

The Role of Intergroup Contact in Predicting Children's Interethnic Attitudes

Evidence From Meta-Analytic and Field Studies

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Research on the effects of intergroup contact among children expanded greatly following the landmark 1954 *Brown v. Board of Education* decision, which declared that racially segregated schools were unconstitutional (see Pettigrew, 1973, 2004; Schofield & Hausmann, 2004; St. John, 1975). Over the last half century, a considerable number of studies have shown how social relations and the social environment of the school can affect children's intergroup attitudes (Cohen, 1980; Damico, Bell-Nathaniel, & Green, 1981; Khmelkov & Hallinan, 1999; Orfield, 2001; Schofield & Sagar, 1977) along with emphasizing the conditions under which children from different racial groups come into contact with each other (see Schofield, 1978).

To date, the most influential theory regarding conditions for intergroup contact was articulated by Allport (1954). Specifically, Allport proposed that contact between groups can lead to improved intergroup attitudes when optimal conditions are established within the contact situation, including

equal status between groups, support of institutional authorities, common goals, and cooperation.

Equal Status Between Groups

Allport contended that, even when groups are initially unequal in status, intergroup attitudes can be improved when the group members have opportunities to interact under conditions of equal status. Although some researchers have noted that groups may vary in the extent to which they perceive equal status in the contact situation (see Cohen, 1982; Robinson & Preston, 1976), many studies suggest that equal status contact can be effective in enhancing positive intergroup attitudes among members of different groups (see Patchen, 1982; Schofield & Eurich-Fulcer, 2001).

Support of Institutional Authorities

Institutional support for the contact, and for the equal status nature of that contact, can also be

influential in promoting positive outcomes. By establishing norms and standards for intergroup contact, support from institutional authorities can make intergroup contact more acceptable, pleasant, and likely to occur, thereby enhancing its effectiveness in improving intergroup attitudes (see Clark, 1963; Fishbein, 1996; Pettigrew, 1998).

Common Goals and Cooperation

Contact between groups is also especially likely to be effective when groups work cooperatively toward a common goal. Indeed, a great deal of research suggests that cooperative interdependence, in which members of different groups must work together and rely on each other, can facilitate the development of positive attitudes across group boundaries (see Aronson & Patnoe, 1997; Johnson, Johnson, & Maruyama, 1984; Slavin & Cooper, 2000).

Examining Intergroup Contact Effects Among Children

Establishing optimal conditions may be particularly important for contact among children from different racial and ethnic groups, as they are readily attuned to and influenced by cues from the social environment. Children become aware of racial and ethnic group differences from very young ages (Aboud, 1988; Goodman, 1952; Hirschfeld, 1996), and their developing views of diverse groups can be affected and shaped by others with whom they come into contact (see Aboud, Mendelson, & Purdy, 2003; Killen, Crystal, & Ruck, in press; Ellison & Powers, 1994). Children's attitudes toward other racial and ethnic groups also tend to grow more positive into middle childhood (Bigler & Liben, 1993; Katz & Zalk, 1978), as they become more able to understand others' perspectives and to recognize both similarities and differences among people within groups and across group boundaries (Doyle & Aboud, 1995). Moreover, children's intergroup attitudes may not only impact their future beliefs (Ellison & Powers, 1994) but also become harder to change as children grow older (see Aboud & Levy, 2000; Banks, 1995; Killen et al., in press).

The social environment of the school, therefore, would likely play a critical role in promoting positive intergroup attitudes among children. Although many social factors can influence

children's development (Malecki & Demaray, 2002), children spend a significant portion of their lives in school, which affords them experiences that contribute to their understanding of social norms and an emerging sense of themselves in relation to others (Hiner, 1990). In part, children learn to make judgments and decisions in response to social interactions with their peers at school (see Killen & Hart, 1999), and these help to form the basis of their social knowledge (Killen et al., in press). At the same time, their intergroup attitudes can also be strongly influenced by the nature and structure of the school environment (Damico et al., 1981; Khmelkov & Hallinan, 1999; Schofield & Sagar, 1977), which can affect both their opportunities to interact with members of various groups (Killen et al., in press) and the extent to which the school's authority figures contribute to establishing appropriate standards for intergroup behavior (Clark, 1963; Schofield, 1995).

