What children want to know about in- and out-groups, and how knowledge affects their intergroup attitudes

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Abstract
One of the key factors contributing to the development of negative attitudes toward out-groups is lack of knowledge about them. The present study investigated what type of information 3- to 4- and 5- to 6- year-old Jewish Israeli children (N = 82) are interested in acquiring about unfamiliar in- and out-group individuals, and how providing children with the requested information affects their intergroup attitudes. Children were shown pictures of individuals from three groups—an in-group (“Jews”), a “conflict” out-group (“Arabs”), and a “neutral” out-group (“Scots”—and were asked what they would like to know about them. The experimenter responded by either answering all of children’s questions, half of the questions, or none. Children’s attitudes toward the groups were also assessed. It was found that children asked the most questions in regard to conflict out-group individuals. Moreover, the older age group asked more questions regarding the psychological characteristics, and fewer questions regarding the social identity, of the conflict out-group than of the other two groups. Finally, full provision of information improved attitudes toward the groups, especially among 3- to 4-year olds, and especially regarding the conflict out-group. These findings have implications for understanding the sources of intergroup biases, and for developing interventions to reduce them.

KEYWORDS
informational preferences, intergroup bias, young children
See that man over there?
Yes.
Well, I hate him.
But you don't know him.
That's why I hate him.
(Allport, 1954, p. 253)

1 | INTRODUCTION

The tendency to evaluate those similar to oneself—the in-group—more favorably than those different from oneself—the out-group, is a prevalent social phenomenon that may have destructive effects on intergroup relations (Hewstone, Rubin, & Willis, 2002). In adults, this intergroup bias has been associated with prejudice, discrimination, dehumanization, and conflict in numerous cultures, involving various social groups (Fiske, 2002; Greenwald & Banaji, 1995; Haslam, 2006). Recently, developmental work has started to show that such a bias is present already in young children (Bigler & Liben, 2007; Buttelmann & Böhm, 2014; Dunham, Baron, & Carey, 2011; McLoughlin & Over, 2017; Nesdale, 2007; Richter, Over, & Dunham, 2016), and perhaps even infants (Pun, Ferera, Diesendruck, Hamlin, & Baron, 2018; Xiao et al., 2018). Crucial questions, therefore, are where do these biases come from, and how can they be remedied.

One of the earliest hypotheses regarding these questions is implied in the parable quoted at the start of the article. The parable, cited in the 50s by Allport in his seminal book *The Nature of Prejudice* (1954), implied that ignorance about the other was a major factor in the development of intergroup biases. This claim likely echoes even more strongly today, given the increased prevalence of multicultural societies, with various social groups living side-by-side, yet having no true acquaintance with each other. Arguably, the salience of diverse social groups, coupled with lack of knowledge about each other, increases anxiety, and encourages the recruitment of stereotypes and exaggerated beliefs about intergroup differences (Stephan & Stephan, 1984). For instance, Medin and Ortony (1989) suggested that the awareness of the various social groups present in a society, combined with the absence of specific knowledge about how the groups differ, may lead people to fill this representational vacuum with what they called "an essence placeholder." Namely, people develop a belief that certain social categories are composed of homogenous members who share an inherent, stable, and unique essence (see also Hirschfeld, 1996). One implication of this general hypothesis is that providing information about out-groups may be an effective mean for revising people's social concepts. The goal of the present study was to assess what type of information children are interested in acquiring about unfamiliar in-group and out-group individuals, and whether providing information about these individuals can improve children's attitudes toward them.

An influential approach inspired by the above discussion is the so-called "contact hypothesis" (Allport, 1954). The general idea is that by familiarizing people from diverse groups to each other, they would come to realize that: (a) out-groups are not composed of homogeneous members all sharing some deep essential features, but rather are composed of unique individuals as diverse as in-groups, and (b) out-group members are not that different from in-group members, often times sharing the same interests, values, and habits. And indeed, intergroup contact has proven fairly effective among adults (see Hodson, Crisp, Meready, & Earle, 2018; Pettigrew & Tropp, 2006, for reviews), and children (see Beelmann & Heinemann, 2014; Skinner & Meltzoff, 2019, for reviews). For instance, studies in the United States and the U.K. have shown that cross-race friendships or racially heterogeneous kindergartens and schools, have positive effects on children's racial attitudes and stereotypes (Feddes, Noack, & Rutland, 2009; McGlothin, Edmonds, & Killen, 2007; Ruck, Park, Crystal, & Killen, 2015; Rutland, Cameron, Bennett, & Ferrell, 2005; Tropp & Prenovost, 2008), and Jewish and Arab Israeli children attending integrated schools become less essentialists about ethnic differences than their age-mates attending segregated schools (Deeb, Segall, Ben-Eliyahu, & Diesendruck, 2011).
Nevertheless, in spite of these successes, one major impediment to this strategy is that in many places in the world, intergroup contact is extremely uncommon and even unviable, especially for young children. An alternative strategy used to overcome this challenge is to present "indirect" situations of contact, that is, contact between in- and out-group members that does not involve actual interactions between the subject and out-group members (Zhou, Page-Gould, Aron, Moyer, & Hewstone, 2019). Some of its forms are extended contact (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997), imagined contact (Crisp & Turner, 2009), and parasocial contact (Schiappa, Gregg, & Hewes, 2005), through which people become aware of friendships between in- and out-group members by means of literature, imagination, or media, respectively. A great deal of research has demonstrated the benefits of indirect contact for intergroup attitudes and intergroup relationships among adults (for meta-analyses, see Lemmer & Wagner, 2015; Zhou et al., 2019), as well as among children (Cameron, Rutland, & Brown, 2007; Vezzali, Capozza, Giovannini, & Stathi, 2012).

