability.

Method

Recruitment of Participants

During the 2004–2005 school year, the participating suburban Chicago school district served approximately 5,000 elementary school students. The district included students who were 56% White, 29% Black, 4% Hispanic, 4% Asian, 7% biracial or multiracial, and 17.9% low income. Consent forms and a letter of invitation were sent to all students in Grades K through 4 in all but one of the district's elementary schools. Consent forms for 155 children were returned; 124 children were interviewed. Of the remaining 31 children whose parents consented but who did not participate in the study, 16 had a scheduling conflict, 8 withdrew before the interview, and 7 withdrew before the interview was complete. The 7 who withdrew

before completing the interview cited a preference to go home and play. Many parents who did not consent to have their children participate expressed interest but declined because of intractable after-school scheduling conflicts.

Participating students included 52.4% boys. In terms of ethnicity, the sample included 63.7% White children, 16.9% Black children, 8.1% Latino children, and 11.3% Asian children. Family median income was between \$60,000 and \$70,000. Over 90% of participating families included an adult with a college degree or advanced or professional degree. Compared to the district's student body as a whole, parents of participating children were more likely to be White, high income, and highly educated. There was no association between age and gender or ethnicity; in other words, gender and ethnic representation was similar at all ages (see Table 1).

Measures

Child age. Parent-reported child date of birth was used to calculate age at the date of interview.

Table 1
Sample Characteristics

Characteristics	N (%)
Gender	
Boy	65 (52.4)
Girl	59 (47.6)
Ethnicity	
White	79 (63.7)
African American	21 (16.9)
Latino	10 (8.1)
Asian	14 (11.3)
Biracial	17 (13.7)
Age (years)	
6	23 (18.5)
7	34 (27.4)
8	24 (19.4)
9	24 (19.4)
10	12 (9.7)
11	7 (5.6)
Highest parent education	
Advanced degree	82 (66.1)
College graduate	32 (25.8)
Some college	9 (7.3)
High school or GED	1 (0.8)
Stereotype-consciousness	
Able to infer stereotypes	82 (66.1)
Knows about stereotypes	41 (33.1)

Child ethnicity. Parents provided information about the child's ethnicity by checking one or more boxes on a list of racial/ethnic designations. The list included African American, European American, Mexican American, Native American, Latino, Asian American, and Other. In the stereotype threat portion of the study, we were interested in the effects of diagnostic testing condition on working memory performance among children from academically stereotyped ethnic groups. In the contemporary American context, negative stereotypes about the academic abilities of African American and Latinos persist (Bobo, 2001). Thus, for stereotype threat analyses, we examined the differential impact of testing conditions on children from stereotyped compared to nonstereotyped ethnic groups (i.e., African American and Latino vs. White and Asian). Because people of mixed ethnic heritage are often judged based on the more stigmatized identity (Myrdal, 1944), when parents indicated a multiethnic heritage, children were designated as being in a stereotyped ethnic group if either of their parents were African American or Latino.

Child verbal ability. As a measure of verbal skill, children were given the Vocabulary subtest of the Wechsler Intelligence Scale for Children—Third Edition (Wechsler, 1991). Children's scaled score on Vocabulary has high split-half and test-retest reliabilities ($r_{xy}s = .87$ and $.89$, respectively) and is highly correlated with Verbal IQ and with Full-Scale IQ (Wechsler, 1991). Vocabulary scaled score will be used as a covariate to distinguish the effects of verbal skills from the effects of other independent variables on each dependent variable.

Child stereotype-consciousness. Children were given a revised version of the McKown and Weinstein's (2003) Stereotype-Consciousness Interview (see Appendix A). There are two parts to this measure. The first part measured children's ability to infer another person's stereotype. The second part measured children's knowledge of broadly held stereotypes.

For the first part, children listened to stories about an imaginary land called Kidland. Children were told that in Kidland, there are two groups of people—the Greens and the Blues. In Kidland, Greens think Blues are not smart. In the target story, a Green protagonist must pick either a Green child or a Blue child who are each previously unknown by the protagonist to be a study buddy or be on a spelling team. Children were randomly assigned to hear one of the two stories. After hearing the story, the examiner asked children who the Green child will pick. The examiner then asked the

child to explain why the protagonist chose the child he or she chose. The examiner also asked who the child thinks is smarter and why the child thinks that. Children's reasoning in response to the "why" questions indicated whether or not they were able to infer the protagonist's stereotype. Children were scored as able to infer a stereotype if their response to either "why" question referred to a stereotype (e.g., "Greens *think* Blues are not smart—that's why the Green choose the Green"). Children were coded as not able to infer a stereotype if their answer did not refer to a stereotype (e.g., "They are both Greens").

For the second part of the interview, children were asked how the real world is like Kidland. Children were prompted to list several similarities between the real world and Kidland. If children's responses included any reference to ethnic stereotypes, the child was coded as knowledgeable about broadly held stereotypes. Because of the conceptual similarity, children were also coded as knowledgeable about broadly held stereotypes if they described prejudice or discrimination. Among children scored as knowledgeable about stereotypes, 65.0% described stereotypes (e.g., "Whites *think* Blacks aren't smart"). An additional 27.5% described discrimination (e.g., "Whites didn't used to let Blacks go to the same restaurants"). An additional 7.5% of respondents described prejudice (e.g., "Whites don't like Blacks"). Finally, 2.5% of respondents used the word "racism" in their response (e.g., "What happens in Kidland is like racism in the real world").

A team of three independent raters coded each child's response to each part of the stereotype-consciousness measure. Average interrater reliability was high—average pairwise agreement for the ability to infer other's stereotypes was $\kappa = .77$ and for knowledge of broadly held stereotypes was $\kappa = .87$. There was no effect of story on children's ability to infer others' stereotypes ($B_{\text{story}|\text{ability to infer}} = 0.24$, $SE = 0.39$, ns , odds ratio [OR] = .79) or knowledge of broadly held stereotypes ($B_{\text{story}|\text{knowledge}} = -0.72$, $SE = 0.39$, ns , OR = 0.49).

