1

Context differences in children's ingroup preferences

Abstract

Ingroup preferences for inclusion decisions for two distinct intergroup contexts, gender and school affiliation, were investigated. Children and adolescents, in the 4th (9-10 years) and 8th (13-14 years) grades, chose between including someone in their group who shared their group norm (moral or conventional) or who shared group membership (school affiliation or gender). With age, children displayed a greater ability to balance information about in group norms and group membership. Younger children were more likely to include an outgroup member who supported equal norms than were older children. Accompanying the choices made, there was a greater use of fairness reasoning in younger rather than older participants, and increased references to group identity and group functioning for school identification. There were no differences in ingroup preferences in the school and gender contexts for groups involving moral norms: desires for equal allocation of resources trumped differences related to ingroup preference. For social-conventional norms, however, there was a greater ingroup preference in a school intergroup context than in a gender intergroup context. Thus, the results demonstrate the importance of context in the manifestation of ingroup preference and the increasing sophistication, with age, of children's and adolescents' group decision-making skills.

Keywords: ingroup preference, social cognition, moral development, group dynamics

Context differences in children's ingroup preferences
Affiliations with groups in the lives of both children and adolescents provide important
sources of social support and belongingness. Developmental psychology research on peer
relations has focused on the role of groups in social development (Brechwald & Prinstein, 2011;
Brown, 2004; Brown & Dietz, 2009; Horn, 2003), as well as identifying how schools provide
important contexts for development (Eccles & Roeser, 2013). Much of the research on
adolescent peer groups focuses on dyadic friendships in a larger group setting (Burr, Ostrov,
Jansen, Cullerton-Sen, & Crick, 2005; Rubin, Bukowski, & Parker, 2006). Prior to adolescence,
however, children begin to interact with and affiliate with groups, and as they gain experience
with groups, they often encounter negative intergroup relations (Killen, Mulvey, & Hitti, 2013).

At the same time, children face bias, discrimination and prejudice, including in intergroup peer contexts, from an early age. The current developmental research on prejudice and bias has primarily focused on the emergence of prejudice (Dunham, Baron, & Carey, 2011; Kinzler & Spelke, 2011; Nesdale, 2008). Due to its focus on early childhood, much less is known, however, about changes over the course of development from childhood to adolescence regarding ingroup preferences. A recent meta-analysis of research on prejudice concluded that as children approach adolescence, prejudice becomes increasingly context and domain specific, manifesting as a complex and multifaceted construct (Raabe & Beelmann, 2011). Understanding developmental patterns in children's social evaluations in complex intergroup contexts is critical for ensuring healthy social development. Negative intergroup relations are related to prejudice, bias, and discrimination (Levy & Killen, 2008; Raabe & Beelmann, 2011). Recent findings highlight the prevalence of ingroup bias in a range of different contexts, and in both minimal groups, which are novel groups developed for the purpose of the study (Atkin & Gummerum, 2012; Dunham et al., 2011), as well as in authentic groups, which are present prior to the start of

the study, including gender (Susskind & Hodges, 2007), race/ethnicity (Nesdale, 2008), nationality (Verkuyten, 2001), and school group (Abrams, Rutland, Cameron, & Marques, 2003).

The current research aims to fill a gap in current developmental research on intergroup attitudes in four ways: 1) by charting age-related differences from childhood to adolescence; 2) examining actual, everyday familiar contexts; 3) directly testing intergroup attitudes for two sources of group membership, gender and school affiliation; and 4) directly comparing how individual evaluate two types of norms, moral and conventional, for the contexts of group membership. Examining both childhood and adolescence is critical, as research indicates that while prejudice in childhood follows stable patterns and demonstrates systematic age-related differences, research with adolescents indicates that context becomes increasingly important (Raabe & Beelmann, 2011). Research with adolescents has yet to demonstrate differences based on age regarding group identification across multiple salient contexts, such as gender and school affiliation. This is a limitation given that both gender and school identity play a significant role in how children and adolescents achieve and succeed in school (Wigfield, Eccles, Schiefele, Roeser, & Davis-Kean, 2006). The current study was designed to provide insight into the agerelated differences regarding children's social development in peer group contexts. Thus, this research will have direct implications for children's development more broadly, including work on peer relations, prejudice, achievement motivation, and group dynamics.

Social psychological research often uses a minimal group paradigm, in which artificial or post-hoc categories created in the laboratory are used to measure bias; this method has revealed a robust and important body of research demonstrating how quickly ingroup preference can be activated (Dovidio, Hewstone, Glick, & Esses, 2010). Yet, developmental research has also revealed the emergence of ingroup bias by using actual, everyday familiar groups, and pointing

to the ways in which prejudice manifests in everyday life. Rather than focusing on general processing patterns that are proposed to account for all types of prejudice, developmental science has shown the ways in which prejudice is context specific, for instance research has demonstrated that children view gender exclusion as more legitimate than racial exclusion (Killen, Lee-Kim, McGlothlin, & Stangor, 2002).

Studying intergroup attitudes from childhood to adolescence using familiar group contexts was one goal of the current project. Groups can hold norms about a range of different behaviors, principles, and beliefs, including those involving moral issues, such as those involving harm to others, and those involving conventional issues, such as traditions, and customs specific to a group. Research on social exclusion with adults has shown that group identity itself reflects both group affiliation and the norms that the group holds (Brown, 2000). Only recently has this been demonstrated in childhood. A few studies drawing on developmental subjective group dynamics have shown that young children focus on group norms and loyalty to these norms in making social evaluations (Abrams & Rutland, 2008). A recent study revealed that in gender intergroup contexts, children and adolescents were more likely to give priority to equal norms than group identity (Killen, Rutland, Abrams, Mulvey, & Hitti, 2013); however in this study, only one type of identity was measured (gender). What is missing from this research, however, is a comparison of different types of norms, moral (treatment of others) and conventional (modes of dress to mark group membership) across two forms of group identification, gender and school affiliation. Thus, the present study was novel by varying the type of norm for two different forms of group identity.

Early in childhood, children begin to interact with others with whom they do not share group membership. Children demonstrate strong support for their ingroup, showing high levels

of positivity towards the ingroup, which can directly or indirectly result in manifestations of prejudice, bias, and discrimination against outgroups (Aboud, 1988; Bigler & Liben, 2006; Nesdale, 2008). Yet, children do not affiliate with only one group or express their preferences in exactly the same manner no matter what group is in question. The literature indicates that children perceive themselves as belonging to multiple groups and the strength of their affiliation with different groups varies (Bennett & Sani, 2008). For instance, research by Shutts, Banaji, and Spelke (2010) revealed that children showed greater ingroup bias when indicating preference for novel objects which were endorsed by either ingroup or outgroup members when the ingroup was based on the categories of gender or age rather than race. Other research, though, revealed no differences in the manifestation of intergroup bias in groups that were randomly assigned and those that were assigned based on hair color (Bigler, Jones, & Lobliner, 1997). These and related studies are an important step towards understanding the way that ingroup bias manifests in different contexts. Moreover, research by Wigfield, Eccles and colleagues (Wigfield et al., 2006) has shown that group identity serves an important factor for successful transition throughout adolescence, from middle- to high-school.

This study examined directly whether children show different levels of ingroup preference in two highly salient and pre-existing group membership contexts for children and adolescents: gender and school affiliation. Individuals can bolster their group identity in two distinct ways: they can show solidarity or preference for others who share their group *membership*, or they can show solidarity with or preference for others who share their group's *norms* (the group's practices and beliefs). While many times those who share one's group membership also share one's norms, there are instances in which these two facets of group identity conflict. Social encounters where children must weigh multiple facets of group identity

are particularly complex, yet, to date, developmental intergroup research has focused more narrowly on contexts which focus on one dimension of group identity. It is unknown if and at what age children can coordinate information about multiple levels of group identity when making social evaluations, but understanding this can add to our knowledge about social cognition, peer relationships, group dynamics, and intergroup relations.

