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Children's Evaluations of Resource Allocation in the Context of Group Norms

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This study investigated children's evaluations of peer group members who deviated from group norms about equal and unequal allocation of resources. Children, ages 3.5 to 4 years and 5 to 6 years ($N = 73$), were asked to evaluate a peer group member who deviated from 1 of 2 group allocation norms: (a) equal allocation of resources, or (b) unequal allocation of resources. Most children negatively evaluated deviant group members who espoused an unequal allocation, even when it benefitted the group, and explained their evaluation with reference to fairness. However, participants who liked unequal deviants (who advocated for an unequal allocation of resources) reasoned about group functioning and the benefits that an unequal allocation would have for the group. With age, children displayed social acumen by differentiating their own evaluation of the deviant act from their expectations of the group's favorability toward that deviant member. Findings revealed age-related increases for social acumen about group norms, as well as the use of fairness reasoning regarding resource allocation.

Keywords: group norms, resource allocation, moral reasoning, social reasoning

Children's understanding of fairness is a central moral concept that emerges in early childhood (Smetana, 2006; Turiel, 2002). An important context for developing notions of fairness is resource allocation (Fehr, Bernhard, & Rockenbach, 2008; Gummerum, Hanoch, Keller, Parsons, & Hummel, 2010). Children spend much of their preschool and elementary school years discussing, debating and interacting around taking turns, sharing toys, and dividing up resources. This makes comprehension about resource allocation a salient one for understanding the development of moral judgment and cognition (Damon, 1977; Piaget, 1932; Smetana, Jambon, & Ball, 2014).

Children recognize the importance of equal distributions of resources between individuals from as early as the preschool years. With age, children are increasingly able to consider such factors as merit or need when determining the fair way to allocate resources (Baumard, Mascaro, & Chevallier, 2012; Blake & McAuliffe, 2011; Fehr et al., 2008; Li, Spitzer, & Olson, 2014). However, when recipients are equally deserving of resources, equal allocation remains children's preferred strategy for ensuring fairness, even to the extent that they opt to throw away a desirable resource (suggested by an experimenter) rather than create an unequal distribution of resources (Shaw & Olson, 2012). Yet, the preference for equal allocation is not unilateral as demonstrated by research on the social relationship context of allocation.

In fact, young children often take the relationship status of the context into account (Moore, 2009). For example, Olson and Spelke (2008) found that friendship status affected 3.5-year-old's fair allocation behavior such that young children allocated equal resources to puppet friend dyads more often than to nonfriend dyads. Expanding on this finding, Paulus and Moore (2014) demonstrated that preschool aged children expected a person to share more with a friend than a disliked peer. Yet, young children's experience with peer groups and group dynamics extends beyond the dyadic or triadic one-time interactions, as often used in resource allocation research. Group norms regarding allocation decisions play a significant role as well.

In fact, surprisingly little is known about how group norms or group processes are related to young children's evaluations of fairness in resource allocation contexts despite an extensive amount of research on the influence of group norms, in general (Haun & Tomasello, 2011; Nesdale, 2013). As Nesdale (2013) has argued, with age, children display a form of "social acumen," which reflects their acquisition of understanding that group decision-making is different from individual perspectives, and that this knowledge is central for the development of social and moral cognition (Nesdale, Killen, & Duffy, 2013). Social acumen reflects children's increasing ability to understand peer relations and social exclusion and bullying (Nesdale & Lawson, 2011; Nesdale, Zimmer-Gembeck, & Roxburgh, 2014). Similarly, Abrams, Rutland, Pelletier, and Ferrell (2009) argue that children's understand-

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ing of how groups work is a form of "group nous," that increases with age. Between the ages of 6 and 8 years, children begin to define group identity by the group norms that are associated with their groups, not just group membership, which is a hallmark of understanding social identity and group dynamics (Abrams et al., 2009).

Additional research in this area has revealed that school norms promoting inclusion have a positive effect on outgroup attitudes (Nesdale & Lawson, 2011), and that group norms play a determining role in how 9- to 13-year-olds make decisions about resource allocations for ingroups and outgroups (Killen, Rutland, Abrams, Mulvey, & Hitti, 2013). Thus, existing research indicates the importance of understanding group norms in relation to children's decisions about social exclusion, bullying, group identity, and resource allocation; yet little to no research has examined the importance of group norms on these social interactions in the preschool years.

