

The Formation of In-Group Favoritism and Out-Group Prejudice in Young Children: Are They Distinct Attitudes?

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Although standardized measures of prejudice reveal high levels of ethnocentric bias in the preschool years, it may reflect in-group favoritism or out-group prejudice. A measure that partially decouples the two attitudes was given to White children between 4 and 7 years of age to examine the reciprocal relation between and the acquisition and correlates of in-group and out-group attitudes. The two attitudes were reciprocally correlated in 1 sample from a racially homogeneous school but not in a 2nd sample from a mixed-race school. In-group favoritism did not appear until 5 years of age but then reached significant levels; it was strongly related to developing social cognitions. Out-group prejudice was weaker, but its targets suffer from comparison with the high favoritism accorded in-group members.

Racial prejudice is a predisposition to react unfavorably to members of a racial group because of their group affiliation (Aboud, 1988). It involves holding derogatory attitudes or beliefs, expressing negative affect, or displaying hostile or discriminatory behavior (Brown, 1995). Teachers and parents tend to think prejudice is low in the early school years because they observe little hostile or discriminatory behavior (Holmes, 1995). However, standardized measures reveal high levels of pro-White/anti-Black bias in White children 6 years of age (Bigler & Liben, 1993; Doyle & Aboud, 1995) and even as young as 3 years (Katz & Kofkin, 1997). Brewer (1999) argued that this may simply be strong in-group identification and attachment and that researchers' assumption about the reciprocal relation between in-group and out-group attitudes has led them to infer, erroneously, that the observation of strong in-group bias implies equally strong out-group negativity and that the origins of both reside in intergroup conflict. This assumption has also led to the use of measures that confound the two attitudes. Before antibias interventions are implemented with children, it is important to determine which attitude should be addressed and whether changing one necessarily changes the other. A separate analysis of in-group and out-group attitudes in relation to social-cognitive underpinnings might also support the thesis that in-group attachment, but not out-group prejudice, has developmental value.

The present study examined these issues as they apply to in-group and out-group attitudes of young White children. Data from children in the process of forming attitudes about natural, as

opposed to lab-created, groups would seem most appropriate for testing ideas about the primacy of in-group favoritism and its relation to out-group prejudice. Although Brewer (1999) based her evolutionary thesis of the primacy of in-group attachment on the survival value of group trust, it seems reasonable to derive developmental implications from these claims. The implications might concern the age at which in-group bias is formed, its intensity, and its prevalence. If in-group favoritism is psychologically primary to out-group prejudice, the former might appear at a younger age and reach significantly higher levels among a larger number of children. More speculatively, if in-group favoritism is somehow necessary for basic survival, it might be connected to the unsophisticated cognitions of young children, whereas out-group prejudice might not. Because children acquire these attitudes after 3 years of age but begin to show some moderation of their biases after age 7 (Aboud & Amato, 2001), I focused on the 4–7-year age group.

Are In-Group and Out-Group Attitudes Reciprocal?

Brewer (1999) claimed first that in-group and out-group attitudes are not necessarily reciprocally related. Conceptually, this is uncontested. However, intergroup theories of bias propose that a comparative or competitive motivation leads children to maximize evaluative differences between their own and other groups (Tajfel, 1978). If in-group and out-group attitudes are unrelated, there will exist many different attitude combinations ranging from positive-negative to positive-neutral and positive-positive—an important distinction for those implementing antibias school programs, who may not want to sacrifice in-group positivity for out-group tolerance (Schofield & Eurich-Fulcer, 2001).

Measures that confound the two attitudes, by allowing respondents to select only one group for each positive or negative evaluation, force a reciprocal relation. Although it is common for older children to evaluate groups separately (e.g., Augoustinos & Rosewarne, 2001; Bennett, Lyons, Sani, & Barrett, 1998; Kinket & Verkuyten, 1999; A. R. Nesdale, 1999; Rutland, 1999; Singh, Choo, & Poh, 1998), assessments with young children typically show targets simultaneously and require the child to choose one (e.g., the Preschool Racial Attitude Measure [PRAM] of Williams,

This research was supported by a grant from the Social Sciences and Humanities Research Council of Canada.

Thanks are extended to the children, teachers, and principals of Whiteside Taylor Day Care, Christmas Park Elementary School, Westmount Park School, and Our Lady of Pompeii for participating and to Isabel Dorion, Sophie Petitclerc, and Sandy DaSilva for collecting the data.

Helpful comments on earlier drafts were provided by my colleagues Anna-Beth Doyle and Morton J. Mendelson.

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Best, Boswell, Mattson, & Graves, 1975). The recently developed Multiresponse Racial Attitude (MRA) measure allows for a partial decoupling of in-group and out-group attitudes in that children can assign each evaluation to more than one group (Black-Gutman & Hickson, 1996; Doyle & Aboud, 1995). However, to date, no study has directly examined the relation between children's in-group and out-group attitudes. Of particular importance is whether the acquisition of in-group favoritism (read *favoritism, attachment = positive evaluation*) in the early years is accompanied by out-group prejudice. Thus, I tested a strong version of Brewer's (1999) claim that in-group and out-group attitudes are not necessarily related, predicting that they would be uncorrelated and that the positive-negative combination would be no more frequent than the positive-positive or positive-neutral ones.

The Primacy of In-Group Attachment

The second hypothesis of Brewer's (1999) analysis, as it relates to the development of prejudice, concerns the primacy of in-group attachment. The issue of primacy implies that in-group favoritism will precede and develop more strongly than out-group prejudice. According to Allport (1954) and Cameron, Alvarez, Ruble, and Fuligni (2001), children are first likely to prefer their own group without disliking out-groups. Existing studies of preschool-aged White children have used either a measure that confounds in-group and out-group attitudes or an open-ended single question such as "Who would you like to have as friends?" On the latter measure, no changes were found between ages 3 and 6 years (Kowalski & Lo, 2001; Ramsey, 1991). Positive evaluations by themselves may discriminate less between target groups than may negative items if children simply want friends. On the confounding measure, pro-White/anti-Black bias was high in some 3-year-olds and rose significantly at 5 years of age (Clark, Hocevar, & Dembo, 1980; Katz & Kofkin, 1997); however, there was no way of knowing whether in-group or out-group bias was responsible for the change. One Israeli researcher who separated the two found that negative attitudes toward a Jewish man were nonsignificantly higher in 6-year-olds than in 3-year-olds, whereas negative attitudes toward an Arab man were considerably higher in 6-year-olds (Bar-Tal, 1996; see also Teichman, 2001). This finding places the age of acquisition of racial attitudes sometime between 3 and 6 years.

To examine the question of primacy, I tested White children between 4 and 7 years of age on the MRA measure, which assesses positive and negative evaluations. I included the confounding measure, the PRAM, to compare levels with those in previous studies and to determine whether scores on it are more strongly related to in-group than to out-group attitudes. On the basis of Brewer's (1999) analysis, in-group favoritism was expected to reach significant levels among 4- and 5-year-old children and to show larger age differences than out-group prejudice. Furthermore, the pro-White/anti-Black confounded score was expected to correlate significantly with in-group favoritism but not with out-group prejudice.

Distinct Social-Cognitive Correlates

The final issue of interest concerns the different underpinnings of in-group and out-group attitudes. Brewer (1999) suggested a more fundamental basis to in-group attachment, namely, the sur-

vival value of mutual trust and cooperation with in-group members, whether they are personally related or not. From a developmental perspective, in-group favoritism is likely to be associated with prevalent and early-developing cognitive representations. Two such cognitions are ethnic self-identification and group categorization. Tajfel (1978) originally suggested that prejudice begins once the child has learned to categorize ethnic groups and to identify with one. Support for this view comes mainly from studies of children placed into one of two teams who then evaluate their own team more positively than the other team (see Bigler, Brown, & Markell, 2001, who assessed both positive and negative evaluations; D. Nesdale & Flessler, 2001; Yee & Brown, 1992). But there is little evidence of a strong negative evaluation reflecting prejudice in these studies. Perhaps only in-group attachment emerges from these cognitions, especially when natural groups, rather than experimentally created ones, are considered (Brewer, 1979). The step from categorization and self-identification to attachment is thought to require a cognitively simple process of generalization from the self to similar others, whereas the step to out-group prejudice may require a more difficult social comparison in which the degree of difference is noted and translated into an evaluation (Aboud & Amato, 2001; Cameron et al., 2001). Alternatively, children may simply infer that similarity is good and difference is bad. Therefore, in the present study, simple forms of categorization and self-identification were assessed, comparable to Tajfel's minimal group manipulation, by asking children whether they recognized in-group and out-group members and knew which group they belonged to. A more common form of categorization, that is, accentuation of within-group homogeneity and between-groups difference, was also assessed because it has been implicated in in-group attachment as well as out-group stereotyping and prejudice (Brewer & Brown, 1998; Katz, Sohn, & Zalk, 1975).

