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*Washington University in St. Louis*

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WASHINGTON UNIVERSITY IN ST. LOUIS  
Department of Psychological & Brain Sciences

Children's Perceptions of Status at the Intersection of Race and Gender  
by  
Grace Reid

A thesis presented to  
The Graduate School  
of Washington University in  
partial fulfillment of the  
requirements for the degree  
of Masters of Arts

December 2019  
St. Louis, Missouri

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Grace Reid

*Washington University in St. Louis*

*December 2019*

## ABSTRACT

Children's Perceptions of Status at the Intersection of Race and Gender

by

Grace Reid

Master of Arts in Psychology

Washington University in St. Louis, 2019

Professor Lori Markson, Chair

By 6 years of age, children associate males with higher status than females (Liben, Bigler & Krogh, 2001), and Whites with higher status than Blacks (Bigler, Averhart & Liben, 2003). However, little is known about how race and gender interact to influence children's thinking about status. In Study 1, we asked whether children associate White men with higher status than other races and genders. Sixty children selected from among Black and White male and female targets the person who they thought would do familiar and novel jobs that varied in status. White men were the most likely to be chosen for high status, familiar—but not novel—jobs. However, this depended on the exact job in question. In Study 2, we explored the influence of race [gender] on children's thinking about the relation between gender [race] and status. Children ( $N = 197$ ) matched groups of targets with high- and/or low-status jobs that were presented in 12 pairs of familiar and novel jobs. Race influenced the rate at which men were chosen over women for high status jobs. However, gender did not affect the rate at which Whites were chosen over Blacks for high-status jobs. Further, these results were found only among familiar jobs. Across two studies, we found evidence that children as young as 5 do consider the joint effect of race and gender on status. Children this age, however, may weigh race more heavily than gender and do not necessarily generalize this information to jobs they do not know.



## Children's Perceptions of Status at the Intersection of Race and Gender

Children can infer an individual's status from an early age. For example, 10- to 12-year-olds acknowledge that their possessions and lifestyle are indicators of their social standing relative to others (Mistry, R.S., Brown, C.S., White, E.S., Chow, K.A. & Gillen-O'Neel, C., 2015). Not only do children use status as a way to group individuals, but they also form attitudes towards people who belong to different social classes. Elementary-aged children are less likely to use positive attributes when describing the "poor" than they are to use positive attributes when describing the "rich" or "middle class" (Mistry et al., 2015). Further, children as young as 4 years old display preferences for people who have many, and high-quality, resources over those with fewer or low-quality resources (Shutts, 2015). Even when a novel group is depicted as having possessions indicative of wealth, 4- and 5-year-old children prefer members of that group to members of a group with fewer, high-status possessions (Shutts, 2015; Horwitz, Shutts & Olson, 2014).

When it comes to their own status, children may have a bias towards rating themselves as high on the social spectrum (Mandalaywala, Tai & Rhodes, under review). Despite this optimistic view of themselves, children also realize that not all people are equally likely to have high status. By at least 6, children are aware that some social groups are higher on the social spectrum than others (Liben, Bigler & Krogh, 2001; Bigler, Averhart & Liben, 2003). Even preschool-aged children's preferences reflect an awareness of a relation between social groups and status as they tend to prefer higher-status social groups over lower-status social groups (Hailey & Olson, 2013). Much of the extant literature on children's knowledge of the relative status of social groups focuses on gender and race. An overview of empirical research on children's beliefs about how these two social groups are linked to status is provided below.

## 1. Gender

In a classic study testing children's thinking about how gender relates to status, Liben, Bigler and Krogh (2001), asked 6- to 11-year-old children whether mostly men, mostly women or both men and women should do a series of 25 occupations. Children were also asked about the pay, importance and difficulty of each job. Children of all ages gave jobs that are stereotyped as masculine higher status ratings than jobs stereotyped as feminine. A novel jobs paradigm was also introduced in which children learned about 12 new jobs that were accompanied by pictures of all female or all male workers. Eleven- and 12-year-olds, but not younger children, rated novel jobs shown with male workers as higher status than novel jobs depicted with female workers (Liben, Bigler & Krogh, 2001). This study was among the first to demonstrate that children as young as 6 associate males with high-status occupations more than they associate females with high-status occupations. Further, older children generalize this information about status to jobs that they have no prior exposure to.

The tendency to rate traditionally masculine jobs as higher in status than feminine jobs was since supported by Teig and Susskind (2008) among first and second graders. Of the 18 jobs rated by these children as the highest in status, only two were jobs that are perceived to be feminine. Weisgram, Bigler & Liben (2010) also found that 5- to 10-year-old children believe that traditionally masculine jobs afford more money and power than feminine jobs. Further, children become more aware of the overrepresentation of men in positions of power as they get older (Weisgram, Bigler & Liben, 2010). What is even more informative about the early association between gender and status is that there are gender differences in children's tendency to pair males with higher status than females. Mandalaywala, Tai and Rhodes (under review) reported that boys were more likely than girls to place males higher on a social ladder than

females. Hayes, Bigler and Weisgram (2017) similarly found that boys were more aware than girls that men typically earn more money than women.

Moreover, boys and girls vary in the degree to which they are interested in jobs that are high in status. Teig and Susskind (2008) found that while both boys and girls between the ages of 6 and 8 preferred high- over low-status jobs, this preference was stronger for boys than it was for girls. In a second study, elementary-aged boys were not only more interested than girls in high-paying jobs, but they were also more interested in novel jobs that were portrayed as high-paying and powerful than they were in any other type of job (Weisgram, Bigler & Liben, 2010; Hayes, Bigler & Weisgram, 2017). However, when explicitly asked to rate the occupational values that are most important to them, girls and boys show no difference in how they rate the importance of money and power over other factors (Weisgram, Bigler & Liben, 2010; Hayes, Bigler & Weisgram, 2017). These findings suggest that boys may implicitly hold a preference for high-paying jobs (also see Howard, Carlstrom, Katz, Chew, Ray, Laine, Caulum, 2010), but know that it is socially unacceptable to acknowledge that money is important or that there are gender differences in pay. Still, indirect assessments of children's beliefs about how gender relates to status demonstrate that children may already perceive men as higher status than women by the time they enter kindergarten.

## **2. Race**

The beginning of research on children's awareness of a link between race and status can be traced back to early studies on skin tone. In 1997, Averhart and Bigler had 5- to 7-year-old African American children read stories in which characters with light or dark skin held either high- or low-status occupations. Children were best at recalling information from stories in which light characters had high-status occupations and dark characters had low-status

occupations. This study was one of the first to document that children associate light skin tones with higher occupational status than dark skin tones. This is not surprising given that lighter skin has historically been associated with higher status than darker skin (Maddox, 2004). Maddox (2004) notes that Blacks with lighter skin tones received educational and economic advantages compared to their darker-skinned counterparts who were often prohibited from occupying high-status positions in the past. Even though this association between light skin and high status occurs above and beyond racial boundaries (Maddox, 2004), children also link specific races whose members generally have lighter skin (e.g., Whites) with higher status than races with darker-skinned members (e.g., Blacks). One of the most notable studies to demonstrate this was conducted by Bigler, Averhart & Liben (2003). Using Liben and colleagues' (2001) novel jobs paradigm, these researchers found that the 6- and 7-year-olds in their study rated jobs portrayed as being performed by mostly Blacks as lower status than jobs performed by mostly Whites. Children in this study also thought that Blacks were less likely than Whites to have common occupations that are considered high status.

This finding that Whites are perceived as higher status than Blacks was corroborated by Elenbaas and Killen's 2016 study in which 5- to 11-year-olds matched Black and White targets to belongings and occupations that were indicative of low, medium or high economic status. Children were more likely to pair Black targets with indicators of low status than they were to pair White targets with indicators of low status. Additionally, White targets were paired with indicators of high status more than Black targets. White targets were also more likely to be paired with indicators of high status than they were to be paired with indicators of low status. Similar results were found among samples of 3- to 7-year-olds in the U.S. (Mandalaywala, Tai & Rhodes, under review) and 4-year-old South African children (Olson, Shutts, Kinzler &

Weisman, 2012). In both of these studies, children were more likely to match possessions indicative of high-status with Whites than with Blacks. In the latter study, Black targets were the least likely to be associated with high-status belongings out of all the other racial and gender groups examined in that study. Taken together, these studies demonstrate the early emergence of a perceived link between race and status.

