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Over, Harriet, Eggleston, Adam ORCID  
logoORCID: <https://orcid.org/0000-0003-4123-3225>, Bell, Jenny  
and Dunham, Yarrow (2017) Young children seek out biased  
information about social groups. *Developmental Science*, 21 (3).  
e12580.

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# Young children seek out biased information about social groups

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**In press: Developmental Science**

## **Acknowledgements**

This research was supported by an Economic and Social Research Council grant to Harriet Over (ES/K006702/1). We thank Catalina Canon, Nathan Vasquez and Helena Wippick for help with coding, Marjorie Rhodes for stimuli and helpful discussions, the Centre for Life and the schools we worked with for help with recruitment and testing, and the families who participated in this research.

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## **Research highlights**

- Children seek out biased information about social groups, preferring to hear information that favors their own group and disfavours their outgroup.
- Children prefer ingroup-favouring information even over unbiased, balanced information.
- Young children also select biased information for others to consume, demonstrating how intergroup biases can start to spread through children's social networks.
- Children are conceptualized as active consumers of social information, not merely passive recipients of information they receive from others.

## **Abstract**

Understanding the origins of prejudice necessitates exploring the ways in which children participate in the construction of biased representations of social groups. We investigate whether young children actively seek out information that supports and extends their initial intergroup biases. In studies 1 and 2, we show that children choose to hear a story that contains positive information about their own group and negative information about another group rather than a story that contains negative information about their own group and positive information about the other group. In a third study, we show that children choose to present biased information to others, thus demonstrating that the effects of information selection can start to propagate through social networks. In studies 4 and 5, we further investigate the nature of children's selective information seeking and show that children prefer ingroup favoring information to other types of biased information and even to balanced, unbiased information. Together, this work shows that children are not merely passively recipients of social information, they play an active role in the creation and transmission of intergroup attitudes.

**Keywords:** Selective information seeking; cultural transmission; minimal group paradigm; intergroup bias

## **Young children seek out biased information about social groups**

Prejudice and discrimination remain substantial social problems. Individuals are often discriminated against on the basis of their membership in a particular social category, for example race, gender or sexual orientation. In the United States, the salary of African Americans is approximately 60% that of Caucasian Americans (U.S. Census Bureau, 2011). Females earn on average 70% that of their male counterparts (Goldin, 2014) and are less likely to be recommended for academic positions even when their CVs are otherwise identical (Moss-Racusin, Dovidio, Brescoli, Graham, & Handelsman, 2012). These inequalities are often underpinned by negative or ambivalent intergroup attitudes. Where do these biased intergroup attitudes come from?

Answering this question requires first noting that intergroup bias begins early in development (Dunham & Olson, 2008). For example, infants prefer to look at, and accept toys from, people who speak their native language over people who speak a foreign language (Kinzler, Dupoux, & Spelke, 2007). From at least the age of five, and probably as young as three, children prefer members of their own group even when those groups are “minimal”, i.e. based on arbitrary, experimenter-created distinctions such as shirt color (Bigler, Jones, & Lobliner, 1997; Dunham, Baron, & Carey, 2011; Richter, Over, & Dunham, 2016). Cultural transmission also appears to play a role in determining children’s attitudes towards real-world groups (Allport, 1954; Devine, 1989). Children are exposed to information that systematically associates social category membership with particular traits and with positive or negative evaluation. Evidence in favor of this claim comes from recent meta-analytic work demonstrating that, despite prior claims to the contrary (Aboud & Amato, 2001; Aboud & Doyle, 1996), there

are clear positive relationships between intergroup attitudes of parents and their children (Degner & Dalege, 2013). Related experimental work has also shown that children sometimes imitate the discriminatory behaviour of others (Olson, Dweck, Spelke, & Banaji, 2011).

