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White Bias in 3–7-Year-Old Children across Cultures

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Abstract

In three studies we report data confirming and extending the finding of a tendency toward a White preference bias by young children of various ethnic backgrounds. European American preschoolers who identify with a White doll also prefer it to a Black doll. In contrast, same age African American children who identify with a Black doll do not show a significant preference for it over a White doll. These results are comparable in African American children attending either a racially mixed (heterogeneous), or an Afro-centric, all African American (homogenous) preschool. These results show the persistence of an observation that contributed to school de-segregation in the United States. Results also reveal a lack of congruence between skin color identity and preference is not limited to African Americans. There is a comparable, if not stronger White preference bias in five to seven-year-old Polynesian and Melanesian children tested in their native island nations. Using a modified procedure controlling for binary forced choice biases, we confirm these findings with second generation American children of Indian descent showing clear signs of a White (lighter skin preference) bias. These results are consistent with the idea that during the preschool years children are sensitive and attracted to signs of higher social status that, for historical reasons and across cultures, tends to be associated with lighter skin color.

Keywords

bias – children – cross cultural – development – ethnicity – preferences – race

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1 Introduction

In the 1940s, a majority of African American children attending Southern segregated or Northern racially mixed preschools were reported to have a White preference bias (Clark and Clark, 1940, 1947). When asked to choose between a White and a Black doll, the majority of these children found the White doll as having more positive attributes (i.e., "nice"). Fifty-nine percent of the children picked the Black doll when asked to choose which doll was the "bad one". These findings were interpreted as early symptoms of lesser self-regard, weaker self-concept, and putatively as alarming signs of troubled ego-development among African American children (Horowitz, 1939). Clark and Clark's findings gained particular significance and notoriety in the context of the Civil Rights Movement. It contributed to a national debate in the US that ended the segregation of public schools, eventually making it unconstitutional in 1954 (Brown vs. Board of Education). Questions remain as to what might influence and potentially cause what seems to be a depleted sense of own group preference by African American and other minority children (i.e., Latino and Asian American children), a phenomenon confirmed by multiple follow-up studies using various methodologies, in addition to straight replications of the Clark and Clark original paired doll force choice paradigm, using both European American or African American adult experimenters. These methodologies included ethnic identification by color and facial features using photographs, drawing and person coloring tasks, as well as affiliation and affinity questionnaires (for reviews see Brand et al., 1974; Aboud and Skerry, 1984; Aboud, 1988, as cited in Shutts et al., 2011).

An important psychological force behind social affiliation and self-identification with a group would be the individual drive for self-enhancement and the striving for positive self-regard (Vaughan et al., 1981). A psychological premise of the social identity theory proposed by Tajfel and Turner (1979) is that self-enhancement motive shapes social preferences and attitudes toward other groups. Accordingly, social stereotypes and in-group favoritism would find their developmental roots mainly in self-enhancement motives (Operanio and Fiske, 2001). Inversely, reduced or symptomatic absence of a preference and identification with members of the same group would be putatively linked to the lesser self-esteem of individuals identifying with disadvantaged groups, in particular African Americans who had a long and deep running history of disenfranchisement due to enslavement or subjugation in their home country. Multiple follow-up studies with African American, but also other ethnic minority groups and in particular Latino and Asian American children,

corroborate the original Clark and Clark findings (Rice et al., 1974; Dunham et al., 2006, 2007).

In general, the self-enhancement process through group membership and affiliation may be hindered for groups that have been historically stigmatized and marginalized. Instead of group preferences being guided by an individuals' identification with the group in order to enhance the self (social-identity theory proposed by Vaughan et al., 1981), perception of group status may be the actual driving force guiding individuals' preference and social attitudes. If this is the case, then there should be a universal appeal for individuals to prefer and affiliate with other individuals of perceived higher status, independently of self-identity (Mullen et al., 1992). Developmentally and in support of the status perception account, evidence shows that already in the preschool years, the perception of higher status plays a role in the determination of children's attitudes and social preferences. Children as young as three years demonstrate an awareness of social groups that are better off and associated with higher regard (Bigler et al., 2001; Nesdale, 2001; Nesdale and Scarlett, 2004). However, the methods used so far in research looking at the link between racial preference and social status rarely factor with whom the child actually identifies. The results are thus difficult to interpret in relation to the self-enhancement vs. self-depreciation premise of the social identity theory outlined above. In general, the now large amount of developmental findings regarding early social categorization and preferences leave open the question of what might be the criteria or social values driving children toward social likes and dislikes.

In child development, explicit signs of a proclivity toward self-enhancement emerge by the third year. When asked to provide a self-portrait, young preschoolers tend to describe themselves in "unrealistically positive" terms (Harter, 1999). In general, the proclivity toward self-enhancement parallels the development of a sense of self that is objectified in relation to others (Rochat, 2009), indexed by the emergence of self-conscious emotions like shame or guilt (Lewis et al., 1989), but also by a novel sensitivity and expression of conformity to group rules and norms (Rakoczy et al., 2008; Haun and Tomasello, 2011).

From approximately three years of age, children are prone to social preferences and attitudes that are categorical, widespread and can be based on minimal information and remarkably fast mapping. From 4–5 years, children favor those sharing transient features, arbitrarily assigned colored teams such as blue vs. red team that minimally define "in-group" characteristics (Patterson and Bigler, 2006). In the preschool years, such minimal group affiliation can determine significant social preference and in-group favoritism at both explicit and implicit levels (Dunham et al., 2011). At a more general cognitive level, such social proclivity frames a preferential encoding of positive information regarding the own group and negative information about the other group

(Corenblum, 2003; Dunham et al., 2011; Raabe and Beelman, 2011). In stories involving light as opposed to darker skin protagonists children of European descent are more likely to associate White characters more positively than Black characters (Bigler and Liben, 1993; Dunham et al., 2006, 2008; Baron and Banaji, 2006; Griffith and Nesdale, 2006). Paradoxically, if we follow the premise of the social identity theory, a comparable lack of positive association with Black characters is reported in African American children (Averhart and Bigler, 1997). This phenomenon is somehow consistent and reflect the fact that by adulthood, African Americans tend to be significantly more negatively stereotyped as unemployed, incarcerated, or poor when compared to European American characters (Penner and Saperstein, 2008). Proximate socio-cultural factors thus seem to play a significant role in shaping young children's social attitudes and stereotypes.

