



'It's not that we hate you': Understanding children's gender attitudes and expectancies about peer relationships

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Widespread gender segregation, evident throughout elementary school, seems to imply that girls and boys have negative feelings and thoughts about one another, and classic theories of inter-group processes support this idea. However, research has generally overlooked children's feelings and perceptions about gender-related interpersonal interactions. This paper investigates the nature of children's attitudes about same- and other-gender peers, and explores how those attitudes relate to the expectancies and beliefs children hold about same- and other-gender peer interactions. Children ($N = 98$ fifth graders) completed questionnaires assessing their global liking of own- and other-gender peers (Yee & Brown, 1994), positive and negative attitudes about own- and other-gender peers, and outcome expectancies related to interacting with own- and other-gender peers. Results indicated that rather than being characterized by out-group negativity, children's inter-group gender attitudes are best characterized by an in-group positivity bias. Children's positive and negative affective attitudes were also significantly associated with outcome expectancies. In contrast, global liking of own- and other-gender peers was less predictive of outcome expectancies. Thus, the greater specificity of the affective attitude measures appeared to be a more predictive and potentially fruitful gauge of children's feelings about own- and other-gender peers. Results are discussed in terms of the need for finer grained and more extensive studies of children's gender-related feelings and cognitions about own- and other-gender peers.

Children's membership in social groups, such as gender, plays an important role in how they relate to other people. In fact, the mere act of categorizing oneself and others into social groups changes the nature of interpersonal perceptions and behaviours (Tajfel &

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Turner, 1979). For example, perceptions of group differences increase, and the in-group is perceived more favourably than the out-group. Children begin to display such inter-group bias from an early age (Bigler & Liben, 2007; Kowalski, 2007; Nesdale, Lawson, Durkin, & Duffy, 2010), and understanding the nature of children's inter-group attitudes can have important implications for interventions aimed at improving children's inter-group relations and interpersonal interactions.

One of the most consequential social group memberships for children is gender. Young children's peer interactions are characterized by a separation of the genders, and a number of short- and long-term consequences are presumed associated with this gender segregation (Maccoby, 1998). This widespread gender segregation, evident throughout elementary school, seems to imply that girls and boys have negative feelings and thoughts about one another. However, research to date has generally overlooked children's feelings and perceptions about gender-related interpersonal interactions. Instead, investigations have focused on identifying children's observable behaviours (e.g., gender segregation, activity preferences, communication styles), and their stereotyped beliefs. Thus, although we can infer some general ideas about children's thoughts and feelings about same- and other-sex peers, a number of important questions remain about the affective and cognitive components of children's gender-related inter-group processes: (1) Do children feel more positively about own-gender peers and more negatively about other-gender peers? (2) Do children expect more positive outcomes when interacting with own-gender peers and more negative consequences to stem from interacting with other-gender peers? (3) Are children's positive and negative feelings about own- and other-gender peers linked to their expectations about interacting with those peers?

Children's gender group attitudes

Children's attitudes about own- and other-gender peers are likely to influence their peer preferences and behaviours. Children report feeling more positively about their own gender as early as in preschool (e.g., Yee & Brown, 1994) and these biases appear to be present throughout the elementary school years (e.g., Heyman, 2001.) In this paper, we want to highlight an important distinction between attitudes and stereotypes about gender groups; the latter involve beliefs about or cognitive representations of attributes associated with boys and girls that may have an implied evaluative component (e.g., 'boys are aggressive'), whereas the former are expressed as evaluative responses (e.g., 'I don't like them', 'they make me feel uncomfortable'; Eagly & Chaiken, 1998). Stereotypes can certainly be determinants of attitudes, as in the case of prejudice, which is understood as negative attitude towards a group (Eagly & Chaiken, 1998). For a variety of reasons, we know little about the explicitly evaluative aspect of children's responding to own- and other-gender peers.

The existing literature on children's gender group attitudes is limited with only a few studies directly measuring such attitudes. Previous studies are difficult to compare because they employ different measures. For example, a few studies have used global affective ratings of liking (Powlishta, 1995b; Verkuyten & Thijs, 2001; Yee & Brown, 1994), but most studies use evaluative trait ratings in which children are asked to rate girls and boys on positive and negative traits (e.g., 'truthful', 'bad', 'lazy') (Carver, Yunger, & Perry, 2003; Egan & Perry, 2001; Powlishta, 1995a, b; Powlishta, Serbin, Doyle, & White, 1994; Susskind & Hodges, 2007; Zalk & Katz, 1978). Social distance, peer nomination, and other peer preference measures have also been used (e.g., Hayden-Thomson, Rubin, & Hymel, 1987; Powlishta *et al.*, 1994); however, such measures are more accurately described as assessments of preferences or judgements that may be

influenced by attitudes, but they are not attitudes *per se*. In sum, most knowledge of children's gender group attitudes derives from evaluative trait measures. This reliance on trait measures, however, is limiting in terms of the insights trait measures can provide into children's gender attitudes. To further complicate matters, children appear to use both the cognitive (stereotypical) and affective (evaluative) connotations of traits in their ratings (Robnett & Susskind, 2010; Serbin, Powlishta, & Gulko, 1993), and the degree to which children use each strategy is unclear (Powlishta *et al.* 1994). These trait measures might be better characterized as inter-group stereotyping measures because they assess who children perceive to have more positive qualities, but they fall short of being direct measures of how children *feel* about girls and boys.