Olson and associates (2012) shed insight on the consequences of perceiving a link between race and status by demonstrating that children's knowledge that Whites are typically higher status than Blacks is related to their own biases. The more children associated Whites with higher status than Blacks and Coloureds, the more likely they were to prefer White targets over Black targets. In addition to fostering racial biases, being aware that there are racial differences in status may also have ramifications for children's own occupational aspirations. For example, African American children's awareness of racial discrimination was found to be related to differences in the status of the occupation they aspired to have and the occupation they expected to have (Hughes, 2011). Similar consequences have been found among children who are aware of gender differences in status. Five- to 10-year-old girls who believed that discrimination was the cause of the lack of female presidents were less likely to believe that they themselves could be presidents (Bigler, Arthur, Hughes and Patterson, 2008). Thus, children who realize that their race, or gender, is typically underrepresented in high-status domains may be less likely to pursue careers in those domains and may instead seek out occupations of low status.

### **3. The Intersection of Race and Gender**

The respective literatures on children's associations between gender and status, and race and status, are fairly comprehensive. Together they demonstrate that children associate males and Whites with higher status than females and Blacks. However, no studies to our knowledge

have examined the combined effect of race and gender on children's thinking about status. The few studies that have examined children's status perceptions of both race and gender did so by questioning children about race and gender separately. For example, Bigler and colleagues (2008) asked 5- to 10-year-olds either about the lack of African American *or* the lack of female U.S. presidents. The majority of children in the study were aware that men and Whites are usually presidents. However, children were not directly asked about whether only White men typically hold the job of being the President. Mandalaywala, Tai and Rhodes (2019) similarly assigned participants to either a race or a gender condition to assess children's associations between each social group and status. However, gender was held constant when children made cross-race judgements, and all targets in the gender condition were Hispanic. Thus, these studies only deepen our understanding of how children think about the independent effects of race and gender on status, but reveal nothing about the joint effect of race and gender on status. In fact, little research has been conducted about how children understand the intersection of race and gender even outside of the realm of status. This has primarily been because young children have generally been thought to be unable to categorize on multiple dimensions (e.g., race and gender) (Liben & Bigler, 1992; Susskind, 2007). Despite this original belief, a growing body of research indicates that children can at least consider two social categories simultaneously.

In one such study, Perszyk, Lei, Bodenhausen, Richeson and Waxman (2018) found evidence that 4- and 5-year-old children hold biases that are both racialized and gendered. Both the explicit and implicit ratings of children in their study were less positive after being primed with pictures of Black boys than after being primed with pictures of Black girls, White girls or White boys. If children truly can weigh only race *or* gender, we might expect ratings after Black male and female targets to be equally lower than ratings following primes of White male and

White female targets. Rather, the specific bias against Black boys suggests that participants conceived of them as different from Black girls instead of grouping them together on the basis of their shared race. Additional evidence of children's ability to consider multiple social categories comes from a study testing 3- and 5-year-old girls' gender and racial preferences (Kurtz-Costes and colleagues, 2011). White girls in this study preferred same-race, same-gender dolls over dolls that were simply same-race or same-gender. Eason, Newheiser & Olson (under review) similarly found that 4- to 5-year-old children expect other people to have friendships that are both same-race and same-gender. Although this tendency was weaker among 4-year-olds, it suggests that children are able to consider multiple categories simultaneously during their early childhood. By 10 years of age, children may even prioritize categorizing individuals based on their multiple, category memberships over more general categories of just race or gender (Susskind, 2007). Given the recent evidence that children can think about multiple social categories in tandem, it is important to understand how children's beliefs about status are shaped by both race and gender.

#### **4. The Current Study**

The goal of the present study was to test whether race and gender simultaneously influence children's thinking about status. First, we asked whether there is a relationship between the race and gender associated with occupations and the status of those occupations. Since previous literature has shown that children associate males and Whites with high status, we predicted that race and gender would work in an additive manner such that higher status racial and gender groups would be most frequently paired with high-status occupations. When asked about who usually performs high-status occupations, children should choose White males more often than Blacks and females (Hypothesis 1). This effect is also hypothesized to be bi-

directional such that children will rate jobs portrayed as being performed by White males as higher status than jobs portrayed as being performed by Blacks or females (Hypothesis 2).

A secondary goal of this study was to examine how children's thinking about how race and gender relate to status changes throughout development. A substantial amount of work predicts that children's knowledge of how race and gender relate to status will become more accurate with age. Not only are older children better at predicting the race and gender of people who work in different jobs (Liben, Bigler & Krogh, 2001; Bigler et al., 2008), but they are also more aware of gender differences in pay than younger children (Hayes, Bigler and Weisgram, 2017). Additionally, children's overall ratings of female targets on a social ladder decreased with age, suggesting that older children are more likely than younger children to associate females with low status (Mandalaywala, Tai & Rhodes, under review). Elenbaas and Killen (2016), also found that children become more aware of the actual distribution of people at different levels of socioeconomic status as they age. Whereas the responses of younger children in their sample revealed only an awareness of the disproportional amount of African Americans at low levels of economic status, older children were also aware of the overrepresentation of European Americans at high levels of economic status. Thus, we predicted that age would be positively related to the degree to which children associate White males with high-status occupations over people of other races and genders (Hypothesis 3).

## 5. Study 1

### 5.1 Method

**Participants.** Sixty participants ( $n_{\text{female}} = 27$ ) between the ages of 5;5 and 10;9 ( $M = 8;7$ ,  $SD = 1;6$ ) participated in this study. Participants were recruited and tested at a research laboratory or nonprofit science museum in the Midwest. Parent reports revealed that children



were mostly from middle-class families and were predominately White (45 White, 10 Multiracial, 2 Black, 2 Other, 1 Asian).

### **Materials.**

**Faces.** Two hundred and twenty-four photographs were gathered from the Chicago Face Database, a collection of facial stimuli that have been rated on various dimensions (Ma, Correll & Wittenbrink, 2015). The first 144 faces were used to create 36 sets of four images. Each set included a photograph of a Black female, Black male, White female and White male target. The order in which the faces within each set were presented on the screen was random. The faces within each set were chosen to be similar in perceived age, attractiveness, femininity, masculinity, racial prototypicality and facial expression.

The last 80 photographs were used to create five groups of four faces. These groups consisted of either all Black female, all Black male, all White female or all White male faces. A final group included one face from each of the four racial and gender categories. These faces were again equated on age, attractiveness, femininity, masculinity, racial prototypicality and facial expression.

**Jobs.** Sixteen jobs that children are likely to be familiar with were chosen from previous studies assessing children's occupational stereotypes (Baker, Tisak & Tisak, 2017; Bigler & Liben, 1992; Bigler, Averhart & Liben, 2003; Elenbaas & Killen, 2016; Liben, Bigler & Krogh, 2001; Olson et al., 2012; Teig & Susskind, 2008; Weisgram, Bigler & Liben, 2010). Each job appeared with an image from Google Images to serve as a symbol of that job. Further, these jobs were *a priori* categorized based on two dimensions of status: pay and importance. This resulted in four levels of status with four jobs at each level. Piloting confirmed that children perceived all

four jobs at the highest status level (i.e., astronaut, doctor, president, scientist) as being high-paying and important<sup>1</sup>.

The researcher also developed nine novel job names. Following Liben, Bigler & Krogh's (2001) novel jobs paradigm, these novel jobs were made-up so that children had no prior exposure to them. The names of each novel job were piloted to ensure that they did not sound similar to any real jobs (e.g., pritchett). Each novel job appeared either with the same generic description or with the status manipulation. These jobs were also accompanied by one of the five groups of target faces to portray workers in the job.

**Status Manipulation.** In addition to categorizing familiar jobs based on their pay and importance, four novel jobs were manipulated in terms of these two dimensions. Jobs were accompanied by a description based on whether they were high or low in pay and importance. Each description was paired with a visual aid (e.g., a small versus a large stack of money).