Applying these themes to the research literature on intergroup contact, we share the view of many theorists who have proposed that features of the school environment may be structured to promote the development of positive intergroup attitudes (see Patchen, 1982; Schofield, 1979; Stephan & Stephan, 2001). In this chapter we examine the ways in which optimal conditions for contact in schools can contribute to improved intergroup attitudes among youth from a variety of racial and ethnic groups. We begin by discussing more in-depth analyses of our meta-analysis of intergroup contact effects (see Pettigrew & Tropp, 2006), in which we focus specifically on effects for samples of children and adolescents in school contexts. We then present findings from a field study of intergroup contact effects and examine young children's interethnic attitudes in relation to their contact experiences in several classroom contexts (see Tropp & Wright, 2003; Wright & Tropp, 2005).

Meta-Analytic Examination of Contact Effects Among Children and Adolescents

Our first examination of these issues involves data on children and adolescents from our recent meta-analytic investigation of intergroup contact effects (see Pettigrew & Tropp, 2006). When performing a meta-analysis, researchers attempt to find every study conducted on a particular topic; then they statistically pool the results to

examine the overall patterns of effects and uncover additional variables that moderate those effects (see Rosenthal, 1991; Johnson & Eagly, 2000). For our meta-analysis, we retrieved hundreds of papers on intergroup contact through intensive searches of multiple research literatures. After we located these works, we then checked to see whether each met the four criteria we had determined for inclusion in the meta-analysis.

First, since our analysis focused on the effects of intergroup contact, we considered only those cases in which intergroup contact could act as an independent variable for predicting intergroup prejudice. These studies included both experimental research on the effects of contact on prejudice and correlational studies in which contact was used as a correlate or predictor for intergroup prejudice. Moreover, we used a broad definition of "intergroup prejudice" in gathering these studies, such that they included measures of participants' feelings, evaluations, beliefs, and/or stereotypes regarding members of other groups (see Tropp & Pettigrew, 2005a, for an extended discussion). Second, to ensure that we examined intergroup (rather than interpersonal) outcomes, we included only studies that involved contact between members of clearly defined groups. Third, the studies had to involve some degree of direct contact between the members of the various groups, which could either be observed by others or reported by the participants themselves. This criterion excluded studies that gauged contact by using indirect measures such as information about an out-group, as well as studies in which participants were categorized into groups without opportunities for actual cross-group interactions. Finally, the outcome measures had to be collected on individuals rather than on an aggregate, and some type of comparative data had to be available to evaluate variability in prejudice in relation to the contact (see Pettigrew & Tropp, 2006, for an extended discussion)

From a multiyear search we uncovered 515 studies (including 713 independent samples) that examined relationships between contact and prejudice that met our inclusion criteria. Conducted between the early 1940s and the year 2000, the studies spanned many disciplines and involved contact between members of a wide range of groups. Altogether they include responses from 250,089 individuals in 38 countries.

We have used the correlation coefficient r as our primary effect size indicator. Larger values of r signify stronger relationships between intergroup contact and prejudice, and negative val-

ues of r signify an inverse relationship, such that greater intergroup contact corresponds to less intergroup prejudice.

Overall, the results from our analysis show that greater levels of intergroup contact are typically associated with lower levels of intergroup prejudice (mean $r = -.215$; see Pettigrew & Tropp, 2006). Our analysis also examined whether relationships between intergroup contact and prejudice varied across different age groups. Specifically, we coded the samples to discern whether the participants were children (12 years old or younger), adolescents (13 to 17 years old), college students (18 to 21 years old), or adults (greater than 21 years old). As Pettigrew and Tropp (2006) report, the effects obtained with samples of children ($N = 82$; mean $r = -.239$), adolescents ($N = 114$; mean $r = -.208$), and college students ($N = 262$; mean $r = -.231$) did not significantly differ from each other. At the same time, effects for college students were significantly stronger than those obtained for adults ($N = 238$; mean $r = -.197$), which is consistent with Sears's (1986) contentions that college students tend to be more open to change than older adults.

For the present chapter we have selected the 198 samples that examined contact-prejudice effects among children and adolescents. Approximately half of them ($N = 97$, 49%) involved contact between youth from different racial and ethnic groups; additionally, 24 samples involved contact between young and elderly people, 43 involved contact between youth with and without physical disabilities, and 29 samples involved contact between youth with and without mental disabilities or mental illness. Furthermore, more than two thirds of the samples ($N = 137$, 69%) were gathered in the United States, while the remaining samples were collected in Europe ($N = 20$, 10%), the Middle East ($N = 16$, 8%), and other parts of the world ($N = 25$, 13%).

