

## **Learning to control ethnic intergroup bias in childhood**

SARAH FITZROY\* AND ADAM RUTLAND

*University of Kent, UK*

### *Abstract*

*The aim of this research was to identify what factors deter explicit intergroup bias in childhood. Two studies were conducted to examine what facilitates the control of ethnic bias amongst 6–9-year-old majority children. In both studies in-group accountability was either low (i.e., only accountable to experimenter) or high (i.e., also accountable to classmates and teachers). Study 1 (n = 287) found that only 8–9-year-old with low social emotions reduced their bias with increased accountability. Study 2 (n = 236) showed children with low “Theory of Social Mind” (ToSM: Abrams, Rutland, Ferrell, & Pelletier, 2009), who perceived an anti-prejudice in-group norm, decreased their bias when accountability increased. In both studies children high in social emotion and ToSM showed low bias irrespective of accountability. Together these studies make a novel contribution by showing for the first time affective and social-cognitive factors that influence how children learn to control explicit bias. Copyright © 2010 John Wiley & Sons, Ltd.*

Especially when inner conflict is present, people put brakes upon their prejudices. They do not act them out—or they act them out only up to a certain point. Something stops the logical progression somewhere (Allport, 1954: pp. 332)

Allport’s quote shown above suggests that when people experience inner conflict about showing prejudice they may start to exert control over their attitudes. Writing in the USA during the 1950s Allport described a few examples of such conflict and people’s attempt to control their ethnic prejudice. In recent times, with the development of a strong anti-racism norm in the majority of the population (Crandall, Eshleman, & O’Brien, 2002; Dovidio & Gaertner, 2000), research shows that most adults are motivated to control their prejudice (Dunton & Fazio, 1997; Plant & Devine, 1998). However, we still know little about the “something” that Allport said helps stop the development of prejudice, especially amongst children who are known to show explicit ethnic bias at an early age (Aboud, 2003; Clark, Hocevar, & Dembo, 1980; Katz & Kofkin, 1997; Nesdale, 2001, 2004). In this paper we describe two studies that examined affective and social-cognitive factors important in 6–9-year-old children learning to control their ethnic intergroup bias.

Research on adults shows that majority status group members generally attempt to control their prejudice. For example, social psychologists have noted a lack of correspondence between controlled (explicit) and automatic prejudice expression (Devine, 1989; Nosek, 2005; Plant & Devine, 1998). Non-prejudiced individuals are typically motivated to inhibit automatically activated cultural stereotypes and establish or maintain a non-prejudiced identity (Devine, 1989). Evidence suggests that these individuals often, following a possible prejudiced response, devote regulatory effort to figure out how to avoid future prejudiced responses (Monteith, Ashburn-Nardo, Viols, & Czopp, 2002). Majority group adults are also known to expend significant effort to control their expression of prejudice during interracial interaction (e.g., Richeson &

\*Correspondence to: Sarah FitzRoy, School of Psychology, University of Kent, Canterbury, Kent CT2 7NP, UK. E-mail: sbsf2@kent.ac.uk

Shelton, 2003). Still other research on adults has reported differences between explicit reports in public versus private as evidence of the presumed control of prejudice (e.g., Devine, Plant, Amodio, Harmon-Jones, & Vance, 2002; Plant & Devine, 1998).

While we have increasing evidence that adults control their prejudice, we know less about children's self-regulatory efforts. An extensive body of developmental research over the last 60 years has found that ethnic bias is present in ethnic majority children as young as 4 years of age (e.g., Aboud, 1988; Katz & Kofkin, 1997). After this, these children's ethnic bias has been found to peak around 5 years of age and then decline past 7 years of age (e.g., Aboud, 2003; Clark et al., 1980).

Recent research in developmental psychology suggests children's prejudice may decline because they learn to control it when made publically accountable (e.g., Abrams, Rutland, Cameron, & Ferrell, 2007; Monteiro, França, & Rodrigues, 2009; Rutland, Cameron, Milne, & McGeorge, 2005). For example, Rutland and colleagues showed that increasing children's *accountability* to their peer group, in the sense that their actions are visible and may have to be defended or could be criticized, promotes 5-16-year-old children's self-presentational control of their ethnic and national intergroup attitudes.

However, while we have evidence that children seem to control their prejudice, currently there is a dearth of research into developmental factors important in children's learning to control their prejudice. Research in the adult literature has suggested that social emotions (e.g., guilt, embarrassment, and shame) encourage people to self-regulate their attitudes (Devine, Monteith, Zuwerink, & Elliot, 1991; Monteith, 1993; Monteith, Devine, & Zuwerink, 1993; Monteith et al., 2002; Zuwerink, Devine, Monteith, & Cook, 1996). For example, Monteith (1993) argued and found that adults learn to control their prejudiced responses through self-regulation after they realize they have or might respond with greater prejudice than expected. This process results in the experience of negative self-directed affect (e.g., guilt, embarrassment), which acts to control prejudice expression.

Social emotions, such as embarrassment, shame, pride, and guilt (Modigliani, 1968, 1971) are known to develop during middle childhood (Tangney & Dearing, 2002). In particular, developmental research shows that the attribution of social emotions increases substantially between the ages of 5 and 11 years (Bennett, 1989; Bennett, Thompson, Yuill, & Banerjee, 1998; Bennett & Gillingham, 1991). For example, Bennett, Thompson, Yuill, and Banerjee (1998) showed that 5-7 year olds self-attributed significantly fewer social emotions than 9 year olds in a hypothetical incident involving them engaging in a rule violation in front of a passive audience (i.e., no overt reaction to the child's behavior is cited) while being responsible for another child who is a friend.