One of the goals of the current study was to further examine the strength of a White/lighter skin bias in children of color who are in different cultural environments (i.e., schools that emphasize Afrocentric values and pride versus schools that do not; socio-cultural environments where children of color make up the numerical minority versus environments where there are the numerical majority). Research has shown exposure to cultural pride messages increase positive attitudes in minority children about their racial group (Branch and Newcombe, 1986; Knight et al., 1993; Marshall, 1995; Stevenson, 1995). In terms of racial composition of environment, the evidence of its relative impact on both African American and Euro-American children is mixed (Gopaul-McNicol, 1988; Dutton et al., 1998; McGothlin and Killen, 2010).

Recent studies suggest that perceived social status in terms of material wealth (Newheiser and Olson, 2012), political and socio-economic power within the larger society (Nesdale, 2001; Shutts et al., 2011), and social prestige (Chudek et al., 2012) could be important criteria for early social preferences. Testing gender and race-based (skin color and facial feature proxy) preferences in 3–13-year-old children from a black township of Johannesburg in South Africa, Shutts et al. (2011) report in-group preference by gender, but not by race. In general, however, children showed a lighter skin preference, independently of whether they were familiar with White people or belonged to a numerical minority or majority in the township. The study by Shutts et al. (2011) indicates that the racial attitude of African children could rest primarily on an early sensitivity to the relative social status of the various ethnic groups in their social environment. Their data point to children's preference for members of groups identified with relatively higher status, independently of group size (numerical minority vs. majority) or relative familiarity (exposure). These findings corroborate those of Newheiser and Olson (2012) with 7–11-year-old African American children showing that children's preference for wealth and

higher economic status predicted their implicit favoritism for White over Black individuals, a preference that is commensurate to White children's implicit in-group favoritism (White bias).

In this general context, the goal of the current study was to probe further the White bias phenomenon, comparing directly 3–7-year-old children from various cultural and socio-economic backgrounds, who by birth or other family circumstances grow up as part of a numerical minority or majority racial group. Our goal was to extend and try to corroborate such phenomenon comparing children, across minority as well as majority cultures inside and outside of the United States. Following the core idea of self-enhancement associated with group identification (Social Identity theory), children of all cultural and demographic backgrounds, regardless of their skin tone, should show significant congruence between self-identity (i.e., looking like one of two dolls) and preference for that doll.

Our rationale and working hypothesis was that, a generalization of a diminished favoritism for the darker skinned dolls by self-identified children of color of both the numerical minority and majority racial groups, would further support the idea that the White bias phenomenon is indeed primarily based on the enduring perception of lighter skin color as a proxy of higher social status, not simply familiarity and the need of children to align with a racial majority.

In a first study, we replicated the original Clark and Clark doll study with minority three- to five-year-old African American children from racially homogenous (strongly Afro-centric) or heterogeneous (predominantly White) preschools in Atlanta, Georgia. In a second study, using photographs instead of real dolls, we tested majority native Melanesian (Ni-Vanuatu) and Polynesian (Samoan) five- to seven-year-old children in their isolated island villages in the South Pacific, comparing them to age matched African American and European American children in the US. Finally, in a third study, using a modified real doll test procedure controlling for binary forced choice bias, we tested 3–7-year-old second generation children of Indian descent living in the Southern United States (Georgia and Mississippi).

2 Study 1

2.1 *Method*

2.1.1 Participants

We tested a total of 114 children of three and five years of age divided into two different groups:

(1) African Americans (N = 57) attending an all-Black, middle-class preschool for children of faculty and staff of Spelman College (an elite and historically black women's college in Atlanta, GA, USA) with strong Afrocentric cultural curriculum and activities. The sample included 23 three-year-olds (M±SD = 44.48±3.83 months, 12 girls) and 34 five-year-olds (M±SD = 64.82±4.40, 13 girls).
(2) African Americans attending racially heterogeneous, middle-class preschools from Atlanta, GA, USA (N = 57). The sample included 30 three-year-olds (M±SD = 45.38±4.20, 15 girls) and 27 five-year-olds (M±SD = 64.33±3.60, 14 girls).

2.1.2 Material

Children were presented with an identical pair of Black and White "Barbie" dolls, gender matched to the child. The dolls had identical facial morphology and wore identical swim cap and bathing suits to reveal the most skin possible, the color of which was the only distinct feature (see Figure 1A).

2.1.3 Procedure

The preferential "pair" doll procedure created by Clark and Clark (1947) was used, with modified wording, to probe children's preference and identity. To address criticisms regarding the original Clark and Clark methods, including their use of a forced choice paradigm forcing children to pick between "good" and "bad" dolls, in the current study we asked children to report their preference and to freely respond why they preferred one doll over the other. Alternatively, children could also report a preference for both dolls. Children were presented simultaneously with the white and black Barbie dolls, gender-matched to the child. Placement location of the Black doll in front of the child was counterbalanced across children of each age group. The two dolls were placed 10 inches apart on a table in front of the child, who then answered six questions in the following order: (1) Are these dolls different?; (2) What is different about them?; (3) Which one do you like the most? (the preference question); (4) Why is that one your favorite?; (5) Which one is like your friends?; (6) Which one is like you? (the identity question). The paired dolls remained on the table in front of the participants during the whole questionnaire interview.

2.2 *Results*

As a function of school environment (All-Black or racially mixed preschools) and age (3- and 5-year-olds), we analyzed the proportion of children (%) who (1) claim that the dolls are different; (2) provide a color or racial reason for

FIGURE 1 *Paired white and black dolls used in Study 1 and 2. This figure is published in colour in the online edition of this journal, which can be accessed via http://booksandjournals.brillonline.com/content/journals/15685373.*

their difference; (3) prefer the White over the Black doll (preference question); (4) give a color or race reasons for their preference; (5) consider the White doll as looking more like most of their friends; and (6) see the White doll as looking more like them (identity question).