A more general way of thinking that is common among preschoolers is the tendency to attend to only one dominating cue. This manifests as an inability to conserve quantities and to categorize people using multiple attributes. Dominated by one dimension of appraisal, the unsophisticated preoperational child may be constrained to conclude that the in-group is good and the out-group is bad. Later-developing processes associated with multiple classification and conservation are credited with the frequently noted rise in middle childhood of positive out-group attitudes (e.g., Bigler & Liben, 1993; Clark et al., 1980), although they are also associated with a more balanced—negative as well as positive—in-group evaluation. Once again, it is important to determine whether these abilities are associated with in-group and/or out-group attitudes. Because the focus here was on the acquisition rather than the decline of favoritism and prejudice, I studied an age group that would largely lack conservation and multiple classification skills.

Brewer (1999) mentioned specific conditions that promote an extension of in-group favoritism to out-group prejudice. One of these is the translation of in-group preference to in-group superiority, called *moral superiority*. The construct closest to this in the child literature is known as *egocentrism* or *sociocentrism*, described as a fixation on one's in-group perspective (Piaget & Weil, 1951). It is manifest in judgments that the in-group perspective is the only right one and that out-group perspectives are wrong, as opposed to judgments that both perspectives are right (Aboud, 1981). The second condition concerns children's perception of

their social world as segmented into racial/ethnic groups. Brewer (1999) suggested that seeing social groups as highly correlated with race, rather than as mixed, would give rise to group comparisons and prejudice.

In this article, two studies are described that tested hypotheses derived from Brewer's (1999) analysis concerning whether, during the years when children acquire race-related attitudes, in-group and out-group attitudes show differences in relation to each other, to age, and to social cognitions such as recognition, identification, group homogeneity, conservation, multiple classification, egocentrism, and racial sorting. The first study examined these hypotheses with children between 4 and 7 years of age and included cognitions related to identification and categorization. The second study, conducted at a different school, focused on a narrower age range during which children were expected to show in-group favoritism, in order to determine if in-group and out-group attitudes were distinct.

Study 1

Method

Participants

Eighty White children (42 boys and 38 girls) between the ages of 3 years 9 months and 6 years 11 months were tested. The mean age was 5 years 7 months; 23 children were under 5 years of age, 27 were between 5 and 6 years, and 30 were between 6 and 7 years. The children lived in a predominantly White suburban community outside a large metropolitan city and attended preschool or after-school programs in the area. They had little direct contact with Black or Native Indian people living in nearby communities; approximately 10% of the school populations were visible minorities, and teachers were predominantly White.

Attitude Measures

Preschool Racial Attitude Measure (Williams et al., 1975). The PRAM Series A consists of six positive and six negative evaluation items to measure pro-White/anti-Black bias, as well as four gender-stereotype filler items. The original pictures of Black and White stimulus persons (male and female) were redrawn to vary hair texture as well as skin color. For each evaluative adjective, the child was shown the corresponding picture of a White person and a Black person and was asked which of the two fit the description. One point was given for choosing a White figure in response to a positive evaluation, and one point was given for choosing a Black figure in response to a negative evaluation. The maximum score was 12. As defined by Williams and Morland (1976), high scores of from 9 to 12 indicate pro-White/anti-Black bias.

Multiresponse Racial Attitude measure (Doyle & Aboud, 1995). The MRA was used to derive separate indices of positive and negative attitudes and to permit the calculation of bias toward Whites, Blacks, and Native Indians. Twenty evaluative adjectives, 10 positive and 10 negative, taken from the PRAM, along with 4 neutral filler items, were each presented along with a concrete behavioral example depicted identically on three 20 × 20 cm cards. The cards were to be sorted among three boxes, labeled as belonging to a White child, a Black child, and a Native Indian child. The boxes were identified by same-sex colored drawings of heads, differing only in skin color and hair texture. That is, a boy set and a girl set of stimulus persons were created for this and subsequently described measures (except multiple classification) so that participants responded to stimuli of their own gender.

For each adjective, the child was handed the three identical cards and was instructed to place them in the box or boxes of "people who are that

way." For example, one item read, "Some children are naughty. They often do things like drawing on the wall with crayons. Who is naughty? Is it the Black child, the White child, the Indian child, or more than one child who is naughty?" The cards depicted an apartment wall with crayon marks on it. Other items can be found in the Appendix.

The number of evaluative adjectives assigned to each box was tallied. Six scores were initially derived, a positive score and a negative score for each of the three racial groups, each with a possible range from 0 to 10. An in-group evaluation score ranging from -10 (*very unfavorable*) to +10 (*very favorable*) was created by subtracting the number of negative evaluations from the number of positive evaluations. An out-group evaluation score was similarly derived from the difference (positive - negative) in Black evaluations. Because we did not intend to examine predictors of attitudes toward Native Indians, and lacked parallel measures with this target group, reactions to Native Indians were not further analyzed, although the means were similar to those found by Doyle and Aboud (1995). The traditional measure of composite prejudice was also calculated to reflect how much more favorable children were to the in-group than to the out-group (in-group - out-group).

Internal consistency was calculated for each of the six scores by examining responses to the 10 items comprising it. In this sample, Cronbach's alphas were .90 for positive White, .89 for negative White, .83 for positive Black, and .79 for negative Black. Test-retest reliabilities¹ across a 2-week interval for an independent sample of children from 4 to 7 years were as follows: $r(22) = .48$ for positive White, $.66$ for negative White, $.68$ for positive Black, and $.71$ for negative Black ($ps < .05$). The difference scores were more reliable: White, $r(22) = .61$; Black, $r(19) = .80$ ($ps < .05$). *T* tests conducted on the pairs of test and retest scores yielded no significant differences on any of these variables; on average, the difference between test and retest scores varied from .13 to .96.

Convergent validity for the MRA has been found with Bigler et al.'s (2001) attitude measure, which uses a different response format in asking how many children from each group, presented separately, have an evaluative trait (none, some, half, most, or all; Zargarpour, 2001). The influence of social desirability has been ruled out with the use of a number of strategies; these include nonsignificant correlations of attitudes with scores on the Children's Social Desirability scale and high similarity between evaluations done to reflect the child's own attitude and evaluations done to reflect the attitude of a friend, for whom social desirability concerns might be lower (Aboud & Fenwick, 1999; Doyle, Beaudet, & Aboud, 1988). Predictive validity has been demonstrated by showing (a) positive correlations between favorable out-group evaluations on the MRA and favorable out-group statements in children's private dyadic discussions and (b) negative correlations between favorable in-group evaluations and unfavorable in-group statements (Aboud & Doyle, 1996). Also, favorable out-group evaluations correlate with having more out-group companions (as reported by classmates), nominating fewer out-group nonfriends, and reporting a higher quality friendship with an out-group classmate (Aboud, Mendelson, & Purdy, in press).

Social Cognition Measures

Recognition of racial cues and self-identification. Children were shown photographs of three Whites, three Blacks, and three Native Indians and were asked to point to the ones who were White, Black, and Indian. The photographs were of unfamiliar same-sex children, of approximately the same age as the participants, who had been judged by 40 Black and White college students to be of intermediate attractiveness. The number of Black and White stimulus peers accurately recognized constituted the child's recognition score (which could range from 0 to 6).

¹ Test-retest data were collected after the completion of the studies reported here and included more explicitly the "none of them" option.

The following self-identification questions were asked in varying order: "Are you a White Canadian?" "Are you a Black Canadian?" "Are you a Canadian Indian?" The child received one point for each correct answer, that is, yes to the White question and no to the others. A self-identification score (from 0 to 2) was created by summing the correct answers to the White and Black questions.