A more recent study by Banerjee (2002b; Experiment 2) also found that children's attribution of embarrassment increased noticeably between 7 and 8-9 years of age and the attribution of embarrassment was associated with the identification of self-presentational motives suggesting that development of this social emotion is related to the degree to which social evaluation issues are salient to a child. This finding is compatible with other research that suggests people who are prone to frequent and excessive embarrassment tend to be more self-conscious than the average person and are more concerned about receiving negative evaluation from others (Buss, 1986; Edelman, 1987; Leary & Meadows, 1991; Miller, 1995).

We will test two age groups of 6-7 and 8-9 years since the above developmental research suggests that between these ages children begin to develop the self-attribution social emotions such as embarrassment. Research also shows that around this age children's explicit ethnic bias begins to decline while their implicit ethnic bias remains constant (Baron & Banaji, 2006; Rutland et al., 2005) and children become aware of peer or adult norms regarding the expression of intergroup bias (Abrams & Rutland, 2008; Augoustinos & Rosewarne, 2001). We expect to find that 6-7 year olds on average will show little evidence of social emotions and therefore, be less inclined to control their intergroup attitudes; whereas, 8-9 year olds will overall have a higher propensity to show social emotions and thus control their expression of intergroup bias.

We will measure the self-attribution of social emotions using a task similar to previous developmental research described above (e.g., Bennett, 1989; Bennett & Gillingham, 1991), but like Bennett et al. (1998; Experiment 2) the hypothetical scenario involving a rule violation will include the participant being responsible for a younger friend. This context of having the child taking care of a younger friend when committing a *faux pas* was included because it accentuated the potential for social emotions in the situation. The only difference compared to previous research is that our version will only include the self-story scenario whereby the child commits an embarrassing act and not when the child's friend commits the act. The reasoning for inclusion of the self-story only is that children's feelings of blame for the friend

committing the act were only shown in 9–11-year-old children (Bennett et al., 1998). The important matter here is that using this task allows us to determine whether the participant also attributes social emotions to this young friend (i.e., other attribution).

We contend that the self-attribution of social emotions suggests children have social evaluation concerns. Moreover, if children also experience social emotions on behalf of a friend they should be able for example, to appreciate the feelings other people close to them (e.g., in-group classmates and teachers) might have if they contravene an in-group norm about the inappropriateness of expressing ethnic intergroup bias. Hence, older children (i.e., above 8 years) with a higher on average propensity to show self and other-attribution of social emotions should demonstrate more control of their explicit ethnic attitudes than younger children (i.e., below 8 years).

This study will examine the control of children's intergroup attitudes by manipulating public accountability by using a similar technique to that utilized by Abrams et al. (2007), whereby children were told their answer's would be shown to other children from their in-group. In this study to increase the strength of public accountability children will be informed that both in-group classmates and teachers will see their answers to an explicit ethnic attitude measure. However, importantly, there will still be some public accountability in the control condition since an experimenter will be present during testing.

We expect children 8 years and above with a lower individual propensity to attribution self and other social emotions will not easily appreciate the feelings of the in-group. They will need to rely on social cues (i.e., high public accountability) to facilitate self and other attribution of social emotions and the control of ethnic intergroup bias. Therefore, these older children's intergroup attitudes will be affected by the public accountability manipulation and they will decrease their bias in the experimental compared to the control condition. In contrast, older children with an high individual propensity to show social emotions should show an immediate interruption in their ongoing behavior and prospective reflection which will prevent biased responses in both the control (i.e., lower public accountability) and experimental (i.e., higher public accountability) conditions.

## METHOD

### Participants

287 White British children (153 males and 134 females) aged 6–9 years of age were selected from ethnically homogeneous primary schools in a suburb of London. The schools' ethnic composition reflected the ethnic diversity of this London suburb (Census 2001, Office for National Statistics); with 91.5% White British children, 2.91% Black African/Caribbean-British children and 5.59% from other ethnic minorities (e.g., Asian-British, Chinese-British, mixed ethnicity). All the teachers in the schools were White British. There were two age groups of children; one hundred and thirty 6–7 year olds ( $M = 6$  years and 5 months,  $SD = 5$  months) and a hundred and fifty seven 8–9 year olds ( $M = 8$  years and 5 months,  $SD = 5$  months).

### Procedure

Children were tested individually in their schools. First they completed a modified version of the social emotion task (Bennett et al., 1998). Following this they completed an explicit ethnic intergroup attitude task (Aboud, 2003; Doyle & Aboud, 1995) whilst they were either under low or high public accountability. Boys and girls in each age group were randomly assigned to either the low or high public accountability condition. Public accountability was manipulated using a similar technique to that employed by Abrams et al. (2007). In the high public self-focus condition ( $n = 144$ , 50.2%) children were told that their ethnic in-group classmates and teachers would see their answers to the explicit intergroup attitude task. In the low public self-focus condition ( $n = 143$ , 49.8%) children were told that their answers on this task would not be shown to their ethnic in-group classmates and teachers. Immediately after the children had completed all the measures they were debriefed and given a parental debrief form to ensure them that although they had been told their

answers' would be shown to classmates and teachers this was just for the study and actually none of their answers' would be shown.

## Measures

### *Social Emotions*

Children were presented with two hypothetical vignettes similar to those used by Bennett et al. (1998) and in these stories the child themselves was cast as the central character. In each vignette, they were described as committing a *faux pas* in a public setting. There were two story contexts (supermarket and bus stop). For instance the bus-stop context story; "Imagine you're out shopping in the supermarket with your mum and with a little 2-year-old friend called Jo. Your mum needs to fetch some bread, so she says to you, "Please look after little Jo for a minute. Make sure that Jo behaves. Do you think you could do that?" So Mum goes off to get the bread, and you wait with Jo next to the tins of baked beans. You're holding Jo's hand, when suddenly, you knock over the whole pile of baked beans tins [CRASH!]. The bean tins roll all over the floor, and all the people in the shop are looking at you. They all saw what happened."