Jobs low on the dimension of pay were given the following description: “\_\_\_s do not make a lot of money. Because they do not need any training, they do not get paid a lot of money to do their job.” Whereas children were told that “\_\_\_s make a lot of money. Because they get special training, they get paid a lot of money to do their job” for high-paying jobs.

Additionally, children were told, “\_\_\_s do not do an important job because they do not have a lot of responsibility” or “\_\_\_s do an important job because they have a lot of responsibility” as the manipulations for importance.

—

<sup>1</sup> Piloting revealed that children's perceptions of the pay and importance of jobs at each of the other three levels of status did not match our *a priori* categories. Thus, these jobs were excluded from the analyses.

## **Measures.**

***Knowledge of Occupational Stereotypes.*** We adapted Bigler, Averhart and Liben's (2003) measure of knowledge of occupational stereotypes. Children were asked, "Which person looks most like the people who usually do the job of being a(n) \_\_\_?".

***Perceived Status.*** Occupational status was assessed using Liben, Bigler and Krogh's (2001) four-item measure. This scale has previously been shown to have good reliability (Cronbach's  $\alpha = .80$ ). Items included, "How hard do you think it is to learn to be a(n) \_\_\_?", "How hard do you think it is to do the of being a(n) \_\_\_?", "How much money do you think a(n) gets paid?" and "How important is the job of being a(n) \_\_\_?". These items were measured on a scale from 1 (*not at all/none*) to 5 (*very/very much*). Each point on the scale was paired with an illustration of a thermometer filled with liquid to varying degrees. The four items were averaged into a composite score. We calculated the reliability of the perceived status scale for each of the five target groups (Cronbach's  $\alpha = 0.56, 0.6, , 0.64, 0.49$  and  $0.68$  for the groups with one per racial/gender group, all White males, all White females, all Black females, and all Black males respectively). Average reliability across groups was Cronbach's  $\alpha = 0.59$ . Since the item that would improve reliability if dropped was not consistent across target types, the full scale was used in the analyses.

***Procedure.*** This study was administered on an iPad<sup>2</sup>. Children were told that they were going to talk about jobs that they had heard of before, or about jobs that they had not heard of. They were then randomly assigned to the Familiar ( $n = 35$ ) or Novel Job Condition ( $n = 25$ ).

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2 The same Black female served as the experimenter for all subjects, with the exception of 40 subjects in the Novel Condition of Study 2.

In the Familiar Condition, children were presented with a single job at a time. They were first given a description of the job and the symbol for that job. One of the sets of four faces appeared below the description and symbol so that children always had four options: Black female, Black male, White female or White male. We then measured children's knowledge of occupational stereotypes by asking them to click on the person who looks most like the people who usually do that job<sup>3</sup>. They were thanked and received a small prize after having seen all sixteen familiar jobs.

The Novel Job Condition consisted of two tasks that were completed in a random order. During the *Status to People* task, children were first introduced to the status symbols. They were then presented with one of the novel jobs and heard the status manipulation along with the corresponding symbol. Next, children completed a manipulation check to ensure that they remembered the status manipulations. They were then shown one of the sets of four faces that included a Black female, Black male, White female and White male target. The status symbols appeared above the faces as a reminder of how much money people in the job get paid and the importance of the job. Children were then asked to choose the person who looked most like the people who usually do that job<sup>3</sup>.

In the *People to Status* task, children were first introduced to the perceived status scale along with the thermometer. They then answered three unrelated questions to get them comfortable with using the full range of the scale. Next, they were presented with one of the target groups: Black females, Black males, White females, White males or one of each. Each group was paired with a novel job name and the generic description.

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<sup>3</sup> They also made a second [and sometimes third] choice, but only the first choice was analyzed.

The four items measuring occupational status were then administered. Each question appeared on a separate page and was accompanied by a picture of the target group of people who did that job. After completing both tasks, children were thanked and rewarded with a small prize.

## 5.2 Results

**Knowledge of Occupational Stereotypes: Familiar.** Study 1 was concerned with whether race and gender have an additive effect on perceptions of status. Hypothesis 1 predicted that children would select White males for high-status jobs more than any other targets. To test this hypothesis, we first conducted an intercept-only Generalized Estimating Equation (GEE) for the Familiar Condition. GEE models are similar to logistic regression models, but are suitable for repeated measures designs by accounting for the correlation between responses given by an individual subject. GEEs are also marginal models that make inferences at the population, rather than subject, level (Touloumis, 2011). Significant intercepts indicate that a specific target type (i.e., Black female, Black male or White female) was selected for high-status jobs at a different rate than the reference group (i.e., White male) (Eason, Newheiser & Olson, under review). The rate of choosing Black female targets for high-status jobs was, on average, only 0.47 times that of the rate of choosing White male targets for high-status jobs,  $p = 0.001$ . This suggests that children associate Black women with high status less readily than they do White men. However, Black male and White female targets were chosen for the high-status jobs at similar rates to White male targets,  $ps > 0.05$ .

In order to test whether the rate of choosing White male targets in relation to other targets was similar across all of the high-status jobs, the type of high-status job (i.e., astronaut, doctor, scientist, president) was added to the model as a covariate. When the type of job was held constant, participants were less likely to choose Black and White female targets for high-status

jobs in comparison to White male targets,  $ps = 0.003$  and  $0.005$  respectively. Children were also marginally less likely to choose Black male targets than White male targets for high-status jobs,  $p = 0.1$ . However, significant effects of job type revealed that children did not always perceive of White males as more likely to do high-status jobs than other races and genders. See Table 1.

Table 1

*Study 1 GEE estimates of Choice for High-Status Jobs*

	Estimate	SE	P
Black female	-1.846	0.621	0.003
Doctor	1.759	0.866	.042
President	-0.360	1.238	0.771
Scientist	2.028	0.665	0.002
Black male	-0.642	0.391	0.100
Doctor	-0.457	0.728	0.530
President	0.832	0.614	0.175
Scientist	0.978	0.604	0.105
White female	-1.558	0.550	0.005
Doctor	1.270	0.710	0.074
President	1.560	0.732	0.033
Scientist	2.839	0.650	<0.001

*Note.* The reference groups are the White males and astronaut. On average, children chose the White males at higher rates than all other targets, but this depended on the exact high-status job.

Finally, children's age in months was included in the model to test whether the tendency to associate White males with high status increases with age (Hypothesis 3). Age was not a significant predictor of children's choices for the high-status job when holding the type of job

constant,  $p = 0.12$ . Regardless of age, children selected the Black and White female targets at lower rates than they selected the White male targets,  $ps = 0.04$  and  $0.009$  respectively. They were no longer more likely to choose White males than Black males for high-status jobs once age was included in the model,  $p > 0.05$ .

**Knowledge of Occupational Stereotypes: Novel.** Study 1 also explored whether children exposed to a novel jobs described as high status (i.e., *Status to People* task) would think that White males are more likely than all other targets to do those jobs (Hypothesis 1). Since participants were only exposed to one novel job that was described as high in both pay and importance, a multinomial logistic regression was conducted. Table 2 shows results of a multinomial logistic regression assessing the log odds of choosing each of the four targets for the high-status, novel job. Children did not choose the White male target at rates that differed significantly from any of the other targets (i.e., Black female, Black male, White female), all  $ps > 0.05$ . Thus, 5- to 10-year-olds may realize that White men are generally more likely to occupy some high-status positions that exist in their society (as shown in the Familiar Condition), but they may perceive of all races and genders as being on an equal playing field when it comes to new, high-status positions.