As seen in Table 1, a significant majority of children at all ages and from both school environments claimed that the two dolls were different (Question 1), all binomial tests $p < 0.001$). No significant age, or school effect were found in relation to Question 1 (Fisher's exact test: $p = 0.496$). Only children noticing a difference were included in subsequent analyses. The proportion of these children pointing to either racial (alluding to race or skin color, e.g., "that one is black") or non-racial aspects (e.g., "their outfits are different," or "just because") in relation to Question 2 (what's different?) did not vary significantly across school environments (Fisher's exact test: $p = 0.288$). As seen in Table 1, children

TABLE 1 *Proportion (%) of children's responses to the 6 questions regarding the pair of black and white dolls as a function of school environment and age*

	All-Black preschool (*N*=57)		**Racially mixed preschool (*N*=57)**	
	3 years (*N*=23)	**5 years (*N*=34)**	**3 years (*N*=30)**	**5 years (*N*=27)**
1. Dolls are different	91.3%**	100.0%**	100.0%**	100.0%**
2. Color/race reason for difference	56.5%	94.1%**	56.7%	81.5%**
3. White preference	56.5%	54.5%	56.7%	50.0%
4. Color/race reason for preference	39.1%	55.9%	43.3%	44.4%
5. White doll like friends	39.1%	34.4%*	46.4%	69.6%*
6. White doll like you	43.5%	33.3%*	33.3%*	37.0%

In a further analysis, we compared a subsample of African-American children (N=54) from both school types based on their own skin tone complexion, distinguishing those of light-medium black skin complexion vs. those of medium-dark skin complexion. With an inter-rater reliability of above 0.95 based on the video recording of each child, we determined that 63.0% of the children had light-medium complexion and the other 37.0% medium-dark complexion. Entering skin complexion as a factor, analysis yielded no significant differences in response to the preference question (Fisher's exact test: $p = 0.576$). There was no evidence of any link between the child's own skin tone and doll preference, regardless of age or school type. A similar analysis revealed no association between the identity question and child's skin tone (Fisher's exact test: $p = 0.759$). $^{*}p < 0.05$; $^{**}p < 0.01$.

from both schools (average of 74.0%) were above chance in providing race-related reasons (binomial test: $p < 0.001$). However, results yielded a significant age effect (Fisher's exact test: $p < 0.001$). Collapsed across school types, 5-year-olds were significantly more likely to provide race-related reasons to explain the difference between the dolls compared to three-year-olds (88.5%; binomial test: $p < 0.001$ compared to 56.6%; binomial test: $p = 0.069$) (see Table 1). Thus, with age children tended to use significantly more of race related criteria (i.e., color characteristics) to explain the difference they noticed between the dolls.

Regarding the preference question (Question 3: which doll do you prefer?), we considered the number of children who preferred the White doll, or alternatively, claimed that they liked them both. Across age groups and for both school types, only a very small number of children responded that they preferred both dolls (less than 2%). We did not include them in further analyses. Of the children who demonstrated a doll preference, we found no significant preference for either White or Black doll, although as seen in Table 1, a slight (non-significant) majority of children preferred the White doll. On the whole, the doll preference of children in all-Black (54.4%) and racially mixed (52.6%) preschools was at chance (Fisher's exact test: $p = 0.849$), with no significant age effect nor any significant age by school interaction. This result confirms that African American children do not show a significant racial in-group preference (Clark and Clark, 1940, 1947; Brand, Ruiz and Padilla, 1974; Aboud and Skerry, 1984; Aboud, 1988; Shutts et al., 2011).

Children's rationales for their preference (their responses to Question 4: Why is that doll your favorite?) referred equally to either race-related (e.g., "that one is black") or non-race-related explanations (based on Fisher's exact test, $p = 0.707$). This was true in all-Black (49.1%) as well as in racially mixed preschools (44.0%) Neither age effect nor any age by rationale interactions were found.

Not surprisingly, the proportion of children identifying the Black doll as resembling their friends (Question 5: Which doll is like your friends?) was significantly higher at the mixed compared to the all-black preschool, regardless of age ($\chi^2(2) = 6.19$, $p = 0.037$, Cramer's $V = 0.241$). More children in the racially mixed preschool described their friends as resembling the White doll than did children from the all Black school (56.9 and 36.4%, respectively).

Finally, a significant majority of children across ages and schools identified with the Black doll (Question 6: Which doll is like you?). There were no significant differences across the two school locations (Fisher's exact test: $p = 0.846$) or between ages (Fisher's exact test: $p = 0.845$). As seen in Table 1

regardless of age, only a minority of children identified with the White doll. Children in both the all-Black (62.5%) and the racially mixed (64.9%) preschools were significantly above chance in identifying with the Black doll (binomial tests: both $p < 0.05$).

2.2.1 Correspondence Between Identity and Preference

In consideration of our working hypothesis, we further analyzed the relation between the identity and preference questions, in particular whether responses to the two questions were congruent or not (e.g., identifying with and preferring the same doll). We found that overall, a significant majority of children (71.0%) tend to be significantly congruent between which doll they self-identify and the one they prefer (binomial test: $p < 0.001$). A significant majority of children who identified with the Black doll also preferred it (62.5%). Of the 35% of children who identified with the White doll, 85% also preferred it (both binomial tests: $p < 0.05$). Factoring school type, only the children from the racially mixed preschools (80.4%) showed this congruency effect (Fisher's exact test: $p = 0.037$, see Figure 2), with no significant effect of age.

When the relationship between children's self-identity and their preference was incongruent, a significant majority of children (82%) tended to identify with the Black doll but prefer the White doll (binomial test: $p < 0.001$). We observed a marginal effect of school type, such that this pattern of incongruence was more frequent in the racially mixed preschool (100%) compared to the all-Black preschool (72%; Fisher's exact test: $p = 0.077$). There were no effects of age.

We also analyzed the proportion of children who were congruent in their identity (Question 6) and their friends' identity (Question 5). In general, approximately half (54%) of children chose the same doll for the identity and friends question There were no significant effects of age or school type.