Because most (57%) of the children and adolescent samples considered the effects of contact in school settings, we wanted to see whether these effects are generally consistent for samples from schools and other intergroup contexts. Results show that, among children and adolescents, the overall relationship between contact and prejudice does not significantly differ between the 113 samples gathered in school settings (mean $r = -.231$) and the 85 remaining samples gathered in residential, recreational, or other settings (mean $r = -.214$), $Q_b(1) = .31$, $p = .58$. We also found similar results for samples of children and adolescents in schools whether

they involved racial and ethnic contact ($N = 57$, mean $r = -.231$) or contact with the other target groups ($N = 56$, mean $r = -.235$), $Q_B(1) = .01$, $p = .93$. These findings suggest that, rather than being limited to any single context, the positive effects of contact appear to be comparable for many kinds of groups across a range of research settings in which youth from different groups interact.

We then considered how the effects of contact might vary for children and adolescents depending on whether the contact situation was or was not structured in line with the conditions proposed by Allport (1954) for optimal intergroup contact. An initial analysis indicates that the 68 samples with structured contact conditions show stronger mean effects (mean $r = -.288$) than the remaining 130 child and adolescent samples (mean $r = -.201$), $Q_B(1) = 6.92$, $p < .01$. To conduct a more rigorous test, we then used codings of methodological variables from our larger analysis (see Pettigrew & Tropp, 2006) to determine whether Allport's optimal conditions could predict stronger contact-prejudice effects once these methodological indicators are controlled. Specifically, we coded the samples for (a) the type of study conducted (1 = survey or field study, 2 = quasi-experiment, 3 = experiment); (b) the type of contact indicator used (1 = assumed, 2 = reported by participants, 3 = observed); (c) the quality of the contact measure (IV; 1 = low reliability, 2 = high reliability); (d) the quality of the prejudice measure (DV; 1 = low reliability, 2 = high reliability); (e) the type of control group used (control: 1 = within-subjects design or between-subjects design with no prior contact; 2 = some prior contact; 3 = considerable prior contact); and (f) the size of the sample.

In the present analysis we used these codings to determine whether the presence of Allport's optimal conditions could predict stronger contact-prejudice effects for the child and adolescent samples beyond what the methodological variables could predict. Overall, the results indicate that structured conditions for optimal contact generally predict stronger contact-prejudice effects for the child and adolescent samples, even after controlling for variability associated with methodological predictors ($\beta = -.157$, $z = -1.937$, $p = .053$). Additionally, focusing only on those samples within school settings, we found that those with structured optimal contact showed significantly stronger contact-prejudice effects (mean $r = -.336$) than those without structured contact (mean $r = -.189$), $Q_B(1) = 10.27$,

$p = .001$. These findings indicate that Allport's optimal conditions can help to facilitate positive outcomes from intergroup contact among youth in school settings.

We then checked to see whether these patterns of effects for child and adolescent samples within schools were consistent for the samples that involved racial and ethnic contact and those that involved contact in relation to other target groups. Of the 57 cases that involved racial and ethnic contact in schools, the 12 samples with structured optimal contact showed significantly stronger contact-prejudice effects (mean $r = -.374$) relative to those obtained for the 45 remaining racial and ethnic samples (mean $r = -.204$), $Q_B(1) = 4.62$, $p = .03$. Similarly, of the 56 cases that involved other target groups, the 29 samples with optimally structured contact showed stronger contact-prejudice effects (mean $r = -.320$) relative to the remaining nonracial and ethnic samples (mean $r = -.162$), $Q_B(1) = 7.01$, $p = .008$.

Overall, our findings suggest that school contact between youth from different groups corresponds with more positive intergroup attitudes, and such positive outcomes become even stronger when Allport's optimal conditions are established in the school environment. These findings are consistent with our larger analysis, which shows that Allport's optimal conditions typically contribute to more positive intergroup outcomes (see Pettigrew & Tropp, 2006). Moreover, our results show that structured contact in schools can contribute to positive intergroup outcomes both in cases of racial and ethnic contact and those that involve contact among youth from other groups. Together, these patterns extend knowledge from the research literature on desegregation (see Schofield, 1979; Stephan & Rosenfield, 1978), which lends substantial support to the view that contact in schools can promote positive intergroup attitudes among children.