We know very little about what types of positive and negative feelings children associate with girls and boys. Indeed, the few existing studies used limited assessments of affect: either asking two items to assess girls' and boys' feelings about same- and other-gender peers or asking only how much children liked boys and girls (Powlishta, 1995b; Yee & Brown, 1994). These studies leave unresolved the question of whether young children's attitudes towards the other gender are *less positive* than in-group attitudes (in-group favouritism) or whether they involve *negative* attitudes (out-group derogation). Because studies have typically used difference scores or forced-choice measures (e.g., Zalk & Katz, 1978), in-group positivity and out-group negativity are often confounded (Brewer, 2001; Cameron, Alvarez, Ruble, & Fuligni, 2001). Additional studies are needed to assess these separate constructs using measures other than trait measures (i.e., more affective measures). In the present paper, we focused on affective components of attitudes about gender groups because they have been relatively unexplored and because stronger effects for own-group favouritism have been found for liking compared to trait measures (Powlishta, 1995b).

The peer relationships literature and the role of gender

Researchers interested in children's peer relationships have long been interested in how children think about their peers and social interactions, especially concerning aggression and social competence (Ladd, 2005). Perhaps most prominently, the social information processing (SIP) model (Crick & Dodge, 1994; Dodge, 1986) proposes that children read and interpret cues from the social environment and evaluate and decide on behavioural responses based on these perceptions. According to research stemming from this theoretical perspective, children differ from one another in their behavioural strategies with peers because they hold different expectations from one another about the outcomes of certain interpersonal behaviours (e.g., Crick & Ladd, 1990). What is missing from the peer literature is a consideration of gender-related inter-group processes and how they influence individual children's relationships and behaviours with own- and other-gender peers. For example, children might expect different behaviours from a peer depending on whether that child is a girl or boy. Such differential expectations linked to gender group membership might affect how and whether children choose to interact with their peers. Indeed, cognitive perspectives on children's gender development have been useful in illustrating how children's beliefs about own- and other-gender peers influence children's behaviours and peer preferences (Bem, 1981; Martin & Halverson, 1981, 1987; Martin, Ruble, & Szkrybalo, 2002), but more research is needed to understand children's gender-related expectations, as such expectations might affect children's proclivity to interact with own- versus other-gender peers (Barbu, Le Maner-Idrosso, & Jouanjean, 2000).

The present study

In this study, we developed a measure to assess children's attitudes about same- and other-gender peers in a way that: (a) decoupled positive and negative feelings and (b) provided more detail about the affective nature of those attitudes than global measures of liking used in past research. Our first research question (RQ1) addressed the association between positive and negative attitudes. Consistent with existing theories and reviews of research on inter-group attitudes (Brewer, 2001; Cameron *et al.*, 2001), we expected that children's positive attitudes would be related to, but distinct from their negative attitudes. We did not have specific predictions about the degree to which children's attitudes would be characterized by in-group favouritism or out-group derogation. On the one hand, Rudman and Glick (2008) have proposed that gender segregation is a result of young children holding strongly negative attitudes about one another, which then leads children to avoid the other gender. Another possibility is that children will view the other gender in a less positive, but not necessarily more negative light and, for that reason, have little interest or motivation for interacting with other-gender peers (Martin & Ruble, 2010).

Our second research question addressed whether girls and boys differ in their inter-group attitudes (RQ2). Based on previous research findings, we expected that girls might show more biased inter-group attitudes compared to boys (Carver *et al.*, 2003; Egan & Perry, 2001; Kowalski, 2007; Powlishta, 1995a,b; Powlishta *et al.*, 1994; Susskind & Hodges, 2007; Verkuyten & Thijs, 2001; Yee & Brown, 1994; Zalk & Katz, 1978). Nonetheless, these findings are largely based on trait-based measures and it is uncertain whether this pattern would hold when affective evaluations are assessed.

By separately measuring positive and negative affect, we were able to address our third research question (RQ3): how should we interpret the global attitude measure findings that have been previously reported in the literature? We predicted that children's general liking of girls and boys, assessed using Yee and Brown's (1994) global affective orientation measure, would be more closely linked to positive rather than negative affective attitudes given the framing of the question in that measure ('How much do you like girls/boys?'). However, we remained open to the possibility that it might be related to both positive and negative affective attitudes given the bipolar nature of the scale.