Prior research has shown that when children have to choose between group membership and group norms, they give priority to moral group norms over group membership in a gender intergroup context (Killen, Rutland, et al., 2013). Little is known about if this preference manifests in the same way when other group identities are made salient. It is clear, however, that during childhood and adolescence group membership matters. The current study extends this research by comparing levels of ingroup preference demonstrated in both a school and a gender context. The contrast between group norms and group membership in a school intergroup context is equally central to children as is gender. These are two important intergroup categories in children's lives, and ones which they identify with early in childhood. They are also, however, distinct intergroup categories. For instance, gender is a biologically determined social category, which children understand quite early (Ruble, Martin, & Berenbaum, 2006; Taylor, Rhodes, & Gelman, 2009), and a category that is often associated with bias, prejudice, and discrimination (Brown, Alabi, Huynh, & Masten, 2011; Brown, Bigler, & Chu, 2010; Liben & Bigler, 2002; Lobel, Nov-Krispin, Schiller, Lobel, & Feldman, 2004; Spears Brown & Bigler, 2004). Further, while young children may affiliate primarily with same gendered peers and engage in gender conforming activities (Moller, Hymel, & Rubin, 1992), as adolescence progresses, there is an increasing social expectation of romantic interest that connects the two categories positively (Powlishta, 1995). Research with children and adolescents aged 9 to 15

years found an increase in mixed-gender affiliations with age (Connolly, Craig, Goldberg, & Pepler, 2004), which suggests that in transitioning from childhood to adolescence individuals more frequently interact with peers of the opposite gender and have mixed-gender friendship groups. Thus, gender provides a social category membership which has changing social implications throughout childhood and adolescence.

School group membership is generally ascribed or chosen by the family, and constitutes an important context for children's lives (Eccles & Roeser, 2013). The obligations for school group membership, however, are solely reinforced through intragroup processes specific to the particular school. For instance, schools can enhance school belongingness and school identity through school "spirit" activities which include sports, contests, and the strong emphasis on school markers such as school-based clothing (e.g., shirts), school logos, and websites; the goal is to create a supportive school environment (Cemalcilar, 2010; Eccles & Roeser, 2013; McMahon, Wernsman, & Rose, 2009). Research indicates that stronger school group identity is associated with components of group functioning including perceptions of group support (Bizumic, Reynolds, & Meyers, 2012). Further, school identity may be enhanced as childhood progresses, and children have more opportunities to develop ingroup positivity and outgroup negativity through engagement in competitive school teams.

On the other hand, research shows that as children enter middle school their relationships with their teachers decline (Eccles, Roeser, Vida, Fredricks, & Wigfield, 2006; Wigfield, Lutz, & Wagner, 2005), which could lead to a less academically oriented and more socially oriented sense of school group identity. Research also indicates that transitioning from primary to secondary school can shift one's school connectedness or school identity. Specifically, children who have a smoother transition from primary to secondary school report higher levels of school

connectedness (Waters, Cross, & Shaw, 2010). Related research with a sample of children between the ages of 9 and 13 years found that both the transition from elementary to middle school as well as the completion of puberty were independently related to lower levels of connectedness, especially to teachers (Forrest, Bevans, Riley, Crespo, & Louis, 2013). Thus, like gender group identity, school group identity may shift developmentally. Both gender and school provide important and pervasive group memberships throughout the school years, and thus are likely to be influential for most children. However, no research has been conducted which compares if and how ingroup preference manifests differently in these two contexts to better understand under what conditions children prioritize group membership and when they place a priority on group norms.

The developmental subjective group dynamics model (Abrams & Rutland, 2008) finds that young children often prefer *outgroup* members who support ingroup norms over ingroup members who deviate from them. For instance, children prefer a member of a different summer school who says positive things about the participant's school more than a member of their own summer school who says positive things about both their own and the outgroup schools (Abrams et al., 2003). Developmental subjective group dynamics research has focused primarily on group norms involving social-conventions (however, for an exception see Abrams, Rutland, Ferrell, & Pelletier, 2008), but the model also emphasizes that children hold norms about a range of different behaviors, and practices. The model therefore embraces the important conceptual distinction between moral norms and those governed by social conventions.

Research from social domain theory (Turiel, 1983) indicates that, from a very early age, children distinguish between situations involving moral issues (which involve welfare, rights, fairness and justice), those involving societal conventions (including customs and traditions) and

those involving psychological issues (such as personal choice or autonomy) (Smetana, 2006). Children also reason very differently about moral and conventional issues. When making decisions about including or excluding others, for example, children often condone exclusion by referencing the societal domain (citing smooth group functioning or past customs or traditions) (Killen, 2007). In contrast, children reject exclusion using the moral domain, identifying the harm to others that exclusion can cause and the unfair nature of some forms of exclusion. This distinction between the moral and conventional domains is explicitly recognized in the present research, since we measured how children decide whether to include or exclude individuals from the ingroup or outgroup in the context of both moral and conventional norms.

Recent research has shown that when making inclusion decisions in contexts where groups hold different norms, the type of group norm matters: children prefer peers who adhere to moral or social-conventional generic societal norms, for instance being equal or adhering to social customs about wearing group tee-shirts, over peers who resist these norms, for instance by being unequal or rejecting social customs (Killen, Rutland, et al., 2013). Examining these distinctions in different intergroup contexts with a focus on who children would include in groups can clarify when children do make evaluations based on moral and conventional distinctions and when ingroup preference, or even bias, may play a role in their judgments. The current study focuses on inclusion decisions because they are common occurrences in children's lives and often involve intergroup evaluations.

Design of the current study

In the present study, participants who were in the 4th (9 - 10 year olds) and 8th (13 - 14 year olds) grades made choices about whether to include someone who shared their group membership (gender or school affiliation) or their group norms (moral and social-conventional).

This paradigm asks children and adolescents to make decisions about group inclusion pitting two distinct elements of group identity against one another, shared norms and group membership.

Further, this design assessed this conflict in two different group membership contexts (gender and school affiliation) and in the context of four different norms (two moral: equal and unequal allocation of resources; and two social-conventional: traditional and non-traditional adherence to customs regarding wearing a group tee-shirt).

Two age-groups, which span middle childhood to adolescence, were sampled, thus age-related differences in ingroup preference across both domains and contexts can also be assessed. We chose 9 years of age because prior research by Abrams and Rutland (2008) has shown that by 8 years of age children understand subjective group dynamics, that is, that loyalty to the group-specific norms of a group can be more important than group membership. Thus, we designed the study for children who were conceptually able to differentiate group loyalty from group membership, and to determine what factors children gave priority to as they moved from age 9 to age 14 years.

Hypotheses

Unlike evaluations that involve moral norms, which children find to be generalizable across different contexts (Smetana, 2006), it was expected that participants would evaluate social-conventional norms differently across the two intergroup contexts. Given that generally children are encouraged to identify with their school and to exhibit school ingroup positivity, as well as given that research indicates that the majority of adolescents' friends do attend their own school (Witkow & Fuligni, 2010) we expected that 1) greater ingroup preference will be shown in the school context than in the gender context. Based on extensive findings from social domain theory (Smetana, 2006), it was hypothesized that 2) participants will support inclusion of an

outgroup member who wants to share equally (when the ingroup norm is to share resources equally). Next, we expected that 3) participants would be less supportive of an outgroup member who wants to divide resources unequally (even though the ingroup norm is to divide resources unequally) in both the gender and school affiliation intergroup contexts.

Central to our developmental aims, we expected that there would be 4) age-related differences in participants' inclusion of the outgroup members. With age, children show greater abilities to balance the tension between group identity and group norms as well as multiple perspectives (Mulvey, Hitti, Rutland, Abrams, & Killen, in press; Rutland, Killen, & Abrams, 2010). Specifically, given that 9-10 year olds prefer strict equality more often than do 13-year olds with resource allocation tasks (Almås, Cappelen, Sørensen, & Tungodden, 2010), it was expected that children will be more willing to include an outgroup member who desires equal allocations than will adolescents. Children will focus narrowly on the moral domain in making judgments about who to include when the group norm involves allocation of resources. Based on the process-based account of moral judgments, which posits that, with age, individuals will be better able to coordinate information about multifaceted scenarios (Richardson, Mulvey, & Killen, 2012), it is expected that adolescents will be more skilled in coordinating information about the social-conventional and moral domains. Thus, adolescents will reason about inclusion decisions in the moral conditions by referencing the fairness of an equal allocation of resources as well as the benefits to the group when an ingroup member desires to give more to their own group than to an outgroup.

While prior research indicates that ingroup bias manifests early, research also indicates that, by adolescence, peer group identity (such as affiliation with a particular social group) is stronger than gender group identity (Tanti, Stukas, Halloran, & Foddy, 2011). On the one hand,

then, adolescents may show greater ingroup preference in the school membership context than in the gender membership context. On the other hand, the salience of the moral and social-conventional norms may eclipse any differences in identification with different groups (school and gender) between children and adolescents. Finally, it was expected that 5) participants who choose to include the outgroup member who shares their group norm will use different forms of reasoning than those who choose to include the ingroup member who does not share the group norm, based on prior research on use of social reasoning about inclusion and exclusion (Horn, 2003).