Contact Among Children in Schools: Examining Features of Classroom Environments

These meta-analytic findings provide a broad overview of the relationships between intergroup contact and prejudice among children and adolescents in school settings. Still, one limitation of meta-analytic approaches is that, by pooling results across many studies, researchers are limited to exploring those variables that the

original investigations have in common. Taken individually, however, some select studies can offer greater insights into the nature of intergroup contact effects in schools beyond what could be considered using our meta-analytic approach.

For example, beyond investigating the effects of intergroup contact at the school level, some studies have examined children's intergroup experiences and attitudes in relation to features of their immediate classroom environment (see Brown & Bigler, 2002; Hallinan, 1996; Oakes, 1996; Schofield, 1989). This research suggests that the numerical representation of children from different groups within the classroom can have a profound impact on the development of intergroup attitudes. In particular, European American children in ethnically balanced classrooms have been shown to express more positive attitudes toward non-European American children than those in European American-only or predominantly European American classes (see Kistner, Metzler, Gatlin, & Risi, 1993; Schofield & Sagar, 1977).

In some of our own work we have begun to examine features of the classroom environment that might impact children's opportunities to engage in intergroup contact, as well as those features that might contribute to improving relations across group boundaries (see Wright & Tropp, 2005, for an extended discussion). In so doing, we have examined the ways in which features of the classroom environment affect the intergroup experiences and attitudes of children who differ not only in ethnicity but also in language. Language is a primary marker of group membership (Giles, Bourhis, & Taylor, 1977), and the relative use of different languages in the classroom can send cues to students regarding the extent to which these languages (and their speakers) are valued within the school environment. Using only the majority language in the classroom could lead minority and majority language children to believe that the useful information imparted in school is inherently linked to use of that language. Instead, classroom instruction in both the minority and majority languages can provide a clear affirmation of the value of the relevant minority language (Cummins, 1989; Genesee & Gándara, 1999; Lambert & Cazabon, 1994). Thus, using both languages in the classroom can help equalize the status of minority and majority language students and thereby help establish optimal conditions for contact among children from these different ethnolinguistic groups.

We have examined these issues among young Latino and Anglo children during their early school years (kindergarten through grade 2; 5 to 7 years old). For the remainder of this chapter we use the term "Latino" to refer to people in the United States of Hispanic origin whose primary language tends to be Spanish, and the term "Anglo" to refer to people in the United States of European origin whose primary language tends to be English. We chose to focus on Latino and Anglo children's intergroup attitudes during the early school years because these are the ages at which children first become aware of ethnic differences (Aboud, 1988; Katz, 1983) and begin to form enduring perceptions of and attitudes toward members of different ethnic groups (Ramsey, 1987; Foster, 1994). Moreover, children at these young ages have had relatively little exposure to prior classroom contexts that could influence their responses to the present classroom setting, thereby facilitating our ability to examine features of the school environment that might contribute to shaping their intergroup attitudes.

Specifically, we examined interethnic attitudes among minority and majority language children in relation to the language of classroom instruction and classroom representation of minority and majority language children (see Tropp & Wright, 2003; Wright & Tropp, 2005). We recruited participants from six central California schools because their student populations included primarily Latino and Anglo children. The schools also varied in terms of socioeconomic status, geographic location (urban vs. rural), and the relative proportions of Latino and Anglo students.

Two schools were predominantly Anglo (approximately 70% of the student population) and were located in upper-middle-class neighborhoods, while most of the Latino students were bused from poorer neighborhoods. Two other schools had more balanced enrollments of Anglo and Latino students and were located in neighborhoods that were economically and ethnically mixed, with most children coming from working-class and lower-middle-class families. The final two schools were predominantly Latino (more than 75% of the student population). Most of the children in these schools came from working-class backgrounds, with many of the Latino children coming from families of farmworkers.

The school principals approved access to kindergarten through second-grade classrooms,

pending approval by the classroom teachers. Only one teacher declined. Across classrooms, the response rate for parental approval ranged from 54% to 100%. Nonparticipation resulted almost exclusively from children failing to return a parental permission form (less than 4% of parents who returned a form refused participation).

