



PAPER

Social class differences produce social group preferences

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Abstract

Some social groups are higher in socioeconomic status than others and the former tend to be favored over the latter. The present research investigated whether observing group differences in wealth alone can directly cause children to prefer wealthier groups. In Experiment 1, 4–5-year-old children developed a preference for a wealthy novel group over a less wealthy group. In Experiment 2, children did not develop preferences when groups differed by another kind of positive/negative attribute (i.e. living in brightly colored houses vs. drab houses), suggesting that wealth is a particularly meaningful group distinction. Lastly, in Experiment 3, the effect of favoring novel wealthy groups was moderated by group membership: Children assigned to a wealthy group showed ingroup favoritism, but those assigned to a less wealthy group did not. These experiments shed light on why children tend to be biased in favor of social groups that are higher in socioeconomic status.

Research highlights

- This work demonstrates that young children form attitudes toward novel social groups based on those groups' relative wealth.
- Children who are assigned to be members of a high-wealth group show more ingroup favoritism than those assigned to be members of a low-wealth group, mimicking patterns observed in real world groups.
- This work also demonstrates that children attend to wealth information without prompting.

Introduction

Like adults around them, young children favor people from some social groups over people from others. In many cases, children's social biases can be characterized as a tendency to favor members of their social ingroups: As early as the preschool years, girls prefer other girls while boys prefer other boys (Martin, Fabes, Evans & Wyman,

1999; Shutts, Roben & Spelke, 2013), and young children who are randomly assigned to a novel group (e.g. 'the blue team') prefer members of their assigned group over members of other groups (e.g. 'the red team'; Dunham, Baron & Carey, 2011; Patterson & Bigler, 2006). Yet ingroup favoritism cannot explain all of children's social group biases. First, children sometimes hold more positive attitudes toward members of one outgroup over members of another outgroup. For example, Hispanic children favor Whites over Blacks in the United States (Teplin, 1976); White children favor Asians over Aborigines in Australia (Black-Gutman & Hickson, 1996); and Asian children favor Whites over Blacks in Taiwan (Kowalski & Lo, 2001). Moreover, children do not always show robust ingroup favoritism: Young White children in Canada, New Zealand, South Africa, the United Kingdom, and the United States tend to like their own group over other racial and ethnic groups, but children from other groups in these same countries often show weaker or no ingroup favoritism (e.g. First Nations children in Canada; Pacific Islander children in New Zealand; Black and Coloured children in South Africa; West Indian children in the UK; Black and Hispanic children in the US; Brand, Ruiz & Padilla, 1974; Corenblum & Wilson, 1982;

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Davey, 1983; Gregor & McPherson, 1966; Newman, Liss & Sherman, 1983; Shutts, Kinzler, Katz, Tredoux & Spelke, 2011; Vaughan, 1964). What accounts for such asymmetrical patterns of ingroup preference?

One hypothesis is that children are sensitive to the social status of different groups in their society, and come to prefer groups they perceive as higher in status (Nesdale & Flesser, 2001; Olson, Shutts, Kinzler & Weisman, 2012; Shutts *et al.*, 2011; Tajfel & Turner, 1979). Indeed, children do link social groups – including those based on race, nationality, and religion – to at least one indicator of status, socioeconomic status (SES; Bigler, Averhart & Liben, 2003; Olson *et al.*, 2012; Radke & Trager, 1950; Short & Carrington, 1992; Zeligs, 1950, 1952). For example, Black and White children in both the United States and South Africa think that Whites are more likely than Blacks to live in expensive houses, drive new cars, and hold high-status occupations (Bigler *et al.*, 2003; Olson *et al.*, 2012; Radke & Trager, 1950). Further, the degree to which children prefer wealthy people, or link wealth with group membership, is correlated with the degree to which children favor stereotypically wealthy groups (e.g. Newheiser & Olson, 2012; Olson *et al.*, 2012; Radke & Trager, 1950). To illustrate, Olson and colleagues (2012) measured South African children's racial preferences for Whites, Coloureds (people of multi-racial backgrounds), and Blacks, as well as the children's tendency to associate the three racial groups with either high-wealth or low-wealth belongings. The researchers found that the more children were aware of the South African racial SES hierarchy, the more strongly children tended to prefer members of higher status groups over members of lower status groups.

Previous research provides preliminary support for the hypothesis that perceptions of group differences in SES play a role in guiding children's social group preferences. However, the research to date is limited in two important respects. First, studies that rely on correlational research designs cannot speak to whether group SES differences play a causal role in determining children's attitudes. Second, research that focuses on children's attitudes and beliefs about existing groups cannot control for other factors that may influence children's preferences (e.g. familiarity with different groups; stereotypes about how dangerous or intelligent different groups are). The present research addressed these limitations by presenting children with novel groups that differed only in SES, and then measuring children's preferences for new members of those groups. This strategy ensured that all participants had similar exposure to the target groups, and knew only about the groups' SES.