Method

Participants

Participants included children and adolescents (N = 729) from the Mid-Atlantic region of the United States. Approximately half of the sample assessed the gender intergroup context (N = 381) and half assessed the school affiliation intergroup context (N = 348). The sample included 53% female participants, and included participants in the 4th grade (N = 207, M = 9.89, SD = .49 range = 8.58 to 11.81) and participants in the 8th grade (N = 522 M = 13.69, SD = .44 range = 12.64 to 15.14). The participants attended elementary and middle schools serving a middle-to middle-low income population. Ethnicity was estimated based on school-reported demographics and researcher observation and reflected the U.S. population, with 70% ethnic majority (European-American) and 30% ethnic minority participants (10% African-American, 15% Latino, 5% Asian-American). Parental consent was obtained for all participants.

Procedure

Surveys were administered to 8th grade participants by trained research assistants in groups of approximately 25-30 participants at the school in a quiet space. Interviews were

individually administered to the 4th grade participants by trained research assistants in a quiet place in the school. Pilot testing revealed no differences for the administration of the instrument in survey or interview format, and statistical analyses of the quality of the responses revealed no differences (e.g., length of responses). The total time to complete the survey or interview was approximately 25 minutes (assessments other than the ones for the present study were also administered).

Design

The protocols for the gender and school intergroup contexts were identical except for the membership of the groups portrayed, see Figure 1 for an example of the images shown to participants. Brightly illustrated pictures accompanied the assessment of the questions during the protocol. The survey and interview included 4 scenarios, which asked participants to determine who should be included in a group. Pilot testing was conducted to determine which factors contribute to inclusion and exclusion issues for children and adolescents and these data, along with previous research from the literature, provided the basis for the creation of the scenarios.

Participants had to choose between someone who shared the group membership of the group (gender or school affiliation, depending on the version completed), or the norm of the group (moral domain: equal or unequal allocation of resources, social-conventional domain: traditional or non-traditional group custom about wearing a group t-shirt). For the social-conventional group norms, the traditional norm refers to wearing an assigned group shirt and the non-traditional norm describes a norm of not wearing an assigned group shirt. Participants were told that this norm was established as a tradition at the school: the schools expected that students in the different groups at school wear an assigned group shirt to group meetings. For the moral group norms, the equal norm describes dividing money equally between one's own group (\$50)

and another group (\$50), while the unequal norm references dividing money unequally between one's own group (\$80) and another group (\$20).

INSERT FIGURE 1

In each intergroup context, there were two versions of the survey and interview, which varied in terms of if the group portrayed shared the participants' own group membership (gender or school affiliation), see Figure 2.

INSERT FIGURE 2

For example, half of the participants in each intergroup context (gender and school affiliation) assessed a story about their own ingroup (gender or school affiliation) which had a norm of being equal. Half of the participants assessed a story about their own ingroup (gender or school affiliation) which had a norm of being unequal. Each participant completed a story about a group that held each norm (2 moral, 2 social-conventional) and 2 of these stories were about their own ingroup, while 2 were about their outgroup.

For each story, pictures illustrated the groups with symbols reflecting the group norms (see Figure 1). Below is an excerpt from the survey, as an example of a social-conventional story (traditional norm) in the gender intergroup context:

"The groups need to decide who can join their club. There is only room for one more member. They have to choose who to invite to join. Remember, your group (a girls' group) usually wears their green and white club shirts to the school assembly. Who should this group invite: Lilly, who wants to be in the group and would not wear the green and white club shirt to the school assembly or Marcus, who wants to be in the group and would wear the green and white club shirt to the school assembly?"

Below is an excerpt from the survey, as an example of a moral story (equal norm) in the school intergroup context:

"The groups need to decide who can join their club. There is only room for one more member. They have to choose who to invite to join. Remember, your group at Your School usually votes to give \$50 to their group and \$50 to your group. Who should this group invite: Kevin, from your school, who wants to be in the group and would say that your group should get \$80 and their group should get \$20 or David, from their school, who wants to be in the group and would say that their group should get \$50 and your group should get \$50?"

In the school context, the names of the participant's actual school and another school in the area were used. Groups were told that the resources were going to be divided between groups at their school and at other schools for the school context. For the gender context, the money was to be divided between the group of girls and group of boys.

Assessments

Participants were given two assessments: 1) *Group Inclusion:* should the group include a deviant ingroup member or a normative outgroup member (e.g., Who should the group invite? 1 = outgroup member who shares group norm, 0 = ingroup member who does not share group norm); and 2) *Justification for Inclusion:* a justification for that choice (e.g., Why?). For the group inclusion question, for example, when the gender intergroup context (female version) included a norm of wearing their club shirts, participants were asked who the group should invite: the ingroup girl (gender ingroup member) who does not want to wear the club shirt, or the outgroup boy (gender outgroup member) who wants to wear the club shirt.

Coding and reliability

Participants' justifications were coded by using coding categories drawn from Social Domain Theory (Smetana, 2006). The coding system included the following codes: 1) *Fairness* (Moral) (e.g., "It is fair to share the money with the other group" or "It would not be fair if he was not allowed to join the group"); 2) *Group Functioning* (Societal) (e.g., "He does not agree with the group"); 3) *Group Identity* (Societal) (e.g., Gender context: "She fits in because she is a

girl", School affiliation context: "Well, he also goes to my school"); and 4) *Larger Societal Norm* (Societal) (e.g., "The rule is that you are supposed to wear the tee-shirt"). Justification analyses were conducted using the three most frequently used justifications, which were all used more than 10%. Justifications were coded as 1 = full use of the category; .5 = partial use; 0 = no use of the category and analyses were conducted on proportional usage. Because participants could use all, partial, or none of the justification codes, the data were independent for coding purposes and concerns about interdependence of the data were not present.

The coding was conducted by coders blind to the hypotheses of the study. For the gender context, on the basis of 25% of the interviews (N = 96), Cohen's $\kappa = .87$ for inter-rater reliability. For the school context, on the basis of 25% of the interviews (N = 87), Cohen's $\kappa = .86$ for interrater reliability. Less than 5% of participants used more than one code.

Data Analytic Plan

Initially Chi-Square tests were used to assess whether inclusion choices differed from chance. Repeated measures ANOVAs were used to test hypotheses regarding inclusion choice and use of justifications. When sphericity was violated, the Huynh-Feldt adjustment was used to interpret results. Follow-up analyses included pairwise comparisons for between-subjects effects (Univariate ANOVAs) and interaction effects (Bonferroni t-tests). Univariate analyses included intergroup context (gender, school), gender of participant, and age of participant. Repeated measures ANOVAs were conducted to compare responses across the different conditions and to assess differences in reasoning. For comparisons across conditions, the repeated-measures factors were inclusion choice for different conditions (equal, unequal, traditional, and non-traditional) and analyses included gender, age group, and intergroup context (gender, school). For the reasoning, the repeated-measures factor was type of justification. Analyses included

intergroup context (gender, school) and inclusion choice (ingroup member or outgroup member). 'Condition' represented the group norm. For example, 'equal condition' indicates that the group has a norm of distributing money equally and is deciding whether to choose to invite an ingroup member who wants to distribute money unequally or an outgroup member who agrees with group and want to distribute money equally.

ANOVAs were used to analyze proportions because of our repeated measures designs, which are not appropriate for logistic regressions. Repeated measures designs are effectively analyzed using ANOVAs because other data analytic procedures (for instance, log-linear models) do not respond well to empty cells. However, repeated measures analyses adjust for empty cells (see Posada & Wainryb, 2008, for a fuller explanation and justification of this data analytic approach).

Results

Inclusion Choice

In order to assess whether participants were responding at chance or not, chi-square analyses were conducted for each condition for the gender and the school context. For the gender context, participants responded above chance in all conditions except the unequal condition (unequal: $\chi^2(1, N = 372) = 0.39$, p = .53, equal: $\chi^2(1, N = 374) = 161.81$, p < .001; traditional: $\chi^2(1, N = 354) = 168.18$, p < .001; non-traditional: $\chi^2(1, N = 373) = 43.34$, p < .001). For the school context, participants responded above chance in the equal and traditional conditions (unequal: $\chi^2(1, N = 345) = 0.01$, p = .96, equal: $\chi^2(1, N = 343) = 110.86$, p < .001; traditional: $\chi^2(1, N = 342) = 92.64$, p < .001; non-traditional: $\chi^2(1, N = 343) = 3.57$, p = .059, see Figure 3).