The final sample consisted of 484 Latino children (244 girls, 240 boys) and 351 Anglo children (167 girls, 184 boys) from a total of 52 kindergarten, first-grade, and second-grade classrooms. Teachers of participating classes completed a short survey in which they reported the amount of Spanish and English used in classroom instruction and the ethnic and linguistic heritage of each child in the class.

The materials and procedures used in this research were adapted from Wright and Taylor (1995; see also Doyle & Aboud, 1995). More than 200 head-and-shoulders Polaroid photos of 5-to-7-year-old Latino and Anglo children were pretested using three Latino and three Anglo adults. These six raters indicated the gender and ethnicity of the child in the photograph and rated the photograph on three criteria, using 5-point Likert-type scales: (a) the clarity of the photograph, (b) the positivity of the child's facial expression, and (c) the child's physical attractiveness. The photographs were first screened, and only those on which there was 100% agreement about gender and ethnicity were considered. Photographs were then matched on the remaining three criteria to create same-gender Latino/Anglo pairs that were nearly equivalent on each of the three ratings. Four (two male and two female) Latino/Anglo matched pairs were combined to create a packet containing eight photographs. Six separate eight-picture test packets were created.

The testing packets were randomly distributed to the testers before each session, and their use was balanced across schools. Children were taken from their regular classes to a quiet place in the school to be tested individually by a coethnic female tester. At the beginning of the session, the tester took a Polaroid photograph of the child and explained the activity as the photograph developed. The child's photograph was then added to the testing packet. All nine photographs (the child's and the eight target photographs) were shuffled and placed in random order in front of the child. The tester then asked the child to sort the nine photographs on a series of trials, using a standard request: "Pick all the children who are _____ and put them in this box, and leave all the children who are not _____ on the table."

On each trial the child was free to select all, some, or none of the nine photographs. Before each sorting trial, the tester again shuffled the photographs and placed them in a random order in front of the child.

The child was first asked to pick the "girls" and the "boys." Since children readily identify gender by this age (Cole & Cole, 1993), these requests were used to ensure that the child understood the nature of the task. Three different types of sorting requests then assessed the children's intergroup attitudes. These sorting requests involved evaluations, friendship preferences, and perceived similarity in relation to both Anglo and Latino target photographs.

Evaluations

The child was asked to sort the photographs in response to six evaluative items and to select those (1) who are good at lots of things; (2) who are smart; (3) who have lots of friends; (4) who are nice; (5) who are happy; and (6) who like school. For each trial, the number of Latino and Anglo targets was tabulated, which created separate ratings of both in-group and out-group evaluation. In order to clarify the presentation of the results, the number of targets was converted into percentages of the possible total, such that the child's score on each trial could be 0% (no targets from that ethnic group were selected), 25% (one of the four targets), 50% (two of the four), 75% (three of the four), or 100% (all of the targets from that ethnic group were selected). Responses to the six sorting trials were combined to produce measures of in-group and out-group evaluation (see Tropp & Wright, 2003; Wright & Taylor, 1995; Wright & Tropp, 2005).

Friendship Preferences

On a single sorting trial, the children were asked to pick the targets they would like as best friends. Their choices were tabulated separately for Latino and Anglo targets and converted to percentages, which created two ratings that ranged from 0% (no targets from an ethnic group were selected) to 100% (all four targets from an ethnic group were selected).

Perceived Similarity

On a single sorting trial, the children were asked to pick all of the targets who were most like

them. Their choices were tabulated separately for Latino and Anglo targets and converted to percentages, which created two ratings that ranged from 0% (no targets from an ethnic group were selected) to 100% (all of the targets from an ethnic group were selected).

After testing was completed in each class, we asked the teachers to report the amount of English and Spanish they used in classroom instruction, as well as each child's ethnic and linguistic background. Subsequently, we contacted the principals by phone and asked about their policies regarding the assignment of students to classes in kindergarten and first- and second-grade classrooms so that we could evaluate the degree to which parental preference might represent a meaningful confound. Across the five schools, the principals' estimates of Anglo children placed in classrooms on the basis of parental preference ranged from 0% to 30%. In addition, principals who made some special placements indicated that between 30% and 50% of these were for reasons other than language of instruction. Thus, even in the school with the highest degree of parental influence, approximately two children per classroom were there because of parental preference for a particular language program. Thus, parental selection appears to play a minimal role in the distribution of children across classroom type.