Table 2

*Study 1 Multinomial Logistic Regression Estimates for Novel Jobs*

	Coefficient	SE
Black female	-0.182	0.606
Black male	-0.182	0.606
White female	0.288	0.540

AIC: 71.586

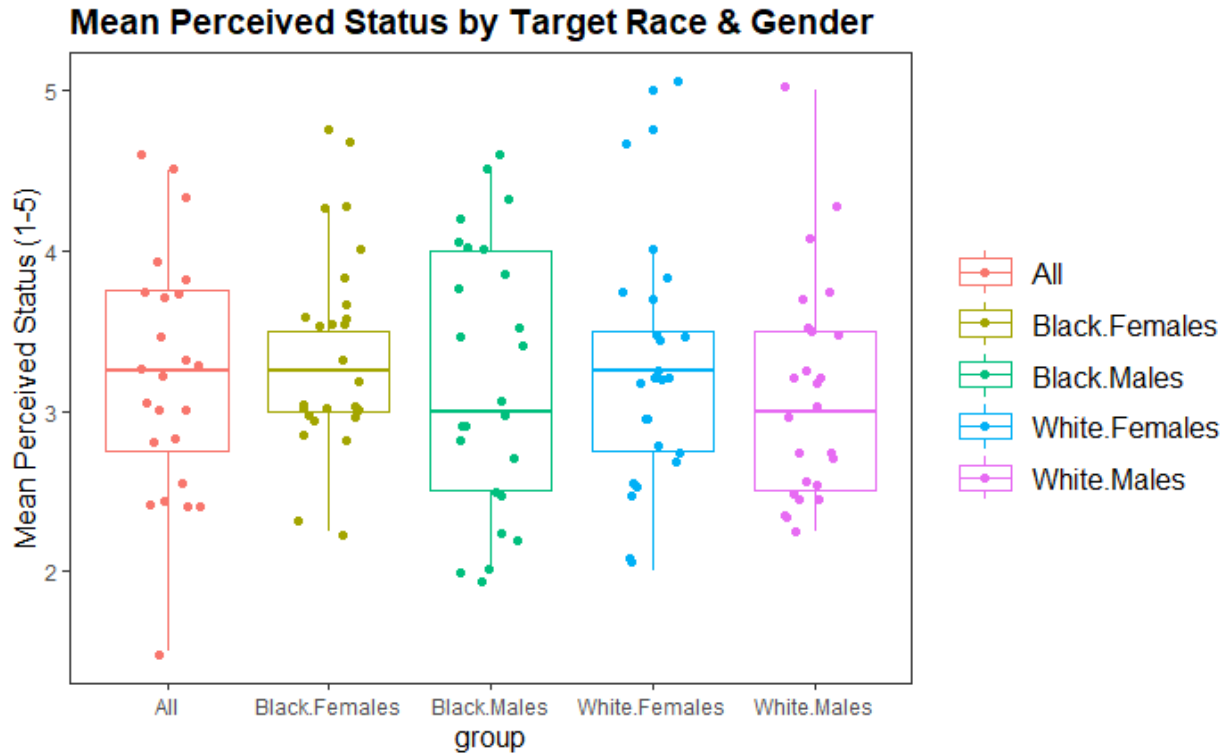
Note. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

After including participants' age in months in the model, there was a marginal tendency to choose the Black female target at a lower rate than the White male target,  $p < 0.1$ . There was also a marginally significant effect of age such that a one month increase in age was associated with a lesser chance of choosing the White male, rather than the Black female, target for the high-status job,  $p < 0.1$ . This is in contrast to the prediction that older children would be more likely to select White males for high-status jobs over other races and genders (Hypothesis 3).

**Perceived Status.** It was also expected that children would perceive the novel job presented as being performed by White men as the highest in status (Hypothesis 2). A regression model was fitted with the target group predicting the average perceived status rating given for the job. There were five levels of target group: all White male, all Black female, all Black male, all White female and one per category. Results indicated that the average perceived status of jobs shown with White males ( $M = 3.11$ ,  $SD = 0.69$ ) was not significantly different from the perceived status of jobs displayed with Black females ( $M = 3.31$ ,  $SD = 0.6$ ), Black males ( $M = 3.22$ ,  $SD = 0.82$ ), White females ( $M = 3.23$ ,  $SD = 0.72$ ), or the group with a representative from each category ( $M = 3.22$ ,  $SD = 0.72$ ), all  $ps > 0.05$ . See Figure 1 for a depiction of the mean perceived status rating across target groups. Age and its squared term were not significant predictors of the perceived status ratings given to jobs depicted with White male workers,  $ps = 0.11$  and  $0.13$  respectively. Thus, children perceived the jobs similarly in terms of status regardless of their age and the race and gender of workers paired with the jobs.

Figure 1





### 5.3 Discussion

In Study 1, our hypothesis that children would be most likely to pair White men with high-status jobs was partially supported for familiar jobs, but not supported among the novel jobs. When asked about common occupations, children were more likely to associate White men with high status than Black or White women. They were also marginally more likely to associate White men with high status than Black men. However, significant effects of the job type revealed that there are some high-status jobs that children think White men are *less* likely to occupy. When asked about jobs that they are unfamiliar with, children did not think that White men were mostly likely to do the highest status job. Further, they did not rate jobs depicted with all White male workers as higher status than jobs shown with other races or genders. These findings provide preliminary support for the claim that children perceive people who are both White and male as high in status. However, the fact that this was only supported among familiar

jobs suggests that children's perceptions of an association between White men and high status may be mostly a reflection of the race and gender of people they typically see performing high-status jobs in the real world.

We also did not find support for the hypothesis that children's perceptions of White men as being at the top of the status hierarchy would increase across development. Older children were actually *less* likely than younger children to choose White men more than Black women for the high-status novel job. Given that there were no overall differences in the rate at which the targets were chosen for the high-status, novel job—and the fact that this effect was marginal—this finding should be interpreted with caution.

In summary, Study 1 provided a step in the right direction towards understanding how race and gender simultaneously affect children's beliefs about status. However, there are a few concerns that should be addressed. First, the between-subjects design resulted in small sample sizes across the conditions and GEEs, in particular, should be conducted with large sample sizes (Touloumis, 2011). Second, a potentially important deviation from Liben, Bigler & Krogh's (2001) novel jobs paradigm is that novel jobs were accompanied by the same generic description instead of with descriptions of the what the jobs entail. It is possible that this made children more aware of the manipulations of race, gender and status. This awareness may have made them less willing to answer truthfully. Finally, children were only presented with one representative from each racial and gender group during the Familiar Condition, and in the *Status to People* task in the Novel condition. The target photos paired with each job also remained constant across participants. Thus, it is impossible to disentangle whether children's responses were due to the race and gender of targets or to the specific targets within each set.

## 6. Study 2

Study 2 was designed to address the above concerns, and to provide a more sensitive test of whether children indeed consider both race and gender when thinking about status. Rather than attempting to demonstrate that White men are perceived as being at the top of the status hierarchy, we aimed to demonstrate that children's beliefs about the association between gender and status are influenced by their beliefs about race, and vice versa. In other words, we expect that the tendency to perceive males as higher status than females will be stronger when the males are White than when they are Black (Hypothesis 4). It is also hypothesized that children's tendency to pair Whites with high-status more than Blacks will be stronger for White males than for White females (Hypothesis 5).

### 6.1 Method

**Participants.** Study 2 consisted of separate samples for the Familiar and Novel conditions. In the Familiar Condition, participants were 97 ( $n_{\text{female}} = 47$ ) children with an average age of 6;12 ( $SD = 1;1$ , range 5;0 to 9;0). Seventy-six participants were White, 10 were Black and 9 were Multiracial as reported by parents. These participants were tested at either a research laboratory, local elementary schools or a nonprofit science museum in the Midwest. Three additional children were tested but excluded for participating in a pilot version of the study ( $n = 1$ ), for being suspected of forging their parent's signature on the consent form ( $n = 1$ ), and because the parent report indicated that the child's primary language was Mandarin ( $n = 1$ ).

One hundred ( $n_{\text{female}} = 50$ ) children between the ages of 5;0 and 8;11 ( $M = 6;7$ ,  $SD = 1;5$ ) participated in the Novel Condition. They were predominately White ( $n = 85$ , 1 Asian, and 6 Multiracial) and middle-class. The study took place at a research laboratory, nonprofit science

museum and public parks in a Midwest region. Five participants were excluded from the analyses that included covariates due to missing information on these variables.

The Familiar and Novel conditions were largely consistent and are presented together. All materials, measures and procedures were the same across conditions except where noted.

### **Materials.**

**Faces.** Facial stimuli were gathered from the Chicago Face Database (Ma, Correll & Wittenbrink, 2015). We created one group of six faces for each of the four racial and gender categories (i.e., Black female, Black male, White female and White male). The six faces within each group were chosen to vary in terms of age, attractiveness, femininity, masculinity, racial prototypicality, and facial expression so that there was diversity *within* the racial and gender categories. However, average ratings on each of these characteristics were similar *across* groups.