INSERT FIGURE 3

In order to test hypothesis 1 and examine differences between the traditional and non-traditional conditions in the school and gender contexts, a 2 (age group: 4th, 8th graders) X 2 (gender: male, female) X 2 (intergroup context: gender, school) X 2 (condition: traditional, non-traditional) ANOVA was conducted, with repeated measures on the last factor. As expected, a main effect for condition was found, F(1, 682) = 65.26, p < .001, $\eta_p^2 = .08$. Across both the school and gender contexts, participants were more supportive of including the traditional outgroup member (who wanted to wear the ingroup tee-shirt) into the traditional ingroup (M = .80, SD = .40), than of including the non-traditional outgroup member (who would not wear the group shirt) into the non-traditional ingroup (M = .61, SD = .49). In both intergroup contexts, participants distinguished between different types social-conventional norms.

While the overall effect for condition by intergroup context was non-significant, Univariate ANOVAs were conducted in order to test expectations that in both the traditional and non-traditional condition participants in the gender context would show different levels of ingroup preference than participants in the school context. For these analyses, 2 (age group: 4^{th} , 8^{th} graders) X 2 (gender: male, female) X 2 (intergroup context: gender, school) univariate ANOVAs were conducted for the traditional condition (ingroup wears the group tee-shirt) and non-traditional condition (ingroup does not wear the group tee-shirt), separately. The ANOVA for the traditional condition revealed a main effect for intergroup context, F(1, 688) = 8.69, p < .01, $\eta_p^2 = .01$, which showed that participants were more likely to include the outgroup member who shared the ingroup norm (wanting to wear the group tee-shirt) in the gender intergroup context than in the school intergroup context ($M_{school} = .76 \ SD_{school} = .43$, $M_{gender} = .84 \ SD_{gender} = .43$), see Figure 3. Participants were more willing to include someone of a different gender than someone from a different school (when the groups were defined by gender and school,

respectively) if that person shared their traditional ingroup norm. Similarly, the ANOVA for the non-traditional condition included a main effect for intergroup context, F(1, 708) = 7.91, p < .01, $\eta_p^2 = .01$. When the ingroup did not want to wear their group tee-shirt (non-traditional), participants were less likely to include the outgroup member who shared the ingroup norm in the school context than in the gender context ($M_{school} = .55 \ SD_{school} = .50$, $M_{gender} = .67 \ SD_{gender} = .47$). Thus, participants exhibited greater ingroup positivity in the school context for both the traditional and non-traditional conditions. In both contexts, however, they preferred the traditional member to the non-traditional member.

To confirm that these findings were only present when groups had social-conventional norms and not morally relevant norms we conducted similar univariate 2 (age group: 4th, 8th graders) X 2 (gender: male, female) X 2 (intergroup context: gender, school) ANOVA analyses for the equal condition and the unequal condition separately. No main effects for intergroup context were found, confirming that morally relevant evaluations were similar across both intergroup contexts (gender identity and school affiliation).

In order to test hypotheses 2 and 3 and to assess whether participants were more supportive of including the equal than the unequal outgroup member in both the gender as well as the school contexts, a 2 (age group: 4th, 8th graders) X 2 (gender: male, female) X 2 (intergroup context: gender, school) X 2 (condition: equal, unequal) ANOVA was conducted, with repeated measures on the last factor. As expected, in both the school and gender contexts, participants included the outgroup member who was equal into the equal ingroup (M = .81, SD = .39) more often than they included the outgroup member who was unequal into the unequal ingroup (M = .51, SD = .50), F(1,703) = 182.94, P < .001, P = .20. There were no significant differences between the gender and school intergroup contexts for either the equal or unequal

conditions, as expected (Equal: $M_{school} = .78 \ SD_{school} = .41$, $M_{gender} = .83 \ SD_{gender} = .38$, Unequal: $M_{school} = .52 \ SD_{school} = .50$, $M_{gender} = .50 \ SD_{gender} = .50$, see Figure 3).

Further, confirming hypothesis 4 that there would be age-related differences, there was an interaction between condition (equal versus unequal) and age group, F(1,703) = 21.41, p < .001, $\eta_p^2 = .03$, revealing that in both the school and gender contexts, the 4th grade participants were more willing to include the equal outgroup member (M = .90, SD = .30) than were the 8th grade participants (M = .78, SD = .42), p < .001. In the unequal condition, the 4th grade participants were less willing to include the unequal outgroup member in the ingroup (M = .42, SD = .50) than were the 8th grade participants (M = .55, SD = .49), p < .01. Thus, younger children showed a greater preference in support of equal norms than did adolescents for both the school and gender contexts, see Figure 4. This finding confirmed expectations that younger children will show a greater concern with strict equality, while adolescents will recognize the importance of maintaining the group norm to ensure smooth group functioning.

INSERT FIGURE 4

Justifications for Inclusion Choice

In order to test for differences in the justifications used by participants to reason about their choice of the ingroup or outgroup member in the school and gender intergroup contexts (Hypothesis 5), repeated measures ANOVAs were conducted for each condition. These ANOVAs were run for the top three justifications used by participants. In the equal and in the unequal condition, these justifications were fairness, group functioning and group identity. In the traditional and non-traditional conditions, these justifications were larger societal norm, group functioning and group identity.

Social-conventional context. In the social-conventional context, separate 2 (age group: 4^{th} , 8^{th} grade participants) X 2 (inclusion choice: ingroup or outgroup) X 2 (intergroup context: gender, school) X 3 (reasoning: larger societal norm, group functioning, group identity) ANOVAs were conducted with repeated measures on the last factor for the traditional and the non-traditional conditions. For the traditional condition, differences were found between participants who chose to include a traditional outgroup member (who would wear the group teeshirt) or a non-traditional ingroup member (who would not wear the group tee-shirt), showing a reasoning by inclusion choice interaction effect F(2, 1348) = 484.85, p < .001, $\eta_p^2 = .41$, see Table 1. Participants used very few references to the larger norm encouraging one to wear the tee-shirt, but did reference this more if they chose the outgroup member, p < .05. Participants who chose the ingroup member referenced group identity more than those who chose the outgroup member, p < .001.

INSERT TABLE 1

Participants who chose the outgroup member referenced group functioning more than those who chose the ingroup member, p < .001. Thus, group identity played a role in choice of the ingroup member, while group functioning featured more prominently in the reasoning of those who chose an outgroup member. There was also an interaction between inclusion choice and intergroup context, revealing differences in reasoning between participants who chose the ingroup versus the outgroup member in the school versus in the gender context, F(2, 1348) = 3.829, p < .05, $\eta_p^2 = .01$, see Table 1. For the traditional condition, participants who chose to include the traditional outgroup member focused on group functioning more in the school than in the gender context, p < .05. Additionally, those who chose to include the non-traditional ingroup

member made much greater references to group identity in the school context than in the gender context, p < .001.

For the non-traditional condition, participants who chose to include a non-traditional outgroup member used different forms of reasoning than participants who chose to include a traditional ingroup member, F(2, 1378) = 252.29, p < .001, $\eta_p^2 = .26$, see Table 1. Participants used more references to the larger societal norm and to the group membership when they chose the ingroup member who was traditional than if they chose the outgroup member who was non-traditional, ps < .001. Participants made more references to group functioning if they chose the outgroup member who was non-traditional than if they chose the ingroup member, p < .001.

Further, there was an interaction between inclusion choice and intergroup context, F(2, 1378) = 12.129, p < .001, $\eta_p^2 = .01$, see Table 1. Participants who chose the ingroup versus the outgroup member used different forms of reasoning in the school than in the gender context. Similar to findings in the traditional condition, participants who chose to include the non-traditional outgroup member focused on group functioning in both conditions (school and gender), but those who chose to include the traditional ingroup member made much greater references to group identity in the school context than in the gender context and more reference to the larger societal norm in the gender than in the school context, ps < .001. Thus, in the school context more so than the gender context, group identity was a more focal concern for participants who chose the ingroup member for both the traditional and non-traditional members.