We have analyzed the children's ratings in two primary ways. First, we compared the general responses of Latino and Anglo children to see whether their patterns of target selections are similar to or different from each other (see Tropp & Wright, 2003). We then examined the patterns of responses among Latino and Anglo children with respect to the use of Spanish and numerical representation of Latino students in the classroom (see Wright & Tropp, 2005).

Comparisons Between Latino and Anglo Children

Evaluations

We first compared Latino and Anglo children's evaluations of targets from each ethnic group. Overall, Latino children showed virtually equal, positive evaluations of Latino targets (73%) and Anglo targets (72%). In contrast, Anglo children were significantly more positive in their evaluations of Anglo targets (70%) than in their evaluations of Latino targets (63%).

Friendship Preferences

We also compared Latino and Anglo children's friendship preferences for targets from each ethnic group. Latino children showed equal preferences for Latino and Anglo targets as friends (54% and 52%, respectively), while Anglo children were significantly more likely to choose Anglo targets as potential friends (47%) than Latino targets (31%).

Perceived Similarity

Finally, we compared Latino and Anglo children in the degree to which they perceived targets from each ethnic group to be similar to themselves. Generally, Latino children were more likely to perceive Latino targets as like themselves (41%) than Anglo targets (34%). Still, Anglo children were even more likely to perceive Anglo targets as like themselves (38%) than Latino targets (17%).

Together, these patterns of findings indicate that the Anglo children showed a clear preference for Anglo targets over Latino targets, while the Latino children offered more balanced ratings of Latino and Anglo targets. These findings are consistent with other research that demonstrates marked differences in the racial attitudes of ethnic minority and majority children (see Aboud, 1988). Generally, European American children tend to hold highly positive attitudes toward the European American majority (Williams & Morland, 1976; Weiland & Coughlin, 1979), yet they seldom show equally positive attitudes toward members of other racial and ethnic groups (Doyle & Aboud, 1995; Katz, 1983). Moreover, although some studies have shown that African American children may favor their own group (e.g., Porter & Washington, 1979), a number of studies suggest that children from other racial and ethnic minority groups are often unlikely to show a favorable bias toward their own ethnic group (see Aboud & Skerry, 1984; Corenblum & Wilson, 1982; Margie, Killen, Sinno, & McGlothlin, 2005).

Comparisons Among Anglo and Latino Children in Different Classroom Contexts

However, the central thrust of our analysis concerns the ways in which classroom environments might be structured to promote positive

intergroup attitudes among young Latino and Anglo children. Preliminary analyses revealed no gender differences associated with these variables. Additionally, only significant main effects of grade emerged for friendship preferences and perceived similarity; kindergarteners selected more friends and saw more targets as similar to them than did children in the first and second grades, who do not differ significantly from each other on either of these measures. Responses from all of the Latino and Anglo children were then used in subsequent analyses of the effects of classroom environments on children's intergroup attitudes.

Because the language of instruction and ethnolinguistic diversity of classrooms varied considerably for Latino and Anglo children, classrooms were divided into three distinct categories for children from each group. Using these breakdowns, we compared children's patterns of responses across the three types of classroom environments determined for their ethnolinguistic group.

Anglo Children

Altogether, we created three categories of classroom environments for Anglo children: English only-token contact classes (162 children), English only-mixed contact classes (80 children), and bilingual-mixed contact classes (109 children). Anglo children who attended English-only classes received instruction primarily in English (less than 10% instruction in Spanish). In addition, Anglo children in English only-token contact classes had mostly Anglo classmates (fewer than 7% of the students in the class were Latino), whereas those in English only-mixed contact classes had both Anglo and Latino classmates (between 25% and 88% of the students in the class were Latino). Anglo children in bilingual-mixed contact classes received regular instruction in both Spanish and English (between 35% and 60% of instruction in Spanish) and had both Anglo and Latino classmates (between 25% and 88% Latino). Using these categories, we conducted a 3 (type of classroom) \times 2 (ethnicity of target) mixed analysis of variance for each of the three dependent measures.