Group homogeneity. This measure was intended to assess how much children minimized within-group differences compared with between-groups differences. Children were asked to rate the dissimilarity of six pairs of different-race photographs of children and six pairs of same-race photographs of children. The photographs described previously were used, and ratings were made on a 60-cm same-different board spread from left to right on the table. The children were given one pair of photos at a time and were asked to place them, facing each other on the board, closer together the more similar they were judged to be and farther apart the more different they were judged to be (Aboud & Mitchell, 1977). Perceived dissimilarity was the distance in centimeters between the two. Two variables were created to reflect group homogeneity. In-group homogeneity was the mean distance between the two Black-White pairs minus the mean distance between the two White pairs (i.e., White-Black dissimilarity minus White-White dissimilarity). An out-group homogeneity score was created by subtracting Black-Black dissimilarity from White-Black dissimilarity. Higher scores reflect perceptions of within-group homogeneity, and lower scores reflect within-group differentiation. For example, a child who judged the between-groups (White-Black) pairs of stimuli to be very different might place them, on average, 50 cm apart; if the same child judged the within-group (Black-Black) pairs to be quite similar, placing them 20 cm apart, this would yield an out-group homogeneity score of $50 - 20 = 30$. Another child with the same between-groups judgment might perceive the within-group pair to be relatively different, placing them 40 cm apart; this would yield a low homogeneity score of $50 - 40 = 10$. Subtracting the within-group score from the between-groups score eliminated potential differences in children's use of the board (possible range = -60 to $+60$). Alpha coefficients for this sample were .64 for White-Black ratings and .65 for within-group ratings. Previous studies with kindergarteners have found coefficients of .73 and .80, respectively (Doyle & Aboud, 1995). Construct validity for these distance judgments comes from a study involving comparisons of self with various in-group and out-group members among 5-9-year-old White and Native Indian children; White children placed drawings of themselves closer to White photos than to several different out-group photos, whereas Native Indian children placed drawings of themselves closer to Native Indian photos (Aboud & Mitchell, 1977).

Conservation. Level of concrete operational thinking was evaluated using an adaptation (Gulko, Doyle, Serbin, & White, 1988) of the Goldschmidt and Bentler Concept Assessment Kit. Seven conservation tasks were administered: area, number, substance, continuous quantity, weight, discontinuous quantity, and volume, in that order. Answers that demonstrated conservation with at least a partially correct explanation were scored as correct; the number of correct answers was the conservation score (possible range from 0 to 7).

Multiple cross-cutting classification. Two- and three-way classification tasks were used (Arlin, 1981). The tasks required simultaneous attention to two or three attributes. Each task had three problems: shapes, objects, and people. For example, the two-way people problem used pictures of Black and White men and women. Three pictures were placed in the quadrants of a square so that race and gender were varied systematically. The child was asked to choose from among four other pictures of Black and White men and women the one that belonged in the fourth quadrant. Instead of following the usual procedure of asking children to explain their choices verbally, I challenged them by presenting them with an alternative choice. If the correct picture was chosen, an incorrect one was subsequently offered to see if the child would reject it. If an incorrect picture was chosen, a correct one was offered to see if the child would

accept it. A score of 0 was given if the answer sequence was *select-incorrect* and *alternative-incorrectly rejected*. A score of 2 was given if the sequence was *select-correct* and *alternative-correctly rejected*. A score of 1 was given for the other sequences, in which only one response was correct. The three-way classification task used pictures that varied on three dimensions—race, sex, and age; the matrix was to be completed by selecting from among eight pictures. A score for multiple classification was obtained by summing scores for the six items (possible range was from 0 to 12). Although the tasks have been used with children as young as kindergarten age, it was expected that most children in this sample would obtain low scores. These would hopefully allow concentration on the acquisition, rather than the decline, of in-group favoritism and out-group prejudice. The alpha coefficient was .66 in a sample of kindergarteners and .51 in this sample.

Procedure

The children were tested individually by a White woman in three sessions that took place several weeks apart. The order of the measures was counterbalanced, with the restriction that attitude measures be given in separate sessions.

Results and Discussion

Intercorrelations among the measures, along with sample means, standard deviations, and ranges, are presented in Table 1. Correlations indicate that in-group evaluation, self-identification, perceived out-group homogeneity, and conservation increased significantly ($p < .05$) with age.

Hypothesis 1: The Reciprocal Relation of In-Group and Out-Group Evaluations

To evaluate whether in-group and out-group evaluations were reciprocally related, correlations were calculated with age partialled out. The correlation of interest concerns the positive-negative difference scores (D scores) reflecting, on balance, how much more positive than negative were children's evaluations of each group. In-group and out-group evaluations were correlated, $r(79) = -.40$, $p < .01$, indicating that more positive in-group evaluations were associated with more negative, or less positive, out-group evaluations (see Table 2). On positive items alone, the in-group/out-group correlation was significant, $r(79) = .26$, $p < .05$; responses to negative items alone were nonsignificantly correlated, $r(79) = .15$. Thus, greater independence was found here on negative items. It was also interesting to note that negative evaluations of the in-group were meaningfully associated with positive evaluations of the out-group, $r(79) = .60$, $p < .01$; these two indices are important components of an unbiased attitude and are prominently reflected in their respective D scores (see Table 2). The two components of a biased attitude—namely, positive in-group and negative out-group evaluations—were also correlated in this sample, $r(79) = .43$, $p < .01$.

A second way to demonstrate the reciprocal relation was to examine the frequency distribution of in-group and out-group evaluations. In-group and out-group scores were categorized as positive (scores from 1 to 10), neutral (0), or negative (-1 to -10). The 3×3 bivariate distribution of children into these three categories, for in-group and out-group evaluations, revealed that certain combinations were more prevalent than others, $\chi^2(4, N = 80) = 31.78$, $p < .01$. In particular, among the 50 (62.5%) who

Table 1
Intercorrelations Among All Attitude and Social Cognition Indices

Variable	1	2	3	4	5	6	7	8	9	10
1. Age (years)	—									
2. PRAM II score	.08	—								
3. In-group evaluation	.40*	.27*	—							
4. Out-group evaluation	-.02	-.09	-.37*	—						
5. Recognition	.18	.24*	.16	.10	—					
6. Self-identification	.26*	.02	.12	-.04	.12	—				
7. In-group homogeneity	.18	.03	.09	.09	.15	.25*	—			
8. Out-group homogeneity	.28*	.20	.04	.13	.26*	.35*	.60*	—		
9. Conservation	.69*	-.07	.11	.11	.19	.12	.06	.21	—	
10. Multiple classification	.11	-.19	-.08	-.06	.01	-.04	-.06	.15	.17	—
<i>M</i>	5.6	9.7	3.3	-0.91	5.7	1.9	15.7	29.0	1.9	4.4
<i>SD</i>	0.90	2.0	4.4	3.7	0.91	0.16	22.3	19.4	2.5	2.3
Range	3.7-6.9	4-12	-10-10	-10-10	0-6	1-2	-24-58	-25-60	0-7	0-10

Note. $N = 80$. Owing to a ceiling effect, a small number of children with self-identification scores < 2.0 were responsible for significant correlations with self-identification. PRAM = Preschool Racial Attitude Measure.

* $p < .05$.

were in-group positive, 30 (60%) were out-group negative, 8 (16%) were out-group neutral, and 12 (24%) were out-group positive. Among the 20 who were in-group neutral, 1 (5%) was out-group negative, 16 (80%) were out-group neutral, and 3 (15%) were positive toward the out-group. Among the 10 who were in-group negative, 5 (15%) were out-group negative, 1 (10%) was out-group neutral, and 4 (40%) were positive toward the out-group.

Although the PRAM confounds in-group and out-group attitudes, it was interesting to see that it correlated significantly with in-group favoritism, $r(79) = .27, p < .02$, but not with out-group prejudice, $r(79) = .09, ns$ (see Table 2). Consequently, it appears that in-group and out-group evaluations are reciprocal at this age but that single-response attitude measures reflect in-group attachment and not out-group prejudice.

Hypothesis 2: Primacy of In-Group Versus Out-Group Evaluations

The second question concerned the age at which PRAM pro-White/anti-Black bias scores and MRA in-group and out-group

evaluations were present and whether the former developed sooner and rose more quickly than the latter. Age differences on the scores were examined with separate one-way analyses of variance after it was determined that there were no gender effects or Age \times Gender interactions. Significant effects were followed up with Newman-Keuls tests to compare means. Significant levels of in-group and out-group evaluations were determined through t -test differences from zero (neutrality). Because of the potential for a nonlinear relation between age and attitudes, the sample was divided into three age groups (see Table 3).