Central to children's comprehension of group dynamics is the ability to differentiate between one's own evaluation of an act and their expectations about the group's goals and motivations, reflecting understanding that the needs and desires of a group may be different from one's own preferences. This distinction is especially important when one's own group is doing something that is viewed as unfair. Knowing that groups may be favorable toward members who want to keep more resources for their own group provides the groundwork for resistance to group norms, especially when group norms are unfair or unequal (Mulvey, Hitti, Rutland, Abrams, & Killen, 2014). Research on bystander intervention has shown that challenging groups that espouse unfair acts toward others is difficult for children due to concerns about social exclusion (Abbott & Cameron, 2014).

No research thus far has examined young children's (3- to 6-year-olds) evaluations of group norms and studied their emergent ability to distinguish their own evaluations from that of the group, in resource allocation decision, a form of social acumen. Further, testing children's willingness to support an ingroup member who advocates for equality when the group norm is to be unequal provides different evidence (if supported) for equality preference then methods designed to ask children how to divide three resources between two deserving peers, as one example. This is because embedding the decision in a group norm context requires children to suppress their group loyalty bias (demonstrated in the literature) with their preference for equality. A social group cost is involved in this decision, unlike resource allocation decisions made in dyadic contexts.

Thus, the central research question for this current study was how do young children coordinate their preference for equal allocation with their preference for ingroup members, when evaluating individuals who deviate from a group norm about resource allocation? The current study integrated research on resource allocation with current research on group dynamics and fairness in childhood.

Current Study

The current study investigated young children's evaluations of deviant group members who rejected the group's resource allocation norm. In group dynamics research a group member who rejects the group norms is referred to as a "deviant" member of the group (see Abrams & Rutland, 2008). Groups were children's own color-coded classroom, such as the "Orange room" (the ingroup) and an age matched classroom in their preschool, such as the "Red room" (the outgroup), reflecting the actual organization of the participating school. In order to test the role of group norms, and children's ability to flexibly evaluate norms that were associated with the ingroup and the outgroup, we manipulated the allocation norm such that participants evaluated the ingroup or outgroup with an equal allocation norm (divided resources equally between the ingroup and the outgroup) and the ingroup or outgroup with an unequal allocation norm (kept more resources for the ingroup and allocated fewer resources to the outgroup). In addition to evaluating the deviant individual, children evaluated the act of deviance itself (*really okay—really not okay*). To test whether children differentiated their own view from the group's perspective, we measured children's expectations of the group's favorability toward the equal and unequal deviant member, as well as their verbal reasoning about why the group would be favorable or unfavorable toward the deviant member (see Blake, Ganea, & Harris, 2012).

Thus, children heard about their groups' allocation norm (equal or unequal allocation of classroom toys), and the allocation norm of the outgroup (equal or unequal allocation of classroom play blocks). Children were randomly assigned to a version with half the children evaluating an equal allocating ingroup and unequal outgroup, and the other half of the participants evaluated an unequal allocating ingroup and equal outgroup. Then children heard about one deviant member of the group presented who went against that norm by advocating for the opposite allocation strategy. Children then evaluated the deviant member's act, and provided their expectations for how the group would evaluate the deviant member. Children's reasoning for their decisions, based on previously validated coding systems, was obtained in order to determine if children focused on equality, ingroup preference, group functioning, or other considerations.

Hypotheses

Evaluations and reasoning about the deviant act. Based on previous findings about children's preference for equality, we expected that in their own evaluations of the deviant member's act, children would be unfavorable toward a deviant member who advocated for an unequal distribution, even when this decision meant fewer resources for the ingroup. Children were also expected to negatively evaluate the act itself, and when reasoning about their judgment, children who were favorable of this deviant act would base their evaluations on group functioning. In contrast, children who were not favorable were expected to use fairness reasoning.

What would be more difficult for children would be the decision to support an ingroup member who advocated for equality when the group norm was to have more for the group (benefitting the ingroup). This is because, consistent with ingroup preferences, children might be likely to favor a deviant who wanted to give more to the ingroup, as both the child as well as the group would benefit when receiving more resources. However, consistent with group dynamics research, children might be unfavorable toward deviant members for being disloyal to the group.