Moral context. For both the equal and unequal conditions, separate 2 (age group: 4th, 8th grade participants) X 2 (inclusion choice: ingroup or outgroup) X 2 (intergroup context: gender, school) X 3 (reasoning: fairness, group functioning, group identity) ANOVAs were conducted with repeated measures on the last factor. For the equal condition, while differences were found

between the types of reasoning used by those participants who chose an ingroup member versus an outgroup member, F(2, 1368) = 40.342, p < .001, $\eta_p^2 = .05$, no differences were found between participants in the gender and school intergroup contexts, see Table 1. Results indicated that participants used more fairness reasoning when they chose the outgroup member and more group functioning reasoning when they chose the ingroup member, ps < .001.

The repeated measures ANOVA conducted for the unequal condition revealed differences in the types of reasoning used by those participants who chose an ingroup versus and outgroup member, F(2, 1356) = 681.71, p < .001, $\eta_p^2 = .50$. For the unequal condition, use of each of the three forms of reasoning differed significantly between participants who chose the ingroup versus the outgroup member, ps < .001. The pattern found in the unequal condition was the reverse of the pattern found in the equal condition. This finding revealed that, even though the chi-square analyses presented indicated that participants were not responding above chance in the unequal condition, participants were, in fact, systematic in their evaluations. Those participants who chose the ingroup member focused on fairness, while those who chose the outgroup member focused on group functioning.

Differences were also documented in reasoning used in the school versus in the gender context by age group, F(2, 1356) = 5.986, p < .01, $\eta_p^2 = .01$. Specifically, 4^{th} grade participants in the gender context used more references to fairness (M = .50 SD = .48) than did 8^{th} grade participants (M = .30 SD = .46), p < .05, while 4^{th} grade participants made fewer references to group identity (M = .01 SD = .06) than did 8^{th} graders (M = .06 SD = .23). This age-related finding reflects the age-related differences documented in participants' evaluations. In the school context, there were no age-related differences documented.

Discussion

No previous research had directly compared group inclusion decisions in two important and pervasive intergroup contexts of school membership and gender when the groups held four distinct norms (two moral: equal and unequal; two social-conventional: traditional and non-traditional). In the current study, participants were required to evaluate ingroup preference in two competing ways: group membership and group norms, and to make a decision that gave priority to one over the other. This paradigm revealed new findings, indicating that ingroup preference manifests differently in these contexts. Further, there were age-related differences in evaluations and reasoning in the moral conditions, revealing increasing sophistication in balancing group identity and group norms with age.

These findings contribute in novel ways to the field of developmental psychology by demonstrating the sophistication of children's and adolescents' social reasoning skills and developmental and context differences in the manifestation of ingroup preference. The findings revealed how adolescents' concerns for group identity were coordinated with their moral judgments about equal treatment and inclusion. On the one hand they valued equality, but on the other hand they understood the importance of allegiance to groups. The results revealed the value of supporting one's group; children and adolescents also exhibited ingroup preference, however, which is a concern given the implications for prejudice and bias.

For researchers focused on improving intergroup relations, our findings revealed that each intergroup context should be approached as distinct given that participants in this study differed in their evaluations of school and gender intergroup scenarios. Further, the results revealed that a preference for fairness trumped differences in ingroup preference. In the moral conditions participants asserted a strong preference for the equal outgroup member in both the school and gender context. The implication of this finding is that children and adolescents are

not solely focused on group membership and that they give strong weight to moral principles in making judgments. This is important given the frequent assumption that children will always give priority to their own needs and make selfish choices.

The findings for the intergroup school context contribute to the literature on school as a developmental context (Eccles & Roeser, 2013). In the social-conventional conditions, differences in ingroup preference emerged. Participants were more willing to include someone who shared their social-conventional norms (in both the traditional and non-traditional conditions), but did not share their group identity in the gender context than in the school context. This reveals an important distinction. In the moral domain, ingroup preference (surrounding group membership) did not manifest differently in the school and gender contexts. In the social-conventional domain, however, ingroup preference was more apparent in the school, rather than gender context. This is consistent with findings by Abrams et al. (2008), which revealed that children in a minimal intergroup context showed ingroup preference in a social-conventional context involving loyalty to the group, but did not exhibit such a preference when judging ingroup and outgroup members in the context of immoral peer behavior.

This study expands these findings by revealing that all intergroup contexts do not elicit the same level of ingroup preference. While school affiliation plays an important role in academic motivation (Wigfield et al., 2006), there may also exist more negative aspects of it by creating in-group and out-group differentiations. Participants showed greater ingroup preference in the school than in the gender context. Moreover, these findings also extend previous research on ingroup bias more broadly (e.g., Dunham et al., 2011), indicating the importance of measuring ingroup preference using authentic groups and in multiple contexts. Further, this research extends prior research which found that biologically based and randomly assigned

groups elicit similar levels of intergroup bias (Bigler et al., 1997), by revealing that there are instances in which different intergroup contexts do elicit differing levels of ingroup preference. These findings were also supported by the participants' reasoning. Participants more frequently referenced group identity in the school context (for instance, "He goes to my school so I think he should be in the group"; 8th grade male) than in the gender context (for instance, "The group should stay all-girls"; 4th grade female).

In the moral condition, group membership did not impact participants' choices. In both the gender and school membership contexts, they chose to include the equal outgroup member over the unequal ingroup member. The salience of the desire to divide resources equally outweighed ingroup preference in favor of either their gender or school group membership. Participants in both the gender and school context supported including an outgroup member who wanted to divide resources equally in the equal group even though this individual did not share the group membership of the rest of the group. This finding reflected previous research documenting preference for outgroup members who abided by the moral principle of equal allocation of resources (Killen, Rutland, et al., 2013). Further the finding adds to our knowledge by also documenting this in a school intergroup context. Further, these results highlight the importance of maintaining norms related to equal distribution of resources to children and adolescents, extending much of the prior developmental research on allocation decisions that focuses on young children.

It is important to note that while both children and adolescents supported including an outgroup member who wanted to divide resources equally, an age-related trend was shown as well. Children showed strong support for the equal outgroup member and less support for the unequal outgroup member, focusing narrowly on the moral implications of their inclusion

decision when the group norm involved allocation of resources. This finding was supported by age-related differences documented in children's and adolescents' reasoning, which revealed that younger children used more reference to fairness in justifying their evaluations.

As an illustration, a fourth grade girl who chose to include the outgroup member who also wanted to be equal said, "Because the money should be given out equally to both groups. That's fair." Adolescents, on the other hand, showed greater skill, in both the gender and school contexts, in coordinating domains. They recognized the moral benefit of equal allocation of resources, while also recognizing the social benefits to group functioning by maintaining the group membership of the group in terms of gender or school identity. As an example, an 8th grade girl who chose the ingroup member who was equal when the group was unequal stated, "Because she is expressing herself and being fair but she made the problem harder because she doesn't agree with the group." The current study is the first to document such age-related differences in reasoning in making inclusion decisions about groups that hold resource allocation norms.

These results provide support for the recently proposed process-based account of moral judgments which suggests that with age individuals will better be able to coordinate the complexity of multifaceted moral judgments (for instance those where group identity may conflict with moral principles) (Richardson et al., 2012), and suggest that continued development in executive functioning skills through adolescence (Crone, 2009) may contribute to age-related differences in children's and adolescents' reasoning about including others. Additionally, throughout adolescence, emotional perspective-taking abilities continue to improve, as demonstrated by research measuring reaction time to judgments involving 1st and 3rd person perspectives (Choudhury, Blakemore, & Charman, 2006). Further, research also reveals that due

to continued brain development and improvements in processing social information, adolescents place a particular focus on social evaluation (Somerville, 2013), which may account for our findings documenting that in the moral conditions adolescents value both group loyalty to the group identity and to the group norm.

Though age-related patterns were found in the moral conditions, participants did not distinguish between the school and gender intergroup contexts. In both the school and gender contexts, participants were more supportive of including the equal outgroup member than the unequal outgroup member. In both contexts, they were also more willing to include the traditional outgroup member than the non-traditional outgroup member. This suggests that when considering both school and gender group membership, participants were attuned to differences across the norms in similar ways. They were more willing to include someone who supports a generic social norm (equality and following social customs regarding group tee-shirts) than someone who does not, regardless of the group norms (for a more complete discussion of the distinction between generic and group-specific norms, see Abrams et al., 2008; Killen, Rutland, et al., 2013).