Child exposure to discrimination. Interviewers read 11 statements about events reflecting personal or vicarious exposure to race-based teasing (e.g., "I have been teased because of my race"), name calling (e.g., "I have been called names because of my race"), or negative treatment (e.g., "I have been treated badly because of my race"). Children indicated how true each statement was for them. Options included "Not at all," "A little," "Pretty much," and "A lot." Children were shown a poster

board with four water glasses representing the response options. A glass with "Not at all" written under it was empty. A glass with "A little" written under it was a quarter full. A glass with "Pretty much" written under it was three quarters full. A glass with "A lot" written under it was full. Children could either speak their response or point to the poster board. Internal consistency reliability for the scale was high (Cronbach's $\alpha = .81$).

Parent racial socialization practices. Parents completed a 44-item Racial Socialization Questionnaire (Briscoe-Smith, 2005). Parents read statements about their parenting practices and indicated their agreement with each statement using a scale ranging from 1 (*very much disagree*) to 9 (*very much agree*). Corresponding to constructs described in the racial socialization literature (Hughes & Chen, 1999), statements included items assessing parental cultural socialization ("I teach my child to respect his or her own culture," eight items, $\alpha = .74$), preparation for bias ("I try to prepare my child for an unjust world," three items, $\alpha = .64$), promotion of mistrust ("I tell my child society will have low expectations for him or her," four items, $\alpha = .64$), and colorblind childrearing ("I want my child to be colorblind to race," five items, $\alpha = .60$).

Parenting practices. Parents completed a 73-item Parenting Styles Questionnaire (Heming, Cowan, & Cowan, 1990). Scales included "authoritarian" parenting ("A child should not talk back to a parent, 17 items, $\alpha = .65$), "authoritative" parenting ("I have a definite and clear position on how to raise children," 13 items, $\alpha = .61$), and "permissive" parenting ("A child's needs must come before the parents," 10 items, $\alpha = .53$).

Discrimination attribution. An intergroup attribution measure, created for this study, was administered. Children listened to four brief stories about interpersonal interactions involving three people. In each vignette, photographs obtained from public domain Web sites or from the Ekman faces (Ekman, 1993) were used to depict each character.

In all of the vignettes, one character was the "actor" and two characters were "targets." Actor photographs were at the top center of a page and target photographs were at the bottom two corners of the page. Actor child and adult photographs were rated by a team of research assistants on attractiveness (anchors were $-3 = \text{very unattractive}$, $-2 = \text{unattractive}$, $-1 = \text{a little unattractive}$, $0 = \text{neither attractive nor unattractive}$, $1 = \text{a little attractive}$, $2 = \text{attractive}$, and $3 = \text{very attractive}$) and expressed mood ($-3 = \text{very unhappy, sad, or mad}$; $-2 = \text{unhappy}$,

sad, or mad; -1 = a little unhappy, sad, or mad; 0 = neither happy nor unhappy; 1 = a little happy; 2 = happy; and 3 = very happy). Actor faces were chosen that were neutral in attractiveness and facial expression (average rating between -1 and 1 on both scales). In each story, one of the two targets was African American and one was European American. All target child photographs were rated as moderately attractive and moderately happy (average rating > 1 on both scales). The actor was always European American. In the stories, target children were described as similar in likability and competence. In all of the stories, the actor treated one of the targets negatively and treated the other positively. Sex of the vignette characters was matched to the interviewee's sex.

In two stories, an African American target child was treated negatively. In two stories, a European American target child was treated badly. Two stories involved peer interactions; two involved teacher-student interactions. Stories were always told in the same order—peer teasing, teacher evaluation, peer exclusion, teacher treatment (see Appendix B). Children were randomly assigned to condition such that half of the children heard stories in which the targets were White, then Black, then White, then Black, and half the children heard stories in which the targets were Black, then White, then Black, then White. After each story, children were asked why the actor treated the target badly. A team of three coders scored children's open-ended responses as either including an attribution to racial discrimination or not. Average interrater reliability between pairs of coders was excellent ($\kappa = .94$). There was no effect of condition on the average number of attributions children gave to White and Black targets, $F(1, 118) = 0.03$, *ns*.

Digit Span. Children were given the Digit Span subtest from the WISC-III (Wechsler, 1991). There are two parts of this test, Digits Forward (DF) and Digits Backward (DB). For DF, the examiner read increasingly long strings of numbers and the child repeated the string. For each trial, a correct recitation of the digit string yielded a score of 1 and an error yielded a score of 0. For DB, the examiner read a second series of increasingly long strings of numbers and children were to recite the numbers in reverse order. DB measures working memory, defined as the capacity to store and manipulate information for brief periods of time. The measure of working memory capacity used in this study was the maximum number of digits correctly recited backward.

Procedures

Developmental interview. Trained undergraduate research assistants accompanied the first author to the school to conduct one-on-one interviews in the school's library during the hour immediately following daily dismissal. The developmental interview took 45 min to complete. Parent questionnaires were mailed home during the data collection period. All children assented to participate.

Stereotype threat experiment. Immediately upon completion of the developmental interview, a brief stereotype threat experiment was completed. Children were randomly assigned to diagnostic or nondiagnostic instructions prior to the administration of Digit Span. Instructions mirrored those in McKown and Weinstein (2003). In the diagnostic testing condition, children were told:

The task you are about to do is a very, very good way of testing how good you are at different kinds of school problems. The test is difficult so that we can really learn how good you are at these kinds of problems. How well you do on this test will show what kinds of school problems you are good at and what kinds of school problems you are not so good at. Please do the best you can so that we can learn about your strengths and weaknesses.

In the nondiagnostic testing condition, children were told:

The task you are about to do will help us understand how children learn different kinds of things. These problems *are not* a test. The problems are difficult so that we can really learn how children learn when they have to think hard about their work. By doing this task, you will help us learn how children remember things and solve different kinds of problems. Please try the best you can so that we can understand how children learn and solve problems.

Following instructions, as a manipulation check, children were asked to indicate the purpose of the test. Specifically, they were asked, "I want to make sure that you understand what this task is for. Is this task: (A) a test of how good you are at different kinds of school problems OR (B) a way to understand how children learn and solve problems." Seventy-two percent of children correctly answered this question. When children gave an incorrect response, the examiner corrected them, saying,

“Actually, the task is . . . ” and then reading the correct response.