However, children are not merely passive recipients of social information. For example, they tend to remember more positive information about ingroups and tend to interpret ambiguous intergroup interactions in ways that favor the ingroup (Dunham et al., 2011; Dunham & Emory, 2014). Even more profoundly, we argue that children can be considered active consumers of information who make choices regarding what they consume. Indeed, the mere act of categorizing oneself as part of a group may be sufficient to generate a tendency to select biased information and thus begin a process by which even relatively trivial grouping dimensions acquire personal and cultural importance. In five studies, we test whether children seek out biased information about social groups. In these studies, we allocate children to minimal groups and offer them a choice about the type of information they would like to hear or would like to transmit to others. Our primary prediction is that, as active and motivated consumers of social information, children will select the stories that favor their own group.

We test this prediction with five- and six-year-old children, the age at which sensitivity to minimal groups begins to be robust (Dunham et al., 2011; Dunham & Emory, 2014; Spielman, 2000). More generally, because children have recently joined school and have increasing opportunity to choose the type of information they consume through storybooks and other media, this is a particularly important period to examine how their choices influence the development of intergroup attitudes.

## **Study 1**

In study 1, we allocated children to one of two minimal groups and then offered them a choice between hearing one of two stories. One of these stories was described as favoring the child's own group and disfavoring the other group. The other story was described as disfavoring the child's own group and favoring the other group. We predicted that children would choose the story written by the author who favored their own group.

We also measured the effect of hearing their chosen story on children's group preferences. We did this to confirm that consumption of biased information would influence intergroup attitudes. Based on prior work on how children internalize group-relevant information (Baron & Dunham, 2015; Schug, Shusterman, Barth, & Patalano, 2013), we predicted that children who chose to hear the story that favored their own group would show greater intergroup bias after hearing it.

## **Method**

### **Participants**

Participants were 24 5- and 6-year-olds (*mean age*: 5 years, 8 months, *age range*: 4 years, 11 months – 6 years, 6 months). Ten of the participants were female and 14 were male. We did not collect specific demographic information from the families who participated in the studies we report here. However, in this study, children were recruited from a village school in a rural area of Northern England. The population of this region is predominantly White with an overall majority of people identifying as Christian. One of the children tested was dropped from the

analyses for failing to correctly identify her group in the manipulation check.

## **Materials**

Two story books depicted cartoon style drawings of children in the Yellow group and the Green group. In one of these books, members of the Yellow group were depicted performing two positive actions (hugging another child and sharing a cookie) and members of the Green group were depicted performing two negative actions (taking another child's building block without asking and pushing another child on the playground). In the other book, the members of the Yellow group were depicted performing the negative actions and the members of the Green group were depicted performing the positive actions. The drawings within these books were adapted from stimuli used in Rhodes (2012). The front covers of the two books depicted neutral playground scenes.

Children's preferences for their own group and the other group were measured using a five-point Likert scale. Each point on this scale was represented by a line drawing of a face with an expression that ranged from smiling to frowning.

## **Design and counterbalancing**

The main measure was which of the two stories children chose to hear – the story favoring their own group or the story favoring the other group. In addition, we measured children's preferences for the two groups before and after they had heard the story of their choice. This was done using two questions per group on a five point scale, 'How much do you like your Yellow group/the other Green group?' and 'How much do you want to play with your Yellow Group/the other Green group?'. Children's responses to these two questions



were averaged to make overall preference measures for each group before and after children heard the story of their choice.

The color of the group to which children were assigned (yellow or green) was counterbalanced as was the color of the group that was introduced first in the preference measures and the story choice. This meant that half of children were asked about their own group first and half were asked about the other group first.

### **Procedure**

Each participant was invited into the testing area and asked to sit at a small table. After a brief warm-up period, the experimenter (E) explained that there were two groups– the Yellow group and the Green group - and that children in the Yellow group got yellow scarves to wear and children in the Green group got green scarves to wear. She then asked children to reach inside a bag and pull out a token, explaining that, if the token was yellow then they would be in the Yellow group, and if the token was green, then they would be in the Green group. (Although this process appeared random to the child it was actually fixed such that half of the children were allocated to the Yellow group and half of the children were allocated to the Green group). Once children had chosen a token, E checked that children understood which group they were in by asking ‘What color token did you get?’ and ‘What color group are you in?’. In order to check that children could visually identify the two color groups, they were then asked to take the appropriate color scarf (yellow or green) from the table in front of them and put it on.