Although there are many facets of SES, the present research focused on wealth because wealth differences

are typically visible to children during their everyday life (compared to other dimensions of SES, such as educational attainment), and because previous work shows that children treat wealth as an important social attribute. Preschool-age children can classify people as 'rich' versus 'poor' based on clothing differences (Ramsey, 1991), and 5-year-old children assume that people with comparable amounts of wealth have other properties in common (e.g. liking to play the same game, liking the same people; del Rio & Strasser, 2011; Diesendruck & haLevi, 2006). Young children associate greater wealth with greater competence (Brey & Shutts, 2013; Sigelman, 2012), and think that other people like children from wealthier families more than they like children from poorer families (Mookherjee & Hogan, 1981). Children also show social preferences in favor of people who have better or more resources (Brey & Shutts, 2013; Elliott & Leonard, 2004; Li, Spitzer & Olson, *in press*; Roper & La Niece, 2009; cf. Sigelman, 2012). For example, 4–5-year-old children prefer a child who has more toys to one who has fewer toys (Li *et al.*, *in press*). Children's positivity toward individuals with greater wealth provides additional support for the hypothesis that wealth differences may contribute to children's social group preferences.

Although no previous studies have manipulated children's exposure to groups that differ in wealth, some research has experimentally manipulated children's exposure to other types of social status disparities between groups in order to assess how such information impacts children's attitudes (Bigler, Brown & Markell, 2001; Brown & Bigler, 2002; Nesdale, Durkin, Maass & Griffiths, 2004; Nesdale & Flesser, 2001; Nesdale, Maass, Griffiths & Durkin, 2003; Yee & Brown, 1992). Many of these studies assigned participants to groups that were said to differ in how well they performed different tasks (Nesdale *et al.*, 2004; Nesdale & Flesser, 2001; Nesdale *et al.*, 2003; Yee & Brown, 1992). For example, Nesdale and Flesser (2001) randomly assigned 5- and 8-year-old children to either a 'good drawing team' or an 'excellent drawing team' and found that those assigned to the merely good drawing team showed less ingroup favoritism than children assigned to the excellent drawing team.

In a different set of novel group studies, Bigler and colleagues assigned children to groups that differed on a wide variety of status dimensions simultaneously (Bigler *et al.*, 2001; Brown & Bigler, 2002). In one experiment, groups differed along several dimensions such as athletic skill, leadership ability, intelligence, and classroom behavior (Bigler *et al.*, 2001). The researchers found that when teachers made use of the groups (marked by T-shirt color) in classroom life (e.g. by referring to the groups by name), the children who had been assigned to the high-status group associated more positive traits with their

group than did the children who had been assigned to the low-status group (Bigler *et al.*, 2001). One of the group attributes that was manipulated in this study – occupational prestige – is related to SES, but because the groups differed in a variety of ways it is impossible to conclude whether this attribute alone had any impact on children's attitudes (Bigler *et al.*, 2001). Importantly, because nearly all of these studies focused only on elementary school children, the research also cannot say whether younger children's social group attitudes can be guided by social status. Nevertheless, this previous research demonstrates that it is possible to use novel groups to study how group characteristics impact children's social group preferences.

In the current research, we introduced 4- and 5-year-old children to two novel groups that differed in relative wealth. The experimenter never labeled or mentioned the groups' wealth; rather, differences in the quality and quantity of groups' material possessions conveyed wealth information. Following this exposure phase, we tested children's preferences for new members of the novel groups (presented in the absence of wealth information). The experiments included 4–5-year-old children because this is the earliest age at which young children show the kinds of social group preferences that appear to reflect an awareness of social status (e.g. race; Aboud, 2003). We predicted that children would come to favor the wealthier group over the poorer group (Experiment 1), but that children would not develop biased attitudes toward groups that differed along just any positive/negative dimension (Experiment 2). We then asked whether children's own membership in a social group would moderate the effect of wealth information on their social group attitudes (Experiment 3).

Experiment 1

Experiment 1 tested whether children's attitudes toward groups are influenced by exposure to information about groups' SES. In the exposure phase of Experiment 1, children learned about two novel groups, one that was depicted as wealthy and one that was depicted as poor. Wealth differences were conveyed by varying the quality and quantity of group members' belongings (e.g. their homes, cars, and furniture). Not only are these differences in material goods salient and meaningful to children as indicators of an individual's wealth (Belk, Bahn & Mayer, 1982; Olson *et al.*, 2012; Radke & Trager, 1950), but they are also the aspects of wealth that children could reasonably be expected to observe in everyday life (Bradley & Corwyn, 2002; Evans, 2004). Following exposure to group SES information, children answered questions designed to

assess their awareness of the relationship between wealth and group membership, as well as their preferences for people from one group over the other.