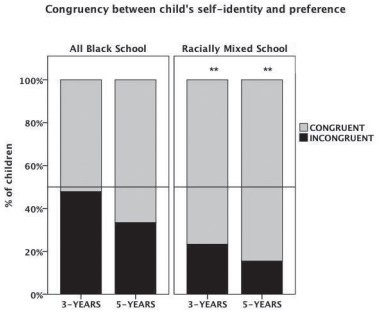

FIGURE 2
Proportion of children who are congruent in their self-identity and doll preference as a function of age and school type. Double asterisks denote p < 0.01 based on binomial tests.

Whether children were congruent or incongruent they were equally likely to identify themselves and their friends with the White or Black doll.

2.3 *Summary Discussion*

The results of this first study confirm Clark and Clark's original findings from the 1940s. For African American preschoolers, independently of whether they are part of an all-Black or mixed-race preschool, there is no significant racial in-group preference (labeled here as a White bias). These results contrast with the significant racial in-group preference typically reported in majority White European Americans, the latter upholding the basic premise of self-enhancement that is at the core of self-identity theory (see Introduction). These results are consistent with previous studies of non-Caucasian minority children (Dunham et al., 2007). They put into question the generalizability of the self-enhancement principle to other racial groups.

As a follow up, in the next study, we addressed the question of whether such a persistent phenomenon is unique to African American minority children in the United States. The goal was to probe whether what we once again confirmed in minority African American children within the United States could also hold for majority children of color in different parts of the world.

Based on the same protocol but with a change in material support and sampling slightly older children (5–7 years) we had access to in the South Pacific, we expanded the investigation to include native majority Polynesian and Melanesian children of color, in addition to African American and European American children that were matched for age.

3 Study 2

3.1 *Method*

3.1.1 Participants

We tested a total of 125 children between five to seven years of age divided into four different groups:

(1) African Americans from predominantly middle-class families in Atlanta, GA, USA (N=36), including 20 five-year-olds (M±SD = 66.50±5.36 months, 12 girls) and 16 seven-year-olds (M±SD = 88.38±6.92, 12 girls). Children completed the study at our University research lab.
(2) European Americans from predominantly White, middle-class families in Atlanta, GA, USA (N = 34), including 18 five-year-olds (M±SD = 67.11±4.36,

11 girls) and 16 seven-year-olds (M±SD = 90.30±3.94, 8 girls). Children completed the study at our University research lab.

(3) Samoan children (N = 34), including 14 five-year-olds (M±SD = 61.14±2.53 months, 10 girls) and 20 seven-year-olds (M±SD = 84.4±1.53 months, 10 girls) living in a rural, traditional chief system, primarily subsistence living village (population approximately 600) on the island of Savai'i in independent Western Samoa which lays in the heart of Polynesia. Samoans share a strong phenotype, most have straight hair, with a light brown skin color. Samoa is an independent Nation since 1962 and native Samoans form an overwhelming majority (total population of approximately 190 000) compared to the few White ("palagi" or foreigners) people living on the two main islands (Savai'i and Upolu), primarily missionaries of various Christian denominations.

(4) Ni-Vanuatu children (N = 26), including 12 five-year-olds (M±SD = 65.08± 4.91 months, 4 girls) and 14 seven-year-olds (M±SD = 90.46±3.38 months, 7 girls) from a rural, traditional, primarily subsistence living village (population of approximately 1500) governed by a chief system on the island of Motalava in the far North archipelago of the Banks in the Torba Province of Vanuatu, in the heart of Melanesia, North East of Australia and South West of Papua New Guinea. Ni-Vanuatu people are typical "Melanesians", which comes from the word melanin or dark skin pigment people. They inherit darker skin and curly hair. With ecology and resources highly comparable to Samoa, Vanuatu is an independent nation since 1980 and native Ni-Vanuatu form an overwhelming majority, living on over sixty remote and spread out islands. Over 110 different languages are spoken in Vanuatu for a total population of approximately 245 000 people, a testimony of the remote and isolated group living within the country. White people constitute a small minority involved in business and a few religious missions, concentrating mainly in the two major cities of Port Vila and Luganville.

For purposes of cross-cultural comparison, African American and European American children were as closely as possible age and gender matched to each of the Samoan and Ni-Vanuatu children that were opportunistically tested in their native villages by trained native female experimenters in the native language of the child. In all instances, data were recorded by a female research assistant of African American descent and most Samoan and Ni-Vanuatu children were tested at their school, in a comparably quiet and non-distracting environment.

3.1.2 Material

The preferential "pair" doll procedure described in Study 1 was used, with one modification. For logistic reasons (e.g., durability and ease of transportation to remote research sites) the dolls were replaced with high definition glossy laminated 5×7 inch photographs of the Black and White dolls (see Figure 1). Note that to ensure comparability of results with Study 1, we analyzed the preference results of a subset of five-year-old children who used either actual dolls (N=55) or photographs (N=62). There was no significant difference, $p > 0.05$ regardless of age. Otherwise following the exact procedure described for Study 1, at test the two photographs of the dolls were placed before the child who was then asked to the six questions in their native language with back translation for accuracy: (1) Are these dolls different?; (2) What is different about them?; (3) Which one do you like the most? (preference question); (4) Why is that one your favorite?; 5) Which one is like your friends?; (6) Which one is like you? (identity question).

3.2 *Results*

The results obtained for each of the six questions as a function of culture (African American, European American, Samoan and Vanuatu) and age (5- and 7-year-olds) are presented in Table 2. A significant majority of children at all ages and from all cultural backgrounds claimed that the two dolls were different (Question 1), all binomial test comparisons $p < 0.001$). No significant age effect were found in relation to Question 1 (Binomial, all p values < 0.01). As in Study 1, only children noticing a difference were included in subsequent analyses. In relation to Question 2 (what is different?), the proportion of these children pointing to either racial (alluding to race or skin color, e.g., "that one is black") or non-racial aspects (e.g., "their outfits are different," or "just because") did not vary significantly across cultures (Fisher's exact test: $p = 0.288$), and no significant age differences were found. All children generally provided racial reasons (binomial tests, all $p < 0.05$, see Table 2).