This study extends our knowledge of the development of moral reasoning by demonstrating that children differentiate between moral and conventional acts in making intergroup judgments and that there are age-related differences in the focus of children's and adolescents' reasoning. Importantly, these findings bring into question new findings which suggest that children view issues involving harm in a between group context as only violating conventional rules and that children do not feel intrinsically obligated to outgroup members (Rhodes & Chalik, in press). Our findings demonstrated that in intergroup contexts children give priority to moral principles by overwhelmingly including an outgroup member to preserve equal

allocation of resources and to avoid intergroup harm. Our findings also demonstrate a very different pattern in a social-conventional context: when no moral principles are at stake, children show varying degrees of intergroup preference, depending on the intergroup context. Thus, the current study indicates that the pattern demonstrated in Rhodes and Chalik (in press) may necessitate further scrutiny, in particular, a second condition which assesses intergroup dynamics in a social-conventional context.

The age-related differences that were documented in both the school and gender contexts for the moral conditions should be of interest to cognitive developmental scientists. What changes in adolescents' social cognition that leads them to more precisely balance moral principles with a sense of group loyalty? We argue that this change reflects a developmental process marked by adolescents' increased experience with groups and attention to group norms (Brown, 2004), as well as the increasing ability with age to balance group identity and morality (Rutland et al., 2010). Further, this research extends the work of behavioral economists and those studying sharing, fairness, and distribution of resources broadly (Almås et al., 2010; Fehr, Bernhard, & Rockenbach, 2008), as participants' reasoning reflects their strong dedication to an equal distribution of resources, even when given the option to choose a group member who would benefit the group with an unequal allocation.

Finally, these findings are of interest to those studying intergroup relations and group dynamics, as this study demonstrates the importance of measuring these constructs in concert. By asking participants to choose between loyalty to your group membership or your group norm, we showed that children and adolescents do distinguish between different types of intergroup contexts and that they do not approach all intergroup encounters in the same manner. These findings reveal the sophistication of children's and adolescents' social judgments, but also point

to new avenues for developmental research to explore in greater detail the very complex intergroup dynamics which children and adolescents' face daily.

Future research should continue to examine ingroup preference in a range of different group membership contexts and with distinct types of group norms, as it is clear that ingroup bias does not always manifest in the same way. Developmental psychologists have proposed the Developmental Intergroup Theory for understanding the manifestation (or lack thereof) of stereotyping or bias in intergroup contexts, noting that children will categorize outgroup members based on one salient dimension, and then may apply stereotypes which they hold in considering this individual (Bigler & Liben, 2006). Future research should explore the interplay between which features of outgroup members are made salient and the stereotypes one holds when evaluating the ingroup preferences which are demonstrated.

Additionally, it would be interesting to further explore the role that intergroup friendships have in these evaluations. It may be the case that participants were more willing to choose a gender outgroup member because they have frequent contact with peers of the opposite sex in their everyday lives. They may not have the same degree of outgroup contact with peers from different schools, who likely live in different neighborhoods. Thus, the greater ingroup preference shown in the school context may be explained by a concern over including a peer from another school because of this peer's relative unfamiliarity. Little is known, in fact, about how many children do have friends from outside their own school. Newcomb and Bagwell (1995) conducted a meta-analysis of children's friendships and noted the lack of research on children's conceptions of outside of school friendships. Since that time some work has shown that the majority of adolescents' friendships are within school, but that, with age, children have increasing opportunities to interact with peers outside of school (Witkow & Fuligni, 2010).

Further research regarding children's and adolescents' ingroup preference as related to their level of identification with different social groups is warranted.

Finally, documenting developmental change using a longitudinal design would be fruitful, and conducting a study in which children's ingroup preferences are tracked over time would be quite valuable. To date we do not know of any longitudinal studies in the area of developmental intergroup attitudes. With an existing data base on intergroup judgments and attitudes in childhood and adolescence such a study could make a significant contribution to the field. Older adolescents, who likely have an even stronger sense of school group identity, may show an even greater preference for school ingroup members. Following children longitudinally would enable researchers to test for the influence of developing social-cognitive skills on children's social evaluations over time.

The age-related trends revealed in this study confirmed expectations that younger children would exhibit a preference for dividing resources equally, even if this meant including an outgroup member. Further, adolescents were more willing to maintain the group membership by choosing an ingroup member who would not agree with the group. Differences were not found by age group in the school and gender intergroup contexts though. Examining an older group of adolescents may capture a more complete developmental picture of how intergroup preference manifests, as older adolescents may be more attuned to different intergroup contexts than children or younger adolescents.

These results provide novel contributions to the field of developmental psychology by revealing that ingroup preference varies by group identification and the social context. This study furthers our knowledge of complex forms of group dynamics and provides evidence that research

examining intergroup relations must attend to both the nature of the group behaviors (moral or social-conventional), as well as the intergroup context.

References

- Aboud, F. E. (1988). *Children and prejudice*. Oxford, England: Blackwell.
- Abrams, D., & Rutland, A. (2008). The development of subjective group dynamics. In S. R. Levy & M. Killen (Eds.), *Intergroup relations and attitudes in childhood through adulthood* (pp. 47-65). Oxford, UK: Oxford University Press.
- Abrams, D., Rutland, A., Cameron, L., & Marques, J. (2003). The development of subjective group dynamics: When in-group bias gets specific. *British Journal of Developmental Psychology*, 21, 155-176.
- Abrams, D., Rutland, A., Ferrell, J. M., & Pelletier, J. (2008). Children's judgments of disloyal and immoral peer behavior: Subjective group dynamics in minimal intergroup contexts.

 Child Development, 79, 444-461.
- Almås, I., Cappelen, A. W., Sørensen, E. Ø., & Tungodden, B. (2010). Fairness and the development of inequality acceptance. *Science*, *328*, 1176-1178. doi: 10.1126/science.1187300
- Atkin, L. M., & Gummerum, M. (2012). Moral and group-based criteria in children's evaluation of peers after transgressions. *Infant and Child Development*, 21, 189-197. doi: 10.1002/icd.744

- Bennett, M., & Sani, F. (2008). Children's subjective identification with social groups. In S.

 Levy & M. Killen (Eds.), *Intergroup attitudes and relationships from childhood through adulthood* (pp. 19-31). Oxford, U.K.: Oxford University Press.
- Bigler, R. S., Jones, L. C., & Lobliner, D. B. (1997). Social categorization and the formation of intergroup attitudes in children. *Child Development*, 68, 530-543.
- Bigler, R. S., & Liben, L. (2006). A developmental intergroup theory of social stereotypes and prejudice. In R. Kail (Ed.), *Advances in child psychology* (pp. 39-90). New York: Elsevier.
- Bizumic, B., Reynolds, K. J., & Meyers, B. (2012). Predicting social identification over time:

 The role of group and personality factors. *Personality and Individual Differences*, 53,

 453-458. doi: 10.1016/j.paid.2012.04.009
- Brechwald, W. A., & Prinstein, M. J. (2011). Beyond homophily: A decade of advances in understanding peer influence processes. *Journal of Research on Adolescence*, 21, 166-179. doi: 10.1111/j.1532-7795.2010.00721.x
- Brown, B. B. (2004). Adolescents' relationships with peers. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (2nd ed., pp. 363 394). New York: Wiley.
- Brown, B. B., & Dietz, E. L. (2009). Informal peer groups in middle childhood and adolescence.

 In K. Rubin, W. Bukowski & B. Laursen (Eds.), *Handbook of peer interactions*,

 relationships and groups (pp. 361-376). New York: Guilford Press.
- Brown, C. S., Alabi, B. O., Huynh, V. W., & Masten, C. L. (2011). Ethnicity and gender in late childhood and early adolescence: Group identity and awareness of bias. *Developmental Psychology*, 47, 463-471. doi: 10.1037/a0021819

- Brown, C. S., Bigler, R. S., & Chu, H. (2010). An experimental study of the correlates and consequences of perceiving oneself to be the target of gender discrimination. *Journal of Experimental Child Psychology*, 107, 100-117. doi: 10.1016/j.jecp.2010.04.010
- Brown, R. (2000). Social identity theory: Past achievements, current problems and future challenges. *European Journal of Social Psychology*, *30*, 745-778.
- Burr, J. E., Ostrov, J. M., Jansen, E. A., Cullerton-Sen, C., & Crick, N. R. (2005). Relational aggression and friendship during early childhood: 'I won't be your friend'! *Early Education and Development*, *16*, 161-183. doi: 10.1207/s15566935eed1602
- Cemalcilar, Z. (2010). Schools as socialisation contexts: Understanding the impact of school climate factors on students sense of school belonging. *Applied Psychology: An International Review*, 59, 243-272. doi: 10.1111/j.1464-0597.2009.00389.x
- Choudhury, S., Blakemore, S.-J., & Charman, T. (2006). Social cognitive development during adolescence. *Social Cognitive and Affective Neuroscience*, 1, 165-174. doi: 10.1093/scan/nsl024
- Connolly, J., Craig, W., Goldberg, A., & Pepler, D. (2004). Mixed-gender groups, dating, and romantic relationships in early adolescence. *Journal of Research on Adolescence*, *14*, 185-207. doi: 10.1111/j.1532-7795.2004.01402003.x
- Crone, E. A. (2009). Executive functions in adolescence: inferences from brain and behavior.