Method

Participants

Twenty-eight 4–5-year-old children ($M = 59.46$ months, $SD = 6.77$ months; 15 female) participated in this experiment either in a university laboratory or at one of several preschools in the Northeastern region of the United States. Our volunteer sample was predominantly White (96%) and middle class. One participant refused to complete the 'preference trial' and three refused to complete the 'membership trial'; their responses are therefore absent from the relevant analyses.

Stimuli

Children saw a picture book containing full-page (8.5 in \times 11 in) drawings. Half of the pages showed members of one group in interior or exterior scenes of 'high-wealth' houses (e.g. landscaped lawns and new cars for exterior scenes and well-furnished rooms with fancy belongings for interior scenes). The remaining pages showed members of the other group in interior or exterior scenes of 'low-wealth' houses (e.g. worn siding and older cars for exterior scenes and sparsely furnished rooms with signs of wear and tear for interior scenes). See Figure 1a for an example of each type of scene. Group membership was marked by clothing color (orange vs. green); which color

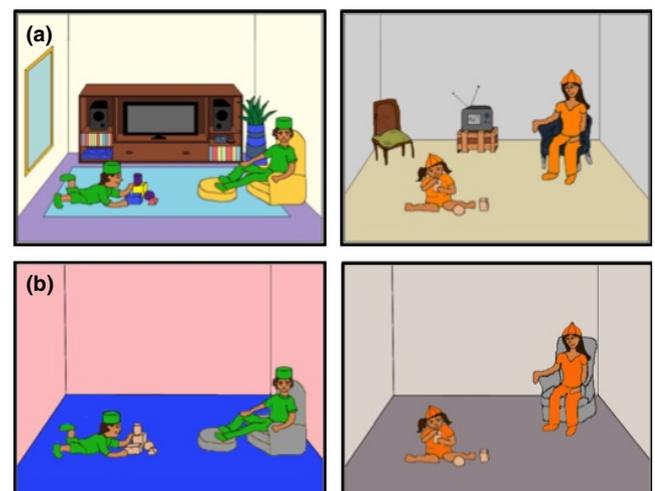


Figure 1 Example stimuli used in (a) Experiments 1 and 3, and (b) Experiment 2. Assignment of groups (Orange vs. Green) to conditions (e.g. high vs. low wealth) was counterbalanced across participants.

group was depicted as high- versus low-wealth was counterbalanced across participants. Children saw 20 people from each group, with two or three people depicted in each scene, representing males and females as well as children and adults.

To ensure that children interpreted our images as pictures of people with high wealth and low wealth, we conducted a study with a separate group of 4–5-year-old children ($N = 20$). The experimenter in this short study told children they would be looking at some pictures of people and their houses. She went on to say, ‘Some of the people in these pictures are rich, and some of the people in these pictures are poor. Rich people can buy expensive things at stores. They go on vacation to places like Disneyland. Poor people can’t buy expensive things at stores. They don’t go on vacation as much; usually they stay home instead. Now we’re going to look at the pictures, and I’m going to ask you some questions, and you can answer by pointing at one of the pictures. Ready?’ Then, participants saw nine pairs of images side by side (one high-wealth and one low-wealth) and were asked for about half (four or five) of the items: ‘Here are two families in their houses. One of these families is rich and one is poor. Can you show me which one is rich?’ For remaining items, the experimenter said, ‘Here are two families in their houses. One of these families is rich and one is poor. Can you show me which one is poor?’ In line with our intentions when creating the images, children correctly identified the ‘rich’ and ‘poor’ images 78% of the time, which was significantly more often than chance (50%), $t(19) = 3.99, p < .001$. These images were therefore taken to indicate wealth differences in the main experiment.

Procedure

Exposure phase. A female experimenter tested all children individually in their school or in the lab. Participants first heard that they were going to learn about two groups: the ‘Oranges’ and the ‘Greens’. To make the novel groups seem relevant to the participants, the experimenter also told participants that after learning about the groups they would select which group they wanted to join.

The experimenter then showed children the pages of the book. For each image the experimenter labeled the group members and offered a sentence of minimal narration (e.g. ‘Here are some Greens inside of their house. They are talking to each other.’). To keep children engaged with the activity of viewing the images, the experimenter asked the child to point to a clearly visible item in the scene (e.g. ‘Where is the door?’) once for each scene. The experimenter’s narration was identical for the high- and low-wealth scenes. Importantly, the

experimenter never drew attention to wealth information in the scene; that is, she never used status-related terms (e.g. fancy, shabby, etc.). Paging through the book took approximately 4 minutes.