Each child heard both contexts and the order of presentation was counter-balanced. Each story was accompanied by two colored pictures, the first showing their mother asking the child to look after the toddler and the second showing the negative event with onlookers.

Children were asked the following questions (the same in both story contexts): (a) "Now remember, you were supposed to be looking after little Jo. How would you feel about what happened? Why? (Anything else?); (b) "How would little Jo feel about what happened? Why?"

### *Scoring of Social Emotions*

Children's answers to questions (a) and (b) were coded as either showing social emotions or not (i.e., 1 = social emotions attributed or 0 = no social emotions attributed). The social emotions included in the children's answers were embarrassment, guilt, or shame. Nearly all social emotion responses included the word embarrassed, though on some occasions, clear paraphrases were accepted: "I'd feel silly because everyone is staring at me." Some other children said they would feel silly or stupid, but as they did not refer to the scrutiny of others, these were coded as zero.

The answers to questions (a) and (b) were then added together separately for both contexts (supermarket and bus stop) to produce a score ranging from 0 to 2. These scores were positively correlated for bus and supermarket contexts ( $r = .21$ ,  $p < .01$ ) and thus were added together and averaged to produce one final 'social emotions' score. For ease of analysis, a threshold split of  $> 0$  was used on the social emotion scores so that children who did not attribute social emotions had scores below this threshold ( $N = 142$ , 49.5%) and children who did social emotions had scores above this threshold ( $N = 145$ , 50.5%).

One tenth of all responses, randomly selected from each age group, were double-coded by an independent judge. Inter-rater agreement exceeded 81% in all cases demonstrating satisfactory inter-rater reliability.

### *Explicit Ethnic Attitudes*

The Multiple-Response Racial Attitude measure (MRA; Aboud, 2003; Doyle & Aboud, 1995) was used to derive the children's ethnic intergroup bias. The children were presented with 20 traits (10 positive and 10 negative) taken from the Preschool Racial Attitude Measure II (Pram II) Series A (Williams, Best, Boswell, Mattson, & Graves, 1975). These were the same traits as used successfully by Rutland et al. (2005) who also tested children aged 6 years and above and required the participants to evaluate children. The positive traits were: clean, wonderful, healthy, good, nice, happy, friendly, helpful, kind, and smart. The negative traits were: unfriendly, mean, dirty, cruel, stupid, selfish, sick, naughty, sad, and bad.

Children were presented with one copy of each trait on card and asked to place them in four cups showing either a photo of a Black child, a White child, both a Black and a White child or a blank cup. The children were explicitly told they could put the card in the 'Black' cup, the 'White' cup, the 'Both' cup (i.e., both 'Black' and 'White') or in the 'Blank' cup. They were also told the later response meant that they did not think the word described either child. To ensure children understood the meaning of each word, they were given a corresponding definition. To ensure understanding of the task, initially each child was asked to practice assigning traits by attributing four non-evaluative items to each of the categories (Black-Gutman & Hickson, 1996). These items were 'likes to run', 'likes to sing', 'likes TV', and 'likes music'.

The number of traits assigned to the Black child and White child was computed. Four scores were calculated; a positive and a negative trait score for each ethnic group, each with a possible range of 0–10. The higher the scores on positive traits and the higher the scores on negative traits the more positive and negative the child's ratings, respectively. Then a positive bias score was derived by subtracting the out-group positive trait score from the in-group positive trait score; and a negative bias score was derived by subtracting the in-group negative trait score from the out-group negative trait score. Finally the positive bias score was added to the negative bias score and divided by 2 to give an intergroup bias score, the higher this score meant the more ethnic intergroup bias shown.

## RESULTS AND DISCUSSION

The correlations between all variables are shown in Table 1. A  $\chi^2$  test of independence was performed to examine the relation between children's social emotions and age group. There was a significant association between age and social emotions  $\chi^2(4, N = 287) = 15.85, p < .01$ . As can be seen from Table 2, children increased their self-attribution of social emotions with age so that a significantly higher percentage of 8–9-year-olds showed social emotions (58.6%,  $n = 92$ ) than did 6–7 year olds (40.8%,  $n = 53$ ).

Children's explicit ethnic intergroup attitude scores were submitted to a 2 (Age)  $\times$  2 (Public accountability)  $\times$  2 (Social emotion level; high and low) between participants ANOVAs. As expected we found a significant three way interaction between Social emotions, Public accountability and Age,  $F(1, 279) = 3.83, p < .05, \eta^2 = .02$ . The sample was then split by age group and there was a significant interaction between Public accountability and Social emotions for 8–9 year olds  $F(1, 279) = 4.08, p < .05, \eta^2 = .03$  but not for 6–7 year olds  $F(1, 279) = .67, p > .05$ . (see Figure 1a, b). Simple main effects

Table 1. Correlations, means, and standard deviations for age, social emotions, and explicit intergroup bias

	1	2	3
1. Age	—		
2. Social emotions	.17*	—	
3. Intergroup bias	-.08	.01	—
4. Means	7.60	2.60	-0.21
5. SDs	1.09	0.88	2.22

\* $p < .05$ .