The PRAM showed high levels of bias in the youngest group, which did not differ from the two older groups. Over 65% of the 4-year-olds scored in the biased range of 9 and above; 80% of the 6-year-olds were biased. On the MRA, the in-group evaluation score was significantly higher in the 5- and 6-year-old groups. Children of these ages also had levels significantly higher than zero according to t tests, $t(26) = 6.58$ and $t(29) = 5.65$, respectively, $ps < .01$, whereas those under age 5 had levels nonsignificantly different from zero. The age difference appears to be largely due to a lower negative evaluation of the in-group in older children

Table 2
Intercorrelations Among In-Group and Out-Group Evaluations With Age Partialled Out

Evaluation	In-group evaluation			Out-group evaluation		
	Positive	Negative	D score	Positive	Negative	D score
In-group						
Positive	—					
Negative	-.06	—				
D score	.55**	-.87**	—			
Out-group						
Positive	.26*	.60**	-.38**	—		
Negative	.43**	.15	.09	.23	—	
D score	-.07	.43**	-.40**	.73**	-.50**	—
PRAM score	.12	-.25*	.27*	-.09	.02	-.09

Note. The D score represents the difference between positive and negative assignments. PRAM = Preschool Racial Attitude Measure.

* $p < .05$. ** $p < .01$.

Table 3
Means (Standard Deviations) and *F* values Reflecting Age Differences on Attitude and Social Cognition Measures

Variable	Age group (years)			<i>F</i> (2, 78)	Range
	Under 5 (<i>n</i> = 23)	5 to 5.99 (<i>n</i> = 27)	6 to 6.99 (<i>n</i> = 30)		
Attitude variables					
PRAM	9.3 (1.8)	9.8 (1.8)	10.0 (2.2)	0.79	4–12
% scoring ≥9	65.2	70.4	80.0		
Composite MRA	0.65 _a (4.2)	5.7 _b (5.8)	5.7 _b (8.1)	5.13**	–20–18
In-group evaluations	0.17 _a (3.4)	4.4 _b (3.5)	4.8 _b (4.6)	10.41**	–10–10
Out-group evaluations	0.48 (2.6)	1.3 (3.2)	0.87 (4.7)	0.33	–10–10
% negative (from –1 to –10)	30.4	51.8	50.0		
Positive White	8.6 (2.6)	9.4 (0.7)	9.1 (2.2)	1.21	0–10
Negative White	8.4 _a (2.8)	5.0 _b (3.7)	4.3 _b (3.4)	10.36**	0–10
Positive Black	8.2 (2.8)	6.7 (3.4)	6.2 (3.6)	2.52	0–10
Negative Black	8.7 (2.4)	8.0 (2.3)	7.1 (3.1)	2.58	0–10
Social-cognitive variables					
Recognition	5.5 (1.4)	5.6 (0.8)	5.9 (0.3)	1.50	0–6
Self-identification	1.9 (0.3)	2.0 (0.0)	2.0 (0.0)	2.61	1–2
In-group homogeneity	14.4 (22.7)	13.1 (23.5)	18.9 (21.1)	0.55	–24.0–58.5
Out-group homogeneity	25.4 (20.5)	25.6 (19.7)	34.9 (17.4)	2.26	–25.0–60.0
Conservation	0.2 _a (.65)	1.9 _a (.80)	4.1 _b (2.5)	32.35**	0–7
Multiple classification	3.9 (2.2)	4.6 (2.1)	4.5 (2.5)	0.67	0–10

Note. Means with different subscripts are significantly different from one another. PRAM = Preschool Racial Attitude Measure; MRA = Multiresponse Racial Attitude measure.

***p* < .01.

rather than to a different positive evaluation, which was already high at 4 years. Thus, children were, on balance, more favorable toward their in-group only after the age of 5 years.

The MRA out-group evaluation score showed no age difference. Only the 5-year-olds had scores significantly lower than zero, $t(26) = 2.16, p < .05$. Consistent with this finding, neither positive nor negative evaluations of the out-group varied significantly with age. The MRA composite score, which compares how much more favorable children are to their in-group than to the out-group, showed significantly higher levels in the 5- and 6-year-old groups, whose scores were also greater than zero, $t(26) = 5.15$ and $t(29) = 3.85$, respectively, $ps < .01$. Consequently, on the basis of their evaluative judgments, 5-year-olds, but not 4-year-olds, were positive to their in-group and negative toward the out-group, although the former attitude increased more sharply with age and reached high levels among a larger proportion of children. Out-group prejudice was consistently low and was significant among 5-year-olds only.

Hypothesis 3: Distinct Social-Cognitive Correlates

The third question concerned social-cognitive underpinnings of in-group and out-group attitudes in this age range. Age differences on social-cognitive variables were examined with separate one-way analyses of variance (see Table 3). Only conservation differed significantly with age; Newman-Keuls comparisons revealed that 6-year-olds were better conservers than both younger groups, who did not differ from each other. Of all the variables, only self-identification showed a restricted range—specifically, a ceiling

effect—which thus prevented this variable from accounting for variation in attitudes. Judging from the descriptive statistics, recognition appeared to be relatively easy for this age group, although as expected, the concrete operational skills of conservation and multiple classification covered the full range but were difficult for the youngest. Hierarchical multiple regressions, with age entered first and the cognitions entered as a block, were conducted on the in-group and out-group evaluation scores separately. Standardized and unstandardized beta coefficients are presented in Table 4 along with significance levels based on *t* tests. One-tailed tests of significance were used because of the expected direction of relations.

Social-cognitive predictors explained a significant amount of the individual difference in PRAM scores (see Table 4). Recognition of others' group affiliations, in-group differentiation (low homogeneity), and out-group homogeneity were associated with higher PRAM bias, whereas conservation and multiple classification were associated with lower bias. Though MRA in-group evaluation was more positive with increasing age, it was less positive in children with higher conservation scores. MRA out-group evaluation also became more negative with age and more positive with conservation, but the relations were nonsignificant. Thus, beyond age, the cognitive variables were not strongly related to MRA group evaluations, except for conservation, which was associated with less bias among some of the older children.

Study 2: Replication and Extension

This study included only children in the 5–6-year range in order to focus on individual rather than age variations in in-group

Table 4
Summary of Hierarchical Regression Analyses for Social Cognition Predictors of Attitudes
 (N = 80)

Variable	PRAM			In-group evaluation			Out-group evaluation		
	B	SE	β	B	SE	β	B	SE	β
Step 1									
Age	.17	.24	.08	1.95	.51	.40**	-.90	.46	-.22
Step 2									
Age	.46	.33	.21	3.01	.72	.62**	-.84	.67	-.21
Recognition	.46	.24	.21*	.62	.52	.13	.22	.48	.05
Self-identification	-1.36	1.44	-.11	.38	3.16	.01	-2.11	2.93	-.09
In-group homogeneity	-.02	.01	-.22*	.01	.03	.04	.01	.02	.01
Out-group homogeneity	.04	.01	.35**	-.03	.03	-.12	.03	.03	.17
Conservation	-.20	.12	-.26*	-.53	.25	-.30**	.34	.23	.23
Multiple classification	-.21	.10	-.24*	-.15	.21	-.08	-.18	.19	-.11

Note. For the Preschool Racial Attitude Measure (PRAM), $R^2 = .006$ for Step 1, and $R^2 = .19$ for Step 2 ($p < .02$); for in-group evaluations, $R^2 = .16$ for Step 1, $R^2 = .08$ for Step 2 (*ns*); for out-group evaluations, $R^2 = .0005$ for Step 1, $R^2 = .07$ for Step 2 (*ns*).

* $p < .05$. ** $p < .01$ (one-tailed significance levels using t test of coefficient).

favoritism and out-group prejudice. Few 4-year-olds appeared to have polarized attitudes, most distributing the MRA evaluations in a balanced manner. Also, without the older 6-year-olds, I thought I might eliminate the impact of concrete operational skills such as conservation, which was associated with a decline in rather than an acquisition of bias. In addition, a sample of children from a more racially mixed school participated. Although contact by itself does not necessarily reduce bias, it provides opportunities for personal experience to influence out-group evaluations (Schofield & Eurich-Fulcer, 2001) and so might alter the reciprocal relation between in-group and out-group attitudes.