Test phase. Following the exposure phase, participants completed three test trials: a matching trial (to assess participants’ knowledge of the groups’ status), a preference trial (to assess participants’ social group preference), and a membership trial (to assess whether children’s social decisions would be affected by group wealth). The order of these trials was counterbalanced across participants. All the characters used in the test trials matched the child’s own gender.

For the matching trial, the experimenter presented a high-wealth scene and a low-wealth scene arranged laterally; neither scene contained people. She then presented a picture of an unfamiliar Orange group member as well as a picture of an unfamiliar Green group member, and asked the child to ‘put the people on top of their rooms’. For the preference trial, the experimenter presented a picture of an unfamiliar Orange group member alongside an unfamiliar Green group member and asked the child to point to the person they liked better. For the membership trial, the experimenter told participants that they would become a member of one of the novel groups and would wear that group’s shirt. The experimenter then presented children with an orange sweatshirt alongside a green sweatshirt and asked participants to indicate which group they preferred to join. For all three trials, the spatial locations of the test items (i.e. on the child’s right vs. left side) were randomized.

Results

On the matching trial, most children (71%) matched the individual from the group that had been depicted as higher in wealth during the exposure phase with the high-wealth scene (and therefore matched the other individual with the low-wealth scene), a pattern that differed from chance ($p = .038$, binomial test). For the preference trial, most participants (74%) preferred the person who belonged to the group that had previously been depicted as higher in wealth ($p = .021$, binomial test); see Figure 2. Finally, for the membership trial, 68% of participants selected the sweatshirt that matched the color of the group that had previously been depicted as higher in wealth, a pattern that was not significantly different from chance ($p = .108$, binomial test).

Focusing on the two test trials that were significantly influenced by wealth information, we asked if there was a relationship between children’s beliefs about the SES associated with each group (as assessed by the matching

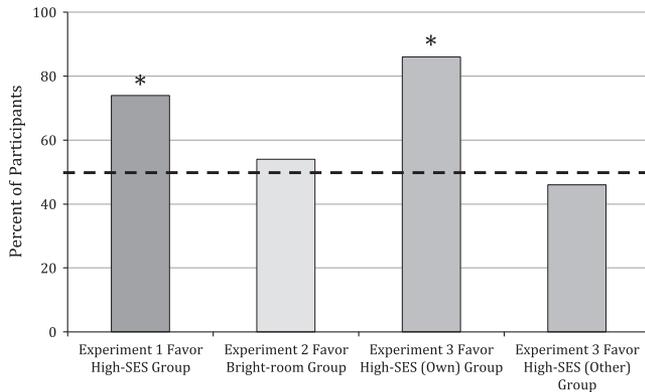


Figure 2 Percentage of participants who favored the group with high-wealth or 'bright' houses on the preference trial; all other participants favored the alternative group. Asterisks indicate cases where more children favored this group than would be expected by chance (50% in all cases).

trial) and children's selection of that group on the preference trial. Responses on the matching trial were not significantly correlated with responses on the preference trial ($p = .393$), suggesting that memory for each group's wealth may be independent from group attitudes.

Discussion

Consistent with our prediction, in the test phase children preferred new members of the group that had been depicted as wealthier in the exposure phase. Given the controlled nature of our novel groups paradigm, these attitudes could only be explained by children's observation of group differences in material wealth, rather than other factors that may influence children's attitudes toward social groups outside the lab (e.g. seeing others favor a particular group, hearing gossip, being exposed to media portrayals). Moreover, the short length of the exposure phase (4 minutes) demonstrates that children can develop attitudes in favor of a wealthier group rather rapidly.

Experiment 1 also revealed that children are capable of remembering and reporting on a learned association between group membership and wealth information. In the absence of direct indications of the targets' wealth, children matched the new targets to the unoccupied rooms in a way that was consistent with what they had seen for previous group members. Children's responses on the matching trial were not closely related to their responses on the preference trial, suggesting that memory for the source of an attitude (the wealth/group pairings) is not necessary for developing social preferences. This finding is consistent with other work showing that social preferences are often dissociated from the capacity to remember the information that caused those

preferences (e.g. Johnson, Kim & Risse, 1985; Li *et al.*, in press; Olson, Heberlein, Kensinger, Burrows, Dweck, Spelke & Banaji, 2013; Tranel & Damasio, 1993).

Surprisingly, children did not show a significant preference on the membership trial. This null result could reflect a methodological issue with the membership question: Participants may have been confused by the wording of the membership trial or may not have understood that the shirts symbolized the novel groups; preschool-age participants may have found the question odd because they had little experience selecting their own social groups; or participants may have responded to our task by simply selecting the color shirt they typically wear. Alternatively, a 4-minute exposure to group wealth differences may not be enough to engender a desire for membership in a particular group.