Following the group allocation, children were asked how much they liked the two groups. E explained that children could show her using the scale. She placed the scale in front of children and, pointing at each face in turn, asked “do you really like them, kind of like them, think they’re ok, kind of don’t like them, or really don’t like them? Once children had answered, E asked them how much they wanted to play with their own group and encouraged them to answer again using the scale. “Do you really want to play with them, kind of want to play with them, think playing with them would be ok, kind of don’t want to play with them, or really don’t want to play with them?” Children were then asked the same two questions, following the same procedure, about the other group.

E then introduced the two stories by saying “Now, I’m going to tell you a story. There are two different stories and you can tell me which one you want to hear, ok?”. “This story [pointing at the first story] was written by someone who really likes your Yellow group but doesn’t like the other Green group at all. This story [pointing at the same story again] has nice things about your Yellow group. This story [pointing at the second story] was written by someone who really likes the other Green group but doesn’t like your Yellow group at all. This story [pointing at the second story again] has nice things about the other Green group. Which story do you want to hear, the one with the nice things about your Yellow group or the one with the nice things about the other Green group?”

Once children had made their choice, E read them the corresponding story. After children had heard the story, E asked them to rate how much they now liked and wanted to play with each of the two groups in the same manner described above.

Finally, E thanked children for their participation. To ensure that the

procedure ended on a positive note, E told them that, although children in both groups could be mean, they were usually nice. As she told them this, she showed them a final picture in which the Yellow and Green groups played nicely together. Children were then told that the groups did not matter anymore and that they could take off their scarves.

### **Coding**

Children's responses were coded from video by E. The entire dataset was second coded by a rater who was unaware of the hypotheses of the study. Agreement for the story choice measure was perfect and agreement for the two preference measures was almost perfect  $r(190) = .99, p < .001$ .

### **Results**

The twenty-three children included in the analyses accurately reported which group they were in and chose the appropriate color scarf for their group when offered a choice between yellow and green. The  $p$  values for all reported results in all studies are two-tailed.

Our main question of interest was whether children would be more likely to choose the story that favored their own group than the story that favored the other group (Figure 1). In fact, 19 of 23 children chose the story that favored their own group, and an observed vs. expected chi square showed that this difference was significant,  $X^2=9.42, p=.002, \phi=.64$

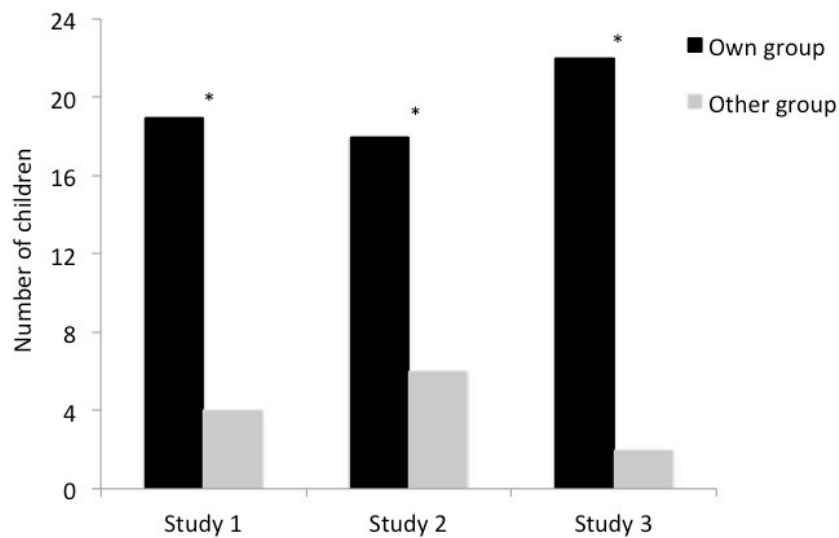


Figure 1. The number of children choosing the story that favored their own group and the other group in studies 1 – 3. (In Study 1  $N=23$ , in studies 2 and 3  $N=24$ ).