Regarding the preference question (Question 3: which one do you prefer?), we considered the number of children who preferred the picture of the White doll. Across cultures and ages, a very small minority of children answered that they preferred both (6%). We did not include these children in the analysis of this particular question. Of the children who demonstrated a doll preference, we found a significant effect of culture ($\chi^2_{(3)} = 8.61$, $p = 0.035$, Cramer's $V = 0.265$). Ni-Vanuatu and African American children did not show a significant White preference bias. No main effect of age was found. We found a marginally significant increase in White preference between five- and seven-year-old

TABLE 2 *Proportion (%) of children's "Yes" responses to the six questions regarding the pair of black and white dolls as a function of culture and age*

	Samoa (*N*=34)		Vanuatu (*N*=26)		African American (*N*=36)		European American (*N*=34)	
	5 years (*N*=14)	7 years (*N*=20)	5 years (*N*=12)	7 years (*N*=14)	5 years (*N*=20)	7 years (*N*=16)	5 years (*N*=18)	7 years (*N*=16)
1. Dolls are different	100**	100**	91.7**	69.2	100**	100**	100%*	100**
2. Color/race reason for difference	100**	100**	58.3	92.3**	95.0**	100**	100**	93.8**
3. White preference	78.6*	100**	41.7	76.9*	75.0*	60.0	72.2	81.3*
4. Color/ race reason for preference	7.10**	10.0**	33.3	46.2	50.0	53.3	55.6	37.5
5. White doll like friends	50.0	85.0**	41.7	46.2	61.1	53.8	66.7	75.0*
6. White doll like you	78.6*	70.0	25.0*	30.8	35.0	6.3**	88.9**	100**

*$p < 0.05$; **$p < 0.01$.

in Ni-Vanuatu children only (Fisher exact test, p= 0.082). We opportunistically tested an additional 8 eight-year-old Ni-Vanuatu children (not represented in Table 2) who were unanimous in their preference for the white doll, confirming this developmental trend ($p < 0.01$).

Regarding children's rationales for their preference (Question 4: Why is that doll your favorite?), we found a significant culture effect ($\chi^2_{(3)} = 14.15$, $p = 0.003$, Cramer's $V = 0.338$) and no significant main effect or interactions with age. The culture effect is driven by the Samoan children, who are significantly less inclined to use racial (color reasons) to explain their preference. All other cultures were at chance in providing either racial or non-racial reasons for their preference.

Regarding the proportion of children identifying the Black doll as resembling their friends (Question 5: Which doll is like your friends?), no significant effects of Culture or Age were found. However, the proportion of children who identified with either doll (Question 6: Which doll is like you?) yielded a highly significant culture effect ($\chi^2_{(3)} = 39.58$, $p < 0.001$, Cramers' $V = 0.565$). Specifically, African American and Ni-Vanuatu children were above chance in

identifying with the Black doll (binomial p = 0.029 and 0.043, respectively). In contrast, European American and Samoan children were overwhelmingly identifying with the White doll (binomial p = 0.001 and 0.009, respectively). Remember that Samoan children tend to have a lighter complexion than the Ni-Vanuatu children.

As in Study 1, we further analyzed the relation between the identity and preference questions, in particular whether responses to the two questions were congruent or not (e.g., identifying with and preferring the same doll, see Figure 3.

Collapsed across age and culture, a significant majority of children (68%) were congruent between their preference and identity, $p < 0.001$. A marginal trend of culture ($\chi^2_{(3)} = 7.28$, $p = 0.063$, Cramer's $V = 0.239$) suggests that this trend is mainly driven by the Samoan (82.4%) and European American (72.7%) children, a significant majority of whom are congruent ($p < 0.01$ and 0.05, respectively). Ni-Vanuatu (60%) and African American (54.3%) children were both at chance in terms of their congruence between their response to the preference and identity question (60 and 54.3%, respectively), with no significant effect of age.

Across cultures, the majority (76%) of the children who were *inconsistent* in their response to the preference and identity question, tended to identify with the black doll but prefer the white doll, $p < 0.01$. There was no effect of age, but a strong effect of culture (($\chi^2_{(3)} = 36.12$, $p < 0.001$, Cramer's $V = 0.939$). A significant majority of Samoan (100%), Ni-Vanuatu (90%), and African American (100%) children tended to identify with the black doll but prefer the white doll (all $p < 0.01$), whereas no European American who were inconsistent showed this pattern ($p < 0.01$). We observed no age effects.

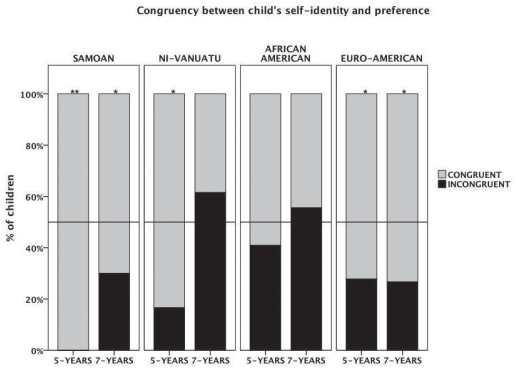

FIGURE 3
The proportion of children (%) who were consistent in their identity and preference as a function of culture and age.

We also examined the relative consistency between children's identity and friends' identity. Collapsed across age and culture, a non-significant majority of children (55.4%) identified themselves and their friends as looking like the same doll. There were no age or culture effects. Examining the children who were *inconsistent*, however, revealed an effect of culture, ($\chi^2_{(3)}$ = 13.68, p = 0.003, Cramer's V = 0.503. African American children (78.9%) were significantly more inclined to identify themselves as black but their friends as white, whereas only a significant minority of European American children (10%) did the same (both $p < 0.05$). Samoan and Ni-Vanuatu children were both at chance.

In a third and final study, we probed further the generality and robustness of a White preference bias, by testing a group of 3–7-year-old Indian American children living in the Southern United States, phenotypically of light brown skin color. In addition, we modified our experimental procedure to avoid the pairwise forced choice methodology that potentially could induce bias in children's preference and identification (Lerner and Schroeder, 1975; GoPaul-McNicol, 1995; Jordan and Herndandez-Reif, 2009).