Why did wealth information influence children's attitudes in Experiment 1? One possibility is that wealth could have a specific and powerful effect on children's evaluations of individuals and entire social groups because it is seen as an essential social category and supports rich social inferences (Brey & Shutts, 2013; del Rio & Strasser, 2011; Diesendruck & haLevi, 2006; Sigelman, 2012). Alternatively, wealth may not be particularly unique; instead, any attribute that varies in positivity and is linked to social groups may lead children to favor one group over another. To distinguish these possibilities, participants in Experiment 2 learned that one group lived in more desirable houses (residences that were more colorful) than the other group, but neither group had residences that connoted higher or lower wealth than the other.

Experiment 2

As in Experiment 1, participants in Experiment 2 were introduced to two novel groups. However, rather than presenting houses that differed in wealth, we presented houses that differed in brightness (bright vs. dull), an attribute that would be appealing to children but that would not signal social class. If children simply like groups associated with preferred stimuli, then we reasoned that children in Experiment 2 would like the group associated with the brightly colored rooms.

To ensure that the bright houses were preferred over the dull houses and that this preference was comparable to children's preference for high- versus low-wealth houses, we presented all images to a new group of 4–5-year-old children ($N = 22$). All participants saw 18 pairs of images side by side; nine pairs included one high-wealth and one low-wealth scene and nine pairs included one bright and one dull scene. The experimenter introduced the images by

saying, 'We're going to look at some pictures on my computer, and I'm going to ask you which one you think is nicer. You can point to the picture that you think is nicer.' The experimenter never labeled or described the images, nor did she provide a definition for 'nicer'; previous research has used this wording to elicit preferences (e.g. for preferred foods or people; Li *et al.*, in press; McCrink, Bloom & Santos, 2010; Newman & Taylor, 1992). Children preferred the high-wealth houses over the low-wealth houses 82% of the time, which was significantly more often than chance (50%), $t(21) = 2.86, p < .001$, one-sample t -test, and preferred the brightly colored rooms over dull colored rooms 75% of the time, $t(21) = 2.27, p < .001$, one-sample t -test. Critically, the strength of children's preference for bright over dull rooms did not differ from the strength of their preference for high-wealth over low-wealth rooms, $t(21) = 1.39, p = .179$, paired-samples t -test. The bright and dull rooms were then used with a new group of participants to investigate their influence on social group attitudes.

Method

Participants

Twenty-eight 4-5-year-old children ($M = 59.11$ months, $SD = 6.76$ months; 12 female) participated in this experiment; they were recruited from the same sources as in Experiment 1. Again the sample was predominately White (86%) and middle class.

Stimuli

The stimuli were similar to those in Experiment 1 except that scenes depicted differences in room brightness (bright vs. dull) rather than wealth differences. Because it is difficult to show house exteriors without conveying at least some social class cues (e.g. house size), children in Experiment 2 saw only interior room scenes. In order to emphasize color differences and erase indications of wealth, we removed or modified some of the furniture from the interior rooms used in Experiment 1. Other aspects of the scenes (e.g. number of people, identity of individuals, postures) were identical to Experiment 1. Examples are displayed in Figure 1b.

Procedure

The procedure was identical to that of Experiment 1, with only slight adjustments to the experimenter's script in order to accommodate the modified stimuli. For example, because the furniture was removed from many of the scenes, questions that previously referred to the

now-absent pieces of furniture (e.g. 'Where is the chair?') were replaced with questions about other features of the room (e.g. 'Where is the floor?').

Results

Performance on the matching trial, in which children were asked to match novel characters to bright and dull rooms, indicated that our exposure phase had no effect on children's responses; only half of the participants matched the characters in a way that was consistent with what they had seen during the exposure phase, $p = 1.00$, binomial test. Similarly, on the preference trial children selected the novel character from the bright group only 54% of the time, a result that did not differ from chance, $p = .850$, binomial test; see Figure 2. Finally, on the membership trial, selection did not differ from chance; only 61% of children selected the shirt from the group that had been previously associated with bright scenes, $p = .345$, binomial test. As in Experiment 1, the correlation between performance on the matching and preference trials was not significant ($p = .272$).

Discussion

Unlike children in Experiment 1, those in Experiment 2 neither systematically encoded the relationship between social group membership and features of houses, nor formed attitudes toward the groups based on house differences. These results suggest that children do not always develop preferences for groups that have been associated with a preferred attribute (e.g. brightly colored rooms). The fact that children in the pilot study preferred bright (over dull) rooms at a rate that matched their preference for high-wealth (over low-wealth) stimuli suggests that the null effects in Experiment 2 are not attributable to the use of stimuli that children did not distinguish or like. Moreover, children's responses in the pilot study were not at ceiling or floor for either dimension, suggesting that our task appropriately captured the range of children's preferences. Nevertheless, it is possible that our pilot study was not sensitive enough to detect differences in the intensity of children's preference for high-wealth (over low-wealth) stimuli compared with bright (over dull) stimuli.