Here we targeted a further type of intervention that, like indirect contact, addresses the issue of "lack of knowledge" about out-groups, and does not require direct "live" contact with out-group members. Namely, we assessed how simply providing information about out-groups may affect children's intergroup attitudes. This strategy shares the viability of the various indirect contact approaches, but differs from them in that it does not present any contact between in-group and out-group members. Arguably, indirect contact may be effective not only because it provides information about the out-group—what may be considered, a purely cognitive effect—but also because it creates some identification with/simulation of the portrayed in-group member, which by extension engages the subject's empathy—in other words, an emotional effect (see Aron et al., 2004; Vezzali et al., 2012; Zhou et al., 2019; for discussions). By providing information about out-groups, we were thus capable of assessing whether the sheer cognitive path suffices to alter children's attitudes.

In fact, sheer provision of information about the out-group has proven to ameliorate adults' attitudes. For instance, studies found a positive correlation between providing factual, demographic, and social knowledge about minority groups, and improved attitudes toward them (e.g., Novotný & Polonský, 2011; Stephan & Stephan, 1984). The effectiveness of such strategies earlier in development, however, is debatable. Indeed, much of what children know about out-groups is acquired not via direct contact or firsthand experience, but from information they gather from their environment, provided by other people (Degner & Dalege, 2013; Harris & Koenig, 2006). This information, however, is often times biased, especially when groups are in conflict (Aboud & Amato, 2001; Bar-Tal, Diamond, & Nasie, 2017; Nasie, Bar-Tal, & Diamond, 2016). In fact, even when the bias is implicit in the input, its effect on children's attitudes and beliefs is substantial. For instance, simply labeling groups or using generic terms to describe groups, has been associated with young children's tendency to essentialize differences between groups (Rhodes, Leslie, & Tworek, 2012; Segall, Birnbaum, Deeb, & Diesendruck, 2015).

Exposing children to information about out-groups that might counter their intergroup biases and beliefs has also met with some challenges, as children's very processing of the information is often times biased. For instance, provision of information about out-groups improved children's attitudes toward them but only when no information about the in-group was provided (Nesdale, Lawson, Durkin, & Duffy, 2010). In addition, children better recalled stories in which characters displayed gender stereotype-consistent than inconsistent behaviors (Bigler & Liben, 1992), and remembered more positive behaviors of an in-group member and negative behaviors of an out-group member (Corenblum, 2003), even when the amount of positive and negative behaviors was equivalent across in- and out-group members (Dunham et al., 2011). Moreover, when given the choice to seek out information about others, children did so in a bias-reinforcing manner. For instance, children chose to hear a story that contained positive information about their own group and negative information about another group, and manifested a similar biased preference in their choice of the type of story they wanted to be spread to others (Over, Eggleston, Bell, & Dunham, 2018). In addition, children tend to endorse positive testimony more for in-group individuals than out-group individuals (Aldan & Soley, 2019).

Given the importance of information to the development of intergroup bias on the one hand, and the biased ways in which children process such information thus limiting its remedial effectiveness on the other, the present
study aimed to approach this issue in a novel way. We aimed to take a step back, and instead of providing children with the type and the amount of information that we believe is important for the construal of others, we first asked children, what type and amount of information they wanted to acquire about others, and then we provided it. We believed such an approach has both theoretical and practical benefits. First, it may reveal, in a more spontaneous and unmediated fashion, children's biases regarding their construal of others. Second, such an approach would allow us to assess how the provision of the requested information affects children's attitudes toward out-groups. Lastly, this method may also provide new guidelines for interventions. By identifying what children want to know about the other, we will be capable to more effectively tailor the message to the recipient.

This approach draws from previous work that assessed the types of information children are interested in acquiring in diverse domains (for a review, see Ronfard, Zambrana, Hermansen, & Kelemen, 2018). For instance, children have been found to be interested in different types of information regarding animals (e.g., eating habits and habitat) compared to artifacts (e.g., function) (Greif, Kemler Nelson, Keil, & Gutierrez, 2006), and prefer generic over individual information regarding animals (Cimpian & Park, 2014). The present study extended this type of investigation to the social domain, and assessed children's preferences for receiving information about people.

To meet our goals, we first simply presented children with unfamiliar individuals, told them about the individual's group membership, and asked children what they would like to know about the individual. Children's open ended questions were coded, classified, and analyzed. Thus, just as Greif et al. (2006) uncovered the properties young children view as central to the definition of animals (e.g., habitats) and artifacts (e.g., function), the present study would reveal the types of properties children consider central in the definition of people. In particular, studies have suggested that when given a choice, children treat psychological properties as more central to the definition of social categories than appearances or biological properties (Diesendruck & Eldror, 2011; Diesendruck & Weiss, 2015; Kalish & Lawson, 2008). The present study assessed whether this preference would be manifested also in children's spontaneous requests for information. Thus, our hypothesis in terms of the content of children's questions, was that the frequency of questions about psychological properties would be high, especially in regard to social groups that children essentialize.