Age-related changes in children's overall reasoning were also predicted. Recent findings regarding children's conformity to group norms suggest that children will be reluctant to support

someone who challenges a group norm. Given that research has also demonstrated young children's preference for conformity to group norms (e.g., Haun & Tomasello, 2011) we expected that young children would use group functioning reasoning when evaluating deviance from groups (disliking disruptions to the group). Thus, our age-related expectations were that 5- to 6-year-olds would use more fairness reasoning than younger children to evaluate what made the unequal deviant's act wrong based on the age-related increase in the understanding of fairness (see Smetana, 2006).

Evaluations and reasoning about group favorability. Regarding children's expectations of a group's favorability of a deviant target, it was predicted that children would expect groups to have higher favorability ratings of unequal deviants, due to children's increased knowledge about group dynamics (Abrams & Rutland, 2008). Knowledge about group dynamics would then be related to awareness that an ingroup, unequal deviant member, in fact, enhances group functioning by providing more resources for the ingroup. Thus, it was expected that reasoning regarding deviant members who preferred an unequal distribution would focus on group functioning in contrast to reasoning about deviant members who were equal, in which case fairness reasoning would predominate.

Social acumen and group nous. Lastly, when comparing children's evaluation of the deviant act and group favorability of the deviant target, we expected an age-related change such that older (5- to 6-year-old) children would differentiate their evaluations of the deviant act from their expectations about the group's preference. Even though no prior research has demonstrated this ability with children less than 6–8 years, we expected that children would be able to do it using a familiar school context and familiar resources (which were desired blocks used by the participants in their everyday play at school). Social acumen and group nous requires children to consider group functioning as well as the fairness dimensions of resource allocation (Abrams et al., 2009). Children were expected to make this distinction (between act evaluation and group favorability ratings) in the equal deviant condition. This condition places group function and equal allocation as competing needs, as aligning with the deviant goes against the group norm and disliking this deviant goes against the moral norm, in favor of inequality. Thus, the extent to which children recognize the group's preferences as distinct from their own evaluation of the deviant act reflects an increased level of social acumen and group nous.

Method

Participants

Participants were 73 young children ages 3.5- to 6-years-old, approximately evenly divided by gender ($M = 4.9$, $SD = 1.67$; 39 girls), and divided into two age groups: 39 3.5- to 4-year-olds ($M = 4.21$, $SD = 0.42$) and 34 5- to 6-year-olds ($M = 5.61$, $SD = 0.61$). Children were recruited from a university-affiliated preschool and kindergarten (enrollment = 110) at a large public university in the Mid-Atlantic region. All participants came from middle-income families (parents were staff, students, and faculty at the university); parents of participants gave written consent for their child's participation in advance. Participants' ethnic background reflected the U.S. representation, 75% European American, and 25% ethnic minority (Asian, African American, Latino, and Biracial).

Design

Group assignment. The preschool selected for this study was organized by a color-coded classroom system (e.g., Red room, Orange room) as part of the preschool administration's decision to provide a group identity for each classroom, which has been in place for two decades at the school (and was not part of our experimental study). Thus, there were six classrooms, grouped by child age, and identified by color in accordance with the school structure. We took advantage of the school structure by creating ingroup and outgroup categories using the color-coded room assignments already in place. Consistent with the classrooms, outgroup rooms were always matched on age (e.g., 3.5- to 4-year-olds were members of the Red room or the Orange room). Thus, participants in the Red room evaluated the Orange room as their outgroup, and the Orange room participants evaluated the Red room as their outgroup (see Figure 1).