Results

Preliminary Analyses

Descriptive statistics. Sample characteristics and descriptive statistics for all measures are presented in Tables 1 and 2, respectively.

Missing data. Parents of 100 participating children, or 80.6% of the sample, returned parent questionnaires. There were no missing data for child respondents. Parent missing data were handled through multiple imputation using NORM 2.03 software (Schafer, 1999). Graham (2009) recommended generating at least 40 imputed data sets when missing data are high to maximize statistical power. For this study, 100 imputed data sets were generated and Mplus 5.1 (Muthén & Muthén, 1998–2007) was used to conduct analyses across all data sets.

Age-Related Changes in Children's Stereotype-Consciousness

Logistic regression models were used to evaluate age-related changes in children's stereotype-consciousness. Each component of stereotype-consciousness—the ability to infer others' stereotypes and knowledge of broadly held stereotypes—was entered as the criterion measure in separate logistic regression analyses. In both analyses, age and verbal ability were entered as the predictors. Age and verbal ability were positively associated with the ability to infer another's stereotypes ($B_{\text{age}} = 0.58$,

$SE = 0.17$, $p < .05$, $OR = 1.78$; $B_{\text{vocabulary}} = 0.23$, $SE = 0.07$, $p < .05$, $OR = 1.26$) and knowledge of broadly held stereotypes ($B_{\text{age}} = 1.13$, $SE = 0.21$, $p < .05$, $OR = 3.08$; $B_{\text{vocabulary}} = 0.23$, $SE = 0.08$, $p < .05$, $OR = 1.26$). A plot of age-related changes in these two kinds of stereotype-consciousness suggests that at every age, children are more likely to be able to infer others' stereotypes than they are to know about broadly held stereotypes (see Figure 1). Hereafter, this first regression model is referred to as the “base model.”

Antecedents of Stereotype-Consciousness

Race. The base logistic regression models described earlier were extended to evaluate the association between race and stereotype-consciousness. Adding dummy codes representing ethnicity did not explain additional variance in children's ability to infer others' stereotypes ($B_{\text{age}} = 0.56$, $SE = 0.17$, $p < .05$, $OR = 1.75$; $B_{\text{vocabulary}} = 0.19$, $SE = 0.07$, $p < .05$, $OR = 1.21$; Wald statistic_{ethnicity} = 1.64, *ns*) or in their knowledge of broadly held stereotypes ($B_{\text{age}} = 1.17$, $SE = 0.22$, $p < .05$, $OR = 3.23$; $B_{\text{vocabulary}} = 0.26$, $SE = 0.08$, $p < .05$, $OR = 1.30$; Wald statistic_{ethnicity} = 2.30, *ns*). Similarly, adding a dummy code representing academically stereotyped child ethnicity (African American and Latino vs. White and Asian) did not explain additional variance in children's ability to infer others' stereotypes ($B_{\text{age}} = 0.57$, $SE = 0.17$, $p < .05$, $OR = 1.77$; $B_{\text{vocabulary}} = 0.22$, $SE = 0.07$, $p < .05$, $OR = 1.24$; $B_{\text{ethnicity}} = 0.26$, $SE = 0.51$, *ns*, $OR = 1.30$) or in their knowledge of broadly held stereotypes ($B_{\text{age}} = 1.16$, $SE = 0.22$, $p < .05$, $OR = 3.20$; $B_{\text{vocabulary}} = 0.26$, $SE = 0.08$, $p < .05$, $OR = 1.30$; $B_{\text{ethnicity}} = 0.80$, $SE = 0.63$, *ns*, $OR = 2.23$).

Parenting. Additional logistic regression analyses were run to evaluate the contribution of parenting practices and racial socialization practices to children's stereotype-consciousness. Age, verbal ability, and variables reflecting racial socialization practices (parent self-reported cultural socialization, preparation for bias, promotion of mistrust, and colorblind practices) were entered simultaneously and analyzed with Mplus 5.1 across 100 imputed data sets. Parent self-reported cultural socialization was negatively associated with the ability to infer others' stereotypes, and preparation for bias was positively associated with this ability ($B_{\text{cultural socialization}} = -0.67$, $SE = 0.31$, $p < .05$, $OR = 0.51$; $B_{\text{preparation for bias}} = 0.59$, $SE = 0.26$, $p < .05$, $OR = 1.80$). In addition, parent-reported cultural socialization practices were positively associated with knowledge of

Table 2
Descriptive Statistics

Scale	Reliability	M	SD	Range
Age	—	8.4	1.4	6–11
Vocabulary scaled score	.87 ^a	12.8	3.5	3–19
Exposure to Discrimination	.81 ^b	1.6	0.5	1–4
Cultural Socialization	.74 ^b	7.1	1.1	1–9
Preparation for Bias	.64 ^b	6.3	1.7	1–9
Promotion of Mistrust	.64 ^b	3.6	1.6	1–8
Colorblind socialization	.60 ^b	5.0	1.1	1–9
Attribution score (Black target)	.94 ^c	1.6	1.3	1–4
Attribution score (White target)	—	0.6	0.9	1–4
Digits Span scaled score	.85 ^b	10.7	3.0	4–19
Maximum Digits Backward	—	3.6	1.0	2–7

^aSplit-half reliability. ^bCronbach's alpha. ^cKappa.

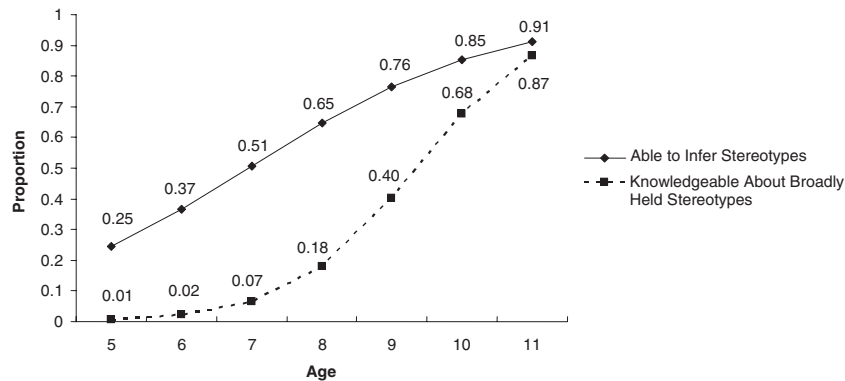


Figure 1. Proportion of children able to infer stereotypes and knowledgeable about broadly held stereotypes, by age. Proportions are adjusted for differences in Vocabulary standard score.

broadly held stereotypes ($B_{\text{cultural socialization}} = 0.58$, $SE = 0.29$, $p < .05$, $OR = 1.78$).