Indeed, our second main goal was to assess potential intergroup biases in the amount of information children were interested in receiving. We did so by assessing children's informational preferences in regard to three target groups: an in-group, a relatively familiar “conflict” out-group, and an unfamiliar “neutral” out-group. The dimension of group membership assessed was ethnicity/nationality (“Jews,” “Arabs,” and “Scots”), as this dimension has been shown to be extremely salient for the population tested here, namely, Jewish Israeli children. In particular, a number of studies have shown that Jewish Israeli children from a similar background to the ones sampled here, essentialize the distinction between Jews and Arabs (see e.g., Birnbaum, Deeb, Segall, Ben-Eliyahu, & Diesendruck, 2010), believe Arabs constitute a fairly homogeneous group (Shilo, Weinsdörfer, Rakoczy, & Diesendruck, 2018), and hold negative attitudes toward Arabs (Diesendruck & Menahem, 2015). In order to assess the scope of the phenomenon at stake, we compared children's informational preferences regarding Arabs, to those held regarding Scots—an arbitrary but fairly unfamiliar national group, with no typical prejudices attached to it. We hypothesized that if children's informational preferences are shaped by motivational factors—for example, a sensitivity to a salient conflict—then children should ask the most questions in regard to Arabs, then Scots, and the least in regard to Jews. Alternatively, if such preferences are driven primarily by lack of knowledge about a particular group, then children should ask the most questions about Scots, secondly about Arabs, and the least about Jews.

Our final goal was to assess the impact of information on children's intergroup attitudes. To this end, we randomly assigned children to one of three conditions, according to whether the experimenter responded to all of the children's questions (Full Information condition), half of the questions (Partial Information condition), or none (No Information condition). The inclusion of three conditions was driven by our interest in whether provision of any amount of information would suffice to improve children's attitudes toward the out-groups. On the one hand, it could have been the case that simply exposing children to the out-group would suffice to change children's attitudes—a result akin to the “mere exposure effect” (Zajonc, 1968). In order to present such a condition to children,
we decided to make it as systematically and pragmatically appropriate as we could, and thus compromised on answering every other question that children asked. On the other hand, studies on indirect intergroup contact indicate that the more exposure one gets, the more substantial is the change in one's attitudes (Wojcieszak & Azrout, 2016). We thus hoped that a comparison of the Full vs. Partial Information conditions—each relative to the No Information condition—would help adjudicate between the above hypotheses. A further hypothesis in this regard was that provision of full information would have the strongest impact in regard to the social category with the most negative attitudes directed to it. The comparison between the two out-group targets—Arabs and Scots—would allow assessing this last hypothesis.

The study included children from two age groups: 3- to 4-year olds and 5- to 6-year olds, allowing us to assess developmental differences in the amount and content of questions children directed at in- and out-group members. These age groups were selected for two main reasons. First, these ages mark important developmental transitions with respect to intergroup biases (Dunham et al., 2011; Nesdale, 2007). Second, there seem to be important changes in children’s question-asking strategies during this period (Ronfard et al., 2018). A further consideration in the design of the study was to have as balanced a gender distribution among participants as possible. A number of recent studies have reported gender differences in intergroup attitudes already among young children, with boys manifesting stronger intergroup biases than girls (e.g., Benozio & Diesendruck, 2015; Buttelmann & Bohm, 2014). We thus wanted to assess whether such gender differences emerge also in terms of informational preferences.

2 | METHOD

2.1 | Participants

Participants were 82 Israeli children (49% female, $M_{age} = 5$ years $0$ months, range = 3 years $3$ months and 6 years 5 months), divided into 42 3- to 4-year olds (62% female, $M_{age} = 4$ years $2$ months, range = 3 years $3$ months and 4 years 11 months) and 40 5- to 6-year olds (40% female, $M_{age} = 5$ years $11$ months, range = 5 years $0$ months and 6 years 5 months). Sample size was determined based on similar studies assessing children’s question asking (e.g., Greif et al., 2006) or the effect of information provision on children’s attitudes (e.g., Cameron & Rutland, 2006; Nesdale et al., 2010; Rhodes, Leslie, Saunders, Dunham, & Cimpian, 2018). All participants were middle-class secular Jews, recruited from pre-kindergartens and kindergartens in central cities in Israel where Jews are the absolute majority (according to the Israeli Central Bureau of Statistics, in 2015, the percentage of Jews in the cities from which children were sampled was 99.9%). All had signed parental consent to participate. The study was conducted in the children's educational institutions during regular school hours. Data were collected by the first author between February and June 2018. The study was approved by the institution’s Ethical Committee.

2.2 | Design

The study had a mixed design, with age group (3- to 4-year olds and 5- to 6-year olds) and information condition (Full Information, Partial Information, and No Information) as between-subjects variables, and group membership of the targets (in-group: Jew, "conflict" out-group: Arab, and “neutral” out-group: Scot) as a within-subjects variable.

2.3 | Materials

The stimuli used were two pictures of novel artifacts for training at the beginning of the study, and six pictures of unfamiliar children in the three experimental trials. Each picture represented an unknown individual from children’s in-group (a Jew) or out-groups (an Arab/a Scot). The pictures depicted a smiling boy/girl on a neutral
background, three boys and three girls, matching the participant’s gender. In order to avoid effects of attractiveness or other preferences based on the physical appearance of the depicted children, the assignment of the pictures to the different groups was counterbalanced between participants (e.g., the same picture was described as a Jew for a third of the participants, as an Arab for another third, and as a Scot for the last third). The pictures were used with permission from their sources (the Internet website or parents).

2.4 Procedure

The procedure was similar to one used by Greif et al. (2006) in their study on children’s questions about animals and artifacts, modified to the social domain. A female experimenter sat individually with each participant and tape-recorded the session. The experimenter presented the task as a game. She told the participant that she would show him/her pictures of new things, and he/she could ask questions about them.