 Developmental Science, 12, 825-830. doi: 10.1111/j.1467-7687.2009.00918.x
- Dovidio, J. F., Hewstone, M., Glick, P., & Esses, V. (2010). *Handbook of prejudice, stereotyping, and discrimination*. Thousand Oaks, CA: Sage Publications.
- Dunham, Y., Baron, A. S., & Carey, S. (2011). Consequences of 'minimal' group affiliations in children. *Child Development*, 82, 793-811. doi: 10.1111/j.1467-8624.2011.01577.x

- Eccles, J. S., Roeser, R., Vida, M., Fredricks, J., & Wigfield, A. (2006). Motivational and Achievement Pathways Through Middle Childhood. In L. Balter & C. S. Tamis-LeMonda (Eds.), *Child psychology: A handbook of contemporary issues (2nd ed.).* (pp. 325-355). New York, NY US: Psychology Press.
- Eccles, J. S., & Roeser, R. W. (2013). Schools as developmental contexts during adolescence. .

 In R. Lerner & M. Easterbrooks (Eds.), *Handbook of psychology* (2nd ed., Vol. 6, pp. 321-337). New York: Wiley/Blackwell.
- Fehr, E., Bernhard, H., & Rockenbach, B. (2008). Egalitarianism in young children. *Nature*, 454, 1079-1083. doi: 10.1038/nature07155
- Forrest, C. B., Bevans, K. B., Riley, A. W., Crespo, R., & Louis, T. A. (2013). Health and school outcomes during children's transition into adolescence. *Journal of Adolescent Health*, *52*, 186-194. doi: 10.1016/j.jadohealth.2012.06.019
- Horn, S. S. (2003). Adolescents' reasoning about exclusion from social groups. *Developmental Psychology*, *39*, 71-84.
- Killen, M. (2007). Children's social and moral reasoning about exclusion. *Current Directions in Psychological Science*, 16, 32-36.
- Killen, M., Lee-Kim, J., McGlothlin, H., & Stangor, C. (2002). How children and adolescents evaluate gender and racial exclusion. *Monographs of the society for research in child development* (Vol. 67, No. 4). Oxford, England: Blackwell Publishers.
- Killen, M., Mulvey, K. L., & Hitti, A. (2013). Social exclusion in childhood: A developmental intergroup perspective. *Child Development*, 84, 772-790. doi: 10.1111/cdev.12012

- Killen, M., Rutland, A., Abrams, D., Mulvey, K. L., & Hitti, A. (2013). Development of intraand intergroup judgments in the context of moral and social-conventional norms. *Child Development*, 84, 1063-1080. doi: 10.1111/cdev.12011
- Kinzler, K. D., & Spelke, E. S. (2011). Do infants show social preferences for people differing in race? *Cognition*, 119, 1-9. doi: 10.1016/j.cognition.2010.10.019
- Levy, S., & Killen, M. (2008). *Intergroup attitudes and relations in childhood through adulthood*. Oxford, UK: Oxford University Press.
- Liben, L. S., & Bigler, R. S. (2002). The developmental course of gender differentiation:

 Conceptualizing, measuring and evaluating constructs and pathways. *Monographs of the Society for Research in Child Development*, 67.
- Lobel, T. E., Nov-Krispin, N., Schiller, D., Lobel, O., & Feldman, A. (2004). Gender discriminatory behavior during adolescence and young adulthood: A developmental analysis. *Journal of Youth and Adolescence*, *33*, 535-546. doi: 10.1023/B:JOYO.0000048067.83738.e6
- McMahon, S. D., Wernsman, J., & Rose, D. S. (2009). The relation of classroom environment and school belonging to academic self-efficacy among urban fourth- and fifth-grade students. *The Elementary School Journal*, 109, 267-281. doi: 10.1086/592307
- Moller, L. C., Hymel, S., & Rubin, K. H. (1992). Sex typing in play and popularity in middle childhood. *Sex Roles*, *26*, 331-353. doi: 10.1007/bf00289916
- Mulvey, K. L., Hitti, A., Rutland, A., Abrams, D., & Killen, M. (in press). Reasoning about resource allocation in an intergroup context from an individual and a group perspective. *Journal of Social Issues*.

- Nesdale, D. (2008). Peer group rejection and children's intergroup prejudice. In S. R. Levy & M. Killen (Eds.), *Intergroup attitudes and relations in childhood through adulthood* (pp. 32-46). Oxford, U.K.: Oxford University Press.
- Newcomb, A. F., & Bagwell, C. L. (1995). Children's friendship relations: A meta-analytic review. *Psychological Bulletin*, 117, 306-347. doi: 10.1037/0033-2909.117.2.306
- Posada, R., & Wainryb, C. (2008). Moral development in a violent society: Colombian children's judgments in the context of survival and revenge. *Child Development*, 79, 882-898.
- Powlishta, K. K. (1995). Intergroup processes in childhood: Social categorization and sex role development. *Developmental Psychology*, *31*, 781-788.
- Raabe, T., & Beelmann, A. (2011). Development of Ethnic, Racial, and National Prejudice in Childhood and Adolescence: A Multinational Meta-Analysis of Age Differences.
 [Article]. Child Development, 82, 1715-1737. doi: 10.1111/j.1467-8624.2011.01668.x
- Rhodes, M., & Chalik, L. (in press). Social categories as markers of intrinsic interpersonal obligations. *Psychological Science*.
- Richardson, C., Mulvey, K. L., & Killen, M. (2012). Extending social-domain theory with a process-based account of moral judgment. *Human Development*, 55, 4-25.
- Rubin, K., Bukowski, W., & Parker, J. (2006). Peers, relationships, and interactions. In W. Damon & R. Lerner (Eds.), *Handbook of Child Psychology* (pp. 571-645). NY: Wiley Publishers.
- Ruble, D. N., Martin, C. L., & Berenbaum, S. (2006). Gender development. In W. Damon & N. Eisenberg (Eds.), *Handbook of child psychology: Vol. 3, Personality and Social Development (6th ed.)* (pp. 858-932). New York: Wiley Publishers.

- Rutland, A., Killen, M., & Abrams, D. (2010). A new social-cognitive developmental perspective on prejudice: The interplay between morality and group identity.

 *Perspectives on Psychological Science, 5, 279-291. doi: 10.1177/1745691610369468
- Shutts, K., Banaji, M. R., & Spelke, E. S. (2010). Social categories guide young children's preferences for novel objects. *Developmental Science*, *13*, 599-610. doi: 10.1111/j.1467-7687.2009.00913.x
- Smetana, J. G. (2006). Social-cognitive domain theory: Consistencies and variations in children's moral and social judgments. In M. Killen & J. G. Smetana (Eds.), *Handbook of moral development* (pp. 119-154). Mahwah, NJ: Lawrence Erlbaum Associates.
- Somerville, L. H. (2013). The teenage brain: Sensitivity to social evaluation. *Current Directions* in *Psychological Science*, 22, 121-127. doi: 10.1177/0963721413476512
- Spears Brown, C., & Bigler, R. S. (2004). Children's perceptions of gender discrimination.

 *Developmental Psychology, 40, 714-726.
- Susskind, J. E., & Hodges, C. (2007). Decoupling children's gender-based in-group positivity from out-group negativity. *Sex Roles*, *56*, 707-716. doi: 10.1007/s11199-007-9235-z
- Tanti, C., Stukas, A. A., Halloran, M. J., & Foddy, M. (2011). Social identity change: Shifts in social identity during adolescence. *Journal of Adolescence*, 34, 555-567. doi: 10.1016/j.adolescence.2010.05.012
- Taylor, M. G., Rhodes, M., & Gelman, S. A. (2009). Boys will be boys; Cows will be cows:Children's essentialist reasoning about gender categories and animal species. *Child Development*, 80, 461-481.
- Turiel, E. (1983). *The development of social knowledge: Morality and convention*. Cambridge, England: Cambridge University Press.