Next, variables reflecting parenting practices (parent self-reported authoritarian, authoritative, and permissive parenting) were entered on a second step after the base model. None of the regression coefficients associated with parenting practices was associated with either ability to infer others' stereotypes or knowledge of broadly held stereotypes.

Exposure to discrimination. Next, the base model was extended to evaluate the association between exposure to discrimination and parenting and children's stereotype-consciousness. The total score on the exposure to discrimination measure was entered to the base model. Self-reported exposure to discrimination did not predict either the ability to infer others' stereotypes ($B_{\text{age}} = 0.58$, $SE = 0.17$, $p < .05$, $OR = 1.78$; $B_{\text{vocabulary}} = 0.23$, $SE = 0.07$, $p < .05$, $OR = 1.26$; $B_{\text{exposure}} = -0.05$, $SE = 0.45$, ns , $OR = 0.95$) or knowledge of broadly held stereotypes ($B_{\text{age}} = 1.13$, $SE = 0.21$, $p < .05$, $OR = 3.09$; $B_{\text{vocabulary}} = 0.23$, $SE = 0.08$, $p < .05$, $OR = 1.26$; $B_{\text{exposure}} = -0.06$, $SE = 0.63$, ns , $OR = 0.94$). Analogous post hoc analyses were run with scores reflecting created subscales reflecting personal exposure to discrimination, exposure to teacher discrimination, and media exposure to discrimination. None of these measures predicted stereotype-consciousness.

Relation Between Stereotype-Consciousness and Discrimination Attributions

Stereotype-consciousness and discrimination attributions. To evaluate the relation between stereotype-consciousness and discrimination attributions, a mixed factorial analysis of covariance was run, with stimulus target race as the within-subjects factor,

knowledge of broadly held stereotypes (aware or not aware) as the between-subjects factor, age and vocabulary scaled score as the covariates, and number of discrimination attributions as the dependent variable. This analysis yielded a significant between-subjects main effect of stereotype-consciousness on attribution scores, $F(1, 120) = 29.20$, $p < .05$, $\eta^2 = .20$, with children who are aware of broadly held stereotypes making substantially more discrimination attributions than children who are not aware of broadly held stereotypes. In this model, there was no association between age and the attribution score. The main effect of knowledge of broadly held stereotypes was qualified by a significant Target Race \times Stereotype-Consciousness interaction, $F(1, 120) = 5.32$, $p < .05$, $\eta^2 = .04$. Specifically, the increase in attribution scores for children who were aware of broadly held stereotypes was greater when the stimulus target was Black than when the target was White (see Figure 2).

Alternative explanations for discrimination attributions. A second model was constructed to evaluate the possibility that the ability to infer others' stereotypes is associated with attributions to discrimination. To evaluate this alternative model, a mixed factorial analysis of covariance was run, with the target race as the within-subjects factor, the ability to infer others' stereotypes (able or not able) as the between-subjects factor, age and vocabulary scaled score as the covariates, and number of discrimination attributions as the dependent variable. This analysis yielded no between-subjects main effect of ability to infer others' stereotypes on attribution scores, $F(1, 120) = 1.54$, ns , $\eta^2 = .01$, and a marginally significant Target Race \times Stereotype-Consciousness interaction, $F(1, 120) = 3.15$, $p = .08$, $\eta^2 = .03$. A second alternative model was run using age (8 and older vs. under 8) as an independent variable

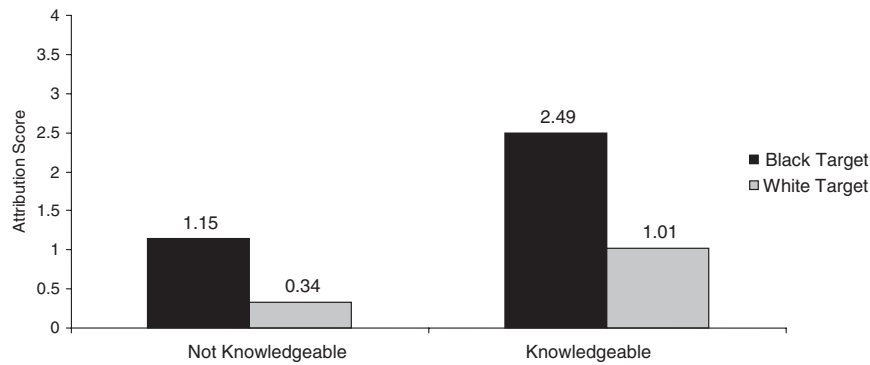


Figure 2. Attribution scores, by knowledge of broadly held stereotypes and target. Proportions are adjusted for differences in Vocabulary standard score.

in place of stereotype-consciousness. There was a main effect of age on attribution score, $F(1, 120) = 4.49$, $p < .05$, $\eta^2 = .04$, and no Age \times Target Race interaction, $F(1, 120) = 2.18$, $p = .11$, $\eta^2 = .02$. The number of attributions to discrimination is thus more weakly associated with age than it is with knowledge of broadly held stereotypes ($\eta^2 = .04$ for age vs. $\eta^2 = .20$ for stereotype-consciousness).

Child ethnicity and attributions. It seemed plausible that the history of discrimination in the United States might predispose ethnic minority children to make discrimination attributions. However, post hoc analyses revealed no evidence of a relation between child ethnicity and attribution scores. Further analyses revealed that the relation between stereotype-consciousness and attribution scores was not different for members of different ethnic groups. A final set of correlational analyses revealed no correlation between children's self-reported exposure to discrimination and their attribution scores.