We also developed a measure based on the SIP model of Crick and Dodge (1994) and on gender schema approaches to understanding gender development and peer interaction (e.g., Martin *et al.*, 2002), to assess children's outcome expectancies related to interacting with same- and other-gender peers. In this measure, we used vignettes of various situations involving interactions with same- and other-gender peers, and asked children about their expectations of inclusion and their expectations of psychological and social costs. This measure enabled us to explore children's expectancies about both the positive aspects and negative aspects of interactions with peers of both genders.

We used this measure to address the fourth research question (RQ4) that asks whether children show more positive inclusion expectancies and lower perceived costs involved with same-gender versus other-gender peer interactions. We expected that children would have higher inclusion expectancies associated with same-gender interactions (i.e., more positive expectancies about being invited to join in interactions with same-gender children) and that they would perceive higher costs (i.e., negative expectancies) involved with interacting with other-gender peers (e.g., teasing). We also predicted that boys would perceive higher costs involved with interacting with the other sex as compared to girls, given that boys face greater sanctions for and self-presentational concerns for

cross-gender behaviours (Banerjee & Lintern, 2000; Blakemore, 2003; Smetana, 1986; Stoddart & Turiel, 1985). Thus, although we expected greater inter-group attitudinal bias among girls, we expected that boys would hold beliefs about other-gender interactions that would be more negative than those of girls.

The final research question (RQ5) concerned how children's attitudes about same- and other-gender peers relate to their outcome expectancies about interacting with those peers. Although we generally expected that positive attitudes would relate positively to inclusion expectations and negatively to costs, and that negative attitudes would relate negatively to inclusion expectations and positively to costs, we also thought that positive and negative attitudes might differ in the degree to which they were predictive of outcome expectancies. For instance, if children's inter-group attitudes are characterized more by in-group favouritism than by out-group derogation, one might expect that positive attitudes are more predictive of expectations related to interacting with the other gender. As such, children's orientation towards other-gender peers might be better characterized as showing a lack of approach rather than avoidance. We focused our investigation on own-gender attitudes in relation to own-gender outcome expectancies and other-gender attitudes in relation to other-gender outcome expectancies, rather than all possible relations because we were most interested in explaining how attitudes towards the in-group or out-group relate to outcome expectancies for that same group. We also expected that given the global nature of the Yee and Brown (1994) items assessing children's general liking of girls and boys, this measure would not predict outcome expectancies as well as the decoupled positive and negative affective attitude scales.

Methods

Participants

Participants were 98 (63 girls, 35 boys) fifth-grade students ($M = 10.16$ years, $SD = .43$, range = 9-11) from public schools in a large metropolitan area in the Southwestern United States. The students were relatively ethnically diverse (57% white, 16% Latino, 6% black/African American, 3% Native American, 2% Asian, and 14% mixed race). Approximately a fifth (22%) of the participants spoke a language other than English at home and, in most cases, (62%) that language was Spanish. On average, parents had at least some college education (had completed between some college/associates degree or had a college degree) and had a household income in the range of \$60-80,000.

Procedure

Students, seated in small groups of 4-5, were administered a questionnaire packet by a trained research assistant in a single 25- to 30-min session during school hours. The measures used in this study were part of a larger questionnaire protocol that included other measures related to gender attitudes and school liking. Because a number of the measures were administered twice in the session - once asking about girls and once asking about boys, we grouped the measures such that children either received all of the measures asking about girls in the first half of the packet and the measures asking about boys in the second half of the packet, or *vice versa*. Two additional orders were also created to vary the orders of the measures within the first and second halves of the protocol. Thus, children received one of four possible orders. All children within a testing group received questionnaires in the same order by measure (though we randomized

whether children were asked questions about girls or boys in the first versus second half of the packet), and the research assistant guided children through the first half of the questionnaire by first reading children the instructions to each measure and a sample question to make sure they understood how to use the response scales. At the end of each measure, children were instructed to wait for directions to turn the page to the next measure. Children were then allowed to pace themselves through the second half of the packet. Children received pencils with the university logo as a thank you gift and schools were paid \$5 per child who participated in the study.

Measures

Global liking

Children's global ratings for liking girls and boys were assessed using a measure developed by Yee and Brown (1994). Children were asked 'How do you feel about girls' and 'How do you feel about boys' and asked to respond on a 7-point scale from 1 (*don't like at all*) to 7 (*like a lot*) with corresponding smiley faces that ranged from a big frown, to a straight neutral mouth, to a big smile.