A second goal in Study 2 was to examine more social-cognitive predictors of out-group prejudice. Because Study 1 found that in-group and out-group attitudes were reciprocally related, I tested several of Brewer's (1999) suggestions as to why children with in-group attachment might possess out-group prejudice. Two that seemed appropriate for this age group were children's perceptions that their social world is racially segmented and judgments that only the in-group is right. Concerning racial segmentation, sorting procedures have been used to show that young children sort pictures of people into two piles using either race or gender (Bigler & Liben, 1993; Ramsey, 1991), yet this finding attests only to the salience of one attribute over the other. When not forced to sort into only two groups, preschoolers tend to create small groups of interactants (Pinker, 1995). Thus instructions that allow for unlimited piles may elicit a more realistic picture of how children perceive social groups than may the two-pile procedure. So, one social-cognitive variable in Study 2 was the number of stimulus people, varying along four attributes, who were placed into single-race versus mixed-race piles. Children who put more pictures into single-race piles were expected to have more negative out-group attitudes. Whether these perceptions were socially determined or tied to cognitive constraints that prevented the child from perceiving multiple cross-cutting categories was not assessed here.

The second determinant of out-group prejudice was described as a form of moral superiority in which different perspectives were interpreted as wrong (Brewer, 1999). Piaget and Weil (1951) studied a similar phenomenon in children, called *egocentrism* or

sociocentrism, in which the in-group is considered to have the only correct perspective. Both Brewer and Piaget and Weil implied that the belief in in-group superiority would be associated with in-group favoritism and out-group prejudice. Although there are developmental reasons for expecting younger children to organize stimuli into single-race piles and to assume egocentrically the rightness of only their own perspective, no study has yet determined whether these behaviors are associated with in-group and/or out-group evaluations. Also included was the measure of group homogeneity from Study 1. Recognition and self-identification were omitted because both should be within the abilities of all children this age; conservation and multiple classification tasks were again given but were difficult for most.

Method

Participants

Thirty-six White kindergarteners (21 boys and 15 girls) between the ages of 5 years 3 months and 6 years 8 months were tested. The mean age was 5 years 10 months. The children attended a racially mixed school in classes where up to 40% of the children might be visible minorities. Teachers, however, were White Canadians of European backgrounds.

Multiresponse Racial Attitude Measure

The MRA was given as in Study 1.

Social Cognition Measures

Group homogeneity. This measure was described in Study 1. Same-age and same-sex pictures from the following race-segmented sorting task were used to make six Black-White ($\alpha = .86$), three White-White ($\alpha = .69$), and three Black-Black ($\alpha = .62$) judgments on a 60-cm board.

Race-segmented sorting. This measure allowed children to organize photos of people into any number of piles of "people who belong together" so that the children's perceptions of social segmentation could be determined. Sixteen same-sex pictures depicted people who varied factorially on attributes of age (child or adult), shirt color (red or yellow), facial expression (smiling or neutral), and skin color (white or brown). Children were instructed to look carefully at each picture, as they were laid out on the

table, and to put the pictures into piles of “people who belong together” using as few or as many piles as needed. The number of pictures put into single-race piles (meaning that only one race of people were found in that pile) was the index used. Because children used, on average, 4 piles, and the range of 1–9 piles was unrelated to age, most had the opportunity to place from 0 to all of the 16 pictures in single-race piles. The number of in-group pictures in single-race piles correlated .84 with the number of out-group pictures in single-race piles, so they were combined.

Egocentric superiority (Aboud, 1981). This task measured whether children judged two different preferences, their own and someone else’s, as both right (reconcile) or as one right and one wrong (egocentric). First, children rated their own preferences for same-sex photographs of two White, two Black, and two Chinese children on a 60-cm liking board (closer together the more the pictured child was liked and farther away the less the pictured child was liked). The children were asked to compare and evaluate their own ratings with those of three other children in the following manner: (a) The tester showed a photo of another child of the least-liked ethnicity and indicated that child’s preferences by setting up identical photos on a second board in the reverse order to the participating child’s preferences. The tester then asked the child, “This is how you put them; this is how [s/he] put them. Are they the same or are they different? Are both of you right or is someone wrong?” (b) The tester showed a photo of a child from the second-to-last-placed ethnicity and indicated that child’s preferences, again in reverse order, but with that child’s in-group as most liked. Again the tester asked the participating child if both were right or if someone was wrong. (c) The tester then showed a photo of a child from the most-liked ethnicity and indicated that child’s preferences, again in reverse order to the participating child’s preferences, asking if both were right or if someone was wrong. For each item, 1 point was given if the child indicated that only self-preferences were right (range = 0–3).

Procedure

A White woman tested the children in two separate sessions. The first session included the measures of group homogeneity, sorting, and egocentrism. The second session included the MRA and an intergroup behavior measure not described in this article. Conservation and multiple classification tasks were given at the end of the first session but are omitted from further analysis because scores were very low (e.g., only 1 child conserved substance).

Results

Intercorrelations among the measures and age are presented in Table 5. Correlations with age were significant only for single-race

sorting. *T* tests on each measure indicated no gender differences, and so data from boys and girls were combined.

Correlations between in-group and out-group evaluations on the MRA, with age partialled out, were nonsignificant in this sample, $r(35) = -.08$ (see Table 6). Children with, on balance, positive evaluations of their own group were not necessarily negative toward the out-group. Also, unlike the findings in Study 1, in-group and out-group evaluations were significantly correlated on negative items, $r(35) = .35, p < .05$, but not on positive items, $r(35) = .21, ns$, although once again, the two components of an unbiased attitude—namely, negative in-group and positive out-group evaluations—were highly correlated.

As in the previous study, the 3 × 3 bivariate distribution of in-group and out-group scores (positive, neutral, or negative) was significant at the .01 level, $\chi^2(4, N = 36) = 18.37$. Of the 22 (61.1%) in-group positive children, 10 (45.5%) were negative toward the out-group, 2 (9%) were neutral, and 10 (45.5%) were positive. Of the 9 who were in-group neutral, 1 (11.1%) was positive toward the out-group, 7 (77.8%) were neutral, and 1 (11.1%) was negative. Of the 5 in-group negative children, 3 (60%) were also negative toward the out-group, and 2 (40%) were positive toward the out-group. This distribution is strong evidence for the likelihood of children holding positive in-group and out-group attitudes simultaneously, although in most cases in-group positive scores were higher.

Hypothesis 2 concerns the levels of in-group and out-group evaluations at this age. Table 7 presents means, standard deviations, and ranges. *T* test comparisons of the means with zero indicated that in-group evaluation was significantly greater than zero, $t(35) = 3.98, p < .01$. Out-group evaluation did not differ from zero, $t(35) = .74, ns$. The MRA composite score was also significantly greater than zero, $t(35) = 3.16, p < .01$, indicating that children were more favorable to their in-group than to the out-group.

Hypothesis 3, concerning the correlates of in-group and out-group attitudes, was tested with multiple regression analyses on in-group and out-group evaluations. Judging from their descriptive statistics and skew, the social-cognitive variables examined as correlates of attitudes were normally distributed with a wide range of scores. To keep the number of predictors down, I excluded age, although the results did not change when it was included. Beta

Table 5
Intercorrelations Among All Attitude and Social Cognition Indices

Variable	1	2	3	4	5	6	7
1. Age	—						
2. In-group evaluation	.00	—					
3. Out-group evaluation	-.11	-.08	—				
4. In-group homogeneity	.24	-.38*	.00	—			
5. Out-group homogeneity	.14	-.17	-.10	.63*	—		
6. Sorting	.36*	.20	-.11	.23	.15	—	
7. Egocentrism	-.28	.29	-.18	.06	.10	-.06	—
<i>M</i>	5.8	2.8	-0.6	8.6	10.5	9.2	2.1
<i>SD</i>	0.36	4.3	4.5	13.5	11.6	6.1	1.0
Range	5.2–6.7	-5–10	-10–9	-20.7–38.7	-8.0–35.3	0–16	0–3

Note. *N* = 36.
* *p* < .05.

Table 6
Intercorrelations Among In-Group and Out-Group Evaluations With Age Partialled Out

Evaluation	In-group evaluation			Out-group evaluation		
	Positive	Negative	D score	Positive	Negative	D score
In-group						
Positive	—					
Negative	-.24	—				
D score	.63**	-.90**	—			
Out-group						
Positive	.21	.53**	-.33**	—		
Negative	.07	.35*	-.25	-.09	—	
D score	.10	.15	-.08	.77**	-.70**	—

Note. The D score represents the difference between positive and negative assignments.

* $p < .05$. ** $p < .01$.

coefficients are presented in Table 8 along with significance levels based on t tests. Once again, in-group attitudes were more consistently related to social cognitions than were out-group attitudes. Children evaluated their group more positively if they showed less in-group homogeneity, more egocentrism, and more sorting into single-race piles. None of the social cognitions accounted for out-group evaluation.