Table 2. Percentage of 6–7 and 8–9 year olds showing social emotions

	Age groups	
	6–7 years	8–9 year olds
No social emotions	59.2% $n = 77$	41.4% $n = 65$
Social emotions	40.8% $n = 53$	58.6% $n = 92$

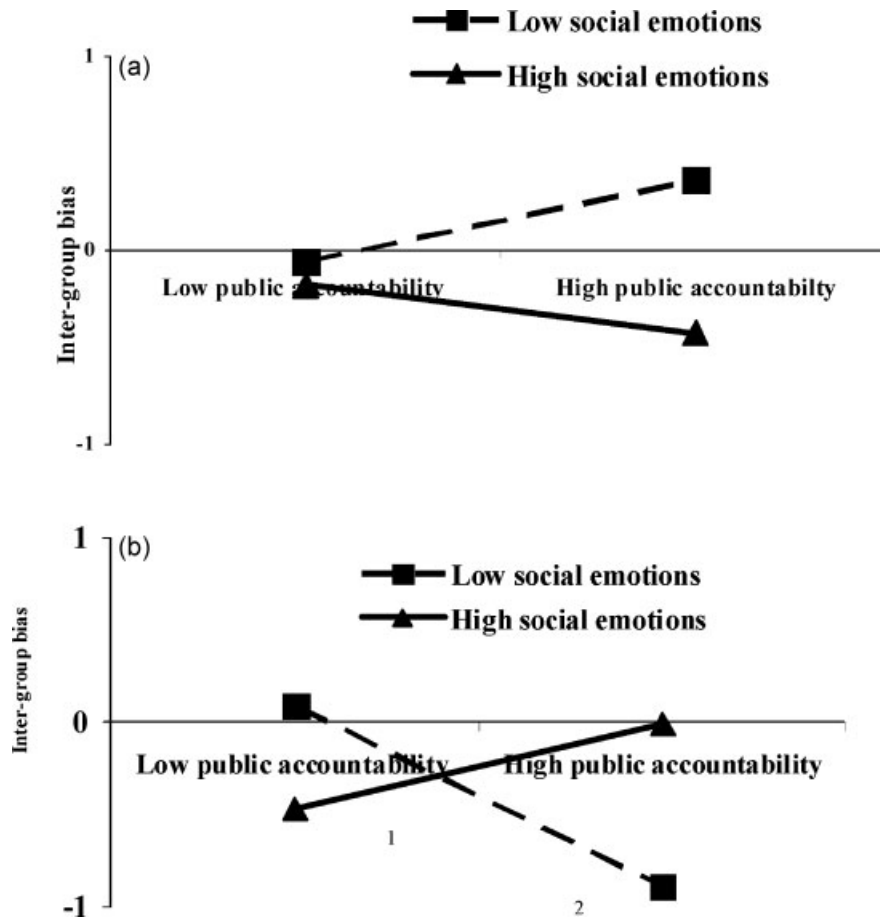


Figure 1. (a) The effect of public accountability on high and low social emotion 6–7-year-old children's intergroup bias. (b) The effect of public accountability on high and low social emotion 8–9-year-old children's intergroup bias. Note: <sup>1</sup> $p > .76$  <sup>2</sup> $p = .06$

analysis showed that amongst the 8–9-year-old children who did not show social emotions there was a marginally significant effect of Public accountability on intergroup bias,  $t(63) = 1.88, p = .06$ . This is shown in Figure 1b. It is clear from this figure that 8–9-year-old children who did not show social emotions reduced their intergroup bias between the low public accountability condition ( $M = 0.09, SD = 1.45$ ) and the high public focus condition ( $M = -0.89, SD = 2.44$ ). In contrast, it is also evident from Figure 1b that intergroup bias amongst the 8–9-year-old children with a high propensity to show social emotion level was not affected by the public accountability manipulation,  $t(90) = -.97, p > .76$ .

These findings suggest that social emotions moderate older majority status children's developing ability to control their expression of explicit ethnic intergroup bias. The intergroup attitudes of the younger children, who overall showed little tendency to attribute social emotions to the self and others, were as expected unaffected by our public accountability manipulation. Also as predicted our findings suggest that 8–9-year-old children with a higher individual propensity to attribute social emotions, were unaffected by the public accountability manipulation. In contrast, 8–9 year olds with a low individual propensity to show social emotions controlled their ethnic intergroup bias when public accountability was increased. Arguably these children did not establish under low accountability that they and their in-group would feel social emotions (e.g., embarrassment) when answering an explicit ethnic bias measure and only did so when made highly accountable to their ingroup.

These findings appear convergent with the adult literature on prejudice control which shows that the main difference between low and high prejudiced individuals is the ability to control prejudice (Devine, 1989). It is also convergent with research (Monteith, 1993; Monteith et al., 2002) which indicates that social emotions (e.g., guilt, embarrassment) serve as warning signals to facilitate the control of prejudice. Study 1 suggests that the attribution of social emotions is an important

factor in children's developing ability to control of their explicit ethnic intergroup attitudes (Nesdale, Durkin, Maass, & Griffiths, 2005; Rutland, 2004; Rutland et al., 2005; Rutland, Brown, Cameron, Ahmavaara, Arnold, & Samson, 2007).

Research on adults also suggests that they are motivated to control intergroup bias due to specific egalitarian social norms (e.g., Monteith, Deenan, & Tooman, 1996; Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997; Lowery, Hardin, & Sinclair, 2001; Towles-Schwen & Fazio, 2003; Dasgupta & Rivera, 2006). Further, recent research suggests that children's understanding of these social norms requires cognitive effort, in particular the ability to understand other people's mental states, attitudes or beliefs about social relationships (Abrams, Rutland, Ferrell, & Pelletier, 2009; Abrams & Rutland, 2008; Banerjee, 2000). Together this research suggests that social norms and second order mental state understanding may also moderate children's control of their ethnic intergroup bias. To test this proposition we conducted a second study.

## Study 2

In Study 2 we vary public accountability as we did in Study 1, and we anticipate that children's control of their ethnic intergroup bias when held publically accountable will be moderated by their understanding and awareness of the in-group norm about showing intergroup bias. This is because once children understand the in-group social norm they can strategically present the self as acting in accordance with this norm, so giving a positive impression of themselves to the in-group.