Gender-related affective attitudes

We developed a measure to separately assess children's positive and negative feelings about girls and boys. Children were asked 'How many girls/boys make you feel . . .' followed by seven positive (happy, good about yourself, like you want to be their friend, excited to hang out, comfortable, like you can be relaxed, energized like you want to run and jump around) and seven negative (sad, bad about yourself, like you want to get away from them, shy, angry, frustrated, scared) items. Items were selected based loosely on classic models of the structure of affect (Russell, 1980; Tellegen, Watson, & Clark, 1999; Watson & Tellegen, 1985) to reflect a range of positive and negative affective states, including states along dimensions of pleasantness-unpleasantness and high versus low arousal. Children responded on a 4-point scale, with 0 = *none*, 1 = *a few*, 2 = *some*, and 3 = *all*. We chose to frame the questions to ask 'how many' rather than the more common 'how much do' because we felt this phrasing more closely reflects children's perceptions of the degree to which girls and boys as groups evoked certain feelings rather than how often they experienced certain feelings as the result of interactions with girls and boys; we felt the former more closely tapped into group-related attitudes and might be less prone to the effects of low-frequency events (e.g., anger). Confirmatory factor analyses using promax rotation showed clear two-factor solutions in which the positive and negative items fell into two separate factors for both girl and boy targets. Loadings ranged from .76 to .84 for the positive scale for girl targets, and .46 to .86 for the negative scale for girl targets, and .69 to .87 for the positive scale for boy targets and .40 to .81 for the negative scale for boy targets. For analyses, four separate scales were created by averaging items for positive and negative affective attitudes related to same-gender (positive: $\alpha = .89$, negative: $\alpha = .84$) and other-gender (positive: $\alpha = .85$, negative: $\alpha = .81$) peers.

Outcome expectancies

Our main dependent variables, children's outcome expectancies for interacting with same- and other-gender peers, were assessed using three scenarios. Participants were asked to imagine that they were in different school-related social situations in which

they faced the possibility of joining a group of same- or other-gender peers or pairing up with an individual same- or other-gender peer. The scenarios included a group of girls/boys playing a fun game, children working on a group project in class and the only available seat is in a group of all girls/boys, and children having to pair up for a new classroom activity and the only remaining seat is next to a girl/boy. The scenarios were presented twice to each child. In the first half of the interview, children were presented the scenarios for one gender, and in the second half they were presented the scenarios for the other gender. After presenting each scenario, children were asked the same five questions. One of the questions involved expectancies related to being accepted (i.e., 'Do you think the boy(s)/girl(s) would let you join/sit with him/her?'), two of the questions involved expectancies about enjoying interacting with the girl(s)/boy(s) (i.e., 'Do you think you would want to join/sit with the boy(s)/girl(s)?', 'Do you think you would have fun joining/sitting with the boy(s)/girl(s)?'), and two other questions involved expectancies related to social and psychological costs (e.g., 'Do you think other kids would tease you for joining/sitting with the boy(s)/girl(s)?', 'Do you think it would make you feel uncomfortable or embarrassed to join/sit with the boy(s)/girl(s)?'). Children responded on a 5-point scale, with 0 = *no, not at all*, 1 = *probably not*, 2 = *maybe*, 3 = *probably*, and 4 = *yes, definitely*. These questions were derived from pre-adolescent children's open-ended responses in focus groups about expectations associated with interacting with same- and other-sex peers (Miller, Wheeler, Updegraff, & Foster, 2010).

Initially, scales were created by averaging items related to being accepted, enjoyment, and costs separately for own versus other-gender targets. The acceptance and enjoyment scales were highly correlated (own gender: $r(98) = .61, p < .001$, other gender: $r(98) = .70, p < .001$) and were therefore combined to create acceptance/enjoyment scales that we will refer to as the *expectancies about inclusion* scales for own-gender ($\alpha = .89$) and other-gender ($\alpha = .92$) peer interactions. The costs scales also demonstrated good internal reliability for own-gender ($\alpha = .85$) and other-gender ($\alpha = .83$) peer interactions. Since the scenarios involved different contexts (i.e., group vs. pair), we additionally conducted all analyses separately for the group versus pair scenarios. Although observed relations tended to be stronger for the group scenarios, findings were consistent across both types of scenarios. Therefore, we used scales that combined items across scenarios.

Results

Descriptive analyses

To address our first four research questions, we conducted bivariate correlations to investigate relations between measures and mixed-model Analyses of Variance (ANOVAs) to investigate mean differences on each of the three measures. For the ANOVAs, participant gender was the between-subjects factor and own- versus other-gender peer targets was the within-subjects factor. Means are presented in Table 1.

The relations of positive and negative affective attitudes

To address the first research question (RQ1), we examined the associations between positive and negative attitudes about same- and other-gender peers. Positive feelings about own-gender peers were associated with positive feelings about other-gender peers, $r(98) = .25, p = .014$. Similarly, negative feelings about own-gender peers were associated with negative feelings about other-gender peers, $r(98) = .40, p < .001$.