Stereotype-consciousness as a mediator of the relation between age and attributions. It is noteworthy that when age and knowledge of broadly held stereotypes are entered simultaneously as between-subjects variables in the mixed factorial analysis of covariance, the relation between age and attribution score is nonsignificant. This suggests that the relation between age and attribution may be mediated by knowledge of broadly held stereotypes. This mediation hypothesis was tested using the procedures recommended by Preacher and Hayes (2004), with age as an independent variable, knowledge of broadly held stereotypes as a mediator, and discrimination attributions as the dependent variable. We used a variation of the Sobel test to estimate the mediated effect by averaging across 1,000 bootstrapped estimates. The 95% confidence interval

used to assess the significance of the mediated effect was .13–.35. The indirect effect of age on attribution via awareness of broadly held stereotypes was significant ($M = 0.23$, $SE = 0.06$, $p < .05$).

Stereotype-Consciousness and Response to Diagnostic Testing Conditions

Next, we evaluated the relation between stereotype-consciousness, child ethnicity, and children's response to stereotype threat conditions. A regression analysis was run with maximum digits backward as the dependent variable; stereotype-consciousness (aware or not aware of broadly held stereotypes), ethnicity (African American and Latino vs. White and Asian), and instructional set (diagnostic vs. nondiagnostic testing conditions) as the independent variables; and age, gender, and verbal ability as the covariates. This analysis revealed a marginally significant Stereotype-Consciousness \times Ethnicity \times Instructional Set interaction, $F(1, 107) = 3.19$, $p = .08$, $\Delta R^2 = .02$. An inspection of a plot of means corrected for differences in age and verbal ability suggests that differences were in the predicted direction. Specifically, children from stereotyped ethnic groups who were aware of broadly held stereotypes performed worse on the DB task under diagnostic compared to nondiagnostic testing conditions (see Figure 3).

Next, examining only children who were aware of broadly held stereotypes, a second analysis of covariance was run with maximum digits backward as the dependent variable, ethnicity (African American and Latino vs. White and Asian) and instructional set (diagnostic vs. nondiagnostic testing conditions) as the independent variables, and age, gender, and verbal ability as the covariates. This analysis revealed a significant Ethnicity \times

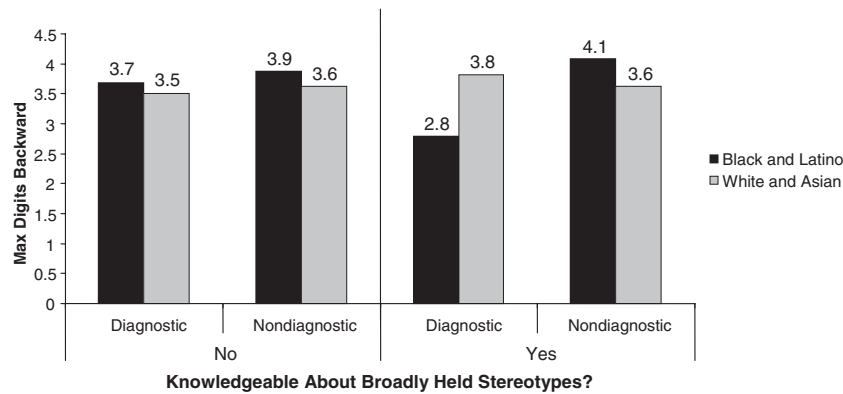


Figure 3. Maximum digits backward, by child ethnicity, testing conditions, and stereotype-consciousness. Means adjusted for age and Vocabulary scaled score.

Instructional Set interaction with African Americans and Latinos performing worse in the diagnostic condition than in the nondiagnostic condition, and Whites and Asian performing the same regardless of condition, $F(1, 31) = 4.51, p < .05, \Delta R^2 = .10$. When the same analysis was run with children who are not aware of broadly held stereotypes, there were no main effects of ethnicity, $F(1, 75) = 1.03, ns, \Delta R^2 = .01$, or instructional set, $F(1, 74) = 0.38, ns, \Delta R^2 < .01$, and there was no evidence of an Ethnicity \times Instructional Set interaction, $F(1, 73) = 0.03, ns, \Delta R^2 = .00$. The effect size of instructional set on maximum digits backward for children from stereotyped groups who were aware of broadly held stereotypes was $R^2 = .15$.

Alternative predictors of response to threat conditions. Next, we sought to evaluate plausible alternative predictors of vulnerability to stereotype threat effects. First, we examined whether the ability to infer others' stereotypes (as opposed to being aware of broadly held stereotypes) was associated with vulnerability to stereotype threat. A regression was run with maximum digits backward as the dependent variable; stereotype-consciousness (able or not able to infer others' stereotypes), ethnicity (African American and Latino vs. White and Asian), and instructional set (diagnostic vs. nondiagnostic testing conditions) as the independent variables; and age, gender, and verbal ability as the covariates. This analysis yielded no evidence of a three-way interaction, $F(1, 107) = 0.86, ns, \Delta R^2 < .01$.

Next, we examined whether age was associated with vulnerability to stereotype threat. Age, ethnicity, and instructional set were entered as the independent variables; gender and verbal ability as the covariates, and maximum number of digits back-

ward as the dependent variable. In the context of this analysis, there was a marginally significant Age \times Ethnicity \times Instructional Set interaction, $F(1, 107) = 3.46, p = .07, \Delta R^2 < .02$. Further analysis with children older than 8 years old (nearest whole number to age median) with instructional set and child ethnicity as the independent variables and verbal ability as the covariate revealed a significant main effect of instructional set, $F(1, 58) = 5.23, p < .05, \Delta R^2 = .06$, qualified by an Ethnicity \times Instructional Set interaction, $F(1, 57) = 5.66, p < .05, \Delta R^2 = .06$. A similar analysis with children under the age of 8 revealed no main effects of ethnicity, $F(1, 49) = 0.05, ns, \Delta R^2 < .01$, or instructional set, $F(1, 49) = 0.39, ns, \Delta R^2 < .01$, and no Ethnicity \times Instructional Set interaction, $F(1, 47) = 0.03, ns, \Delta R^2 < .01$. This finding indicates that among children over the age of 8, African American and Latino children performed worse under diagnostic than nondiagnostic testing conditions and White and Asian children performed the same regardless of testing condition.