The four groups of faces were presented in pairs so that each child saw all six possible pairings of the face groups appear twice (12 total trials). These trials were completed in a random order. Additionally, the position (i.e., left or right) in which each face group appeared on the screen was counterbalanced such that all children saw each face group appear in both locations.

**Jobs.** We created twelve pairs of jobs that consisted of one high-status and one low-status job. These pairs were selected so that the jobs were related, but one required more education and was higher paying than the other (e.g., principal & bus driver). Each job was given a definition and an image created from pictures on Google Images or the BOSS Database (Brodeur, Guérard, & Bouras, 2014) to serve as a symbol for that job. The presentation of the jobs within each pair was counterbalanced such that the high-status job came first on half of the trials and the low-status job came first on the other half of trials.

Each job pair was presented with one of the six possible pairings of the face groups. Since children this age are aware of the gender-type of occupations, we chose familiar jobs that have previously been used as gender-neutral occupations (Liben, Bigler & Krogh, 2001; Teig & Susskind, 2008). Further, we attempted to have jobs with a strong gender association appear only in within-gender comparisons (e.g., children chose between the Black female group and the White female group for the architect-construction worker trial)<sup>4</sup>. Novel jobs and descriptions were modified from Liben, Bigler & Krogh (2001), were unusual/outdated jobs gathered from various websites, or were created by the primary researcher.

**Status Indicators.** Each job within the pair was given a status description based on whether it was the high- or low-status job. High-status jobs received the following description, “A \_\_\_ makes a lot of money and goes to school for a long time.” Low-status jobs were followed by, “A \_\_\_ does not make a lot of money and does not go to school a long time. We also created visual aids to remind children of the status of each job. Additionally, the symbol for the high-status job always appeared in a yellow box with the visual aid for high status. The symbol for the low-status job always appeared in a purple box with the visual aid for low status. In order to make the study more interactive, children in the Novel Condition were asked to guess whether people in the job make a lot of money and go to school a long time before being provided with the correct status manipulation for each job.

**Measures.**

**Endorsement of Status Hierarchy.** One item assessed the degree to which children

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<sup>4</sup> One exception to this was the comparison of “veterinarian” to “dogwalker.” Although previously used as a gender-neutral job, veterinarian may be more gendered than dogwalker.

endorse traditional status hierarchies in which males [Whites] are associated with higher status than females [Blacks]. Children were asked, “Which group has a person who is a \_\_\_?” Choosing the Black or female group for the low-status job (or the White or male group for the high-status job) was indicative of endorsing the status hierarchy. These responses were coded as 1, while other responses were coded as 0.

**Procedure.** The study was administered on an iPad at one of the testing sites<sup>2</sup>.

Participants were first told that they would hear about different jobs and were asked to provide their own definition of a job. All children then heard the same definition of a job, “A job is something that adults do for work and can make money for doing.” They were also given two examples of jobs that did not appear during the test trials (i.e., firefighter, ballerina). Next, we asked children about their career aspirations. This question was not of interest to the current study and will not be discussed in future sections.

Children were then told that they were going to hear about different jobs, but that they would practice first. The practice trials were aimed at familiarizing children with the procedure. The practice trials for the Familiar Condition consisted of choosing a group of objects for a specific purpose (e.g., a group of instruments for playing music). During the Novel Condition, children chose the group they thought would have a principal [or a bus driver] out of two groups of Hispanic females. The practice trial was changed for the Novel Condition so that it was more relevant to the purpose of the study and to ensure that children understood the procedure.

Next, children were told that they were going to see two jobs at a time. They were introduced to the two visual aids for status while being told that one job would be a job where people make a lot of money and go to school for a long time, and vice versa. Prior to proceeding,

children were required to pass a manipulation check by correctly identifying either the high- or low-status visual aid.

During the test trials, children were shown one of the 12 pairings of the face groups (e.g., Black females versus Black males) at a time. They were then presented with one of the job pairs and told that one of the groups had a person who did the first job, and the other group had a person who did the second job. After ensuring that they knew the definition and status of both jobs within the pair, they were randomly assigned to indicate either which group did the high- or the low-status job (Familiar Condition). Children in the Novel Condition made a selection for both the high- and low-status jobs in a randomized order. To ensure that children in the Familiar Condition understood that choosing one group for the high-status job meant that the other group did the low-status job, they were shown each group matched with the jobs they had chosen them for. They were also given the option to change their answer.

After completing all twelve trials, children were thanked and given a prize for their participation.

## **6.2 Results**

### **Endorsement of Status Hierarchy: Gender.**

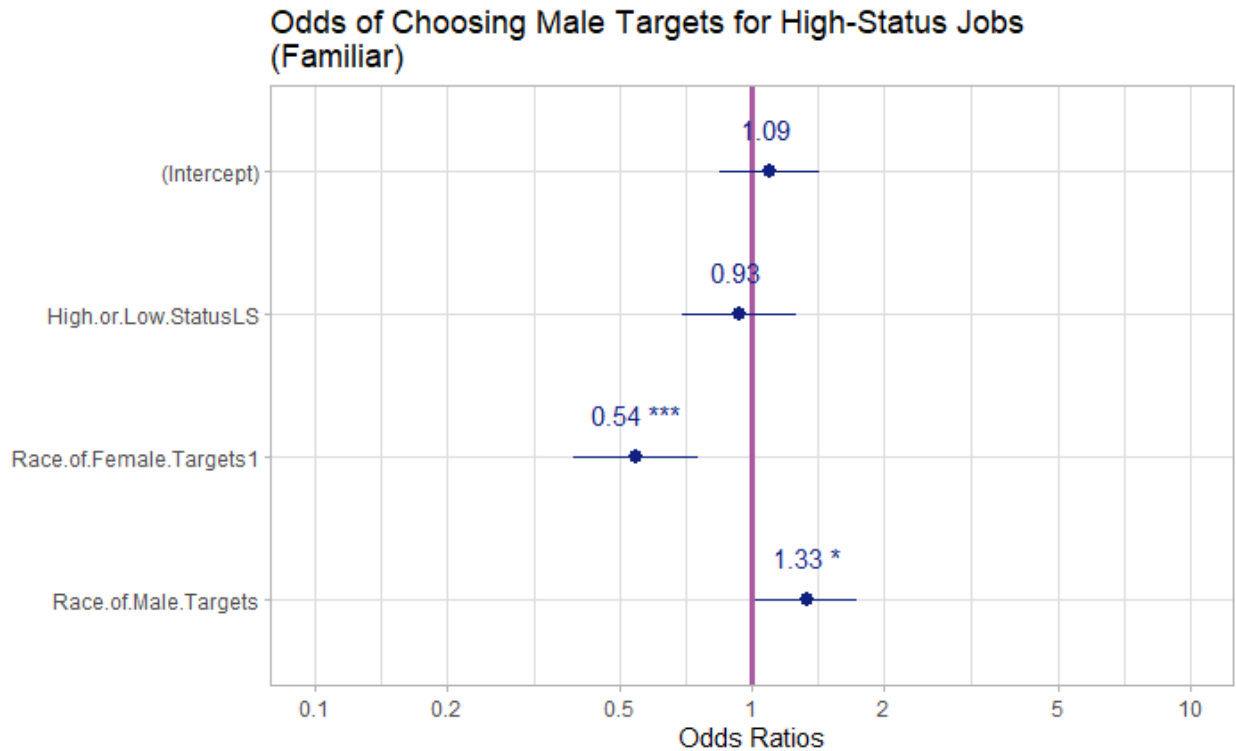
*Familiar Condition.* Study 2 asked whether children's perceptions of the association between gender and status depends on the race of people involved. In particular, it was hypothesized that the tendency to choose males more than females for high-status jobs would be stronger for White males than for Black males (Hypothesis 4). To test this hypothesis, a Generalized Estimating Equation was conducted with the race of the male targets predicting the rate of choosing male targets for high-status jobs. Results indicated that, on average, the rate of choosing male [over female] targets for high-status jobs when the male targets were White was

1.31 times that of the rate of choosing male targets for high-status jobs when the males were Black,  $p = 0.04$ . Further, a significant intercept revealed that male targets were chosen for high-status jobs at a significantly lower rate than female targets when the males were Black,  $p = 0.01$ .