Table 1. Means (SD) for attitude measures and outcome expectancy measures by participant gender and own- versus other-gender targets

Participant gender	Attitude measure					
	Global liking ^a		Positive affective attitudes ^b		Negative affective attitudes ^b	
	Own gender	Other gender	Own gender	Other gender	Own gender	Other gender
Girls	5.94 (1.18)	4.79 (1.28)	2.71 (.87)	1.75 (.86)	1.14 (.84)	1.29 (.76)
Boys	5.57 (1.50)	4.69 (.96)	2.60 (1.04)	1.74 (.90)	.73 (.61)	.81 (.73)
Total	5.81 (1.31)	4.76 (1.18)	2.66 (.93)	1.74 (.87)	.99 (.79)	1.12 (.78)
Participant gender	Outcome expectancy measure					
	Inclusion expectancies ^c		Cost expectancies ^c			
	Own gender	Other gender	Own gender	Other gender		
Girls	3.03 (.79)	2.13 (.86)	.39 (.63)	1.47 (.96)		
Boys	3.22 (.37)	2.23 (.84)	.29 (.50)	1.41 (.90)		
Total	3.10 (.67)	2.17 (.85)	.35 (.59)	1.45 (.93)		

Note. ^aResponse scale ranged from 1 to 7. ^bResponse scale ranged from 0 to 3. ^cResponse scale ranged from 0 to 4.

These findings indicate that a factor such as children's more general sociability might have influenced children's affective attitudes, but the moderate correlations indicate that such a variable is unlikely to fully account for children's expressed feelings about own- and other-gender peers. Furthermore, positive and negative affective attitudes were negatively correlated for own-gender peers, $r(98) = -.47, p < .001$, but were not correlated for other-gender peers, $r(63) = -.16, n.s.$ Thus, feeling more positively about a gender group was not necessarily associated with feeling less negatively about that same group.

The nature of positive and negative affective attitudes

To address our first and second research questions (RQ1 and RQ2), we conducted a mixed-model ANOVA with a 2 (target gender: own vs. other gender) \times 2 (participant gender: girls vs. boys) design. This analysis revealed a significant main effect for target gender, $F(1, 96) = 60.07, p < .001, \eta^2 = .39$. As expected, girls and boys had significantly more positive feelings about own-gender peers than other-gender peers, $t(62) = 6.70, p < .001$, and $t(34) = 4.75, p < .001$, respectively. We expected that girls may have stronger inter-group attitudes than boys (RQ2) but there was not a significant main effect for gender, $F(1, 96) = .14, n.s.$, and there was not an interaction between gender and target gender, $F(1, 96) = .19, n.s.$ Thus, girls and boys showed an in-group positivity bias that was similar in magnitude and direction.

The analysis of negative affective attitudes involved a 2 (target gender: own vs. other gender) \times 2 (participant gender: girls vs. boys) mixed model ANOVA. The analysis did not show that children held negative attitudes towards other-gender peers but it did reveal a significant main effect for participant gender, $F(1, 96) = 11.89, p = .001, \eta^2 = .11$. Compared to boys, girls had more negative feelings about peers. There was not a

significant main effect for target gender, $F(1, 96) = 1.61$, n.s., and there was not an interaction between participant gender and target gender, $F(1, 96) = .15$, n.s. Thus, contrary to expectations of some inter-group research (Carver *et al.*, 2003; Egan & Perry, 2001; Kowalski, 2007; Powlishta, 1995a,b; Powlishta *et al.*, 1994; Susskind & Hodges, 2007; Yee & Brown, 1994; Verkuyten & Thijs, 2001; Zalk & Katz, 1978), children did not appear to exhibit negative feelings for the out-group, and girls appeared to express overall more negative feelings about children of both genders. Nonetheless, even girls' more negative attitudes were not very negative. Girls' mean responses for both genders indicated they had negative feelings about only between 'a few' and 'some' girls and boys.

The nature of children's global liking ratings

Children's ratings of global liking for own- versus other-gender peers were not correlated, $r(98) = .069$, n.s., indicating that children's ratings of liking of own- versus other-gender peers were independent of one another. A 2 (target gender: own vs. other gender) \times 2 (participant gender: girls vs. boys) mixed-model ANOVA on liking ratings revealed a significant main effect for target gender, $F(1, 96) = 32.06$, $p < .001$, $\eta^2 = .25$. Girls and boys liked own-gender peers significantly more than they liked other-gender peers, $t(63) = 4.84$, $p < .001$, and $t(35) = 3.96$, $p < .001$, respectively. There was not a significant main effect for gender, $F(1, 96) = 1.53$, n.s., and there was not an interaction between gender and target gender, $F(1, 96) = .52$, n.s. Thus, girls and boys showed an inter-group bias that was similar in magnitude and direction.

Exploring the relations between global liking and affective attitudes

To address the third research question (RQ3) concerning how global measures of attitudes relate to more fine-grained attitudinal measures, relations between the measures were assessed. Children's global liking ratings for own-gender peers were positively correlated with positive affective attitudes about own-gender peers, $r(98) = .41$, $p < .001$ and other-gender peers, $r(98) = .31$, $p = .002$, but were not correlated with negative affective attitudes about own-gender, $r(98) = -.036$, n.s., and other-gender, $r(98) = -.17$, n.s., peers. As we predicted, the global liking ratings appeared to be a better gauge of positive rather than negative feelings.