Developmental psychologists have recently begun to demonstrate that group norms affect young children's explicit ethnic intergroup attitudes (Apfelbaum, Pauker, Ambady, Sommers, & Norton, 2008; Nesdale, Durkin, Maass, & Griffiths, 2005; Rutland, 2004; Rutland et al., 2005; Rutland et al., 2007). For example, Nesdale et al. (2005) found that 7-year-old children only showed explicit ethnic prejudice when either a pro-prejudice norm and/or an out-group threat was made salient. Nesdale and colleagues also found older 9-year-old children showed evidence of ethnic prejudice control, except when both an in-group pro-prejudice norm and out-group threat was present. Similarly, Rutland et al. (Study 1, 2005) found that 5–16-year-old White British children highly aware of the social norm against expressing explicit racism showed low explicit ethnic prejudice. In contrast, children with little awareness of this norm only inhibited their prejudice when the norm was made salient by increasing their accountability.

We expect children who have a strong awareness that their in-group typically shows low ethnic intergroup bias (i.e., hold an anti-prejudice norm) are mostly likely to inhibit their explicit ethnic intergroup bias under high public accountability. It is possible that children may think their in-group typically shows high intergroup bias (i.e., hold a pro-prejudice norm) and in this case we would not expect children to show any evidence of bias control. Arguably the presence of a pro-prejudice norm is less likely in the domain of ethnic intergroup attitudes because research suggests in western societies amongst most ethnic majority people there is a clear and strong social norm about showing explicit positivity towards the Black ethnic minority out-group (see Crandall et al., 2002; Dovidio & Gaertner, 1998; Zitek & Helb, 2007). In contrast, research suggests that children often perceive pro-prejudice norms in the domain of national intergroup bias (e.g., Rutland, 1999; Bennett et al., 2004; Abrams et al., 2009).

However, the control of explicit intergroup bias by attending to an in-group anti-prejudice norm is also likely to involve recursive reasoning about mental states, since the child is concerned about the way he or she is seen in the mind of others. This ability initially involves what developmental psychologists call 'Theory of Mind' (ToM), namely the capacity to impute mental states or understand what others think and believe (Premack & Woodruff, 1978). Developmental psychologists have typically measured ToM using what are known as 'false belief' tasks which reveal whether children understand that it is possible to hold beliefs that are different from reality (Wimmer & Perner, 1983). Essentially in this task a child is privy to some crucial information that another child does not have and they are judged to hold ToM if they realize the other child will behave consistent with their lack of information rather with the information held by the child.

Developmental research (e.g., Sullivan, Zaitchik, & Tager-Flusberg, 1994) shows children from 5 years of age engage in recursive mental state reasoning about false beliefs (i.e., understand that one person may have a false belief about another person's belief). This second-order false belief understanding is known to develop well into middle childhood (Baron-Cohen, O'Riordan, Stone, Jones, & Plaisted, 1999). From around 6–7 years of age children can understand false beliefs about social, not just physical, stimuli (e.g., Nguyen & Frye, 1999; Symons, McLaughlin, Moore, & Morine, 1997), and begin to understand about false emotions as well as false beliefs (Harris, Johnson, Hutton, Andrews, & Cooke, 1989).

In the present study we measured children's second-order mental state understanding using a measure of Theory of Social Mind (ToSM) first developed by Abrams et al. (2009). This task was selected because we were concerned with children's inferences about the expression of liking or disliking. The ToSM task tests children's ability to distinguish their own feelings about a character from the feelings of a peer who does not share the same information about that character. This requires an ability to use information about the prior social relationship between two peers to make an inference about their feelings towards one another, independently of the child's own knowledge and feelings about that peer. The ToSM task is based in the interpersonal domain, allowing us to be confident that it does not simply measure children's learning of a particular social norm for a specific group.

Further, Abrams et al. (2009) found that children's understanding of group dynamics and norms (i.e., who will be accepted and rejected by the group) was associated with the development of ToSM. Children with high ToSM were able to use this understanding to inform their exclusion judgments of individual group members. This finding suggests that ToSM may be important to children's ability to understand group norms about showing explicit bias and their control of explicit intergroup bias (Rutland, 2004; Rutland et al., 2005; Apfelbaum et al., 2008).

Research suggests that children begin to show second-order mental state understanding involving false emotions (Harris et al., 1989) and liking in social relationships (Abrams et al., 2009) from approximately 6–7 years of age. This is why 6–9-year-old children, who should already show some ToSM ability, were examined within the Study 2. However, unlike in Study 1, the age was used as a continuous variable since the developmental literature has not identified any major shift in children's ToSM ability beyond 6–7 years of age.

In Study 2, we expect children will only control their ethnic intergroup bias when they are aware that their in-group holds an anti-prejudice norm. Furthermore we anticipate that children's ToSM will moderate whether they act in accordance with this in-group norm when held publically accountable to the in-group. Children high in ToSM should readily perceive the anti-prejudice norm even under minimal public accountability (i.e., when only the in-group experimenter is present) and, therefore, show low intergroup bias in both the low and high public accountability conditions. In contrast, we expect children with low ToSM will significantly decrease their intergroup bias between the low and high public accountability conditions, since the manipulation will cue them to attend to and act upon the anti-prejudice in-group norm.

## METHOD

### Participants and Design

236 White British children (123 males, 113 females) aged between 6–9 years ( $M = 7$  years and 9 months,  $SD = 12$  months) were selected from ethnically heterogeneous elementary schools in a predominantly White middle-class suburb outside a large metropolitan city in the southeast region of England. According to the Commission for Racial Equality (2006), only 8.5% of the schools population in this area was from an ethnic minority and all teachers in the schools were White British.

### Procedure

Children were tested individually in their schools after parental/guardian consent was obtained. They first completed in a counter balanced order the ToSM measure (Abrams et al., 2009) and a measure of the children awareness of the in-group norm about showing intergroup bias. Following this, as in Study 1, the children completed an explicit ethnic intergroup bias measure (Aboud, 2003; Doyle & Aboud, 1995) under either low or high public accountability. Assignment to the low or high public accountability condition was random in each age group. Public accountability was manipulated using a same technique to that in Study 1. This created a high public accountability condition ( $n = 120$ , 50.8%) and a low public accountability condition ( $n = 116$ , 49.2%).