The race of the female targets and the question type were added to the model in the second step in order to determine the effect that the race of the male targets had on children's choice for the high-status job above and beyond these variables. This model revealed that, holding all other variables constant, children were significantly more likely to choose male over female targets for high-status jobs when the male targets were White (probability = 0.57) than when they were Black (probability = 0.43),  $p = 0.03$ . There was also a significant effect of the race of the female targets such that children were less likely to choose males for high-status jobs when the female targets were White and the male targets were Black,  $p < 0.001$ . The rate at which male and female targets were chosen for high-status jobs was reduced to non-significance once controlling for all other variables. Further, there was no significant effect of whether children were asked about the high- or low-status job. See Figure 2 for all estimates from the GEE analysis. Moreover, results of a Wald's test revealed that the model that included the race of the male targets was a better fit than the model that did not,  $p = 0.04$ . This suggests that, when asked about well-known occupations, children are more likely to endorse the gender status hierarchy for White males than for Black males. Further, they are less likely to endorse the gender status hierarchy when the males are from a lower status racial group (i.e., Black) than the females (i.e., White).



Figure 2



*Note.* Exponentiated GEE results for model with the race of the male targets (1 = White) predicting the odds of choosing male over female targets (1 = White) for the high-status job while holding the question type and race of the female targets constant. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

To test how age influences the role of race in children's understanding of the link between gender and status, a third GEE was conducted with the interaction between the race of the male targets and children's age in months. Once accounting for age, the effect of race of the male targets was reduced to non-significance,  $p = 0.11$ , but was still in the predicted direction. Further, children were still less likely to choose the male targets for the high-status jobs when the female targets were White and the male targets were Black,  $p < 0.001$ . There was also a marginally significant interaction between the race of the male targets and participant age. As children aged, the odds of choosing White males for the high-status job when the female targets were Black decreased,  $p = 0.1$ . This tendency was stronger among older children,  $p = 0.1$ .

*Novel Condition.* A Generalized Estimating Equation with the race of the male targets predicting the rate of choosing male targets for high-status jobs was also conducted for the Novel Condition. There was no significant difference in the rate of choosing males for the high-status jobs when the targets were White versus Black males,  $p > 0.05$ . Yet, a significant intercept revealed that, when the male targets were Black, there was an tendency to choose the males less than females for the high-status jobs,  $p = 0.03$ . See Table 3 for a comparison of the Familiar and Novel Conditions. This indicated a reversal of the gender status hierarchy among Black targets.

Table 3

*Study 2 Odds of Choosing Male Targets for High-Status Jobs*

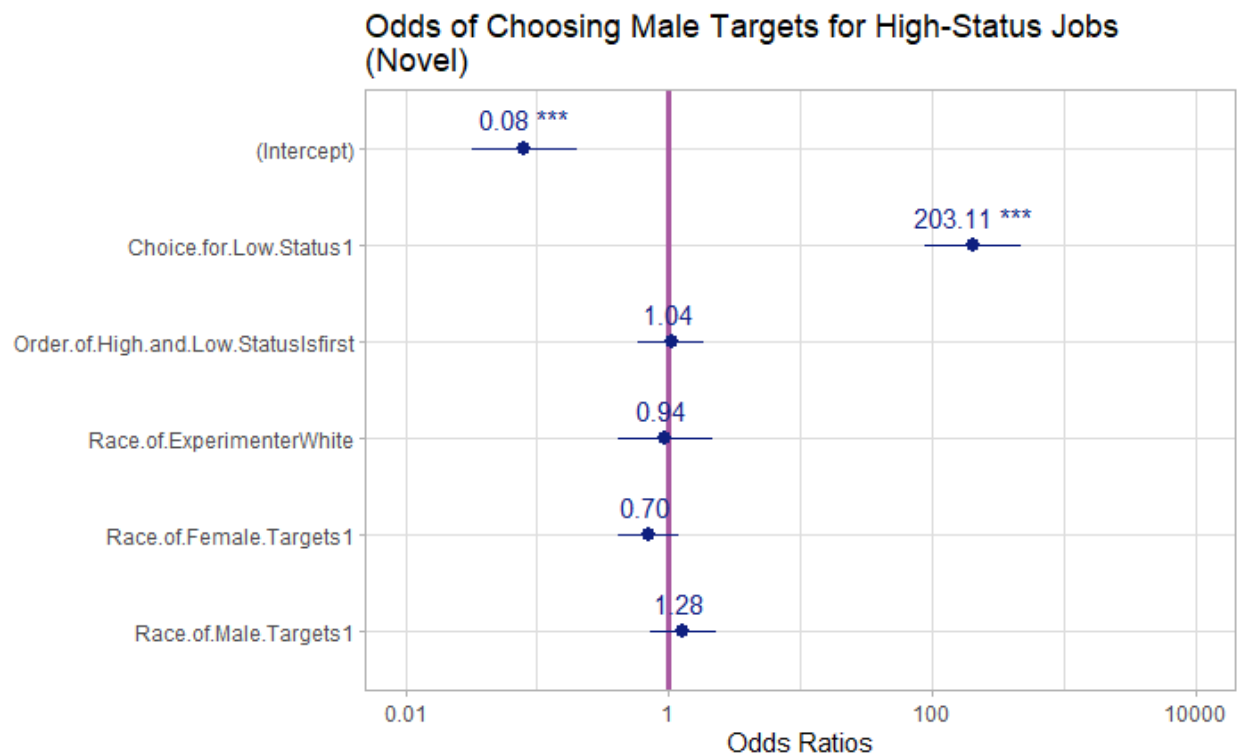
	Familiar Condition			Novel Condition		
	Odds Ratios	CI	P	Odds Ratios	CI	p
(Intercept)	0.79	0.65 – 0.95	0.014	0.77	0.61 – 0.97	0.026
Male Targets: White	1.31	1.01 – 1.70	0.039	1.08	0.79 – 1.46	0.633

*Note.* The reference group is Black male targets. Significant intercepts for both conditions reveal that male targets are less likely than female targets to be chosen for high-status jobs when the males are Black. For the Familiar condition, the odds of choosing males over females for high-status jobs is greater for White male targets than for Black male targets.

The race of the female targets, participants' choice for the low-status job, the order in which children were asked about the high- and low-status jobs, and the race of the experimenter were also added to the model as covariates. Figure 3 shows the GEE estimates for the odds ratios of children's choice for the high-status job. A significant, negative intercept revealed that children were significantly less likely to choose male than female targets for the high-status job when both the male and female targets were Black and all other variables were held constant,  $p < 0.001$ . The race of the male targets was not a significant predictor of the odds of choosing the

male targets for the high-status job. The only other significant finding was that children were significantly more likely to choose the male targets for the high-status job when they chose the female targets for the low-status job,  $p < 0.001$ . When asked about jobs that they should have no expectations of, children were no more likely to endorse the gender status hierarchy for White men than they were for Black men. Interestingly, however, there was a tendency to view men as *less* likely to perform high-status jobs than women when both targets were Black. Although there was no difference in how often White and Black men were chosen over women for high-status jobs, the finding that Black men were associated with lower status than Black women mimics Perszyk and colleagues' (2018) finding that preschoolers direct their bias towards Black boys.

Figure 3



*Note.* Exponentiated GEE results for model with the race of the male targets (1 = White) predicting the odds of choosing male over female targets (1 = White) for the high-status job while holding the experimenter race, choice for the low-status job, order in which the questions were presented and race of the female targets constant. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

A third GEE was conducted that tested the interaction between the race of the male targets and participants' age in months while holding all other factors constant. Neither age nor the interaction between the race of the male targets and age were significant predictors of participants' choice for the high-status job,  $p_s > 0.05$ . Further, the intercept was no longer significant, indicating that children selected the male and female targets for high-status jobs at equal rates once taking age into account,  $p > 0.05$ . The choice for the low-status job was again a significant predictor suggesting that choosing female targets for the low-status job was associated with an increase in the rate of choosing male targets for the high-status job when keeping all other factors constant,  $p < 0.001$ .