The nature of children's inclusion and costs expectancies

To address the fourth research question (RQ4) concerning the nature of children's outcome expectancies for interacting with same- and other-gender peers, we first examined relations among the types of expectancies. Expectancies about inclusion and costs were negatively correlated for both own-gender ($r(98) = -.33$, $p = .001$) and other-gender peers ($r(98) = -.42$, $p < .001$). Expectancies about inclusion for own-gender peers were not correlated with expectancies about inclusion for other-gender peers, $r(98) = .002$, n.s. However, expectancies about costs for own-gender and other-gender peers were significantly correlated, $r(98) = .30$, $p = .003$. Thus, children who expected costs involved with interacting with the other gender also perceived greater costs involved with interacting with own-gender peers. However, children's expectancies about being included by and enjoying their interactions with own- and other-gender peers were generally not associated.

To assess mean level differences in expectancies about inclusion for same- and other-gender peer interactions, a 2 (target gender: own vs. other gender) \times 2 (participant gender: girls vs. boys) mixed-model ANOVA was conducted on outcome expectancies about inclusion. The analyses showed a pattern consistent with predictions: the main effect for target gender was significant, $F(1, 96) = 67.16, p < .001, \eta^2 = .41$, indicating that children had higher expectancies related to inclusion for own-gender peers compared to other-gender peers. There was no main effect for participant gender, $F(1, 96) = 1.72, n.s.$, and no interaction between target and participant gender, $F(1, 96) = .17, n.s.$ Thus, girls and boys were similar in their higher expectancies for inclusion related to own-gender peers.

A similar analysis was conducted on expected costs of interacting with same- and other-gender peers. As expected, the main effect for target gender was significant, $F(1, 96) = 121.91, p < .001, \eta^2 = .56$, indicating that children perceived higher costs related to interacting with other-gender peers compared to own-gender peers. There was no main effect for participant gender, $F(1, 96) = .35, n.s.$, and no interaction between target and participant gender, $F(1, 96) = .067, n.s.$ Thus, girls and boys were similar in their perceptions of greater costs related to interacting with other- versus own-gender peers.

Relations between attitudes and expectancies

We conducted a series of multiple regression analyses to investigate the relations between the various attitude measures and outcome expectancies (RQ5). To adjust for children's more general sociability (or lack thereof), all analyses included as a covariate attitudes about the group other than the one that was the focus in a particular model (i.e., for analyses involving own-gender peers, other-gender attitudes was the covariate, and *vice versa*). In each of the analyses, outcome expectancies (inclusion or costs related to own- or other-gender peers) served as the dependent variable. Participant gender (girls were coded 0 as the reference group) and attitudes related to the other group were entered in the first step. The attitude variable (global liking, positive affective attitudes, or negative affective attitudes related to own- or other-gender peers, all mean-centred) was entered in the second step, and the interaction between gender and attitudes was entered in the third step. The results are organized such that within each section, we first present results related to own-gender peers, followed by results for other-gender peers.

Relations between global liking and outcome expectancies

Children's global liking of own-gender peers was not significantly related to own-gender inclusion expectancies ($R^2 = .12, b = .078, n.s.$). However, greater global liking of other-gender peers was significantly associated with higher inclusion expectancies with other-gender peers ($R^2 = .14, b = .23, p = .005$). No relations were found between global liking ratings and cost expectancies for own- and other-gender peers.

Relations between positive affective attitudes and outcome expectancies related to inclusion

Children's positive affective attitudes about own-gender peers were significantly associated with own-gender inclusion expectancies and there was a significant interaction between participant gender and positive affective attitudes (see Table 2). Follow-up

Table 2. Hierarchical regression analyses investigating the relation between positive affective attitudes and outcome expectancies related to inclusion and costs

	Inclusion (N = 98)		Costs (N = 98)	
	b	t	b	t
Target: own-gender peers				
Participant gender	.23*	2.00	-.11	-.97
Other-gender attitudes (covariate)	-.089	-1.35	.20**	3.033
Own-gender attitudes	.55***	6.80	-.301	-3.84
Own-gender attitudes × participant gender	-.34**	-2.81	.37**	3.14
Final R ²		.36		.21
Target: other-gender peers				
Participant gender	.11	.72	-.076	-.40
Own-gender attitudes (covariate)	.027	.33	-.23*	-2.21
Other-gender attitudes	.61***	5.79	-.29*	-2.19
Other-gender attitudes × participant gender	-.13	-.75	.37	1.66
Final R ²		.34		.11

Note. Participant gender and the covariate were entered in the first step, positive attitudes were entered in the second step, and the interaction between participant gender and positive attitudes was entered in the third step. The *b*'s presented are from the final model.

* $p < .05$; ** $p < .01$; *** $p < .001$.

regression analyses conducted separately for girls and boys revealed that more positive affective attitudes were related to higher own-gender inclusion expectancies for both sexes but more strongly for girls ($R^2 = .38$, $b = .56$), $t(62) = 5.99$, $p < .001$, compared to boys ($R^2 = .25$, $b = .16$), $t(34) = 2.71$, $p = .011$.