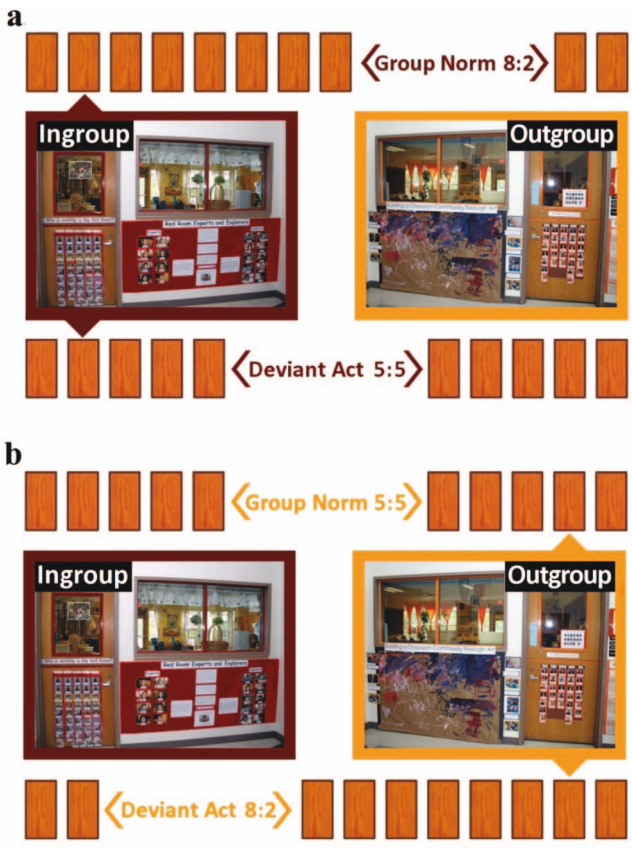

Figure 1. Graphic display of the stimuli administered during the interview, representing Version 1 of the protocol. The ingroup classroom photo on the left has a red border and red doors; the outgroup classroom photo on the right has an orange border and an orange door. Story "a" depicts the deviant member's allocation behavior (equal deviant) when the group norm is to allocate unequally and story "b" depicts the deviant member's allocation behavior (unequal deviant) when the group norm is to allocate equally. See the online article for the color version of this figure.

Group identity. As a measure of ingroup identification, children's level of affiliation with their preschool classroom was measured using methodology adapted from Cameron and Rutland (2008). Before hearing about group norms and individual deviants, children were shown a photo of their actual classroom door and asked about their favorability of being in the classroom (e.g., "How much do you like or not like being in the Red room?"). Children responded using a smiley faces Likert-type scale (used in previous research with preschool-aged children), from 1 = *not like at all* to 6 = *like very much.*

Group norms. There were two group norms: equal allocation (five blocks for your group and five blocks for the other group) and unequal allocation of resources, advantaging the ingroup (eight blocks for your group and two blocks for the other group). Using a within-subjects design, children evaluated two vignettes (equal and unequal group norms) using brightly illustrated images (of the 10 blocks) and photographs (of the door of the classroom with a color enhanced outline of the door; see Figure 1). The exact wording for how the group norms associated with each classroom were described to participants is listed below (under Instructions to Participants section).

Counterbalancing. Two protocol versions were used to test for effects of group membership and order of norm, such that ingroup and outgroup norms were either equal or unequal. Within each age group (3.5- to 4-year-olds and 5- to 6-year-olds), participants were randomly assigned to one of the two versions. In Version 1 (depicted in Figure 1) children were first presented with their ingroup holding an unequal norm, advantaging the ingroup (8:2 distribution) followed by the outgroup with an equal norm (5:5 distribution). Version 2 had the opposite norms, such that the participant's ingroup had an equal norm (5:5 distribution) and the outgroup had an unequal norm, advantaging the outgroup (8:2 distribution). In all stories and versions, deviant members went against the group norm by espousing equality or inequality, advantaging the deviant's group. Statistical tests revealed no significant version effects, indicating that the order of the story norm did not bear on children's judgments. Additionally, no effects were found for ingroup or outgroup, meaning that children's evaluations did not vary on the basis of the deviant member classroom group. Ingroup and outgroup were collapsed and the following analyses were within-subjects.

Procedure

After consent was obtained, trained research assistants individually interviewed children in a small, quiet room at the school. Before the interview began children were told that they would hear stories and answer questions using picture cards and that there were no right or wrong answers. Interviews lasted 20–25 min.

All children received the following introductions with corresponding classroom labels and with interviewer actions as described in brackets:

> As you told me, at your preschool there are different colors for each room. This is your room, the Red room (pointing to photograph of the Red room door) and this is the Orange room (pointing to photograph of the Orange room door). Let's say these rooms get 10 new blocks (pointing to row of 10 blocks) for the kids to play with. First, let's make sure that we have all 10 (counting 1, 2, . . . 10 with child). A group of kids in the Red and Orange room get to choose how to give out the blocks.