The session began with two practice items, similar to those employed by Greif et al. (2006). The experimenter showed participants two pictures of different objects (pair of compasses and a chest expander), and said regarding the first picture: “Here, look at this thing, what do you want to know about this thing?” If the participant did not respond, the experimenter asked if there was anything the participant wanted to ask about the picture. In the very few cases where participants did not ask questions, the experimenter provided examples, telling the participant: “You can ask, for example, what is that?” or "you can ask, for example, what is it for?" The practice was carried out on objects to avoid training participants on specific questions about people. The experimenter always answered participants’ questions. After answering the first question, the experimenter asked if the participant had additional questions. The practice phase continued until the participant indicated he or she did not have more questions or asked to move on.

After the practice phase, the experimenter moved to the experimental phase, telling participants that now she would show them pictures of children they did not know, and they could ask questions about the pictured children. The experimenter showed participants a picture of a same-gendered target child, describing only the target’s group-membership (e.g., “Look, here is an Arab boy”). In counterbalanced order across participants, participants were exposed to three types of targets: in-group (Jew), “conflict” out-group (Arab), and “neutral” out-group (Scot). The experimenter asked participants what they would like to know about the target (e.g., “What do you want to know about this boy?”). Given the practice trials and the general instructions prior to the introduction of the pictures, no further prompt was made. In the very few cases in which children did not ask any questions, the experimenter encouraged them to ask anything they wanted about the picture.

The experimenter’s response to participants’ questions varied by information condition. Participants were randomly assigned to one of the following three conditions. For participants in the Full Information condition (N = 27), the experimenter responded to all of the participants’ questions. In the Partial Information condition (N = 23), the experimenter responded to every other question posed by participants. Finally, in the No Information condition (N = 32), the experimenter did not respond to any of the questions, stating that although it was a good question, she did not know the answer yet but would look it up. The experimenter responded to some of participants’ questions with pre-set neutral answers (e.g., “his name is Ahmad,” “he is 5 years old,” and “he lives in Haifa”), and to some other questions with spontaneous, pragmatically appropriate neutral answers (e.g., “he likes the yellow color”). After each response, the experimenter asked the participants if they would like to know more about the target child.

Once participants exhausted all their questions about a target, their attitudes toward the pertinent group were assessed via four questions, in a fixed order (adopted from Rhodes et al., 2018). Namely, children were asked in reference to the pictured individual: “Would you like to play with this Arab boy?”; “Would you like to invite this Arab boy to your birthday party?”; “Would you like to sit next to this Arab boy in kindergarten?”; “Would you like to share your toys with this Arab boy?” For each question, participants responded either “yes” or “no” and were then asked a follow-up question. For example, if they responded affirmatively, they were asked, “Do you sort of want...
to, or really want to?" Each item received a score ranging from 1 to 4, with higher numbers meaning positive attitudes. Once participants completed the attitude questions regarding a target group, the experimenter presented to them the next target picture, and asked them its corresponding questions. At the end of the study, participants received a sticker in gratitude for their participation.

3 | RESULTS

Analyses were conducted using mixed quantitative and qualitative methods. Analyses were conducted separately to evaluate the different hypotheses listed in the Introduction. Namely, we first assessed whether there were differences in the amount of information children were interested in receiving about individuals from different groups. Then, we analyzed the content of information children wanted to receive about individuals from different groups. Finally, we tested how provision of information impacted—if at all—children's attitudes toward different groups.

3.1 | Preferences for amount of information regarding groups

Our first analysis was a repeated measures ANOVA, with participants' age group and information condition as between-subjects variables, target group membership as a within-subjects variable, and number of questions as the dependent measure. Neither gender nor order of targets (e.g., in-group first vs. last) was included in the analysis since preliminary analyses found no significant effects involving these factors. In cases where the assumption of sphericity was violated, degrees of freedom were corrected using Greenhouse–Geisser estimates.

The ANOVA revealed a significant effect of target group, $F(1.82, 138.77) = 3.92, p = .02, \eta^2_p = .04$, with children asking the most questions about Arabs, then Scots, and the least about Jews. Post hoc Bonferroni pairwise comparisons revealed that, consistent with our hypothesis regarding this measure, children asked significantly more questions about an Arab ($M = 3.60, SE = 0.47$) than about a Jew ($M = 2.49, SE = 0.26$), $p = .04$. There were no significant differences in number of questions asked about a Scot ($M = 3.03, SE = 0.38$) compared to a Jew, $p = .36$, or an Arab, $p = .43$. In addition, there was a main effect of age, $F(1, 76) = 5.32, p = .02, \eta^2_p = .06$, with 5- to 6-year olds asking significantly more questions ($M = 3.75, SE = 0.43$) than 3- to 4-year olds ($M = 2.33, SE = 0.43$), irrespective of target group (see Figure 1). Finally, there was a main effect of information condition, $F(2, 76) = 3.44, p = .03, \eta^2_p = .08$. Tukey post hoc tests revealed that the participants asked significantly more questions in the Full Information condition ($M = 3.77, SE = 0.52$) than in the No Information condition ($M = 1.98, SE = 0.48$), $p = .02$. There were no significant differences in number of questions between the Partial Information condition ($M = 3.37, SE = 0.57$) and the No Information condition, $p = .11$, or the Full Information condition, $p = .86$. There were no significant interactions.