Discussion

Summary and Integration of Findings

Age-related changes in stereotype-consciousness. Consistent with our hypotheses and with prior research, in this study, between the ages of 6 and 11, with age, a greater proportion of children were able to infer others' stereotypes and were aware of broadly held stereotypes. Second, at every age in this range, a greater proportion of children were able to infer others' stereotypes than were aware of broadly held stereotypes. Children thus appear able to infer

others' stereotypes before they are aware of broadly held stereotypes. Longitudinal and experimental work will be needed to verify and understand this developmental sequence. It may be that children first become able to infer others' stereotypes. They then use this skill to "collect data," inferring from others' behaviors what stereotypes are broadly held by whom about whom.

Interestingly, in the upper end of the age range of this study, almost all children demonstrated both the ability to infer others' stereotypes and knowledge of broadly held stereotypes. Whereas previous work (McKown & Weinstein, 2003) only included children up to age 10, and did not find such a convergence, this study included 11-year-olds. It may be that by 11 years old, children have mastered all aspects of stereotype-consciousness, which leads to a convergence in developmental trajectories.

Age-related changes in children's ability to infer others' stereotypes were consistent with the literatures on children's theory-of-mind understanding (Flavell, 1999, 2000), social perspective taking (Selman, 1980), and person perception (Peevers & Secord, 1973; Rhoads & Ruble, 1984), all of which strongly suggest that in middle childhood, with age, children become more skilled at inferring others' mental states and traits. Furthermore, age-related changes in children's knowledge of broadly held stereotypes were consistent with the literatures on ethnic perspective taking (Quintana, 1998) and ethnic cognitions (Augoustinos & Rosewarne, 2001; Enesco et al., 2005; Verkuyten et al., 1997), both of which found that by the age of 10, children demonstrate knowledge that racial bias is a part of the social world. A limitation of this study is that the Stereotype-Consciousness Interview requires children to draw an analogy between an imaginary world and the real world and verbally express this understanding. Because of the cognitive and linguistic requirements of the task, it is likely to provide a conservative estimate of the prevalence of stereotype-consciousness.

Ethnicity and stereotype-consciousness. Contrary to hypotheses and previous research (McKown & Weinstein, 2003), in this study, there were no ethnic differences in the age of onset of children's stereotype-consciousness. The regression coefficients and ORs associated with stereotyped ethnicity were nearly identical in this study to those in McKown and Weinstein (2003) Study 1: $Bs = 0.80$ and 0.86 , $ORs = 2.23$ and 2.36 in this study and McKown and Weinstein, respectively. The smaller sample size in the present study may have reduced power to detect an effect of ethnicity that in fact existed. It is

also possible that the discrepancy between the current study and prior work originates from differences between the community or school environment, the salience of race in those settings, or the characteristics of the children who participated. Future research should systematically evaluate factors that moderate the relation between ethnicity and age of onset of stereotype-consciousness.

Parenting practices and stereotype-consciousness. The racial socialization literature emphasizes the important role that parent conversations about race play in preparing children for a multiethnic world (Hughes et al., 2008). Do parent conversations about race influence the development of stereotype-consciousness? In this study, the more frequently parents talked about some aspects of race, the more likely their child was to have developed stereotype-consciousness. More frequent parent-reported preparation for bias was associated with greater likelihood of being able to infer others' stereotypes. Similarly, more frequent parent-reported cultural socialization practices were associated with greater likelihood that children had achieved knowledge of broadly held stereotypes. It is important to note that there was no association between general parenting practices and stereotype-consciousness, although it is possible that low measure reliability on some of the parenting practices scales reduced power to detect effects. This suggests it is conversations parents have with their children about race specifically, and not general parenting practices, that are related to the development of stereotype-consciousness. These findings make an important contribution to research demonstrating links between parental racial socialization and child outcomes. The present study suggests that stereotype-consciousness may serve as a mediator of such effects.

Surprisingly, more frequent parent-reported cultural socialization practices marginally predicted less likelihood of being able to infer others' stereotypes. Although it seems unlikely, it may be that parent cultural socialization practices interfere with the ability of children to infer others' stereotypes. It may also be that parents modify their practices depending on their children's social cognitive skills and that when children seem less capable of picking up on social cues, they more frequently emphasize socialization practices. Future research will be necessary to understand this puzzling finding and to explore the specific mechanisms through which parents' conversations with their children about race influence children's racial

cognitions in general and their stereotype-consciousness specifically.

Exposure to discrimination and stereotype-consciousness. Children's exposure to discrimination has been regularly documented (e.g., Simons et al., 2002) as has the impact of discrimination on children's academic achievement and mental health (Cooper et al., 2008). It seems plausible that exposure to discrimination would increase children's awareness of broadly held stereotypes. In this study, however, exposure to discrimination was unrelated to stereotype-consciousness. The distribution of scores on the exposure questionnaire was positively skewed such that children in this sample reported little exposure to discrimination. Restricted range on this measure may have constrained our ability to detect an association between exposure to discrimination and stereotype-consciousness. Alternatively, it may be that a self-report questionnaire does not capture the kinds of experiences with discrimination that shape children's understanding of stereotypes. Finally, it is possible that the wording of the questions in this measure was inadequately understood by children to accurately assess their exposure to discrimination. Future work using other measurement strategies and methodologies and with samples that have more exposure to discrimination will help clarify the role of discrimination in facilitating the development of stereotype-consciousness.

Social consequences of stereotype-consciousness. Brown and Bigler (2005) argued that knowledge of stereotypes should be associated with interpreting others' behaviors as expressions of discrimination. This study provides empirical support for that proposition. When children had developed knowledge of broadly held stereotypes, they became more likely to explain negative interracial interactions as reflecting discrimination. In this study, knowledge of broadly held stereotypes was a much stronger predictor of making such attributions than age. In addition, with knowledge of broadly held stereotypes as the central predictor and age as a covariate, age was unrelated to the discrimination attributions. A Sobel test of mediation indicated that the relation between age and attributions to discrimination was mediated by knowledge of broadly held stereotypes. This study finds that by late elementary school, most children have developed sufficient knowledge of broadly held stereotypes that they may regularly interpret social interactions as expressions of discrimination. Interestingly, it was stereotype-consciousness, not child ethnicity or exposure to discrimination that was

associated with children's tendency to make discrimination attributions. Future research should examine the relation between children's stereotype-consciousness, the nature and context of the interracial interactions, and children's attributions about the causes of actors' behavior.