General Discussion

Overall, the findings indicate that in-group favoritism was significantly related to out-group prejudice in the first sample but not the second. Even when the correlation was significant, in-group positivity was sometimes associated with out-group positivity or neutrality, although it was more frequently associated with prejudice. At this young age, in-group favoritism appeared to be developing quickly and strongly, whereas out-group prejudice changed more slowly and reached statistically significant levels only among 5-year-olds in one sample. Furthermore, attitudes toward in-group and out-group appeared to be associated with different social

cognitions. Although these data came from only two Canadian samples, they demonstrate that at an age when children are beginning to form racial attitudes, in-group attachment is their primary concern. Out-group members suffer more from comparison than from outright hostility.

Reciprocal Nature of In-Group and Out-Group Attitudes

The first sample of children, who came from a relatively homogeneous school, showed a reciprocal relation between in-group and out-group attitudes; children who were, on balance, more positive to their in-group were most likely to hold negative attitudes toward the out-group. Children from the mixed-race school did not consistently hold reciprocal attitudes; positive-in-group children were equally divided in their attitudes toward the out-group. Therefore, at this age, children are capable of possessing highly positive in-group attitudes and only slightly less positive, rather than negative, out-group attitudes. Theories assuming an automatic translation of in-group favoritism to out-group prejudice on the basis of universal motives to maximize distinctiveness or derive positive comparisons need to be modified.

The difference in findings between the two samples points to the need to consider different routes by which children develop out-group attitudes. Children in the first sample, who had little personal experience with out-group members, may have used their in-group attachment as a reference by which to evaluate others who looked different. In contrast, those who had personal experience with out-group peers may have instead used their experiences to develop more balanced and independent out-group evaluations.

An examination of the four Valence \times Target indices available from the MRA highlights the basis of reciprocal in-group/out-group evaluations when they occur. Children in the sample that showed a reciprocal relation tended to assign more of the 10 negative traits to the out-group if they assigned most of the 10 positive ones to their own group, whereas the sample that showed independent attitudes did not. On the other hand, both samples showed a fairly consistent tendency to assign more of the positive traits to the out-group if they assigned more negative traits to their own group. The latter two indices appear to reflect tolerance and introduce a more balanced attitude by countering the indices known to reflect bias (i.e., positive in-group traits and negative out-group traits). One may speculate that if in-group attitudes are

Table 7
Means, Standard Deviations, and Ranges for Attitude and Social Cognition Measures

Variable	<i>M</i>	<i>SD</i>	Range
Attitudes			
Composite MRA	3.4	6.4	-10-20
In-group evaluation	2.8	4.3	-5-10
Out-group evaluation	-0.6	4.5	-10-9
% negative (from -1 to -10)	38.9		
Positive White	8.7	1.9	3-10
Negative White	5.9	3.5	0-10
Positive Black	7.0	3.3	0-10
Negative Black	7.6	2.9	1-10
Social cognitions			
In-group homogeneity	8.6	13.5	-20.7-38.7
Out-group homogeneity	10.5	11.6	-8.0-35.3
Race-segmented sorting	9.2	6.1	0-16
Egocentrism	2.1	1.0	0-3

Note. MRA = Multiresponse Racial Attitude measure.

Table 8
Summary of Simultaneous Regression Analyses for Social Cognition Predictors of Attitudes
 (N = 36)

Variable	In-group evaluation			Out-group evaluation		
	B	SE	β	B	SE	β
Group homogeneity	-.15	.05	-.48**	-.03	.07	-.07
Race-segmented sorting	.24	.10	.34**	-.08	.13	-.11
Egocentric superiority	1.42	.59	.34**	-.79	.76	-.18

Note. For in-group evaluations, $R^2 = .35$ ($p < .01$); for out-group evaluations, $R^2 = .05$ (*ns*). In-group homogeneity was used as the predictor of in-group evaluation, and out-group homogeneity as the predictor of out-group evaluation.

** $p < .01$ (one-tailed significance using t test of coefficient).

indeed psychologically primary (Allport, 1954), it is children's realistic acknowledgment of negative in-group qualities that directs their attention to the potential positive qualities of out-group members. These evaluations may be appropriate to target in childhood interventions (Aboud & Doyle, 1996). Another focus in such interventions would be to support the disengagement of negative out-group evaluations from positive in-group evaluations.

In-Group Favoritism

The second hypothesis was largely confirmed in that in-group favoritism, once it appeared at 5 years of age, exceeded out-group prejudice. It was present in 64%–77% of children who were 5 years old and older and was significantly greater than neutrality at this age.

Of the social and cognitive variables associated with in-group favoritism, group self-identification was the weakest (see also Bennett et al., 1998). By 4 years of age, most children had reached a ceiling, with scores of 1.9 out of 2; thus they knew they were White Canadian and not Black Canadian but did not yet show an in-group preference. These children would presumably develop an in-group preference shortly, but self-identification by itself did not trigger it. As measured here, both self-identification and recognition of group membership may have been unable to explain attitude differences simply because they were too easy and lacked variation. However, in-group favoritism was higher among those with poor conservation (Study 1), those with less perceived in-group homogeneity, those who did more sorting into single-race piles, and those who showed egocentric superiority (Study 2). Generally, these correlates were distinctively associated with in-group attitudes, except for conservation, which in the first study was associated with less positive in-group attitudes and nonsignificantly more positive out-group attitudes. Conservation appears to overwhelm other cognitions in explaining individual variation in attitudes when the sample includes conservers and nonconservers (e.g., Clark et al., 1980). Other variables became relevant in the second study, which included only 1 nonconserver.

In-group homogeneity is generally lower than out-group homogeneity (Brewer & Brown, 1998), but it was surprising to find that those with less in-group homogeneity, or more differentiation among individuals, were more favorable to the whole in-group. Thus, at this age, in-group differentiation operated, like out-group differentiation has with older children (e.g., Katz et al., 1975), to enhance positive evaluation. Also, children who placed more pic-

tures of people into single-race piles showed greater in-group attachment but not out-group prejudice. The inference is that although the simple form of categorization and self-identification, as manipulated in minimal-group teams, did not explain variation in attitudes (except on the forced-choice PRAM, to be discussed later), the more commonly measured form of categorization did, entailing both racial segmentation and within-group differentiation (Brewer & Brown, 1998).

Egocentric superiority was related here to in-group but not out-group evaluation; children who said that their own in-group preferences were the only right ones were more likely to have highly positive in-group scores. Similarly, those who were unable to conserve quantities had stronger in-group favoritism. Thus, developmentally immature ways of thinking were associated with the early formation of in-group attachment.

Conversely, those who judged a different preference to be as valid as their own had, on balance, less positive in-group attitudes but not lower out-group prejudice. Acknowledging the validity of opposing perspectives may first be experienced with in-group members who disagree and may lead children to question their egocentric assumption of in-group superiority (i.e., "Everyone agrees that my group is the best"; Augoustinos & Rosewarne, 2001). On the same note, appreciating that two different perspectives can both be right may require an ability to distinguish between appearances and evaluation; that is, where appearances are different, evaluations may be the same, and vice versa (Aboud, 1981). A similar ability underlies conservation, which was also associated with less in-group favoritism here and elsewhere (Clark et al., 1980). This ability may be one of the first to make children aware that one group can be both good and bad—an awareness that is applied to their own group before being applied to an out-group.

To the extent that the PRAM reflected in-group rather than out-group attitudes, many of these correlations were replicated with it. In fact, the PRAM was correlated significantly with all but the self-identification measure. Higher PRAM scores were found among those who recognized peers as group members, perceived high homogeneity among out-group members and low homogeneity among in-group members, could not conserve, and were unable to use two or more attributes to classify people. With these kinds of results, one can see why the measure has been cited as support for the categorization hypotheses. Perhaps because it confounds in-group and out-group attitudes, it capitalizes on the correlates of both. However, with 70% of children scoring in the 9–12 range,

the cognitive variables might be distinguishing between very high and moderate in-group favoritism.