3.2 | Preferences for content of information regarding groups

The second line of analyses used content analysis (Krippendorff, 2004), so as to assess the type of information children wanted to know about in- and out-groups. Participants' questions were fully transcribed and then coded into shared categories. To establish the reliability of the coding, we used two independent judges who categorized all participants' questions. Cohen's kappa analysis yielded a high level of agreement between the two judges ($\kappa = 0.906, p < .001$). Disagreements were resolved by discussion.

The content analysis revealed that children asked for information about in- and out-groups regarding four main categories: Psychological characteristics, appearance, personal identity, and social identity (including questions about the target's social group and family). These categories covered about 88% of all questions asked. Table 1 presents examples of questions for each category. Table 2 presents the frequency of questions by categories and targets.
For our first analysis, we focused on children's preferences for the different categories across all targets. Given that many children did not ask questions of many of the types, rather than performing analyses using frequencies of children as data points, we entered frequencies of responses as the dependent measures. We then performed weighted cases chi-square analyses on these frequencies (see Field, 2009). In particular, for these first analyses, we transformed the absolute numbers into percentages, by dividing the total number of questions in each category by the total number of questions asked by children. Given the significant effect of age on the number of questions children asked, we conducted these analyses separately for each age group. The analyses revealed that, across all targets, 3- to 4-year olds asked proportionally more questions about psychological characteristics (32.36%) than 5- to 6-year olds (18.70%), $\chi^2(1, N = 724) = 17.48, p < .001$, and 5- to 6-year olds asked proportionally more questions about social identity (30.73%) than 3- to 4-year olds (17.45%), $\chi^2(1, N = 724) = 15.75, p < .001$.

A similar analysis was conducted regarding gender, by dividing the total number of questions in each category by the total number of questions asked by boys and girls. The analysis revealed that, across all targets, girls asked proportionally more questions about appearance (26.51%) than boys (16.71%), $\chi^2(1, N = 724) = 10.31, p = .001$.

Finally, a significant effect of target order was also found. Specifically, across ages and genders, children who were introduced to the in-group target first, compared to those introduced to the in-group last, asked: (a) more questions about psychological characteristics (37.31% vs. 12.33%, respectively, $\chi^2(1, N = 724) = 61.73, p < .001$); (b) fewer questions about social identity (21.49% vs. 29.30%, respectively, $\chi^2(1, N = 724) = 5.75, p = .01$); and (c) fewer questions about appearance (15.52% vs. 26.47%, respectively, $\chi^2(1, N = 724) = 12.84, p < .001$).

Our main hypothesis regarding this measure had to do with whether children had any group biases in terms of their content preferences. To assess this hypothesis, we transformed participants' absolute number of questions of each category type asked in relation to each target, into percentages out of the total number of questions asked regarding that target. We then conducted within each age group, weighted cases chi-square tests comparing the percentage of questions of a given category regarding a specific target to the equivalent percentage regarding a different target. Figure 2 displays these percentages. Among 3- to 4-year olds, chi-square analyses revealed no significant differences among targets regarding any of the question categories. In contrast, the analyses among 5- to 6-year olds yielded significant differences. In particular, confirming our hypothesis, 5- to 6-year
olds asked more questions about the psychological characteristics of Arabs (27.90%) than of Jews (22.82%) and Scots (14.19%), $\chi^2(2, N = 449) = 15.84, p < .001$; and in turn, asked more questions about social identity in regards to Jews (35.24%) and Scots (36.77%) than Arabs (22.09%), $\chi^2(2, N = 449) = 9.85, p = .007$. A similar analysis was conducted regarding gender, and revealed that the above pattern was true only of boys. Namely, among girls, the analyses revealed no significant differences among targets regarding any of the question categories. In

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Examples of children’s questions by categories</th>
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<tbody>
<tr>
<td>Category</td>
<td>Examples</td>
</tr>
<tr>
<td>Psychological characteristics (e.g., preferences, behaviors, abilities, and social interaction)</td>
<td>What color he loves most? Does she like to paint or to play? Does he always behave properly? Can he stand on his hands? What can she do? Could she be my friend?</td>
</tr>
<tr>
<td>Appearance (e.g., body organs, clothing, facial expression)</td>
<td>How many teeth does he have? Why does she have short hair? Does he have brown eyes? Does she have earrings on her ears? What pants is he wearing? Why is she smiling?</td>
</tr>
<tr>
<td>Personal identity (e.g., name, age, and status)</td>
<td>What is his name? What is her nickname? How old is he? What does she do? Who is he? Is he in kindergarten or in school?</td>
</tr>
<tr>
<td>Social identity, including:</td>
<td></td>
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<tr>
<td>(a) Social group (e.g., origin, language, and group membership)</td>
<td>Which country does he live in? Where was she born? Does she live in Israel? Which language does he speak? Why is he an Arab? Is she Jewish like me?</td>
</tr>
<tr>
<td>(b) Family (e.g., parents, siblings, and family composition)</td>
<td>Does she have only a father or also a mother? What is his father’s name? Does he have grandparents? How many siblings does he have? Does she have older or younger siblings? Does he have a family?</td>
</tr>
<tr>
<td>Other (technical, insignificant)</td>
<td>Why does the picture look like that? What is this dirt (in the picture)? Why is there only white (in the picture’s background)?</td>
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</table>
contrast, the analyses among boys revealed that boys asked more questions about the psychological characteristics of Arabs (34.35%) than of Jews (11.57%) and Scots (20.16%), $\chi^2(2, N = 377) = 18.50, p < .001$; and in turn, asked more questions about social identity in regards to Jews (31.57%) and Scots (36.13%) than Arabs (19.63%), $\chi^2(2, N = 377) = 10.20, p = .006$.