After introducing the pictures of the classrooms, children were introduced to the group norms associated with each classroom. An example of the explanation for the ingroup unequal norm condition (male protocol) in which the deviant peer prefers an equal allocation is as follows (selections in italics were changed depending on the condition, and room names were based on participant's own classrooms):

> Now, let's talk about your group in the Red room. Remember, your group always likes to *keep eight blocks* for your room (moving and counting out blocks with child), and *give two blocks* (moving counting out blocks with child) to the Orange room. (Regrouping blocks into a row of 10). Let's say George, who is also in your group in the Red room (pointing to image of kids), wants to be different. He wants to *keep five blocks for your group* (moving and counting out blocks with child) and *give five blocks* (moving and counting out blocks with child) to the group in the Orange room.

Pilot testing indicated that the children followed the story and understood the questions (with the exception of four children who did not understand the Likert-type scale and were eliminated prior to the final sample of $N = 73$). The picture cards were engaging, and children followed along closely (see Figure 1).

Measurement Items

Group favorability of the target. Children rated the group's favorability: (a) *Group favorability of the deviant target rating:* (e.g., How much do you think your group of friends would like or not like "*X*" (deviant member)? 1 = *not like at all* to 6 = *really like*); and (b) Justification (Why?).

Evaluation of the act. Children were asked to evaluate the act: (c) *Evaluation of the deviant act rating*: (e.g., How okay or not okay do you think "*X*" (deviant member) is for "*Y*" (wanting equal distribution or unequal distribution of blocks)? 1 = *really not okay* to 6 = *really okay*); and (d) Justification (Why?).

Coding and Reliability

Responses to the justification assessments were coded for quantitative analysis using content coding categories drawn from social domain theory (Killen & Rutland, 2011; Smetana, 2006), a previous study on reasoning regarding group norms and deviant peers with 9- and 13-year-olds (Killen et al., 2013), as well on the basis of pilot testing. All interviewers had received extensive training in interviewing children with multiple years of experience with engaging children in reasoning. Extensive pilot testing was conducted with the interview to ensure that children understood the questions. The coding system was comprised of three conceptual categories, along with an "other" category for uncodeable data: (a) *fairness* (moral domain: e.g., "It's just not fair to give them less"); (b) *group functioning* (societal domain: e.g., "He's not doing what the group is doing and they won't like it"); (c) *autonomy* (psychological domain: e.g., "She can do what she wants to do"); and (d) *Other/uncodeable* (e.g., "She's nice"). Following social domain coding system guidelines, only codes used more than .10 proportionally were included in the analyses. Autonomy and other were used less than .10 ($M_{autonomy} = .04$ and $M_{other} = .03$) and thus

analyses were conducted on two categories, fairness and group functioning.

The coders, who were blind to the hypotheses of the study, were trained to code the protocols (with discussions regarding disagreements) with pilot data until reliability was achieved at or above Cohen's $\kappa = .85$. Using a new subset of the data, 25% ($N = 19$) of the interviews were coded for reliability which was computed at Cohen's $\kappa = .88$. The trained reliability coders then coded the entire data set. Less than 5% of the participants used two codes for the items discussed.

Data Analysis Plan

Univariate analyses of variance (ANOVAs) and repeated measures ANOVAs were conducted to analyze allocation judgments and justifications for group favorability of the deviant target, and evaluation of the act (see Killen et al., 2013). If sphericity was violated, the Huynh-Feldt adjustment was used. Pairwise comparisons (Bonferroni) were conducted for between-subjects and interaction effects. ANOVAs included age group (3.5- to 4-year-olds, 5- to 6-year-olds) and gender of participant (male, female). Repeated-measures analyses were conducted for comparing participants' responses to two items: (a) evaluation of the act, and (b) group favorability of the deviant target. To test for ingroup preferences, separate analyses with group identity (ingroup, outgroup), age, and gender of the participant were conducted. Participant's group membership was not significant in any of the following analyses, and was dropped from all analyses. Participant gender was also not a significant predicting variable and will not be discussed further.