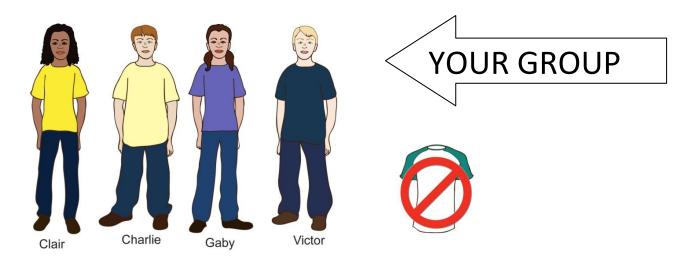
- Verkuyten, M. (2001). National identification and intergroup evaluations in Dutch children.

 *British Journal of Developmental Psychology, 19, 559-571.
- Waters, S., Cross, D., & Shaw, T. (2010). Does the nature of schools matter? An exploration of selected school ecology factors on adolescent perceptions of school connectedness.
 British Journal of Educational Psychology, 80, 381-402. doi:
 10.1348/000709909X484479
- Wigfield, A., Eccles, J., Schiefele, U., Roeser, R., & Davis-Kean, P. (2006). Development of achievement motivation. In W. Damon & N. Eisenberger (Eds.), *Handbook of child psychology* (6th ed., Vol. 3, pp. 933-1002). New York: John Wiley & Sons, Inc.
- Wigfield, A., Lutz, S. L., & Wagner, A. L. (2005). Early adolescents' development across the middle school years: Implications for school counselors. *Professional School Counseling*, 9, 112-119.
- Witkow, M. R., & Fuligni, A. J. (2010). In-school versus out-of-school friendships and academic achievement among an ethnically diverse sample of adolescents. *Journal of Research on Adolescence*, 20, 631-650. doi: 10.1111/j.1532-7795.2010.00653.x

Figure 1: Examples of Visual Materials for Ingroup School Identification Context and Gender Context

A. School Identification Context, Ingroup, Non-traditional Group Norm

Remember, your group at YOUR School...

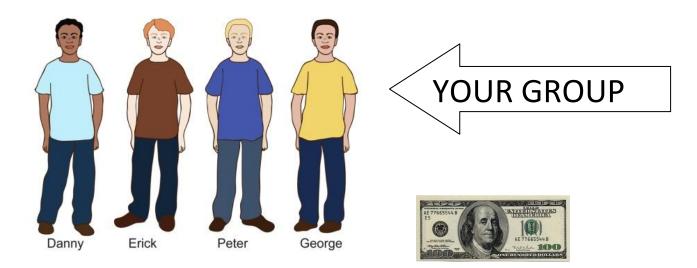


©2011 J.K. Tycko, Illustrator

usually does not wear their green and white club shirt.

B. Gender Context, Ingroup, Unequal Group Norm

Remember, your group



©2011 J.K. Tycko, Illustrator

usually votes to give \$80 to your own group and \$20 to the other group.

Figure 2: Example of the Design, Gender Context

Within – Subject (all participants evaluate four scenarios)	Design of the Protocol			
Scenario 1: Girls' Group	Group Norm: Equal			
	Choice: Ingroup (Girl): Unequal or Outgroup (Boy): Equal			
Scenario 2: Boys' Group	Group Norm : Unequal			
	Choice: Ingroup (Boy): Equal or Outgroup (Girl): Unequal			
	Group Norm: Traditional			
Scenario 3: Boys' Group	Choice: Ingroup (Boy): Non-traditional or Outgroup (Girl): Traditional			
Scenario 4: Girls' Group	Group Norm: Non-traditional			
	Choice: Ingroup (Girl): Traditional or Outgroup (Boy): Non-traditional			

Note: For each intergroup context (gender and school), there were two versions of the protocol to create the Between-Subjects factors. For example, this design is for the gender study and shows the Within-Subjects Variables; all participants received 4 stories (with a norm and a choice). The Between-Subjects Variables were reflected by the order of the ingroup/outgroup norm. Thus, for Version 2, the first story is a Girls' Group that is Unequal, with an Equal Ingroup and an Unequal Outgroup. The school study design was identical except that instead of assessing boys and girls groups, they were assessing groups from their own school or another local school.

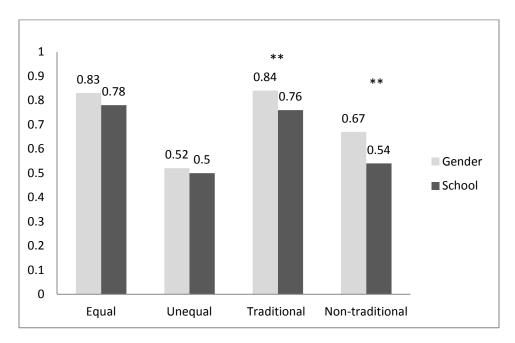
KEY:

Equal = equal allocation Unequal = unequal allocation (more for the ingroup)

Traditional = wear the t-shirt Non-traditional = refuse to wear the t-shirt

Choice = whom to pick between one of two peers

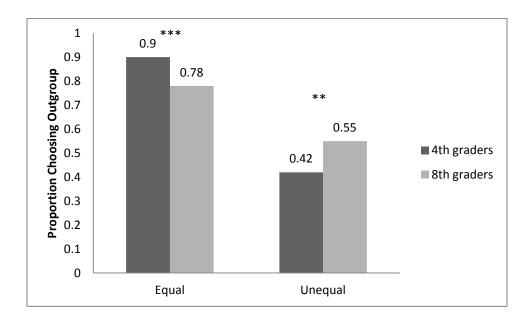
Figure 3: Proportion of Participants Choosing the Outgroup Member who Matches the Group Norm



Note: In both the traditional and non-traditional condition, participants in the gender context differed from participants in the school context at p < .01.

Figure 4: Proportion of Participants Choosing the Outgroup Member who Matches the Group

Norm across both Contexts (School and Gender) by Age Group



Note: For the equal condition, 4^{th} graders differed from 8^{th} graders at p < .001. For the unequal condition, 4^{th} graders differed from 8^{th} graders at p < .01.

Table 1: Proportions and Standard Deviations for the Justifications Used for Choosing an Outgroup or Ingroup Member in the Gender and School Intergroup Contexts

	Gender Context		School Context		Total	
	Ingroup	Outgroup	Ingroup	Outgroup	Ingroup	Outgroup
Equal Norm						_
Fairness	.05 (.23)	.50 (.48)	.08 (.27)	.45 (.48)	.07 (.25) ^a	.47 (.48) ^a
Group functioning	.45 (.49)	.44 (.48)	.44 (.49)	.45 (.48)	.44 (.49)	.47 (.48)
Group identity	.26 (.12)	.02 (.12)	.40 (.48)	.01 (.11)	.35 (.47) ^b	$.02(.11)^{b}$
Unequal Norm						
Fairness	.72 (.44)	.03 (.15)	.64 (.46)	.02 (.14)	.69 (.45) ^c	.02 (.14) ^c
Group functioning	.08 (.26)	.92 (.26)	.10 (.30)	.90 (.30)	.10 (.29) ^d	.92 (.26) ^d
Group identity	.08 (.27)	.01 (.07)	.18 (.37)	.03 (.19)	.13 (.32) ^e	.02 (.13) ^e
Traditional Norm						
Larger societal norm	.00 (.03)	.03 (.17)	.00 (.00)	.03 (.18)	.00 (.00) ^f	.03 (.17) ^f
Group functioning	.17 (.38)	.88 (.31) ^g	.14 (.34)	.93 (.29) ^g	.14 (.34) ^h	.91 (.28) ^h
Group identity	.60 (.49) ⁱ	.03 (.16)	.77 (.41) ⁱ	.03 (.17)	.73 (.44) ^j	.03 (.17) ^j
Non-traditional Norm						
Larger societal norm	.21 (.40) ^k	.00 (.03)	.13 (.32) ^k	.00 (.00)	.16 (.35) ¹	.00 (.00) ¹
Group functioning	.38 (.48)	.89 (.29)	.36 (.47)	.95 (.20)	.36 (.47) ^m	.92 (.26) ^m
Group identity	.23 (.41) ⁿ	.03 (.17)	.41 (.48) ⁿ	.02 (.13)	.34 (.46)°	.03 (.16)°

Note: ${}^{t}p < .05$, ${}^{g}p < .05$, all other pairs differed significantly at p < .001.