### 3.3 Effect of information provision on intergroup attitudes

Our final analyses addressed the hypotheses as to whether, and what amount of, information, impacted children’s attitudes toward the different target groups. For the first step, we used a repeated measures ANOVA with information condition, age, and gender as between-subjects variables, target group membership as a within-subjects variable, attitudes as a dependent variable, and number of questions as a covariate. Order of targets was not included in these analyses because preliminary analyses revealed no significant results involving this factor.

The analysis revealed a significant effect of target on attitudes, $F(1.64, 109.96) = 4.34, p = .02, \eta^2 = .06$, with children manifesting the most positive attitudes toward Jews, then to Scots, and the least toward Arabs.
hoc Bonferroni pairwise comparisons revealed that overall, participants’ attitudes toward Jews were significantly more positive ($M = 2.91$, $SE = 0.11$) than toward Arabs ($M = 2.54$, $SE = 0.12$), $p = .001$, or Scots ($M = 2.66$, $SE = 0.11$), $p = .03$. In addition, there was a significant main effect of gender on attitudes, $F (1, 67) = 18.48$, $p < .001$, $\eta^2_p = .21$, with girls manifesting significantly more positive attitudes toward in- and out-group targets ($M = 3.15$, $SE = 0.14$) than boys ($M = 2.25$, $SE = 0.14$). Finally, the analysis revealed four significant interactions, which qualify the above main effects: (a) between target and information condition, $F (3.28, 109.96) = 2.70$, $p = .04$, $\eta^2_p = .07$; (b) between target, age, and gender, $F (1.64, 109.96) = 4.05$, $p = .02$, $\eta^2_p = .05$; (c) between target, age, and information condition, $F (3.28, 109.96) = 2.60$, $p = .050$, $\eta^2_p = .07$; and (d) between target, gender, and information condition $F (3.28, 109.96) = 4.42$, $p = .004$, $\eta^2_p = .11$. In order to clarify the source of the interactions, we split the data by age, and conducted a univariate ANOVA for each target group, with information condition and gender as independent variables, attitudes as dependent variable, and number of questions about the target as covariate.

### 3.3.1 Three-to-four-year olds

The analysis regarding the Arab target revealed a significant main effect of gender on attitudes, $F (1, 35) = 13.64$, $p = .001$, $\eta^2_p = .28$, meaning that girls manifested more positive attitudes toward Jews ($M = 3.27$, $SE = 0.18$) than boys ($M = 2.14$, $SE = 0.24$). In addition, there was a significant main effect of information condition, $F (2, 35) = 5.39$, $p = .009$, $\eta^2_p = .23$. Tukey post hoc tests revealed that the participants in the Full Information condition manifested significantly more positive attitudes toward Arabs ($M = 3.44$, $SE = 0.27$) than participants in the Partial Information condition ($M = 2.21$, $SE = 0.29$), $p = .04$, or No Information condition ($M = 2.50$, $SE = 0.23$), $p = .02$. Finally, there was a significant interaction between gender and information condition, $F (2, 35) = 3.77$, $p = .03$, $\eta^2_p = .17$, however, this finding is difficult to interpret given the small Ns in each cell of this interaction.

The analysis regarding the Scot target revealed a significant main effect of gender, $F (1, 35) = 13.73$, $p = .001$, $\eta^2_p = .28$, again with girls manifesting more positive attitudes toward Scots ($M = 3.39$, $SE = 0.18$) than boys ($M = 2.26$, $SE = 0.24$). In addition, there was a significant main effect of information condition, $F (2, 35) = 3.72$, $p = .03$, $\eta^2_p = .17$. Tukey post hoc tests, however, revealed that the differences in participants’ attitudes toward Scots in the Full Information ($M = 3.45$, $SE = 0.26$), Partial Information ($M = 2.31$, $SE = 0.29$), and No Information conditions ($M = 2.71$, $SE = 0.22$), did not reach significance, that is, between Full and Partial Information: $p = .09$; between Full and No Information, $p = .11$; and between Partial and No Information: $p = .92$. Finally, there was a significant interaction between gender and information condition, $F (2, 35) = 4.60$, $p = .01$, $\eta^2_p = .20$, however, this interaction was not followed further because of the small Ns.

Lastly, the analysis regarding the Jew target revealed a significant main effect of gender, $F (1, 35) = 10.36$, $p = .003$, $\eta^2_p = .22$, meaning that girls manifested more positive attitudes toward Jews ($M = 3.39$, $SE = 0.18$) than boys ($M = 2.42$, $SE = 0.23$). In addition, there was a significant main effect of information condition, $F (2, 35) = 3.39$, $p = .04$, $\eta^2_p = .16$. Here too, however, Tukey post hoc tests revealed no significant differences between the Full Information ($M = 3.46$, $SE = 0.26$) and Partial Information ($M = 2.53$, $SE = 0.28$) condition, $p = .22$; between Full and No Information conditions ($M = 2.74$, $SE = 0.22$), $p = .06$; and between Partial and No Information conditions, $p = .90$. Again there was a significant interaction between gender and information condition, $F (1, 35) = 5.97$, $p = .003$, $\eta^2_p = .28$, which was uninterpretable given the small Ns.