Out-Group Prejudice

The weak levels of out-group prejudice, though significantly greater than neutrality among 5-year-olds in the first study, underline the importance of treating out-group bias separately from in-group bias. When analyzed separately from in-group favoritism, prejudice did not appear until 5 years of age, thus challenging findings based on the PRAM that out-group prejudice appears at age 3 (Katz & Kofkin, 1997). None of the hypothesized predictors, such as perceived out-group homogeneity, single-race sorting, or egocentric superiority, was significantly associated with out-group attitudes. These variables appeared to be related as expected to age, to show appropriate variation, and to correlate with in-group attitudes. However, if the age-appropriate task for young children is to develop an in-group attachment, then social cognitions may be used to facilitate this goal. If struggling with out-group attitudes is a more salient developmental task for children in middle childhood, then social and cognitive variables might show a stronger link to out-group attitudes at that age. Although none of Brewer's (1999) suggestions for predictors of out-group prejudice were supported here, it would be fair to say that their childhood form might be more benign than their adult form: Egocentrism may have led children to infer that people who held a different perspective were wrong; but without any moral tone, the inference did not translate into a negative evaluation. Moreover, even children who organized more photos of people into single-race piles rarely dichotomized; rather, they made single or multiple groups.

Despite the weaker levels of out-group prejudice than of in-group favoritism in this young age group, one can still argue that out-group prejudice is unnecessarily high and detrimental to both the experimenter and the target of prejudice. In many aspects of living, children will make choices of whom to play with, to work with, and to talk to on the basis of a comparison. Among children older than 5 years, the preference is strongly for in-group members. Thus, in aspects of life where in-group alternatives are available, out-group members are less likely to receive positive recognition. Second, despite the nonsignificance of out-group prejudice levels in one of the two samples, a great many negative evaluations were actually made of the out-group. Reviews of multicultural programs emphasize how difficult these are to change (Bigler, 1999). Finally, although I did not use a no-information control target, Singh et al. (1998) found that their subjects assumed that the control was an in-group member. Thus, the proper comparison standard may be the in-group rather than neutrality.

Sociocultural and Methodological Issues

The limitations of this study mainly concern (a) the sociocultural nature of the samples and (b) the attitude measure. The children in these samples, who live in an environment characterized as multiethnic and bilingual, may not have the same stereotypes or status expectations about White and Black people as do children living in the United States and watching American television (Graves, 1999). Therefore, prejudice may develop later and be lower in this sample than in some U.S. locations. However, the

level of in-group favoritism should not differ if it is a developmentally valuable process rather than a sociocultural or conflict-based one (Brewer, 1999; Cameron et al., 2001).

The MRA, while going well beyond past measures in partially decoupling in-group and out-group attitudes, may still be criticized for not encouraging a *none* or a *neither* response and for not separating in-group and out-group further into two separately presented targets (Cameron et al., 2001). However, neither of these options is particularly feasible with children as young as 5 years, and no reliable or valid alternative currently exists. A review of 15 studies published since 1980 with 5-year-olds and 9 studies with children from 6 to 12 years old revealed that most of the studies either presented racial/ethnic targets together and asked the child to consider whether one or more than one fit the given description (Averhart & Bigler, 1997; Bigler & Liben, 1993; Black-Gutman & Hickson, 1996; Doyle & Aboud, 1995; Doyle et al., 1988) or forced the choice of only one (Corenblum & Annis, 1993; Katz & Kofkin, 1997; Kowalski & Lo, 2001; Ramsey, 1991). Perhaps a better option is to present targets separately, one at a time (Aboud, 1980; Augoustinos & Rosewarne, 2001; Bar-Tal, 1996; Holmes, 1995; Semaj, 1980; Teichman, 2001). The major benefit of a separate presentation is the complete decoupling of the targets being evaluated. However, either the out-group would have to be presented first or the child would have to be given some warning that in-group and out-group targets were to be evaluated. Otherwise, in-group targets would be evaluated on the basis of their unique individual features rather than their group membership (Kinket & Verkuyten, 1999). The concern about using a simultaneous presentation is that it might heighten intergroup comparisons, but this has not been supported in research on adolescents or adults (Mummendey, Klink, & Brown, 2001).

Concerning evaluation and response format, most measures in previous studies included from 6 to 10 positive and an equal number of negative traits to be considered separately (Augoustinos & Rosewarne, 2001; Averhart & Bigler, 1997; Bigler & Liben, 1993; Black-Gutman & Hickson, 1996; Corenblum & Annis, 1993; Doyle & Aboud, 1995; Doyle et al., 1988; Katz & Kofkin, 1997; Semaj, 1980). A few studies simply elicited spontaneous evaluations with open-ended questions (Holmes, 1995; Teichman, 2001); but a response that depends too much on drawing skill, verbal fluency, or recall may not accurately reflect young children's attitudes (Lerner & Schroeder, 1975). Similarly, the use of only positive evaluations, such as liking (Aboud, 1980; Kowalski & Lo, 2001; Teichman, 2001), is problematic because item-response analyses on the MRA items indicated that positive items discriminated less among those with different in-group and out-group scores than did negative items (Ramsay, 2000). Because of the concern that children may be reluctant to evaluate people negatively, in particular their own group, Kowalski (2002) provided a miniature "trash can" into which children could throw negative items they thought applied to none (similar to Davey's, 1983, "Nobody Box"). The lack of such an explicit option in the present investigation may have meant that children assigned more negative items to out-group stimuli than they would have with the option. However, the concern has always been that social desirability will motivate children to avoid negative evaluations. One might reasonably ask why many White children in the present sample avoided assigning negative qualities to in-group members starting at the age of 5 years, particularly when they would have

seen more of these qualities among in-group members at that age. Research shows that when friends talk with each other about race evaluations, the more persuasive ones voice the belief that all groups can harbor negative characteristics (Aboud & Doyle, 1996).

Finally, the psychometric properties of most measures have barely been addressed in published papers. Alpha coefficients showing internal reliability of multi-item measures range from .55 to .91 (Averhart & Bigler, 1997; Black-Gutman & Hickson, 1996; Corenblum & Annis, 1993; Doyle & Aboud, 1995). Besides the MRA, only the PRAM has published test-retest reliability. Furthermore, the MRA has solid evidence of validity, whereas this information is lacking for other measures.

In conclusion, according to several criteria, in-group and out-group attitudes appeared to be distinct in our samples of White children under 7 years of age. In-group favoritism developed at an earlier age and reached higher levels in a larger proportion of the children than did out-group attitudes. In-group favoritism but not out-group prejudice was associated with lower perceived group homogeneity, higher single-race grouping, and higher egocentrism.