#### **Endorsement of Status Hierarchy: Race.**

*Familiar Condition.* Study 2 also asked whether children would consider gender when matching White and Black targets with jobs of high- and low-status. It was hypothesized that children would be more likely to endorse the racial status hierarchy for White males than for White females (Hypothesis 5). To test this possibility, a GEE was conducted with the gender of the White targets predicting the odds of choosing White over Black targets for the high-status job. Results indicated that the odds of choosing White targets were about 1.48 times that of the odds of choosing Black targets for high-status jobs when the White targets were females,  $p < 0.001$ . However, they were equally likely to choose White males and White females over Black targets for the high-status jobs,  $p > 0.05$ . Thus, children did endorse the racial status hierarchy whereby Whites are perceived as higher status than Blacks, but they did so just as much for White women as they did for White men.

In line with the analyses conducted for gender, we sought to determine whether children's tendency to choose the White targets for the high-status job would be influenced by the gender of

the White targets above and beyond the gender of the Black targets and the question type. When holding all other variables constant, children were significantly more likely to choose White targets for the high-status job than Black targets,  $p < 0.005$ . On average, the odds of choosing White targets for the high-status job was 1.53 times that of the odds of choosing Black targets. None of the other predictors reached significance, all  $ps > 0.05$ . See Figure 4 below. Again, we found evidence that 5- to 8-year-olds are just as likely to perceive White women as higher status than Blacks as they are to perceive White men as higher status than Blacks.

Figure 4



There were no independent or interactive effects of age on children's tendency to choose White targets for the high-status jobs,  $ps > 0.05$ .

**Novel Condition.** An equivalent GEE was conducted with the gender of the White targets predicting the odds of choosing a White over a Black target for the high-status, novel jobs. A

non-significant intercept indicated that children were equally likely to choose Black and White targets for the high-status job when the White targets were females,  $p > 0.05$ . There was a marginally significant effect of the gender of the White targets such that children were less likely to choose the White targets for the high-status jobs when they were White males rather than White females,  $p = 0.08$ . Table 4 compares the results from the Familiar and Novel conditions. The finding that children were more likely to endorse the racial status hierarchy for White women than for White men is in opposition to Hypothesis 5.

Table 4

*Study 2 Odds of Choosing White Targets for High-Status Jobs*

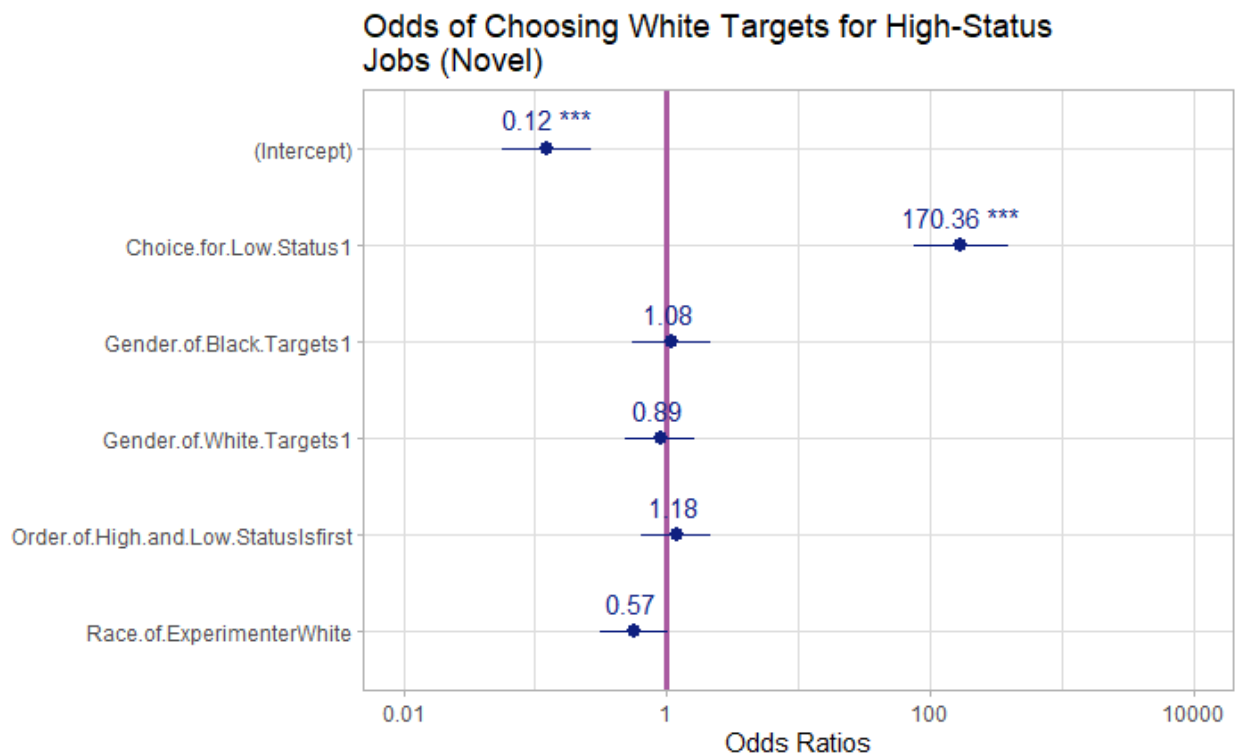
	Familiar Condition			Novel Condition		
	Odds Ratios	<i>CI</i>	<i>p</i>	Odds Ratios	<i>CI</i>	<i>p</i>
(Intercept)	1.47	1.17 – 1.86	0.001	1.11	0.90 – 1.38	0.330
White Targets: Male	0.82	0.61 – 1.09	0.177	0.76	0.56 – 1.03	0.076

*Note.* The reference group is White female targets. A significant intercept for the Familiar condition reveals that White targets are more likely than Black targets to be chosen for high-status jobs even when the White targets are females. A marginally significant effect of gender in the Novel condition shows that children were less likely to choose Whites over Blacks when the targets are White males than White females.

We also conducted a GEE to determine the effect of the gender of the White targets on participants' choice for the high-status job while controlling for the gender of the Black targets, the race of the experimenter, whether children were asked about the high- or low-status job first, and their choice for the low-status job. Children were significantly less likely to choose White targets than Black targets for the high-status job once controlling for all other variables,  $p < 0.001$ . The odds of choosing White targets for high-status jobs were only 0.12 times that of the odds of choosing Black targets for high-status jobs. There was also a significant effect of the choice for the low-status job, such that the odds of choosing a White target for the high-status job

were greater than the odds of choosing Black targets for the high-status job when Black targets were chosen for the low-status job,  $p < 0.001$ . In other words, children were more likely to select White targets for the high-status job when they selected Black targets for the low-status job (Shown in Figure 5). This suggests that, although children had the option to choose the same group for both jobs in a pair, they overwhelmingly chose different groups for the high- and low-status jobs. Additionally, there was a marginally significant effect of the race of the experimenter such that the odds of choosing the White targets for the high-status job were slightly lower when the experimenter was White and all other factors were held constant,  $p = 0.06$ . Similar to the findings for gender, the racial status hierarchy was reversed when children heard about new jobs.

Figure 5



We also tested whether there was an interaction between the gender of the White targets and children's age in months while holding all other predictors constant. There were no

significant independent or interactive effects of age on participants' choice for the high-status jobs,  $p_s > 0.05$ . Once including age in the model, the intercept was no longer significant which indicated that children chose White and Black targets at similar rates when all other predictors were held constant,  $p > 0.05$ . There was still, however, an effect of participants' choice for the low-status jobs such that children were more likely to choose White targets for the high-status job when they chose Black targets for the low-status job,  $p < 0.001$ .

### 6.3 Discussion

Hypothesis 4, that the perceived association between males and high status would be stronger for White than Black males, was partially supported. Children were actually *more* likely to choose females than males for high-status jobs when the males were Black. This suggests that race may trump gender when Black men are pitted against White women. Further, children were more likely to choose males than females for high-status, familiar jobs when the males were White than when they were Black. When asked about novel jobs, children were *less* likely to choose males than females for high-status jobs when both the male and female targets were Black. Thus, the gender status hierarchy was actually reversed among Black targets such that Black females were associated with higher status than Black males. However, this reversal was not found in the Familiar Condition and children were equally likely to choose males and females for high-status jobs when both target groups were Black. Additionally, children showed no difference in the rates at which they chose male and female targets for high-status jobs when all variables were held constant. Thus, race was responsible for children's endorsement of the gender status hierarchy.