### 3.3.2 Five-to-six-year olds

The analysis regarding the Arab target revealed no significant effects or interactions. Regarding the target Scot, the analysis revealed a significant main effect of gender, $F (1, 33) = 4.61$, $p = .03$, $\eta^2_p = .12$, with girls manifesting more positive attitudes toward Scots ($M = 2.88$, $SE = 0.26$) than boys ($M = 2.15$, $SE = 0.21$). A significant main
effect of gender was found also regarding the target Jew, $F(1, 33) = 8.69, p = .006, \eta^2_p = .20$, with girls manifesting more positive attitudes toward Jews ($M = 3.40, SE = 0.26$) than boys ($M = 2.39, SE = 0.21$). There were no other effects among 5- to 6-year olds. In particular, as can be seen in Figure 3, there were no significant effects involving information condition.

In sum, the findings revealed that information condition had no substantial effect on 5- to 6-year-olds' attitudes toward any of the groups, hinting, perhaps, about the rigidity of these attitudes at this age. In contrast, and as can be seen in Figure 3, information condition did affect 3- to 4-year-olds' attitudes toward all three target types, with children in the Full Information condition manifesting the most positive attitudes compared to children in the other two information conditions. Nevertheless, this effect was most robust when targets were Arabs, as it was only in that case that the difference between the Full information condition and the other two conditions reached statistical significance.

4 | DISCUSSION

The present study investigated, in an open and unmediated way, what type of information children are interested in acquiring about unfamiliar in-group and out-group individuals. This investigation allowed us to examine whether there are differences in the amount and content of information children request regarding in- and out-group members. In addition, the study investigated the effect that providing information about in- and out-group individuals, has on children's attitudes toward them. For these purposes, we assessed Jewish Israeli 3- to 4-year-olds and 5- to 6-year-olds' informational preferences and attitudes in regard to three target groups: an in-group ("Jews"), a relatively familiar "conflict" out-group ("Arabs"), and an unfamiliar "neutral" out-group ("Scots"), represented by realistic pictures of same-gendered children.

Regarding the amount of information children requested, the findings revealed that overall, 5- to 6-year olds produced more questions than 3- to 4-year olds. This finding is not surprising, given the advanced cognitive and linguistic capacities of 5- to 6-year olds relative to 3- to 4-year olds, which impinges on their ability to initiate, formulate, and express questions (Ronfard et al., 2018). Also not surprisingly, children asked more questions in
the Full Information condition than in the other two conditions. This effect likely resulted from children in the Full Information condition feeling reinforced to keep asking, given that the experimenter always provided them with responses in that condition. Importantly, condition did not interact with target group, indicating that the above "pragmatic" effect could not account for potential differences regarding target group. And indeed, the most theoretically interesting result on this measure was that children across age groups and conditions asked the most questions about an Arab, then about a Scot, and the least about a Jew.

This finding is revealing because it shows that children's questioning was not driven solely by lack of knowledge. If that had been the case, we would have expected children to ask the most questions about an individual from a group they do not know at all, that is, about a Scot. Instead, they asked the most questions about an individual from a relatively familiar group, that is, an Arab. It would seem, then, that factors other than sheer lack of knowledge drove children's questioning behavior. One such factor is that partial and ambiguous knowledge of a salient category may have triggered curiosity more than a familiar category, and more than a totally unfamiliar and irrelevant category (see information gap interpretation of curiosity, Loewenstein, 1994). A second more motivational explanation has to do with the significance of the category "Arabs" for Jewish Israeli children. Namely, for historical and political reasons, the category is associated with conflict and threat (Bar-Tal et al., 2017; Bar-Tal & Teichman, 2005). According to coping theories, in a threatening condition, the individual may be especially alert and prone to seek information relevant to the threat, in order to cope with it (Miller, 1981, 1992), control it (Folkman, 1984), and reduce the uncertainty attached to it (Berlyne, 1960). Jewish Israeli children may have been motivated to ask for more information about Arabs for these reasons.

Regarding the content of information children were interested in, the findings revealed first and foremost, the repertoire of contents children entertain in order to get to know people. As Greif et al. (2006) had suggested, children's spontaneous questions can be taken as indicative of what children take to be conceptually fundamental in the definition of various kinds. Their study revealed, for instance, that children view different characteristics as fundamental to the definition of animal kinds (e.g., eating habits and habitat) compared to artifact kinds (e.g., function). In this vein, the current study—which examined for the first time, to our knowledge, children's informational preferences regarding unfamiliar people from real social groups, in an open way—revealed that children considered four types of properties as fundamental in their definition of people: Psychological characteristics (e.g., preferences, behaviors, and abilities), appearance (e.g., body organs, clothing, and facial expression), personal identity (e.g., name, age, and status), and social identity (referring to either family or social group membership).

The fact that young children would ask questions about the visible and concrete aspects of the targets shown in the pictures, like their appearance and personal identity, might be unsurprising. However, the fact that they also asked questions about abstract and invisible aspects, such as internal psychological characteristics, and about broader aspects, such as social identity, is an interesting revelation about children's intuitive social reasoning and construal of others. In particular, it indicates that children seem to construe people not solely as psychological beings, with desires, preferences, and habits, but also as social beings, with roles, social networks, and group identities (see Clément, Bernard, & Kaufmann, 2011; Hirschfeld, 2013; Wellman & Miller, 2008, for a discussion). This interpretation may partly explain the age-related differences in terms of the type of information children asked about, whereby 3- to 4-year-olds asked more questions about the psychological characteristics of the individuals than 5- to 6-year-olds, and 5- to 6-year-olds asked more questions about the social identity of the individuals. This developmental difference may reflect changes in the conceptual challenges puzzling children at different ages (Chouinard, 2007). Thus, as children start to gain a more explicit theory of mind—around ages 3- to 4-years (Wellman, 2014)—their attention is directed toward others' psychological characteristics. And as the salience of, and awareness to, social groups increases—around ages 5- to 6-years (Kowalski, 2007; Nesdale, 2004; Ruble et al., 2004)—children's curiosity about these aspects rise as well.