Analyses for reasoning were performed on fairness and group functioning justifications. These analyses were conducted as a function of whether participants had given positive (e.g., okay) or negative (e.g., not okay) ratings for the evaluation of the act and group favorability. Thus, dichotomous variables were first created for evaluation of the act (1 = *not okay* to 6 = *okay*) and group favorability (1 = *really bad* to 6 = *really good*) grouping the three negative scaled responses and the three positive points of the scale (e.g., dichotomous evaluation of the act: 1–3 as *not okay*, and 4–6 as *okay*). Testing variance in reasoning based these dichotomous variables provided a discrete test of children's justifications based on a relevant and valid grouping criterion (i.e., the positive or negative valence in their evaluation), and enabled us to directly compare the findings obtained in this study with data using the same measures conducted with older children in which the scales had been transformed into dichotomous variables (see Hitti, Mulvey, Rutland, Abrams, & Killen, 2014; Mulvey, Hitti, Rutland, Abrams, & Killen, 2014). Thus, for the reasoning analyses these dichotomous assessments, *evaluation of the act* and *group favorability,* were used as the independent variables, predicting variance on the proportions of reasoning used which were dependent variables. Follow-up tests were conducted with pairwise comparisons.

The allocation conditions were labeled according to the actions of the deviant member. Thus, the "equal condition" referred to the condition in which a member deviated by advocating equal distribution of the blocks when the group had a norm of unequal distribution. Conversely, the "unequal condition" referred to when the ingroup member deviated by espousing unequal allocation of the blocks when the group had a norm of equal allocation.

Results

Act Evaluation and Reasoning

Evaluation of the deviant act. To directly compare children's evaluations of the deviant act by the two types of allocation norms, a 2 (Age Group: 3.5- to 4-year-olds, 5- to 6-year-olds) × 2 (Group: ingroup, outgroup) × 2 (Deviance Act: equal, unequal) ANOVA with repeated measures on the last factor was conducted. Children evaluated ingroup members who espoused equal allocation more positively than those who espoused unequal allocation, $F(1, 69) = 80.58$, $p < .001$, $\eta_p^2 = .54$ (see Table 1). Additionally, there were no significant age differences; all children preferred equal to unequal deviant members, even when the deviant act reflected group disloyalty. There were no effects for group identification; children did not differ in their approval for ingroup or for outgroup members who espoused equality in contrast to the group norm.

Justification for evaluation of the act. Two 2 (Act Evaluation: okay, not okay) × 2 (Age Group: 3.5- to 4-year-olds, 5- to 6-year-olds) × 2 (Justification: fairness, group functioning) ANOVAs were conducted on children's justifications for equal and unequal resource distribution, one for each deviance condition. An interaction effect was found for children's act evaluation and type of justification when evaluating the equal deviant act, $F(1, 58) = 4.22$, $p < .05$, $\eta_p^2 = .07$; children who evaluated the ingroup member's preference for equal allocation as being "okay," used significantly more fairness reasoning than group functioning reasoning, $p < .001$, whereas children who evaluated the act as "not okay" did not significantly differ in their proportion of fairness and group functioning reasoning (see Figure 2). Thus, the deviant who went against the group was doing something permissible for reasons of fairness.

Consistent with this finding, an interaction effect was found for evaluations of the unequal deviant act and children's justifications, $F(1, 58) = 9.06$, $p < .01$, $\eta_p^2 = .14$. Children who evaluated the ingroup member's desire to challenge the group's equal allocation norm as being "not okay," used significantly more fairness reasoning than group functioning reasoning, $p < .001$, and children

Table 1
Evaluations of Deviant Group Members

Condition and deviant act	3.5–4 years	5–6 years	Total
Group favorability of the deviant			
Equal deviant	4.36 (1.94)	3.41 (1.91)	3.92 (1.97)
Unequal deviant	2.79 (2.18)	2.24 (1.52)	2.53 (1.91)
Evaluation of the deviant act			
Equal deviant	5.00 (1.68)	4.94 (1.61)	4.97 (1.64)
Unequal deviant	2.85 (1.90)	2.26 (1.52)	2.57 (1.75)

Note. The table displays the means (SDs) for evaluations of deviant group members by condition and participant age group. The "deviant" is the group member who espouses a view different from the group (e.g., "equal deviant" is the member who advocates for an equal allocation when the group norm is to allocate unequally). Evaluations are based on 1–6 Likert-type scale responses ranging from (1 = *not at all* to 6 = *a lot* or 1 = *really not okay* to 6 = *really okay*).