### Measures

*Explicit ethnic attitudes.* The MRA (Aboud, 2003; Doyle & Aboud, 1995) was used as a measure of intergroup attitudes, as in Study 1 and was scored in the same way as described in Study 1.



### *Theory of Social Mind (ToSM)*

The ToSM task (Abrams et al., 2009) required children to understand a “false evaluation” of another character. The task has a social focus, requiring understanding of how a first character will feel towards a second character who has secretly stolen the first character’s toys. To answer correctly children must dissociate their own evaluation of the thief from the evaluation held by the first character. They have to understand the mental state of the first character and accurately assess this character’s evaluation of thief. This social situation provides a parallel context to the social cognitive demands children may face when making social judgments about group behavior, such as how other in-group members would feel towards an out-group.

Children were told, “Jack and Chris have just met for the first time. Jack is playing a game with Chris. Jack is having fun and is enjoying playing the game a lot. Then Jack leaves the room to get a drink. While Jack is gone, Chris steals some of Jack’s toys. Jack comes back after Chris has hidden the toys in his pocket.” This story was told with illustrative pictures to aid understanding and to keep the children’s attention. Children were then asked, “Do you think Jack likes Chris?”, and “Why/why not?” Children should state that Jack likes Chris because Jack did not know about the theft.

Responses were scored according to both the judgment of whether Jack would like Chris or not, and also whether the explanation indicated that the child understood that Jack was unaware Chris had stolen the toys. A score of zero was assigned to incorrect answers (“no”) including any with the explanation that Jack would not like Chris because Chris stole/is a thief. A score of 1 was assigned to correct answers, (“yes”) but with a limited explanation (e.g., “because he plays with Chris”). A score of 2 was assigned to correct “yes” answers that included an accurate explanation (e.g., “because he thinks Chris is nice”, or “because he doesn’t know Chris took the toys”). A higher score indicated more advanced ToSM.

### *Awareness of In-group Norm*

In contrast to previous studies (e.g., Rutland et al., 2005) which have assessed children’s personal norms about showing intergroup bias, in this study we examined their awareness of social norms about showing prejudice held by their in-group. Children were presented with a pictorial ambiguous money scenario from the Ambiguous Situations Task (McGothlin, Killen, & Edmonds, 2005; McGothlin & Killen, 2006). In this money situation picture, two children (one White and one Black) are standing outside on a playground. The White child has her/his pockets pulled out with a distressed expression on his face. A £5 note is on the ground behind him. The Black child is bending down picking up the £5 note. Children were first presented with this picture (N.B. boys received a picture with boys as characters and girls were given a picture with girls as characters) then asked to imagine that another white child or white teacher in their class had seen the picture. Then they were presented with 12 different statements that could be said about this picture (six positive and six negative). The six positive statements were: ‘The Black child is picking up the money to give it back to the White child’; ‘The Black child has seen the money but won’t steal it’; ‘The Black child can’t have stolen the money as he/she is not nasty’; ‘The Black child is being helpful’; ‘The Black child is kind so will give the money back to the White child’; ‘The Black child is not bad so will give the money back’. The six negative statements were: ‘The Black child has seen the money and will steal it’; ‘The Black child stole the money because he/she is nasty’; ‘The Black child is a thief’; ‘The Black child is picking up the money as he/she will steal it’; ‘The Black child is not being helpful as he/she will take the money and keep it’; ‘The Black child is bad so will not give the money back’.

Children were then asked to rate how many children and teachers in their class would say the each of the above statements if they saw the picture. A series of response scales was presented, showing proportionate numbers of stick people with labels representing almost all the children/teachers, most of the children/teachers, about half of the children/teachers, a few of the children/teachers, and none of the children/teachers. This was later scored as a scale from 0 (none) to 4 (almost all). Children’s answers for the six positive statement were reversed scored and combined with responses for the six negative statements, so a higher score (above 2) indicated the children thought their in-group would show ethnic bias towards the out-group (i.e., pro-prejudice norm) and lower score (below 2) meant the children perceived their in-group wouldn’t show bias towards the ethnic out-group (i.e., anti-prejudice norm). Analyses revealed the 12 items had good reliability ( $\alpha = .85$ ), so all items were retained for analysis and averaged to give a total prejudice norm score.

Table 3. Correlations, means, and standard deviations for age, ToSM, norm, and explicit intergroup bias

	1	2	3	4
1. Age	—			
2. ToSM	.21*	—		
3. Norm	-.07	.03	—	
4. Intergroup bias	-.22*	-.03	.03	—
5. Means	7.33	1.10	1.56	0.056
6. SDs	1.02	0.71	0.87	2.62

\* $p < .01$ .

## Results and Discussion

The correlations between all variables are shown in Table 3. Analysis of children's intergroup bias was conducted using multiple regression with Age (in months), ToSM score, Prejudice norm score as continuous predictors and Public accountability (dummy coded as high or low) as a binary predictor. To test our hypotheses, procedures recommended by Aiken and West (1991) were followed. We first centered age, ToSM score, Prejudice norm score and Public accountability and computed their two, three, and four way interactions which were then entered hierarchically as predictors of intergroup bias.