References

- Aboud, F. E. (1980). A test of ethnocentrism with young children. *Canadian Journal of Behavioral Science*, 12, 195–209.
- Aboud, F. E. (1981). Egocentrism, conformity, and agreeing to disagree. *Developmental Psychology*, 17, 791–799.
- Aboud, F. E. (1988). *Children and prejudice*. New York: Blackwell.
- Aboud, F. E., & Amato, M. (2001). Developmental and socialization influences on intergroup bias. In R. Brown & S. Gaertner (Eds.), *Blackwell's handbook of social psychology: Intergroup processes* (pp. 65–85). Malden, MA: Blackwell.
- Aboud, F. E., & Doyle, A. B. (1996). Does talk of race foster prejudice or tolerance in children? *Canadian Journal of Behavioral Science*, 28, 161–170.
- Aboud, F. E., & Fenwick, V. (1999). Exploring and evaluating school-based interventions to reduce prejudice. *Journal of Social Issues*, 55, 767–786.
- Aboud, F. E., Mendelson, M. J., & Purdy, K. T. (in press). Cross-race peer relations and friendship quality. *International Journal of Behavioral Development*.
- Aboud, F. E., & Mitchell, F. G. (1977). Ethnic role taking: The effects of preference and self-identification. *International Journal of Psychology*, 12, 1–17.
- Allport, G. W. (1954). *The nature of prejudice*. Cambridge, MA: Addison-Wesley.
- Arlin, P. K. (1981). Piagetian tasks as predictors of reading and math readiness in grades K-1. *Journal of Educational Psychology*, 73, 712–721.
- Augoustinos, M., & Rosewarne, D. L. (2001). Stereotype knowledge and prejudice in children. *British Journal of Developmental Psychology*, 19, 143–156.
- Averhart, C. J., & Bigler, R. S. (1997). Shades of meaning: Skin tone, racial attitudes, and constructive memory in African American children. *Journal of Experimental Child Psychology*, 67, 368–388.
- Bar-Tal, D. (1996). Development of social categories and stereotypes in early childhood: The case of “the Arab” concept formation, stereotype and attitudes by Jewish children in Israel. *International Journal of Intercultural Relations*, 20, 341–370.
- Bennett, M., Lyons, E. J., Sani, F., & Barrett, M. (1998). Children's subjective identification with the group and in-group favoritism. *Developmental Psychology*, 34, 902–909.
- Bigler, R. S. (1999). The use of multicultural curricula and materials to counter racism in children. *Journal of Social Issues*, 55, 687–705.
- Bigler, R. S., Brown, C. S., & Markell, M. (2001). When groups are not created equal: Effects of group status on the formation of intergroup attitudes in children. *Child Development*, 72, 1151–1162.
- Bigler, R. S., & Liben, L. S. (1993). A cognitive-developmental approach to racial stereotyping and reconstructive memory in Euro-American children. *Child Development*, 64, 1507–1519.
- Black-Gutman, D., & Hickson, F. (1996). The relationship between racial attitudes and social-cognitive development in children: An Australian study. *Developmental Psychology*, 32, 448–456.
- Brewer, M. B. (1979). In-group bias in the minimal intergroup situation: A cognitive-motivation analysis. *Psychological Bulletin*, 86, 307–324.
- Brewer, M. B. (1999). The psychology of prejudice: In-group love or out-group hate? *Journal of Social Issues*, 55, 429–444.
- Brewer, M. B., & Brown, R. J. (1998). Intergroup relations. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 2, pp. 554–594). New York: McGraw-Hill.
- Brown, R. (1995). *Prejudice: Its social psychology*. Cambridge, MA: Blackwell.
- Cameron, J. A., Alvarez, J. M., Ruble, D. N., & Fuligni, A. J. (2001). Children's lay theories about in-groups and out-groups: Reconceptualizing research on prejudice. *Personality and Social Psychology Review*, 5, 118–128.
- Clark, A., Hocevar, D., & Dembo, M. H. (1980). The role of cognitive development in children's explanations and preferences for skin color. *Developmental Psychology*, 16, 332–339.
- Corenblum, B., & Annis, R. C. (1993). Development of racial identity in minority and majority children: An affect discrepancy model. *Canadian Journal of Behavioural Science*, 25, 499–521.
- Davey, A. (1983). *Learning to be prejudiced: Growing up in multi-ethnic Britain*. London: Edward Arnold.
- Doyle, A. B., & Aboud, F. E. (1995). A longitudinal study of White children's racial prejudice as a social cognitive development. *Merrill-Palmer Quarterly*, 41, 210–229.
- Doyle, A. B., Beaudet, J., & Aboud, F. E. (1988). Developmental patterns in the flexibility of children's ethnic attitudes. *Journal of Cross-Cultural Psychology*, 19, 3–18.
- Graves, S. B. (1999). Television and prejudice reduction: When does television as a vicarious experience make a difference? *Journal of Social Issues*, 55, 707–725.
- Gulko, J., Doyle, A. B., Serbin, L., & White, D. (1988). Conservation skills: A replicated study of order of acquisition across tasks. *Journal of Genetic Psychology*, 149, 425–440.
- Holmes, R. M. (1995). *How young children perceive race*. Thousand Oaks, CA: Sage.
- Katz, P. A., & Kofkin, J. A. (1997). Race, gender, and young children. In S. S. Luthar, J. A. Burack, D. Cicchetti, & J. Weisz (Eds.), *Developmental psychopathology: Perspectives on adjustment, risk, and disorder* (pp. 51–74). New York: Cambridge University Press.
- Katz, P. A., Sohn, M., & Zalk, S. R. (1975). Perceptual concomitants of racial attitudes in urban grade-school children. *Developmental Psychology*, 11, 135–144.
- Kinket, B., & Verkuyten, M. (1999). Intergroup evaluations and social context: A multilevel approach. *European Journal of Social Psychology*, 29, 219–237.
- Kowalski, K. (2002). *The emergence of ethnic/racial attitudes in preschool-age children*. Manuscript submitted for publication.
- Kowalski, K., & Lo, Y-F. (2001). The influence of perceptual features, ethnic labels, and sociocultural information on the development of ethnic/racial bias in young children. *Journal of Cross-Cultural Psychology*, 32, 444–455.
- Lerner, R. M., & Schroeder, C. (1975). Racial attitudes in young White

- children: A methodological analysis. *Journal of Genetic Psychology*, 127, 3–12.
- Mummendey, A., Klink, A., & Brown, R. (2001). Nationalism and patriotism: National identification and out-group rejection. *British Journal of Social Psychology*, 40, 159–172.
- Nesdale, A. R. (1999). Developmental changes in children's ethnic preferences and social cognitions. *Journal of Applied Developmental Psychology*, 20, 501–519.
- Nesdale, D., & Flesser, D. (2001). Social identity and the development of children's group attitudes. *Child Development*, 72, 506–517.
- Piaget, J., & Weil, A. M. (1951). The development in children of the idea of the homeland and of relations to other countries. *International Social Science Journal*, 3, 561–578.
- Pinker, S. (1995). *The language instinct*. New York: Harper.
- Ramsay, J. O. (2000). TestGraf: A program for the graphical analysis of multiple choice test and questionnaire data [Computer software]. Retrieved from <http://www.psych.mcgill.ca/faculty/ramsay.html>
- Ramsey, P. G. (1991). The salience of race in young children growing up in an all-White community. *Journal of Educational Psychology*, 83, 28–34.
- Rutland, A. (1999). The development of national prejudice, in-group favouritism and self-stereotypes in British children. *British Journal of Social Psychology*, 38, 55–70.
- Schofield, J. W., & Eurich-Fulcer, R. (2001). When and how school desegregation improves intergroup relations. In R. Brown & S. Gaertner (Eds.), *Blackwell's handbook of social psychology: Intergroup processes* (pp. 475–494). Malden, MA: Blackwell.
- Semaj, L. (1980). The development of racial evaluation and preference: A cognitive approach. *The Journal of Black Psychology*, 6, 59–79.
- Singh, R., Choo, W. M., & Poh, L. L. (1998). In-group bias and fair-mindedness as strategies of self-presentation in intergroup perception. *Personality and Social Psychology Bulletin*, 24, 147–162.
- Tajfel, H. (1978). Social categorization, social identity and social comparison. In H. Tajfel (Ed.), *Differentiation between social groups* (pp. 61–98). New York: Academic Press.
- Teichman, Y. (2001). The development of Israeli children's images of Jews and Arabs and their expression in human figure drawings. *Developmental Psychology*, 37, 749–761.
- Williams, J. E., Best, D. L., Boswell, D. A., Mattson, L. A., & Graves, D. J. (1975). Preschool Racial Attitude Measure II. *Educational and Psychological Measurement*, 35, 3–18.
- Williams, J. E., & Morland, J. K. (1976). *Race, color, and the young child*. Chapel Hill: University of North Carolina Press.
- Yee, M. D., & Brown, R. (1992). Self-evaluation and intergroup attitudes in children aged three to nine. *Child Development*, 63, 619–629.
- Zargarpour, S. (2001). *Individual differences in children's group perceptions and peer preferences as a function of prejudice level*. Unpublished doctoral dissertation, Concordia University, Montreal, Quebec, Canada.

Appendix

Multiresponse Racial Attitude (MRA) Items

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|---|--|
| 1. Clean—never forget to wash hands before eating | 14. Selfish—like to keep things to themselves and don't share with friends |
| 2. Unfriendly—always pushing others around and getting into fights | 15. Sick—miss school and can't play with friends |
| 3. Mean—always poking other children | 16. Friendly—have lots of friends because they are fun to be with |
| 4. Wonderful—can do just anything with glue and paper | 17. Filler |
| 5. Filler | 18. Naughty—do things like draw on the wall with crayons |
| 6. Dirty—always have dirty hands and put finger marks everywhere | 19. Kind—bring flowers to their teachers |
| 7. Health—eat good food that gives them lots of energy | 20. Won't let others play—tell them to go away |
| 8. Good—keep their rooms clean | 21. Filler |
| 9. Cruel—sometimes throw rocks at little cats | 22. Bad—take money from their mothers' purses |
| 10. Stupid—do stupid things like pulling all the toilet paper in the bathroom | 23. Helpful—like to carry things for other people |
| 11. Nice—say thank-you when they receive presents | 24. Smart—always do good work in class |
| 12. Filler | |
| 13. Happy—smile and laugh a lot | |

Received March 29, 2001
 Revision received July 25, 2002
 Accepted July 28, 2002 ■