Children's positive affective attitudes about other-gender peers were also significantly associated with other-gender inclusion expectancies and this effect did not differ by participant gender (see Table 2). Thus, more positive affective attitudes were associated with higher inclusion expectancies among girls and boys for both own- and other-gender peers.

Relations between positive affective attitudes and outcome expectancies related to costs

Children's positive affective attitudes about own-gender peers were significantly associated with own-gender cost expectancies, although this effect was qualified by a significant interaction between attitudes and participant gender (see Table 2). Follow-up regression analyses conducted separately for girls and boys revealed that more positive affective attitudes was significantly associated with lower cost expectancies for girls ($R^2 = .20$, $b = -.30$), $t(62) = -3.53$, $p = .001$, but not boys ($R^2 = .22$, $b = .061$), $t(34) = .75$, n.s.

More positive affective attitudes about other-gender peers were significantly associated with lower other-gender cost expectancies (see Table 2). Thus, more positive affective attitudes were associated with lower cost expectancies for both own- and other-gender peers, although in the case of own-gender peers, this association was only significant among girls.

Table 3. Hierarchical regression analyses investigating the relation between negative affective attitudes and outcome expectancies related to inclusion and costs

	Inclusion (N = 98)		Costs (N = 98)	
	b	t	b	t
Target: own-gender peers				
Participant gender	.20	1.39	.004	.033
Other-gender attitudes (covariate)	.24**	2.67	-.019	-.25
Own-gender attitudes	-.41***	-4.20	.36***	4.22
Own-gender attitudes × participant gender	.21	1.08	-.13	-.73
Final R ²		.19		.19
Target: Other-Gender Peers				
Participant gender	-.017	-.09	.17	.87
Own-gender attitudes (covariate)	.002	.02	.34**	2.70
Other-gender attitudes	-.39**	-2.67	.30 [†]	1.96
Other-gender attitudes × participant gender	.23	.95	-.21	-.82
Final R ²		.089		.16

Note. Participant gender and the covariate were entered in the first step, negative attitudes were entered in the second step, and the interaction between participant gender and negative attitudes was entered in the third step. The *b*'s presented are from the final model.

[†]*p* = .053; ***p* < .01; ****p* < .001.

Relations between negative affective attitudes and outcome expectancies

More negative affective attitudes were associated with lower inclusion expectancies for own- and other-gender peers among both girls and boys (see Table 3). More negative affective attitudes about own-gender peers were also significantly associated with greater own-gender cost expectancies. This association approached significance for other-gender peers (see Table 3).

Discussion

In this study, we developed two new measures to gain a deeper understanding of children's feelings and expectations related to interacting with own- and other-gender peers. The first measure we developed decoupled positive and negative affective attitudes about same- and other-gender peers. Consistent with inter-group theory perspectives (Brewer, 2001; Cameron *et al.*, 2001), our results indicated that children's positive affective attitudes were distinct from their negative affective attitudes. This finding suggests additional research is needed to identify the sources of both types of feelings.

The present results provide the first direct evidence relevant to a debate about the nature of gender-related inter-group relations in young children. Because of the intimate interdependence of men and women as adults, gender relations can be characterized by ambivalent feelings, involving both benevolent and hostile aspects (Glick & Fiske, 2001). When this line of reasoning has been applied to children, the assumption has been that they have yet to develop intimacy with members of the other gender, therefore there would be no offsetting of the hostile aspects by feeling of benevolence. If this were the case, we would expect that children's feelings about the other gender would

be characterized by hostility and positive feelings would not be evident (Rudman & Glick, 2008). However, we found a very different picture: children's inter-group gender attitudes are best described as expressing an in-group positivity bias. Children felt more positively about their own gender, and they felt little negativity for either gender.

The present findings also provide insights into the nature of gender differences in attitudes. Contrary to evidence using trait-based measures, we did not find greater inter-group bias among girls as we had predicted. This finding suggests that the patterns ascertained from the trait-based measures might have resulted from girls' holding 'boys are bad' stereotypes (Heyman, 2001) that coloured their attitudes towards them.

As we expected, children's ratings of global liking for own- and other-gender peers, measured using a bipolar scale used in past research (Yee & Brown, 1994), were related to positive, but not negative, affective attitudes, indicating that this measure is a better gauge of positive rather than negative evaluations. Given that children's attitudes were generally not negative, the lack of association with negative affective attitudes might also indicate the need for a more sensitive measure to detect already low levels of negativity.

How do we reconcile these findings showing a lack of out-group negativity bias or prejudice among children with relatively widespread conclusions that girls and boys show a strong dislike for one another? One explanation is that such conclusions have been largely based on children's behavioural avoidance of other-gender peers (i.e., gender segregation), rather than direct assessment of children's attitudes. Because of the ubiquity and strength of gender segregation, it is easy to draw the conclusion that strong levels of other-group negativity must drive this behaviour. However, gender segregation may result from the process of individual children's slight preference for interacting with in-group members becoming magnified when they are played out over groups of children (see Martin, Fabes, & Hanish, 2011), and need not be explained by the presence of strong dislike of other-gender peers.