The presence of a group preference effect in Experiment 1, but not Experiment 2, raises questions about why wealth information could have such a strong impact on children's preferences. For example, wealth information may be particularly meaningful to children because they view it as a signal of competence (and competence is an important trait; Sigelman, 2012), or it may be that wealth differences are meaningful because they imply

'essential' differences (del Rio & Strasser, 2011). We return to this idea in the General Discussion.

Experiment 3

Experiment 3 investigated how information about group wealth interacts with attitudes toward one's own group, a question that is particularly important in light of the fact that children themselves often belong to wealthy or poor groups. While social identity theory (SIT; Tajfel & Turner, 1979) and its intellectual descendant social identity development theory (SIDT; Nesdale, 1999) suggest that people generally prefer their ingroup, previous research has demonstrated that higher status groups show more ingroup favoritism than lower status groups (Hinkle & Brown, 1990; Mullen, Brown & Smith, 1992). Insofar as wealth is a valued attribute, SIDT predicts that children who are members of a high-wealth group will show strong ingroup favoritism. In contrast, when children are members of a low-wealth group they are predicted to show significantly less ingroup favoritism. We tested these predictions by assigning children to be members of a high- or low-wealth group within our novel groups paradigm.

Method

Participants

Fifty-six 4–5-year-old children were recruited in the same way as in all previous experiments. Twenty-eight participants were randomly assigned to the high-wealth group condition ($M = 59.55$ months, $SD = 8.18$ months; 12 female) and 28 were randomly assigned to the low-wealth group condition ($M = 59.89$ months, $SD = 7.18$ months; 12 female). Participants were predominately White (71%) and middle class. Four additional children participated in the experiment, but were excluded from analyses because of experimenter error ($N = 1$), a desire to stop prior to test ($N = 1$), and failure to correctly identify their assigned group during the group assignment manipulation check (described below; $N = 2$; one from the high-wealth group and one from the low-wealth group).

Procedure

The procedure used in Experiment 1 was slightly modified so that children felt like they belonged to one of the novel groups. When introducing the novel groups, the experimenter included the additional sentences, 'You are going to be in the Green/Orange group. See this

shirt? Since you are in the Green/Orange group, you'll put on this green/orange shirt.' Participants were given a shirt to wear (or hold, if the child did not want to wear an additional piece of clothing), and the experimenter confirmed that children understood the group assignment manipulation by asking them to report their group membership. Then, the experimenter administered the exposure phase, matching trial, and preference trial (as described in Experiment 1), as well as a manipulation check probing the child's group assignment. For the manipulation check (which occurred after the test phase), children were again asked to report their group assignment.

Results

Participants in both conditions learned the relationship between wealth and group membership, matching the character from the high-wealth group with the high-wealth room 71% of the time in the high-wealth condition ($p = .036$, binomial test) and 82% of the time in the low-wealth condition ($p < .001$, binomial test). Performance on the matching trial in the two conditions did not differ, $\chi^2(1, N = 56) = .902$, $p = .342$.

On the preference trial, participants' responses differed depending on their group assignment, $\chi^2(1, N = 56) = 9.639$, $p = .002$, with those assigned to the high-wealth novel group systematically preferring the character from the high-wealth group (86% of the time; $p < .001$, binomial test) but those assigned to the low-wealth group selecting this character only 46% of the time, a pattern not different from chance ($p = .851$, binomial test); see Figure 2.

As in previous experiments, the correlation between performance on the matching and preference trials for the high-wealth group member was not significant for participants assigned to either the low-wealth group, $r(28) = .060$, $p = .761$, or the high-wealth group, $r(28) = .194$, $p = .323$.

Discussion

Experiment 3 revealed that assigning children to be a member of a group depicted as high or low in wealth had a dramatic impact on children's attitudes. Only children assigned to the high-wealth group showed a preference for the group previously depicted as wealthier. Children who had been assigned to the low-wealth group showed no systematic preference either for the wealthier group or for their own (poorer) group. The lack of group preference observed in the low-wealth group was not due to ignorance about the wealth disparity between groups, as children in both groups accurately reported the

groups' wealth on the matching trial. Thus, children in the low-wealth group were not engaged in motivated misremembering, as one might have predicted (see Dunham *et al.*, 2011), and instead fully recognized their group's lower wealth. This experiment suggests that children's preferences are influenced by both pro-wealth attitudes and pro-ingroup attitudes, which aligned with one another for children in the high-wealth group but were in opposition for children in the low-wealth group.