The analysis for evaluations yielded a significant main effect of ethnicity of target. Anglo children generally indicated a bias toward Anglo (71%) rather than Latino (63%) targets. A significant two-way interaction also showed no significant differences in Anglo children's

evaluations of Anglo targets across the three types of classrooms (means ranged from 69% to 72%) but revealed significant differences in evaluations of Latino targets across the three types of classrooms. Anglo children in both the bilingual classes (67%) and English only-mixed contact classes (66%) evaluated Latino targets more positively than children in the English only-token contact classes (58%).

The analysis for friendship preferences also yielded a significant main effect of ethnicity of target: Anglo children showed a general preference for Anglos (46%) over Latinos (30%) as friends. Additionally, the main effect of type of classroom and the two-way interaction were significant. No significant differences emerged among Anglo children in the three types of classrooms with respect to their selection of Anglos as friends (means ranged from 41% to 48%), but significant differences emerged with respect to the children's selection of Latinos as friends. More specifically, Anglo children in bilingual classes were more likely to select Latino targets as friends (39%) than those in English only-token contact classes (24%) or those in English only-mixed contact classes (28%).

The analysis for perceived similarity also showed a significant main effect of ethnicity of target. Anglo children generally selected more Anglos (38%) than Latinos (17%) as similar to themselves. Additionally, the main effect of type of classroom was significant, and the two-way interaction approached statistical significance. Specifically, Anglo children in bilingual-mixed contact classes selected more Latino targets as similar to themselves (28%) than either those in the English only-mixed contact classes (12%) or those in the English only-token contact classes (11%).

Latino Children

Similarly, we created three categories of classroom environments for Latino children: English only-mixed contact classes (109 children), bilingual-mixed contact classes (251 children), and bilingual-token contact classes (121 children). Latino children attending English only-mixed contact classes received instruction primarily in English (less than 20% instruction in Spanish) and had both Latino and Anglo classmates (3% to 88% of the students in the class were Latino). All of the children in the bilingual classes received regular instruction in both Spanish and English (between 35% and 60%

of instruction in Spanish). In addition, Latino children in bilingual–mixed contact classes had both Latino and Anglo classmates (fewer than 85% of the students in the class were Latino), while children in bilingual–token contact classes had mostly Latino classmates (more than 85% of the students in the class were Latino). Using these categories, we then conducted a 3 (type of classroom) \times 2 (ethnicity of target) mixed analysis of variance for each of the three dependent measures.

The analysis for evaluations yielded no significant differences in Latino children's evaluations of Latino and Anglo targets across the three types of classroom environments. Latino children were equally positive in their evaluations of Latino and Anglo targets, regardless of whether they were in English-only classes (75% for Latino targets and 73% for Anglo targets), bilingual–mixed contact classes (74% for Latino targets and 73% for Anglo targets), or bilingual–token contact classes (70% for Latino targets and 69% for Anglo targets).

Similarly, the analysis for friendship preferences showed no significant differences in Latino children's friendship preferences for Latino and Anglo targets across the three types of classrooms. Latino children chose virtually equal numbers of Latino and Anglo targets as potential friends, regardless of whether they were in English-only classes (50% for Latino targets and 52% for Anglo targets), bilingual–mixed contact classes (52% for Latino targets and 53% for Anglo targets), or bilingual–token contact classes (55% for Latino targets and 57% for Anglo targets).

Finally, with respect to perceived similarity, the main effect of ethnicity of target was significant since Latino children were generally more likely to perceive Latino targets as like themselves (41%) than Anglo targets (36%). However, as the two-way interaction was not significant, this tendency was consistent across all three types of classroom environments—that is, among Latino children in English-only classes (41% for Latino targets and 28% for Anglo targets), bilingual–mixed contact classes (42% for Latino targets and 35% for Anglo targets), and bilingual–token contact classes (42% for Latino targets and 36% for Anglo targets).

Together, the results reveal a number of important trends regarding the ways in which features of the classroom environment may positively shift intergroup attitudes among young Latino and Anglo children. Overall, the findings

for Anglo children are consistent with our meta-analytic results and other research that supports the contact hypothesis, which suggests that establishing optimal conditions in the contact situation can promote the development of positive intergroup attitudes. Equalizing children's classroom status under conditions of institutional support by balancing representations of minority and majority language children and using both languages in the classroom enhanced Anglo children's attitudes toward targets from the minority language group. Moreover, the participating children reported their attitudes toward targets with whom they had never come into contact, which suggests that such features of the classroom environment can promote generalized positive attitudes toward the minority language group and not simply toward their classmates from that group.