Academic consequences of stereotype-consciousness. Stereotype threat theory holds that when individuals become concerned about being judged on the basis of a self-relevant stereotype, they can behave in a manner that is consistent with the stereotype (Steele & Aronson, 1995). A core assumption of this theory is that it is concern about others' stereotypes that causes stereotype threat. Children provide a natural opportunity to test this assumption. If the theory is correct, children from stereotyped groups who do not yet know about broadly held stereotypes will not be affected by stereotype threat conditions. In contrast, children from stereotyped groups who do know about broadly held stereotypes will be affected by stereotype threat conditions.

Consistent with this prediction, African American and Latino students who were aware of broadly held stereotypes performed more poorly on a working memory task when the task was characterized as diagnostic of ability than when the same task was characterized as nondiagnostic of ability. In contrast, children from nonstereotyped ethnic groups and children who were not aware of broadly held stereotypes performed the same on the task regardless of how it was characterized. These findings suggest that when children from stereotyped ethnic groups develop knowledge of broadly held stereotypes, they become vulnerable to situations in which their performance may be interpreted as confirming a negative stereotype about their group, hampering performance in a self-fulfilling prophecy. It may be that children's working memory is impaired by the cognitive load introduced by stereotype threat conditions.

Like the McKown and Weinstein (2003, Study 2), this study found that knowledge of broadly held stereotypes, not the ability to infer others' stereotypes, moderated the relation between instructional set, child ethnicity, and performance. Unlike McKown and Weinstein, results of this study suggest that age also moderates the effects of stereotype threat conditions on task performance—specifically, the older the child, the more strongly diagnostic testing conditions hamper task performance for African American and Latino students only. What is the relation between age and knowledge of broadly held stereotypes? Specifically, 49.3% of

children over age 8 are *not* aware of broadly held stereotypes and 12.3% of children under age 8 *are* aware of broadly held stereotypes. One possibility is that the stereotype-consciousness interview under identified children who were aware of broadly held stereotypes and that a substantially greater proportion of children older than 7 were actually aware of broadly held stereotypes, although they could not or did not articulate that understanding in the context of the stereotype-consciousness interview.

Whatever the reason, these findings lead to the conclusion that as children from stereotyped ethnic groups get older and learn of others' stereotypes, they become susceptible to stereotype threat induced by diagnostic testing conditions. The main difference in these two findings is the estimated age at which children become susceptible to stereotype threat. With age as the criterion, after age 8, children become susceptible to stereotype threat. With knowledge of broadly held stereotypes as the criterion, between the ages of 9 and 10, children become vulnerable to stereotype threat conditions. Either way, consistent with the main findings in McKown and Weinstein (2003, Study 20, these findings suggest that it is in middle to late elementary school that children become susceptible to stereotype threat conditions inducted by the manner in which performance tasks in a stereotyped domain are characterized.

Conclusion

Taken together, this study suggests that as children traverse elementary school, they become able to infer others' stereotypes, they become knowledgeable about broadly held stereotypes, and conversations with parents about race can promote the development of this new social understanding. Furthermore, this study suggests that when children develop knowledge of broadly held stereotypes, they become more likely to attribute discriminatory intent to individuals engaged in interracial interactions. Finally, this study suggests that knowledge of broadly held stereotypes can lead African American and Latino children to perform poorly on tasks that require working memory capacity when those tasks are framed as diagnostic of their ability. Future longitudinal research on children racial cognitions will help to clarify individual child factors and experiences that give rise to stereotype-consciousness and the consequences of this social understanding for children's social and academic functioning.










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Appendix A

Revised Stereotype-Consciousness Interview (SC-R), Study Buddy Story

<p>[SHOW BLANK PAGE]</p> <p>INTRODUCTION: I am going to tell you some stories about an imaginary land called Kidland. In this land, there are two groups of people: the Greens and the Blues.</p>	 <p>These children are Greens. They are called Greens because everything about them is green. See? Everything about them is green.</p>	 <p>These children are Blues. They are called Blues because everything about them is blue. See? Everything about them is blue.</p>	<p>[SHOW BLANK PAGE]</p> <p>STEREOTYPE: There's something I want to tell you about the people of Kidland. In Kidland, Greens think Blues are not very smart. Greens think Blues don't understand their teachers. Greens think Blues aren't good at homework. Greens think Blues don't do well on tests and don't get good grades.</p>
 <p>Greens think that Blues are not smart enough to be the teacher. See? [Point to Green] A Green thinks that only Greens are smart enough to be a teacher.</p>	 <p>Greens think that Blues are not smart enough to be the boss at work. See? [Point to Green] A Green thinks that only Greens are smart enough to be the boss in the factory.</p>	 <p>Greens think that Blues are not smart enough to be the mayor. See? [Point to Green] A Green thinks that only Greens are smart enough to be the mayor. [QUESTION 1 HERE.]</p>	<p>[SHOW BLANK PAGE]</p> <p>I am going to tell you a story about Kidland. After I tell you the story, I am going to ask you some questions, so listen carefully and pay close attention.</p>
 <p>VIGNETTE: This is Gene/Gina. Gene/Gina is about your age. It is the first day of school. Gene/Gina has never met any of his/her new classmates.</p>	 <p>The teacher assigns Gene/Gina to sit at a table with two other children. See? [Point to child in center.] Here is Gene/Gina. Gene/Gina has never met these students before. S/he doesn't know anything about them.</p>	 <p>The teacher asks Gene/Gina [Point to G.] to pick <i>one</i> child at the table to be his/her study buddy. A study buddy is someone you work with so you can understand your homework. A study buddy is someone you work with so you can solve homework problems. A study buddy is someone you work with so you can do well on tests.</p>	 <p>[Point to G.] Gene/Gina looks at the other two students and thinks hard about who s/he wants to be his/her study buddy. S/he knows it will be important to pick someone who is a good student and who can help him/her with his/her work. [QUESTIONS 2 ON HERE.]</p>