Although children had only 4 minutes of experience as a member of their assigned novel group and an equally brief exposure to information about their group's status, our experimental manipulation was enough to engender a pattern of group preferences remarkably similar to what is observed in the racial attitudes literature; in both our paradigm and in studies of racial attitudes, children in high-status groups favor their ingroup while children in low-status groups do not show significant preferences (e.g. Aboud & Skerry, 1984; Ramsey & Myers, 1990). Our findings are also consistent with previous research that has found similar patterns of ingroup favoritism when novel groups differ by other indicators of status (Bigler *et al.*, 2001; Brown & Bigler, 2002; Nesdale & Flessner, 2001) and therefore contribute to a growing body of work in which ingroup favoritism and group status information impact children's intergroup attitudes (e.g. Bigler *et al.*, 2001; Nesdale & Flessner, 2001; Shutts *et al.*, 2011).

General discussion

The present paper provides experimental evidence that learning SES information about a group can engender preferences for or against that group. Children favored members of a group shown to be wealthier over members of a group shown to be poorer (Experiment 1). This finding is consistent with previous correlational research suggesting that children's attitudes toward groups are associated with their perceptions of which groups are wealthy versus poor (e.g. Olson *et al.*, 2012; Radke & Trager, 1950) as well as with research showing that children like higher SES groups (e.g. Newheiser & Olson, 2012; Shutts *et al.*, 2011). These results add to the literature on children's understanding of status, suggesting that children not only form attitudes based on a group's athletic prowess, intelligence, or drawing skill (Nesdale, 1999; Bigler *et al.*, 2001), but also on the basis of factors that routinely covary with social group membership outside the lab – in this case, SES. Perhaps most remarkably, these studies demonstrate that already by the preschool years children attend to wealth information and use it as the basis for forming attitudes toward individuals and groups.

Beyond demonstrating that a social group's SES can influence children's evaluations of that group, these findings also suggest that not just any evaluative information is enough to engender social group preferences, at least in a short experimental task such as the one used here. Even though children preferred bright rooms to dull rooms, children did not form preferences for groups associated with the former stimuli over the latter stimuli (Experiment 2). While speculative, these studies suggest that children may be more attentive and may form preferences more quickly when social group membership is correlated with highly socially relevant information, such as wealth (and presumably other factors like good vs. bad behavior or occupational roles), rather than less socially relevant information, such as room brightness (and presumably other factors such as shoe size). While previous studies show that children see wealth as socially meaningful (e.g. children think that people with the same amount of wealth have other things in common as well; del Rio & Strasser, 2011; Diesendruck & haLevi, 2006), SES information and house color information differ in other ways as well. To help illuminate why certain group attributes influence children's attitudes while others do not, future research could directly manipulate the social relevance of a novel group attribute (e.g. by giving children direct evidence that people with colorful houses play with one another, and people with drab houses play together). Showing the influence of these manipulations on children's group attitudes would provide a direct demonstration that children's attitudes are selectively sensitive to socially relevant attributes.

Finally, children's tendency to favor members of higher status groups was moderated by group membership (Experiment 3). Participants who were assigned to membership in the wealthier group showed stronger ingroup favoritism than participants assigned to membership in the poorer group. These results fit with a meta-analysis of novel groups studies by Mullen and colleagues (1992) in which members of higher status novel groups show more ingroup bias than members of lower status novel groups. Similarly, our findings are consistent with studies of children's ingroup favoritism for familiar social groups; for example, our studies replicate the finding that young children from lower status groups (e.g. Blacks in the US) show no ingroup preference (e.g. Aboud, 1988; Aboud & Skerry, 1984; Newheiser & Olson, 2012; Ramsey & Myers, 1990). Importantly, Experiment 3 raises the possibility that members of lower status racial groups may show less ingroup favoritism because they have some understanding that their group is lower in SES. Consistent with this interpretation, previous work has found that Black

children in the United States perceive their group as being lower in SES than Whites (Bigler *et al.*, 2003; Radke & Trager, 1950), and recent findings show that the more Black children in the US value wealth, the more they favor White over Black individuals (Newheiser & Olson, 2012). More broadly, these results are in line with research coming from the perspective of SIT (Tajfel, 1978; Tajfel & Turner, 1979) and SIDT (Nesdale, 1999), which note that ingroup favoritism can be moderated by one's membership in a group that is high or low status.