Mindful of this potential bias and in order to control it, for the next study we used a novel preferential sorting task in which the child was asked to select which of 5 color-graded, otherwise identical dolls they preferred. The dolls ranged from white to dark black skin. In successive trials and by attrition, the child eventually ranked the dolls from most to least preferred. In a final test, the child was asked to choose between their preferred skin color doll and a new Barbie doll with brown skin wearing an easily identifiable Indian and South Asian cultural decoration (i.e., Hindu "bindi" forehead dot make up).

4 Study 3

The goal was to probe further the generality of a White preference using a different methodology and a different group of minority children living in the US. The rationale of the third study, particularly its final test, was to pitch children's preference for a particular doll against another one with possibly darker skin but wearing a clearly identifiable cultural in-group feature ("bindi" decoration on the forehead). The idea was to test the robustness of the White bias and self-identity congruence vs. incongruence with a new cohort of children of color, first generation, Indian American children.

4.1 *Method*

4.1.1 Participants

We tested a total of 32 children (all girls) between three and seven years of age divided into three different age groups: 10 three-year-olds (34–50 months, M±SD = 45.65±3.40), 10 five-year-olds (58–74 months, M±SD = 65.46±5.64); and 12 seven-year-olds (82–98 months, M±SD = 90.34±5.59). These children were recruited and tested while attending child-oriented activities at the Hindu temple of their community in the greater Atlanta metro area and in Mississippi.

4.1.2 Material

Five identical "Barbie" dolls of graded skin color from light to dark were gender matched to the child (all girls, Figure 4). Dolls with identical facial morphology wore identical swim cap and bathing suits to reveal the most skin possible, the color of which was the only distinguished feature. The five dolls were presented in a random bouquet to the child for preference sorting.

FIGURE 4 *Five dolls of graded skin tone (from left: lightest to darkest) used in the preference sorting task in Study 3. This figure is published in colour in the online edition of this journal, which can be accessed via http://booksandjournals.brillonline.com/content/journals/15685373.*

4.1.3. Procedure

The child was presented with the bundle of five randomly arranged dolls (Caucasian, Hispanic, Light Black, Medium Black and Dark Black, see Figure 4) and asked to put them in a line on the table facing them. Once laid on the table, the child was asked the six questions described previously. After answering the questions, the preference sorting task began. The child was asked to pick up and hand to the experimenter the doll they most preferred. With this doll retrieved from the line-up, the child was then asked again to hand the one they preferred among the remaining dolls until sorting was exhausted with the last pair compared. We recorded the rank ordering of the dolls following this successive preference sorting procedure.

Finally, in a final test, similar to the original Clark and Clark, the child was presented with a new Indian doll, dressed with the same bathing suit but wearing the distinct Hindu "bindi" mark on the forehead (Figure 5), a conspicuous trademark of the child's own cultural group. This doll was paired with the child's most preferred among the five preceding dolls. Facing this new pair (preferred and Indian) the child was then again asked the six questions.

FIGURE 5
Indian doll with "bindi" mark used in Study 3 for the test pitting this doll against the child's favored doll of the five of Fig. 1B. This figure is published in colour in the online edition of this journal, which can be accessed via http://booksandjournals.brillonline.com/content/journals/15685373.

4.2 *Results*

4.2.1 Doll Sorting Preference Task

With regard to the six questions, 100% of children responded that the five dolls were different. When explaining this difference, a significant majority (91%) provided a race or color-related rationale (binomial test: $p < 0.001$). Responses to the preference question significantly differed from chance, $\chi^2(4) = 22.06$, $p < 0.01$, with a majority of children (50%) preferring the lightest doll of the five dolls. Standardized residual for the lightest doll category ($R = 3.79$) indicates that it was the largest contributor to this trend. The percentage of children who preferred the other dolls (in order from the second lightest to darkest) were as follows: 18.75, 21.8, 6 and 3%. When justifying this preference, however, children were at chance in providing race or color-related rationales. Children were also at chance regarding the doll that most resembled their friends as well as the doll that most looked like themselves. We observed no effect of age (see Table 3).

Figure 6 depicts the percentage of children who preferred each doll in the preference sorting task (from lightest to darkest). Regarding children's ranking of the five dolls, we examined the proportion of children who demonstrated a light doll bias by dichotomizing children who ranked the two lightest dolls as either their first or second preferred doll from those who ranked the remaining three darker dolls as their favorite. A significantly higher proportion of children (29 out of 32, i.e., 91%) ranked the two lightest dolls as either their first or second preferred doll (binomial test: $p < 0.01$). No children ranked the two lightest dolls as their least preferred of the five dolls (see Table 3).

As in Studies 1 and 2, we also examined the consistency of children's identity and preference (e.g., whether they chose the same doll for both questions). With regard to the sorting task, a non-significant minority (38%) of children demonstrated consistency by choosing the same doll as their favorite and the one who most looked like themselves. Children (47%) were at chance regarding whether they selected the same doll as representative of themselves and their friends. Examining *inconsistency*, a non-significant majority (65%, or 13 of 20) identified with a doll that was darker than the one they preferred. A non-significant majority of children (69%, or 11 of 16) showed a similar bias by identifying with a doll darker than the one chosen as looking like their friends.

4.2.2 Choice between Favorite and Indian Doll

Following our procedure and as a final test, children's preferred doll in the sorting task was then paired with an Indian doll representative of the child's

TABLE 3 *Proportion (%) of children's answers to the six questions for both the doll sorting preference task (left columns) and the choice between the preferred and Indian doll (right columns)*

	3 years (*N*=10)	5 years (*N*=10)	7 years (*N*=12)
Sorting task with five dolls			
1. Five dolls different	100%**	100%**	100%**
2. Color/race reason for difference	90.0%*	80.0%	100%**
3. Preference for lightest doll	40.0%	70.0%	50%
4. Color/race reason for preference	20%	40%	50%
5. Lightest doll like friends	30%	10%	40%
6. Lightest doll like self	50%	20%	10%
7. Sorting Task: % of children who ranked either of the two lightest dolls as their 1st or 2nd favorite	80%	90%*	100%**
Choice task with Indian and favorite doll			
1. Favorite and Indian dolls different	90%*	80%	100%**
2. Color/race reason for difference	40%	40%	100%**
3. Preference for Indian doll	70%	60%	66.7%
4. Color/Race reason for preference	20%	20%	58.3%
5. Indian doll like friends	30%	60%	41.7%
6. Indian doll like self	80%	60%	75%

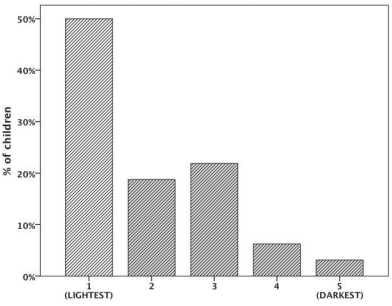

FIGURE 6
Proportion (% of children) preferring each of the five dolls following the preference sorting task.

cultural in-group (bindi mark on the forehead). Again, we observed no effect of age. A series of binomial tests were used to analyze children's responses to the six questions described previously. Data were dichotomized on the basis that fewer than 7% of children freely responded "both" or provided other responses to these six questions.