These broad developmental differences notwithstanding, a central finding on this measure had to do with the frequency with which children from the different age groups and genders asked different types of questions regarding in- and out-groups. In particular, whereas 3- to 4-year-old boys and girls asked similar types of
questions regarding in- and out-group individuals, 5- to 6-year olds—primarily boys—manifested distinct patterns. Specifically, 5- to 6-year olds asked more questions about the psychological characteristics and fewer questions about the social identity of Arabs than of Jews and Scots. One potential interpretation of this finding has to do with the fact that our subjects typically have very little contact with out-group members. Thus, whereas it may be more trivial to them to assume that in-group members share with them similar preferences and behaviors, they may be curious as to whether this is also true of out-group members. Whether this curiosity then relates to positive attitudes is a question for future research.

A further interpretation of these findings, however, relates to the notion discussed above that children’s spontaneous questions may reveal their beliefs about what is conceptually fundamental in a particular domain. In this light, we might interpret this group-bias in information content, as revealing what children take as fundamentally different between in- and out-group members. Within this perspective, it makes sense that differences appeared only at ages 5- to 6-years, as this is an age at which children start to manifest robust beliefs about essential differences between social categories (Birnbaum et al., 2010; Deeb et al., 2011; Rhodes & Gelman, 2009). In fact, a number of studies indicate that 4- to 6-year olds ascribe a central role to psychological and behavioral properties—in contrast to biological or physical properties—in their representations of novel social categories (Diesendruck & Eldror, 2011; Diesendruck & Weiss, 2015; Kalish & Lawson, 2008). The current findings indicate that this conceptualization appears not only in children’s responses to forced choices of alternatives presented by an adult experimenter, but spontaneously as well. Still within this perspective, it may also make sense that this biased conceptualization of in- and out-groups was especially true of boys—a point we will discuss further below, after reviewing the findings on attitudes.

As for attitudes, replicating findings from other cultures and with respect to diverse social groups, here too children, in particular 5- to 6-year olds, manifested more positive attitudes toward in-group than out-group individuals (see Buttelmann & Böhm, 2014; Dunham et al., 2011; McLoughlin & Over, 2017). Interestingly, boys held more negative intergroup attitudes than girls in both age groups, except for attitudes toward Arabs—which were similar among 5- to 6-year-olds’ boys and girls. In general, this gender effect is consistent with previous studies, using resource distribution types of tasks, and minimal group paradigms (Benozio & Diesendruck, 2015; Buttelmann & Böhm, 2014). As these authors suggest, it seems that from a young age, boys are more preoccupied with group membership than girls, an argument that is further supported by the findings related above on boys’ intergroup bias regarding informational content. More targeted research is necessary in order to examine the origins of such gender differences. A further interesting finding regarding attitudes was that there was no difference in children’s attitudes toward the conflict (Arabs) and neutral (Scots) out-groups. One might have expected that, given the conflict between Jews and Arabs, Jewish Israeli children’s attitudes toward Arabs would be more negative than toward Scots. It might be the case that sheer group membership is enough to trigger intergroup biases in attitudes (see for instance, Dunham, 2018, for a discussion). Alternatively, it could be that although the response in the two cases was similar, the source of the bias might have been different: one deriving from a sense of threat (Arabs), and the other from unfamiliarity (Scots).

Most importantly in terms of attitudes, the findings revealed a positive effect of information provision on intergroup attitudes. Specifically, 3- to 4-year olds, but not 5- to 6-year olds, who received answers for all of their questions (Full Information condition), manifested more positive attitudes toward in- and out-group members, compared to children who received partial answers or no answers (Partial or No Information conditions). This effect was especially robust in regard to attitudes toward Arabs. This finding is in line with previous studies among adults that found positive correlations between providing information about minority groups and improved attitudes toward them (e.g., Novotný & Polonský, 2011; Stephan & Stephan, 1984). From a theoretical perspective, this supports the notion that enhancing people’s knowledge of other groups may serve as a deterrent for the development of intergroup biases (Allport, 1954). From a practical standpoint, the fact that this manipulation was effective among 3- to 4-year olds, but not 5- to 6-year olds, emphasizes the importance of intervening before intergroup attitudes become consolidated and difficult to change by such short-term programs. Moreover, given
the findings on older children's preferences for information about psychological properties of out-groups, it may be especially effective to highlight the diversity of out-group behaviors, beliefs, and values.

Before concluding, several limitations and future directions should be noted. First, given the open approach of the study, the absolute amount and specific content of information that children received, varied substantially across participants. We do not know how this variability might have affected the results. Second, given our manipulation of information provision, some children might have been somewhat frustrated by not getting immediate answers to their questions. Third, our stimuli were pictures of individual children, which could have primed participants to individuate the group members. It could be interesting to conduct a similar study, but present a picture of a group instead of an individual. Finally, it would be extremely valuable to assess the long-term effect of information provision on children's attitudes, by following up on the children for a prolonged period of time.

These caveats notwithstanding, the present study revealed that children have biased preferences regarding the amount and content of information they are interested in obtaining vis-à-vis in- and out-group members. Importantly, the findings further indicate that providing such information, may be an effective way to reduce bias, already by 3- to 4-years of age.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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