The present findings also raise a host of questions that will be critical to address in future research. Most notably, the majority of participants in the present research were White and from middle-class families. Thus, it will be important to examine whether the effects observed here generalize to children from other racial and ethnic groups, as well as children from families that are lower in SES. Extant research suggests that children from lower SES backgrounds respond similarly to children from higher SES backgrounds on tasks that probe their understanding of social class (Ramsey, 1991); their perception of wealth as an important social attribute (del Rio & Strasser, 2011; Leahy, 1981); their endorsement of anti-poor and pro-wealth social class stereotypes (Weigner, 2000; Woods, Kurtz-Costes & Rowley, 2005); and their preferences for wealthier individuals (Dittmar & Pepper, 1994; Elliot & Leonard, 2004). These findings provide evidence that the tendency to notice and favor high-SES individuals is shared by children from higher and lower SES families, and suggest that children from low-SES families might therefore perform similarly in the present experiments. Nevertheless, the results of our own Experiment 3 indicate that membership in a low-wealth group can dampen preferences for a high-wealth outgroup. Thus, future research may reveal that children from lower SES families will show less robust preferences for the high-wealth novel group, to the extent that these children spontaneously identify with the less wealthy novel group. For this reason, it will be important in future research to assess how much children identify with, or feel similar to, novel group members, as well as attempt to measure children's perceptions of their own family's wealth. A definitive answer to how children from lower SES families, as well as children from minority families, would respond in the present experiments awaits empirical attention. In addition to probing the generality of the effects observed in the present manuscript, such research should also shed light on the role of experience in guiding children's attitudes and stereotypes, as children from different racial, ethnic, and social class backgrounds may be exposed to different information in their social environments.

In future research it will also be important to test whether the principal effects in the present experiments maintain when aspects of the stimuli or dependent measures are varied. First, Experiments 1 and 3 depicted SES differences by varying the quality and quantity of material possessions, in part because previous work suggests children are sensitive to these aspects of SES (e.g. Olson *et al.*, 2012; Radke & Trager, 1950) and because these differences reflect how wealth differences are sometimes (but not always, of course) displayed in communities (Bradley & Corwyn, 2002; Evans, 2004). Yet it is possible that material possessions are not the only – or best – way to test how SES information affects children's attitudes. Moving forward, it will be important to disentangle the specific cues that children use to recognize individuals who are high in material wealth, as well as examine other aspects of SES. For example, previous work also suggests that at least by the elementary school years, minority group children are aware of their group's lower occupational prestige (Bigler *et al.*, 2003). Might group differences in occupational prestige lead to social group preferences as wealth did here? Second, in order to test the strength and nature of children's preference for higher over lower SES individuals and groups, it would be useful to present children with dependent measures that allow for graded responses (e.g. Likert scales) and independent evaluations of different wealth groups (rather than comparative measures). Third, the experiments in this paper presented children with homogenous groups: All members of a group were either rich or poor. Outside the lab, group membership is never perfectly correlated with SES, and it will therefore be important to examine whether and how children learn links between SES and group membership when the input is less perfectly aligned.

A related question for future research is *how* children typically come to learn relationships between social groups and SES. In our experiments, children observed this information directly. In life outside the lab, children may gain this information first-hand as well, but this may not be the only (or primary) route to learning about groups' SES. Children could also learn about the relationship between group membership and SES by overhearing others discussing this relationship or by hearing stereotype-consistent comments. The media likely provide yet one more route by which children can learn the association between group membership and SES, as television tends to portray some racial and ethnic groups as being less well-off than other groups (e.g. Mastro & Stern, 2003; Seggar & Wheeler, 1973; Signorielli & Kahlenberg, 2001). Which of these factors contributes most to children's learning – and how these

sources of information combine to ultimately influence children's social attitudes – remains an open question.

Finally, the present research raises questions about why children might favor individuals or groups that are higher in wealth. One possibility is that children's preferences are related to their assumptions about the traits or abilities of people who vary in wealth. For example, previous research shows that young children like people who are competent, and assume that wealthy people are more competent than poor people (Brey & Shutts, 2013; Brosseau-Liard & Birch, 2010; Sigelman, 2012). A second possibility is that children learn SES biases from adults (who hold markedly negative attitudes and stereotypes about the poor; see Bullock, 1995, and Lott, 2002, for review). Yet a third possibility is that children prefer to align themselves with people who appear wealthier because they assume that those people will share their valuable resources. Future research is necessary to illuminate and distinguish these different possibilities.

The present work has clear implications outside the lab as it highlights the potential double discrimination experienced by members of poorer social groups. Not only do members of poorer groups have fewer resources (by definition), but they also face prejudice, evidenced here in children as young as 4–5 years of age. As one way in which people reinforce the existing status hierarchy is by favoring higher status groups (Jost & Banaji, 1994; Jost, Banaji & Nosek, 2004), our studies on children's pro-wealth attitudes add to a growing body of work showing that system-justifying tendencies emerge early in development (e.g. Olson, Dweck, Spelke & Banaji, 2011) and suggest that societies may maintain group-based inequalities over time because of an early-developing internalization of existing social hierarchies.

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