Overall the regression model significantly predicted the children's intergroup bias,  $R^2 = .11$ ,  $F(14, 235) = 1.76$ ,  $p < .05$ . Age was a significant predictor of intergroup bias ( $\beta = -.24$ ,  $t = -3.58$ ,  $p < .01$ ), indicating that as age increased intergroup bias decreased. As expected, there was also a significant three-way Prejudice norm  $\times$  Public accountability  $\times$  ToSM interaction ( $\beta = -.14$ ,  $t = -1.97$ ,  $p < .05$ ). A simple slopes analysis revealed that public accountability had a significant effect on intergroup bias for low ToSM ( $t = -2.72$ ,  $p < .01$ ) children but not high ToSM ( $t = 0.36$ ,  $p > .05$ ) children, *only* when they thought their in-group held an anti-prejudice norm (see Figure 2a, b). In these Figures the effects for ToSM are represented by values  $\pm 1$  standard deviation from the mean.

In line with our prediction, only children with low ToSM scores who thought their in-group wouldn't discriminate against the out-group significantly decreased their intergroup bias when public accountability increased. In contrast, children with high ToSM scores who were aware their in-group held an anti-prejudice norm (children with low scores on the norm task) showed low intergroup bias irrespective of the public accountability manipulation. The intergroup attitudes of children who thought their in-group held a pro-prejudice norm (children with low scores on the norm task) were as predicted unaffected by our public accountability manipulation.

Study 2 makes an original contribution by revealing that ToSM and children's awareness of the in-group norm together moderate children's control of their ethnic intergroup bias when held publically accountable to the in-group. These findings go beyond previous research showing that children control their prejudice (Abrams & Rutland, 2008; Nesdale, 2004; Rutland, 2004; Rutland et al., 2005) by highlighting how social-cognitive and normative processes combine during the process of prejudice control in childhood.

## GENERAL DISCUSSION

Together the two studies described in this paper tell us about the 'something' Allport (1954) said is required for children to control their intergroup bias. They suggest that both the development of social emotions (e.g., embarrassment) and ToSM in combination with children's awareness of in-group norm moderate how children inhibit their intergroup bias when held accountable to the in-group. Our studies support the notion that children's intergroup bias may decline due to children's increasing ability to control their bias when made publically accountable to the in-group (e.g., Abrams et al., 2007; Monteiro et al., 2009; Rutland, 1999, 2004; Rutland et al., 2005). Moreover they make a novel contribution by showing for the first time amongst children affective and social-cognitive factors that influence how they learn to control their explicit ethnic intergroup bias.

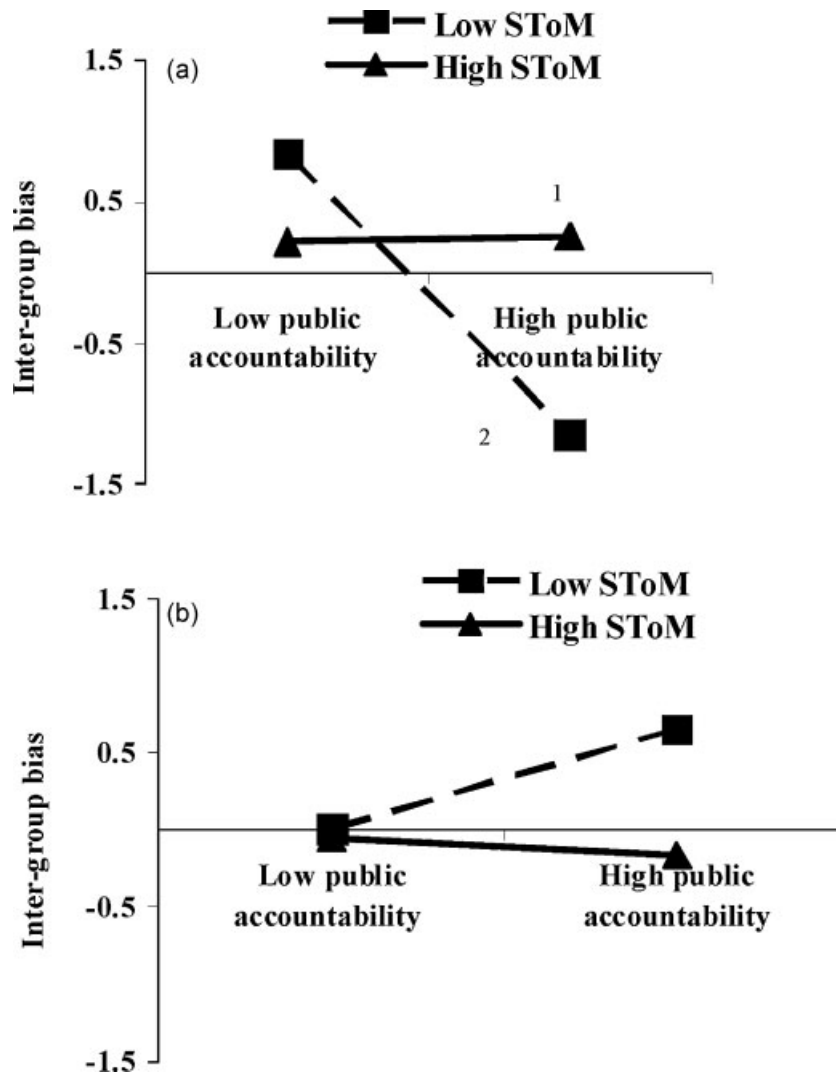


Figure 2. (a) The effect of public accountability on high ToSM and low ToSM children's intergroup bias when they understand their in-group holds an anti-prejudice norm. (b) The effect of public accountability on high and low ToSM children's intergroup bias when they understand their in-group holds a pro-prejudice norm. Note: <sup>1</sup> $p > .05$  <sup>2</sup> $p < .01$

Further the finding that both social emotions and ToSM act in similar ways in the process of inhibiting intergroup bias under in-group accountability, with children low in these abilities suppressed their intergroup bias when made accountable to the in-group suggests that the two factors are interrelated. Indeed previous developmental research has suggested that the attribution of social emotions such as embarrassment is associated with recursive cognitions about other's mental states and second-order mental state understanding (e.g., Banerjee 2002b; Bennett & Matthews, 2000). Our studies suggest a child's developing capacity to understand their social emotions and beliefs, and they how might be different or the same as other's social emotions and beliefs is important if they are to control their intergroup attitudes. This type of recursive reasoning about emotions and mental states in intergroup contexts arguably offer the child the potential to frame their intergroup attitudes to create a positive image amongst their in-group (i.e., engage in self-presentation).