We did not find support for Hypothesis 5, that the racial status hierarchy would be endorsed more for White males than White females. On average, children were more likely to



choose White than Black targets for high-status, familiar jobs when all variables other variables were kept constant. Even when both the White and Black targets were females, children displayed a tendency to associate Whites with higher status jobs than Blacks. There was also no difference in the rates at which White targets were chosen for the high-status jobs over Blacks when the White targets were males versus females. One possibility is that the perceived relation between race and status is so strong that children do not attend to gender when making cross-race comparisons. Moreover, children were actually *less* likely to choose White [over Black] targets for high-status, novel jobs when both the White and Black targets were females. Black women, then, were more readily associated with high status than were White women when children were introduced to new jobs. This is consistent with the findings for gender: children promoted the traditionally lower status group to high-status when probed about new jobs.

## **7. General Discussion**

The existing research on children's knowledge of the relation between status and racial and gender groups suggests that children typically perceive Whites and males as having higher status than Blacks and females (Liben, Bigler & Krogh, 2001; Bigler, Averhart & Liben, 2003). This study sought to expand the previous literature by examining whether children consider race and gender simultaneously when thinking about the relation between social groups and status. In Study 1, children's responses reflected an awareness of how belonging to a high-status gender *and* racial group benefits status as children were more likely to choose White men for high-status jobs than they were to choose Black and White women. However, this finding was not universal across all high-status jobs. Additionally, this effect was only found among jobs that children are likely to be familiar with. This suggests that children this age may not yet apply information about how race and gender relate to status to new situations.

In Study 2 (Familiar Condition), race did affect how children thought about the relation between gender and status, but gender did not have a strong influence on their perceptions of the relation between race and status. In terms of the gender status hierarchy, children demonstrated a stronger male = high-status association for White than Black males. In fact, children did not choose men more than women for high-status jobs once the race of the male and female targets was taken into account. This suggests that children's perceptions of men as higher status than women could be explained solely by the targets' race. However, the Whites = high-status association did not differ between White males and White females. Children were more likely to associate Whites with high status than they were to associate Blacks with high status, but they did this for both White men *and* White women. Thus, the racial status hierarchy may be so engrained in children that they do not take into account the gender of people involved.

The pattern of results for the Novel Condition revealed interesting findings whereby children were *less* likely to choose males and Whites for the high-status jobs when all other variables were held constant. This meant that children chose male targets less than females when both groups were Black, and they chose White targets less than Black targets when both groups were females. These results are consistent with Study 1 such that children did not necessarily associate Whites and males with higher status than Blacks and females when it came to jobs that they were unfamiliar with. In fact, the pattern was reversed whereby Blacks and females were associated with high-status *more* often than Whites and males. While the results of the Familiar conditions show that children notice how race and gender relate to status, the results from novel jobs suggest that children do not necessarily believe that this is how the world ought to be. One promising possibility is that, when given the chance, children attempt to rectify injustices by promoting social groups that are traditionally lower in status to high-status positions.

## 7.1 Limitations

Although, Study 2 provided an improvement from Study 1, a limitation of the current study is the relatively small sample sizes (Study 1,  $N = 60$ ; Study 2,  $Ns = 97$  and  $100$ ). Our analyses relied heavily on Generalized Estimating Equations, which provide more accurate estimates with larger sample sizes (Touloumis, 2011).

A second limitation is that pairings of jobs with targets (Study 1) and target groups (Study 2) was consistent across participants. For example, children always chose between the same Black male, Black female, White male and White female when asked to choose the person who looks most like an astronaut (Study 1). In Study 2, each job pair was always accompanied by the same combination of target groups (e.g., Black females vs. White females for architect-construction worker). Although children completed two trials per target group, and multiple trials for each job in Study 1, it is possible that some attribute of the jobs other than status influenced children's responses. However, this is less of a concern for the Novel conditions given that children should not have had any prior expectations about the jobs.

A final limitation worth noting is that of social desirability. Similar studies have found evidence that children are increasingly concerned about appearing prejudiced as they get older (Bigler et al., 2008). In fact, 8 years old often marks a decrease in children's expression of negative attitudes since children this age are aware of social norms (Hailey & Olson, 2013). The sensitive nature of status discrepancies may have resulted in weaker effects than what would typically occur. The fact that responses became less stereotypical with age in the *Status to People* (Novel) task in Study 1, and in the gender analyses for the Familiar Condition in Study 2, suggests that social desirability may have been at work in the present study.

## 7.2 Future Directions

Although it was not of direct interest to the present study, children were also asked to provide an explanation for their choices on half of the trials in Study 2. Children's explanations were coded into categories such as race-related and gender-related justifications. Exploratory analyses revealed that children in the Familiar Condition mentioned gender more than race as a reason for choosing particular groups for the high- and low-status jobs. One question of interest is whether the type of responses children provide depends on the race and gender of targets involved. For example, are children more likely to mention gender when comparing White males and females than when comparing Black males and White females? This sort of analysis could provide qualitative support for the current findings.

It might also be interesting to examine whether a particular racial and gender group is perceived as most likely to occupy low-status occupations. In Study 1, we only analyzed children's responses for the high-status jobs since these were the only jobs relevant to the hypotheses. Further, piloting revealed that children's perceptions of status did not match our *a priori* categories for the medium- and low-status jobs. However, children's responses for low-status jobs will be important for understanding how race and gender jointly affect perceptions of status. The adult research on intersectionality results in two opposing predictions. According to Beale's 1979 double jeopardy hypothesis (Purdie-Vaughns & Eibach, 2008), belonging to multiple, minority groups (e.g., Black women) should result in greater disadvantage than belonging to a single minority group (e.g., Black men or White women). This suggests that Black women will be associated with lower status than all other races or genders. In contrast, Sidanius & Pratto's 1999 subordinate male target hypothesis argues that competition is largely between males such that gender takes precedence over race (Purdie-Vaughns & Eibach, 2008).

This theory suggests that Black men will be at the bottom of the status hierarchy. While little research has examined intersectionality among children, recent work by Perszyk and colleagues (2018) found that 4- and 5-year-olds directed their biases towards Black males, which is consistent with the latter theory. Additional research is needed to determine whether this bias against Black males extends to children's perceptions of status.

Further, we conceptualized of status in terms of pay (Studies 1 & 2), importance (Study 1), and education (Study 2). However, power is also an important factor that contributes to the status of jobs (Weisgram, Bigler & Liben, 2010). Additionally, Mandalaywala and colleagues (under view) found that children's beliefs about the relation between race [and gender] and status depends on the specific aspect of status that is being tested. While children's tendency to associate Whites with high status became evident when asked about wealth, their association between males and high status was more evident when asked about social power. Thus, future studies should disentangle whether children's perceptions about the joint relation of race and gender to status varies based on the specific dimension of status that is in question.

Finally, it will be important to conduct similar studies with more diverse samples of children. The participants in the current study were largely from White, middle-class families. Due to the small number of non-White participants, the analyses were not broken down by child race/ethnicity. However, children who themselves belong to lower status social groups may not hold the same beliefs about how race and gender relate to status (Hailey & Olson, 2013, Horwitz, Shutts & Olson, 2014).

The current study suggests that children are capable of weighing both race and gender when thinking about the relative status of different social groups. However, this relationship may be more nuanced than expected as children do not always perceive of people who are advantaged

in terms of both race and gender (i.e., White men) as being at the top of the status hierarchy. There may also be times at which race is more important than gender for children's status perceptions. Additionally, children's beliefs about how race and gender relate to the status of real-world occupations do not map onto their expectations about novel occupations. The fact that our hypotheses were only supported among occupations that children are familiar with suggests that children's beliefs about how race and gender relate to status are gleaned from the world around them. Thus, the goal of changing children's status perceptions may be best achieved by increasing the presence of traditionally underrepresented groups in high-status domains.

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