Stereotype-Consciousness Interview Questions

1. In Kidland, do Greens think Blues are smart or not smart?.....Smart Not Smart
2. What group is Gene/Gina from? Green or Blue?.....Green Blue
3. Does Gene/Gina know any of the kids in this class?.....Yes No
4. Does Gene/Gina know the other kids at his/her table?.....Yes No
5. Does Gene/Gina want to pick a study buddy that is good at schoolwork or not good at schoolwork?.....Good Not Good
6. Which child will Gene/Gina pick to be his/her study buddy?
[Point to kids at table] This child or this child?.....Green Blue Don't Know
[If child responds "don't know," say once: WHO DO YOU THINK GENE WILL PICK?]
7. Why will Gene/Gina pick that child?
8. Which child at Gene's/Gina's table does Gene/Gina think is better at schoolwork? [Point to kids] This child or this child?Green Blue Don't know
[If child responds "don't know," say once: WHO DO YOU THINK GENE THINKS IS BETTER AT SCHOOLWORK?]
9. Why does Gene/Gina think that?
10. Let me ask you something else. How much is the real world like Kidland? Would you say it's:
 ___ Not at all ___ A little ___ Pretty much ___ A lot
 like Kidland like Kidland like Kidland like Kidland.
 [If child says "Not at all," say "Are there *any* ways that the real world is like Kidland *at all*?
 If child insists there are no similarities, go to last two questions. Otherwise, say:]

11. You said that the real world is [a little, pretty much, or a lot] like Kidland. How is the real world like Kidland?

[If child begins to discuss stereotypes, prejudice, or discrimination, prompts until child reports: (1) an actor, (2) a target, and (3) a belief, attitude, or behavior. Codeable response will include who holds the beliefs, what they believe, and about whom they believe it.]

[ONLY IF CHILD DOES NOT TALK ABOUT STEREOTYPES, PROMPT WITH:]

12. What are some other ways the real world is like Kidland?

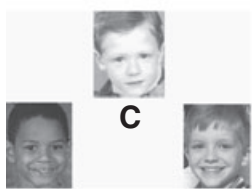

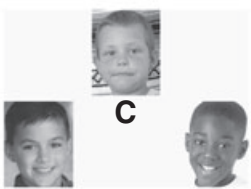
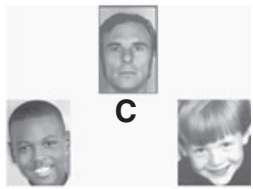
[If child does not mention stereotype, prejudice, or discrimination, ask:]

13. In Kidland, Greens think Blues are not smart? Is there anything like that in the real world?..... Yes No

[If so,] Please tell me about that.

Appendix B

Discrimination Attribution Measure (Boy Version, Order 1)

 <p>A C B</p>	 <p>A C B</p>	 <p>A C B</p>	 <p>A C B</p>
<p>These children [POINT TO A AND B] are both good students. They sit at a table together in their class. Both students are good at schoolwork and both are really nice. They work together on their schoolwork with other students at their table. One day the students are working together at a table with a third student [POINT TO C]. This student [POINT TO C] makes a face at this student [POINT TO A] and says to [HIM/HER], "You're dumb. I don't want to work with you."</p> <ol style="list-style-type: none"> 1. Why did this student [POINT TO C] call his classmate [POINT TO A] dumb? 2. Why didn't this student [POINT TO C] call his other classmate [POINT TO B] dumb? 3. Let's say this student [POINT TO C] calls his classmate [POINT TO A] dumb because he thinks that student is not smart. Why does he think that student is not smart? 4. Why does this student [POINT TO C] think the other student [POINT TO B] is smart? 	<p>[POINT TO A AND B.] These children are both good students. They study hard and they do well on homework and on tests. One day, their teacher [POINT TO C] assigns their class to write a story. Both of these students were excited about writing their stories and they both worked really hard. They both did a really good job on the story. The teacher gives this student [POINT TO B] a good grade for the paper. The teacher gives this student [POINT TO A] a bad grade for the paper.</p> <ol style="list-style-type: none"> 1. Why did the teacher [POINT TO C] give this student [POINT TO A] a bad grade? 2. Why did the teacher [POINT TO C] give this student [POINT TO B] a good grade? 3. Let's say the teacher [POINT TO C] gave this student [POINT TO A] a bad grade because the teacher doesn't think the student is good at schoolwork. Why does the teacher think the student is not good at schoolwork? 4. Why does the teacher [POINT TO C] think this student [POINT TO B] is good at schoolwork? 	<p>These two children [POINT TO A AND B] are new at their school and they don't know anyone. Both are really nice children and both are very good at sports. [POINT TO C] One day on the playground, another child is playing with some friends. That child runs over to these two [POINT TO A AND B]. [HE/SHE] says to this child [POINT TO B], "We want you to play with us." He says to the other child [POINT TO A], "We don't want to play with you. Go away."</p> <ol style="list-style-type: none"> 1. Why do you think this child [POINT TO C] said that this child [POINT TO A] couldn't play with him and his friends? 2. Why do you think this child [POINT TO C] invited this child [POINT TO B] to play with him and his friends? 3. Let's say this child [POINT TO C] doesn't invite this child [POINT TO A] to play because he doesn't like the child, even though they just met. Why do you think he doesn't like the child? 4. Why do you think this child [POINT TO C] likes the other child [POINT TO B], even though they just met? 	<p>[POINT TO A AND B] These two children are very good at school and the behave themselves well. They try hard and they usually raise their hands when their teacher asks a question. The teacher [POINT TO C] usually calls on this student [POINT TO B]. The teacher is friendly and encourages that student. [POINT TO A] The few times the teacher calls on this student, [HE/SHE] is not friendly and [HE/SHE] doesn't listen to the student's ideas.</p> <ol style="list-style-type: none"> 1. Why is the teacher [POINT TO C] not very friendly towards this student [POINT TO A]? 2. Why is the teacher [POINT TO C] friendly towards this student [POINT TO B]? 3. Let's say the teacher [POINT TO C] is not friendly towards this student [POINT TO A] because the teacher doesn't like the child. Why do you think the teacher doesn't like this child [POINT TO A]? 4. Why does the teacher [POINT TO C] like this child [POINT TO B]?