However, our findings suggest that such recursive social reasoning may not always result in low explicit intergroup bias since self-regulation of bias also appears to be depend on the specific social norms children perceive to be held by the in-group to which they are accountable. In Study 2 children who perceived a pro-prejudice in-group norm showed no

evidence of decreased ethnic bias under in-group accountability. Pro-prejudice in-group norms regarding *national* intergroup bias have been found before in studies with white European children in either the UK (e.g., Abrams, Rutland, Cameron, & Marques, 2003; Abrams et al., 2009; Rutland, 1999) or the Netherlands (e.g., Verkuyten, 2001). Indeed, in line with our argument, Rutland et al. (2005—Study 2) found that 10–12-year-old white British children *increased* their national intergroup bias when an in-group pro-bias norm was made salient by increasing their in-group accountability. A recent study by Abrams et al. (2007) also showed that above 7 years children's social exclusion of individuals who challenged the validity of the in-group within a relatively minimal group context increased when they were made accountable to the in-group. These studies show that self-regulation can also operate to facilitate intergroup bias in the domain of nationality and minimal groups where arguably different social norms about showing explicit intergroup exist.

An alternative account of our findings with children scoring high on the social emotions and ToSM tasks may simply be that these children are more empathic towards the out-group since previous research has shown that enhancing children's empathy is associated with lower explicit intergroup bias (Aboud & Levy, 2000; Feshbach & Feshbach, 1998). Future research could address this point directly by measuring children's empathy (see Nesdale, Griffiths, Durkin, & Maass, 2005). The use of an implicit measure of ethnic intergroup bias alongside an explicit measure within our experimental paradigm might also clarify whether children with high social emotions and ToSM are controlling their explicit bias. Nonetheless the findings of Rutland et al. (2005; Study 1) suggest that older children (i.e., 10 years and above), who should show high social emotions and ToSM, are indeed controlling their explicit attitudes under in-group accountability because they continue to show implicit ethnic bias despite showing less explicit ethnic bias.

However, empathy cannot explain why children with little propensity to show social emotions or ToSM significantly decreased their intergroup bias when made highly accountable to the *in-group*. A manipulation making children accountable to the out-group may have increased these children's empathy for the out-group and so decreased intergroup bias, but it seems unlikely this occurred with our in-group accountability manipulation. Instead our findings relating to the children with little social emotions or ToSM suggests their decreased intergroup bias results from being held highly accountable to the in-group which most likely holds a moral norm that one should be empathic and less biased towards the ethnic out-group. These children, unlike the high social emotions and ToSM children, required increased public in-group accountability before they appreciated how the in-group felt towards the out-group and only then showed lower intergroup bias.

A potential limitation of our research was the use of the extended identity task to measure social emotions in Study 1 since it included a question that asked children to judge the feelings of a toddler they had in their care. Developmental research has shown that children as young as 2-year-old are not capable of feeling social emotion like embarrassment or guilt (e.g., Bennett, 1989). It is possible though debatable whether our 5–11-year-old participants were aware of these emotional limitations of toddlers. Nonetheless if the children inferred the toddler was feeling social emotion they could arguably be engaging in egocentric attribution. The inclusion of an older friend in the *faux pas* story might have addressed this issue, but then it would have been difficult to make the child feel a sense of responsibility for the child. Indeed we deliberately created a context of having the child taking care of a younger friend when committing a *faux pas* because it accentuated the potential for social emotions in the situation. Future research should aim to measure children's attributions of social emotions when they commit a *faux pas* in a context involving an older friend while maintaining a sense of responsibility for this friend.

Another factor to consider in future research is children's motivation to comply with social norms that condemn explicit ethnic intergroup bias even though they may have the capacity to show high attribution of social emotions and ToSM. For instance, how much children identify with their group may also affect their motivation to control explicit intergroup bias. Children with high group identification may show greater attention to the norm held by their group (Abrams & Rutland, 2008; Abrams et al., 2003) and subsequently be more likely to self-regulate their attitudes and if their group norm is to reject discrimination then they should control their intergroup bias.

In the majority of societies now explicit ethnic intergroup bias is rare (Dovidio & Gaertner, 2000) and most adults, and we would suggest children too, are able and motivated to control their intergroup bias (Plant & Devine, 1998). Recent research, however, suggests that ethnic majority children still show implicit ethnic bias (e.g., Baron & Banaji, 2006; Dunham, Baron, & Banaji, 2006; Rutland et al., 2005), so future research should also examine how we might reduce children's implicit ethnic bias. Previous research has shown that amongst ethnic majority status children extended contact with other ethnic groups (i.e., vicarious friendships) is associated with lower implicit ethnic bias (Turner, Voci, & Heswstone, 2007). Future research should examine causality within this relationship (i.e., do children who have less implicit bias seek out contact or does contact cause less bias in the first place?).

To conclude, our studies suggest that the ability to attribute social emotions together with the interactive effect of children's knowledge of in-group norms and "ToSM" moderate how children control their ethnic intergroup bias when held accountable to the in-group. Overall both studies extend previous research which has shown children self-regulate their intergroup attitudes when held publically accountable and demonstrate that factors known to facilitate intergroup bias control in adults begin to emerge in early childhood. If we are to encourage people, as Allport suggests, to 'put the brakes on' prejudice our findings suggest we need early interventions aimed at promoting children's attribution of social emotions (e.g., embarrassment), social-cognitive ability to understand other's mental states and wider anti-prejudice in-group norms within society.

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