At the same time, such effects of the classroom environment were not evident among Latino children, who rated Anglo and Latino targets virtually equally in each classroom context. Indeed, given the trends we observed for Anglo children, it is striking to note how little Latino children varied in their evaluations of Anglo and Latino targets across the three types of classrooms. Nonetheless, it is also important to point out that, while their evaluations of Anglo and Latino targets were comparable, Latino children perceived greater similarity between themselves and Latino targets relative to Anglo targets. Thus, Latino children seemed to recognize group differences between Anglo and Latino targets, yet this awareness of group difference did not appear to translate into differentiated evaluations of targets from these groups.

As the Latino children generally rated targets from both groups positively, there may be limits on the extent to which their positive intergroup attitudes could be further enhanced through contact under optimal conditions. Still, these patterns may also suggest that establishing optimal conditions for contact may be particularly effective in promoting positive intergroup attitudes among ethnic majority children and less so among children from ethnic minority groups. In line with this view, research suggests that ethnic minority and majority children and young adults may differ in how they view intergroup relations (Cohen, 1982; Fisher, Jackson, & Villarruel, 1998; Robinson & Preston, 1976) and that the positive effects of optimal contact conditions are less pronounced among members of ethnic minority groups than among members

of ethnic majority groups (Tropp, 2006; Tropp & Pettigrew, 2005b). Further research is needed to ascertain whether similar patterns of effects would emerge across a range of school-based interventions and to determine the most effective methods by which contact can effect positive changes in intergroup attitudes among children from both ethnic minority and majority groups.

Conclusion

Decades of contact research have proposed that features of the school environment can be structured to encourage positive intergroup attitudes (see Patchen, 1982; Schofield, 1979, Stephan & Stephan, 2001). In this chapter we have considered ways in which establishing optimal conditions for contact in schools can contribute to improved intergroup attitudes among youth from diverse racial and ethnic groups. Findings from our meta-analytic review of intergroup contact effects (see Pettigrew & Tropp, 2006) suggest that contact between youth from different racial and ethnic groups promotes positive intergroup attitudes and that these effects become stronger when features of the school environment exemplify Allport's optimal conditions. Similarly, our research in schools (see Wright & Tropp, 2005) suggests that establishing optimal conditions for contact may be especially effective in promoting positive intergroup attitudes among ethnic majority children, yet they may be less effective in promoting positive outcomes among ethnic minority children. As we reflect on these findings and look toward future research on intergroup contact, we must attempt to gain greater insights into the ways in which children from various groups perceive intergroup contexts; we must also consider whether and how these perceptions may change as children grow older. In addition, we also need to refine our understanding of how optimal contact conditions are likely to function within school environments and among children of different status groups.

Moreover, we must also consider the extent to which any positive effects of intergroup contact are likely to endure and how these effects might vary among children at different ages. Recent longitudinal studies with samples of younger and older adults show that intergroup contact experiences can have positive long-term effects on intergroup attitudes (Eller & Abrams, 2004; Levin, van Laar, & Sidanius, 2003; van Laar, Levin, Sinclair, & Sidanius, 2005). Still, some

work suggests that intergroup attitudes can become more resistant to change as children grow older (see Aboud & Levy, 2000; Banks, 1995; Killen et al., in press). It is therefore conceivable that the enduring effects of contact would be especially pronounced among children and adolescents, as their early contact experiences would be instrumental in nurturing the long-term development of positive intergroup attitudes.

However, the potential for such positive outcomes may hinge on the degree of continuous intergroup contact that children and adolescents experience. Repeated contact experiences facilitate greater intimacy and feelings of intergroup closeness (Pettigrew, 1997; Wright, Aron, & Tropp, 2002), particularly when the contact is supported and reinforced by others within one's social environment (Damico et al., 1981; Fishbein, 1996). At the same time, there may be some limits to the extent to which intergroup contact could continually improve intergroup attitudes, as its enhancing effects may taper off after a certain degree of positive attitude change (see Pettigrew & Tropp, 2006, for a related argument). Future research on these issues could bring us several crucial steps closer to uncovering strategies that would be effective in promoting lasting positive effects of intergroup contact among children and adolescents.

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