We also sought to confirm that hearing the story that favored their own group would influence children’s intergroup attitudes (Figure 2, panel a). A 2 (group membership) \* 2 (time of measurement) within subjects ANOVA on those children who chose the story that favored their own group revealed a main effect of group membership  $F(1,18)=27.74, p<.001, partial \eta^2= .606$  such that children preferred their own group to the other group but the main effect of time did not reach conventional levels of significance  $F(1,18)=3.82, p=.066, partial \eta^2 = .175$ . As predicted, there was a significant group membership by time of measurement interaction  $F(1,18)=5.93, p=.025, partial \eta^2 = .25$ . Planned comparisons revealed that whereas liking for the ingroup was similar before and after the story  $t(18)=.867, p=.397$ , liking for the outgroup significantly decreased  $t(18)=-2.59, p=.019, d=.77$ . In fact, whereas these children were initially ambivalent towards their outgroup (their ratings of the outgroup did not differ significantly from the

neutral point on the scale, one sample  $t(18)=.99, p=.334$ ), after they heard their chosen story they showed outgroup negativity (that is, their ratings of the outgroup were significantly lower than the neutral point on the scale, one sample  $t(18)=-2.39, p=.028, d=1.13$ ).

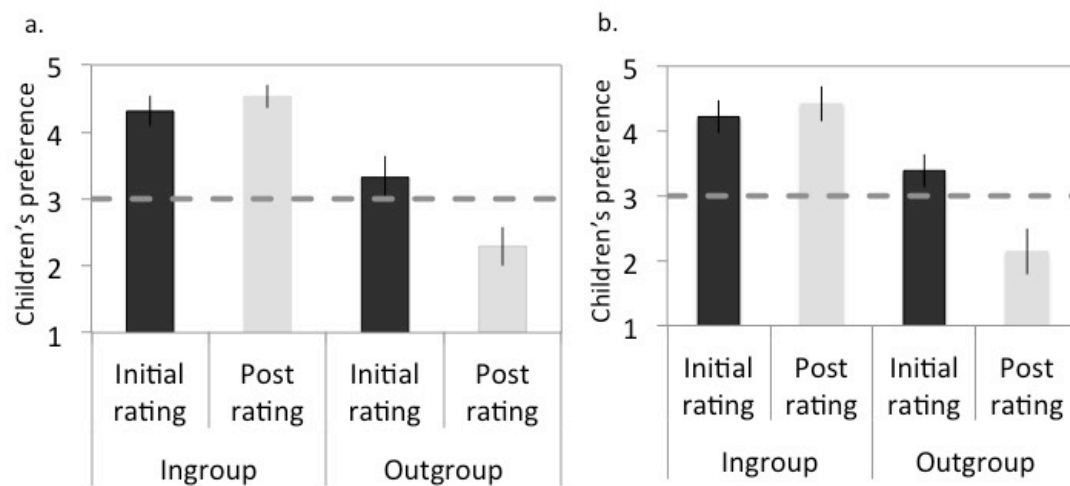


Figure 2. Intergroup attitudes before and after children chose and were read the story that favored their own group and disfavoured the other group in studies 1 (panel a) and 2 (panel b). Dashed line reflects a neutral attitude (the scale midpoint). Error bars represent the standard error of the mean.

Only four children chose the story biased towards the other group. As this number was so low, it was not possible to statistically analyse their responses. Instead we briefly report the means of their preferences: Own group at Time 1: 2.13; Outgroup at Time 1: 4.63; Own group at Time 2: 1.75; Outgroup at Time 2: 4.88.

## Study 2

Study 1 demonstrated that children chose to hear information that favored their own group. Importantly, this effect could not have been driven by