Results show that a significant majority of children (91%, $p < 0.01$) described the dolls as different although they were at chance in providing color or race-related reasons for this difference (63%). Regarding the preference question, we analyzed the proportion of children who chose the Indian (in-group) doll as their favorite. A non-significant majority of children (65.5%) chose the Indian doll as their favorite ($p = 0.110$, two-tail). Children were at chance in providing color or race-related rationales for this preference (34.3%) and in choosing the doll most representative of their friends, although a significant majority (71.9%) chose the Indian doll as the one that most looked like them ($p < 0.01$; see Table 3).

We also assessed the relative strength of children's White bias by determining the proportion of children who switched in their preference. Of the children who preferred the lightest doll on the sorting preference task (N=16), in the follow-up choice task 56.3% (N=9) switched their preference and identified the Indian doll as their favorite. In contrast, of the children who preferred the medium through dark doll (N=10), 80% switched their preference and identified the Indian doll as their favorite (8 out of 10, a non-significant majority based on binomial test).

Finally, we examined consistency of choice for the contrast between the favorite doll from the sorting task and the Indian doll. A significant majority (75%) of children identified with and preferred the same doll (e.g., preferred and identified with their favored doll or the Indian doll, $p = 0.007$). Of this group of children, a significant majority (75%, or 18 of 24) specifically identified with and preferred the Indian doll over the favorite doll from the sorting task ($p = 0.023$). In contrast, a non-significant minority (34%) was consistent in choosing the same doll for the identity and friends question. Examining *inconsistency*, a non-significant majority (63% or 5 of 8) tended to identify with the Indian doll but prefer the favorite doll from the sorting task. Similarly, a non-significant majority of children (71% or 15 of 21) identified with the Indian doll but said the favored doll from the sorting task most resembled their friends.

4.3 *Summary*

Our results confirm a strong White (lighter skin) preference bias in our sample of Indian American children. In the sorting preference task with dolls of

graded color, Indian American children chose as their favorite doll one that tends overwhelmingly to be of lighter skin tone. However, when comparing the child's preferred doll in this task to an Indian doll dressed with the same outfit but wearing the distinct Hindu "bindi" mark on the forehead, children preferred and identified with this doll that is representative of their cultural in-group. Children were also more consistent in their identification and preference with this Indian doll. These findings confirm the pervasiveness of a White bias that mitigates preference in children when otherwise no clear in-group cultural markers are available.

5 Discussion

Our results confirm that there is a systematic White or lighter skin preference bias in children across cultures, independently of the child's numerical majority or minority ethnic group status within a particular population. We interpret these results as further supporting evidence of a social and economic status perception account of early social attitude and preference, with the caveat that this is only indirect evidence since we did not test for status perception directly. Our findings, however, do not support the general idea that self-enhancement motives underlie systematic in-group preference, as proposed by the social identity theory that has prevailed for decades (Vaughan et al., 1981).

There is a remarkable similitude between what we found in Study 1 with African American preschoolers and what Clark and Clark reported over 60 years ago. African American preschoolers (three- and five-year-olds from both racially mixed and all-Black preschools persist in showing no signs of racial in-group preference. A slight majority of today's African American, preschool-aged children continue to manifest a preference for the White over the Black doll, even though a significant majority of them identified both themselves and their friends as more closely resembling the black doll. Such an enduring phenomenon is uncanny considering that parochialism and the general tendency towards in-group favoritism is construed as a normative goodness of fit from an evolutionary perspective. From a more proximal standpoint, it has been suggested that in-group favoritism is deeply rooted in development. There is now evidence that pre-linguistic infants (11 months old on average) tend to pay significantly more visual attention and favor individuals that resemble them (Mahajan and Wynn, 2012). However, if we can assume that in-group favoritism might be deeply rooted in evolution and ontogeny, our results clearly show that such propensity also depends on context and can be

modulated by historical and socio-economic circumstances. Replicating the data that Clark and Clark reported some 60 years ago, we found no evidence of a racial in-group bias in African American preschoolers, whether or not they were enrolled in all-Black (in our case highly Afro-centric), or racially mixed preschool environments. The racial make-up of the school environment persists in having surprisingly no effect on the proclivity of African American children to have a significant preference for their racial in-group.

We conclude that the persisting lack of evidence of an in-group bias by African American preschoolers is probably linked to an overall experience of belonging to a minority whose racial phenotype (skin color) tends to be associated with lesser social ascendance and social economic status, as well as strong negative stereotypes associated with the group. Such associations appear to override the proximal school environment of the child, even if such environment deliberately fosters racial pride and positive in-group esteem.

In Study 2, testing older children (five and seven years) and using the same high contrast White-Black doll choice, this time with photos, we replicated the evidence of a markedly reduced, even inverted in-group racial bias, not only with African American children, but also with native children of color in Polynesia and Melanesia. These findings suggest that the persistent reduction of racial in-group bias and putative White bias is not unique to African American children. The general historical discrimination against people of color globally may be playing a critical role in the persistence of a White/light skin bias. We interpret these findings as the expression of a more universal preference for surface traits associated with higher social and economic status. Such interpretation would uphold the idea that an important aspect of what constitutes racism is the economy of class differences where the relative lightness of skin color becomes the most immediate proxy of social power hierarchy (so-called "colorist" view, see Nakano Glenn, 2009).