Another possible explanation for the lack of out-group negativity bias is that children's bias expressed on trait measures might be a better reflection of children's motivation to express positive distinctiveness of the in-group rather than negative feelings towards the out-group. Children might actually feel quite drawn to the other gender, but perceptions of norms might prevent them from overtly expressing an interest in or liking of the other gender. For example, Thorne's (1986, 1994) work describes how children engage in 'borderwork' or contact with the other gender, as when boys stage 'raids' on girls to disrupt their play. These forms of contact appear more playful rather than hostile (Rudman & Glick, 2008). Children's greater likelihood to engage in mixed-gender play in private settings in which they are less likely to be observed by a larger group of their peers (Bannerje & Lintern, 2000; Thorne, 1986) also suggests that gender segregation at least in part results from perceived costs involved with violating peer norms rather than dislike for the other gender. Further research is needed to identify the nature of the gender-related norms that children fear violating.

Our outcome expectancies measure is a step in the direction of better understanding the role of norms in governing children's gender-related inter-group interactions. As predicted, children's outcome expectancies clearly revealed that children had higher expectations about being included by and enjoying interacting with own-gender peers and that they perceived higher costs involved with interacting with other-gender peers. The effect sizes for these findings were large, suggesting that these gender-related expectations play an important role in children's interactions. These findings are consistent with the idea that children's avoidance of other-gender peers is at least in part motivated by concerns about norm violation. Contrary to our expectations, we

did not find that boys perceived greater costs involved with interacting with the other gender. Further research is needed to explore this finding and the nature of girls' and boys' concerns about norm violation.

Our investigation of the relation between children's gender attitudes and outcome expectancies revealed, as expected, that affective attitudes showed a stronger relation than did global liking with outcome expectancies. Children's global liking ratings were only associated with inclusion expectancies related to other-gender peers, not costs. The more differentiated measure of attitudes showed a different story: both positive and negative affective attitudes were associated with both types of outcome expectancies. More positive affective attitudes were associated with greater inclusion expectancies and lower cost expectancies, and more negative affective attitudes were associated with lower inclusion expectancies and higher cost expectancies. These results indicate that although children's gender-related inter-group attitudes are not characterized by much negativity, negative attitudes are nonetheless consequential and predictive of outcome expectancies.

Associations between positive affective attitudes, and inclusion and cost expectancies related to own-gender peers, were stronger among girls. This finding suggests that positive feelings may be more central to girls' than boys' gender-related decisions about peer interactions. In future research, it will be interesting to examine this possibility by linking affect and expectancies to children's actual preferences to interact with own- and other-gender peers.

Limitations and future direction

Our study design did not allow us to determine directionality: children's inter-group gender attitudes resulting from in-group identification could be thought to shape outcome expectancies or outcome expectancies stemming from children's experiences with their peers could shape gender attitudes. These relations could also be bi-directional and transactional over time. An important future direction would be to test a model that includes changes over time.

Our measure of expectancies related to costs was somewhat limited in its ability to describe the various types of costs children perceive related to interacting with own- and other-gender peers. We are currently developing an expanded version of this measure.

Children's attitudes about own- and other-gender peers were correlated, suggesting the influence of individual differences in sociability. Although we adjusted for such effects in the regression analyses, future studies should more directly measure and adjust for sociability. It would also be interesting to examine the role of children's positive and negative experiences with peers of both genders, ranging from victimization to close friendships. Social psychologists have argued that personalization facilitates positive changes in attitudes towards out-group members (e.g., Brewer & Miller, 1984), and thus we would expect that children's experiences would be informative of changes in their attitudes. More generally, even though our findings revealed that children on average generally felt positively about own- and other-gender peers, children varied in their positive and negative feelings and it would be important for future research to consider the sources and implication of individual differences.

Our sample was limited to older elementary school aged children, who tend to have more flexible beliefs about behaviours that are appropriate for girls and boys (Miller, Trautner, & Ruble, 2006). The increased salience of dating and romantic relationships among this age group might also evoke greater interest in and curiosity about other-gender peers (and possibly also greater anxiety about interacting with the

other gender). Future studies should investigate how children's gender-related attitudes and expectancies develop and change across childhood.

Our sample of boys was much smaller than our sample of girls, which might have limited power in our analyses and might account for some of our results that found stronger effects among girls. Nonetheless, it is noteworthy that we achieved relatively strong effects in a number of our analyses despite this limited sample size.

Conclusions

Gender plays an integral role in children's peer relationships. The present study demonstrated that children's feelings about their peers and their expectations related to interacting with their peers vary depending on whether their interaction partners are girls or boys. These findings are relevant to understanding gender-related phenomena, such as gender segregation, as well as expanding the literature on peer relationships to include a consideration of inter-group processes.

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