In relation to the persistent and environmentally resilient lack of significant in-group preference bias by African American children, we found the same phenomenon in Melanesia and even a significantly reversed out-group (White) bias among Polynesian children who are part of an overwhelming majority racial group (independent nation of Samoa). Our data show that Samoan children, at least from five years of age, have a strong white doll, outgroup preference. Although Samoan children tend to have a light brown skin color, they grow up in a culture that emphasizes their "non-White" phenotype. In Samoan language, foreigners are referred to as "Whites" (palagi), using this surface characteristic as a semantic marker between their in-group and people of European descent. Anecdotally, Samoans encountering African Americans

in their village tend to be puzzled by the apparent contradiction of being from America and not being a "palagi" (White) proper. Our personal experience traveling and researching in this independent island nation is that an African American person is explicitly considered as possibly a person that belongs to their in-group. Samoan children, look like same age European Americans, identifying with the White doll and showing a strong preference toward it, despite the fact that their language marks that they are different from people of European descent (palagi). In all, across ethnic groups and ages, there is a proclivity for children to show either no significant preference for the darker doll or to prefer the lighter doll.

Using a more graded, less dichotomized doll choice procedure, the results of our last study of Indian children living in the United States (Study 3), unambiguously upheld the White bias observed in the first two studies. We conclude that the single forced choice of the original doll study cannot simply account for the White bias phenomenon. Interestingly, however, our data also indicate that Indian children can override the lighter skin bias, by preferring a doll wearing the distinct Hindu/South East Assian "bindi" decoration mark on the forehead, in some instances even when it was of a slightly darker skin color compared to the one they first elected as their favorite. This result shows the intricate link between social preference and cultural identity. Our Indian children demonstrate that a make-up mark of their strong cultural identity can potentially override their first association of skin color with social status and ascendance. Nevertheless, the latter association seems to be the default when no specific cultural indices like the Hindu "bindi" are present, particularly if the child preferred the lightest skin tone doll in the preliminary sorting task (Fig. 4). The overall results indicate once again an unambiguous and overarching White bias consistent with what we found in the first 2 studies.

Recent research corroborate the idea that the detection of surface traits (i.e., skin color) associated with differences in social status, economic power, and wealth might underlie the tendency of young children of color to display reduced or markedly absent racial in-group preference bias (i.e., a white bias). Findings by Newsheiser and Olson (2012) confirm that preference for high social status, indexed by relative material wealth, predicts out-group White bias in 7–11-year-old African American children. These data demonstrate the existence of an early association between lighter skin tone and higher group status.

Consistent with other cross-cultural examinations of racial preference (Dunham et al., 2007; Shutts et al., 2011), the tendency toward a White bias is also reported in conditions where children of color are the majority group.

The tendency to prefer the group associated with greater social ascendance could account for our findings in Samoa and Vanuatu where children demonstrated a heightened and significant White bias despite being the majority racial group in their cultures. As shown in Study 1, the same could be said for the African American children, where numeric racial majority or minority in the school context does not lead to significant changes in racial in-group preference. Likewise, Shutts et al. (2011) show that a White bias among majority South African children does not mesh well with an explanation of a White bias based on group size or familiarity. Rather, it resonates with the idea that the White bias is the expression of a preference for phenotypes (e.g., skin color) associated with individuals belonging to groups of greater political and economic power.

Preference for members of higher status groups has been shown across multiple paradigms and age groups (Mullen et al., 1992; Nesdale and Flesser, 2001) with some suggestions that the lack of an in-group preference or sometime significant racial out-group bias in children of color is the result of being part of a socio-political system that motivates children to affiliate with a more dominant group (e.g., System Justification Theory; Jost, 1996). Accordingly, the theory would predict that in-group bias depends on whether or not one's own social group is considered to be dominant (Baron and Banaji, 2009). In line with such prediction, we propose that children perceive lighter skin as indicative of greater social ascendance. Our research confirms that such phenomenon is manifested early in development and appears to be transcultural.

According to the System Justification Theory, positive in-group bias can only be observed when comparing the in-group to a lower status group. For example, Dunham et al. (2007) found that Latino-American children only showed a significant in-group bias when comparing themselves to a darker racial group (African Americans), not showing a significant in-group bias when the comparison group was White. The same was found with Japanese children who showed a stronger in-group bias when comparing themselves to Blacks as opposed to Whites (Dunham et al., 2006). These results show the intricacies of the relative social status associated with surface traits, including skin color.

Future studies should investigate more precisely the criteria by which children, across cultures, come to perceive and evaluate their own group in relations to others. Such criteria must probably vary across cultures depending on resources and social organizations (e.g., more or less communal and egalitarian organizations and group living conditions). While the nature of what is meant by "higher status" in children may be ambiguous or amorphous, it

appears to play a central role in determining racial preference, at least from the preschool years. Although ours and other recent findings point to the possibility that children construe preference in terms of a larger social context, what children understand to be "high status" associated with lighter skin tone (e.g., political influence, wealth and material abundance, popularity, etc.) remains an open question.

Again, familiarity, increased exposure to one's in-group, and relative numeric majority were not predictive of preference in our studies, as evidenced by African American children in all-black, Afro-centric preschools who performed identically to African American children in racially mixed preschools. The lack of discernable differences between these school environments suggests that this aspect of children's socialization may not be a driving influence in young children's racial preferences. The relative influence of other sources, such as media exposure, should continue to be investigated. Some researchers have suggested that children's literature and digital media images (e.g., television, video games, movies) is an important source of cultural information about group status (Spitz, 1999; Yeoman, 1999; Hurley, 2005). The magnified White bias in the South Pacific may not be fully explained by such media consumption, but it cannot be completely ruled out as children and adults in these cultural contexts are cognizant of the global power structure in which Europeans have historically been at the top.

In conclusion, the White bias found in children of color, from various regions of the world and in various North American minority groups, is most likely linked to the generalized and enduring syndrome of an early drive to affiliate with higher status that for centuries has been and continues to be associated with lighter skin color. The meaning and perception of social status in early development and its impact on the development of racial in-group/out-group preference biases would deserve more research scrutiny to understand what impact minority status has on children's affective, social-cognitive, and cultural development.

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