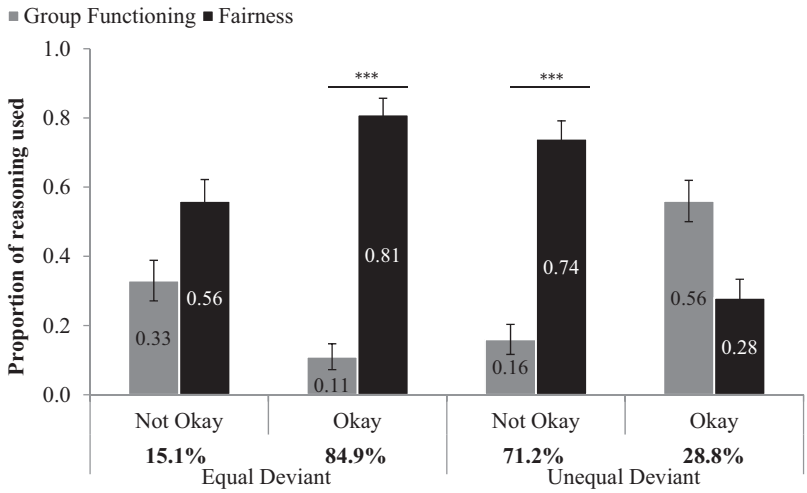

Figure 2. Proportion of reasoning used for evaluations of the deviant target act for equal and unequal deviants; y-axis indicates the proportion of usage for each reasoning type. Percentages on *x*-axis indicate the proportion of participants represented in each evaluation group (e.g., 15% of participants evaluated the equal deviant act as "not okay"). Error bars represent standard errors of the mean.

who evaluated the act as "okay" did not differ significantly (see Figure 2). Taken together, these findings demonstrated the consistency in the use of fairness reasoning to justify why equal allocation is acceptable and unequal allocation is unacceptable.

An interaction effect for age was found in the unequal condition, $F(1, 58) = 11.06$, $p < .01$, $\eta_p^2 = .16$, such that older children used more reasoning about issues of fairness and equality when evaluating the act of distributing blocks unequally than did younger children, $p < .001$ (see Figure 3). Thus, with age, children used more fairness justifications to explain why they thought unequal allocation was wrong.

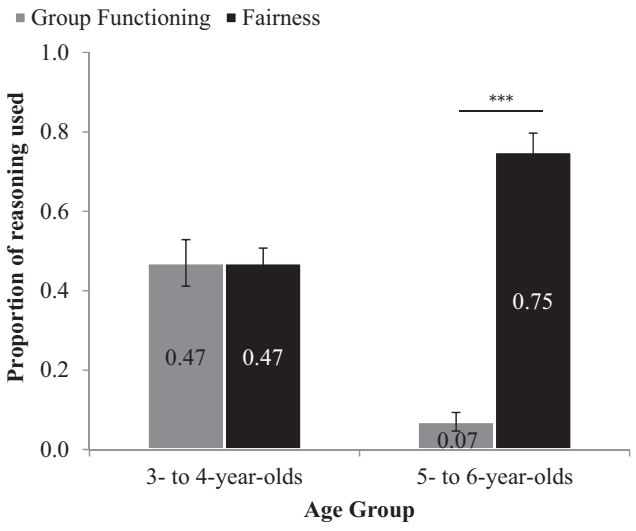

Figure 3. Proportion of reasoning used across evaluations of the unequal deviant target act by age; y-axis indicates the proportion of usage for each reasoning type. Error bars represent standard errors of the mean.

Group Favorability Evaluation and Reasoning

Group favorability of the target. To test our hypotheses that children expected the group to like an ingroup member who espouses equal allocation (the equal deviant) more than an ingroup member who espouses unequal allocation (the unequal deviant) we conducted a 2 (Age Group: 3.5- to 4-year-olds, 5- to 6-year-olds) × 2 (Gender: male, female) × 2 (Deviance Act: equal, unequal) ANOVA with repeated measures on the last factor. A main effect was found for deviant target, $F(1, 68) = 20.90$, $p < .001$, $\eta_p^2 = .23$. Participants expected the group to be more favorable toward a group member who wants to allocate equally than one who espouses an wants to be unequal allocation—even though both were going against the group norm (see Table 1). Additionally, a main effect revealed that these expectations also varied by age, $F(1, 68) = 4.37$, $p < .05$, $\eta_p^2 = .06$ ($M_{3-4\ \text{years}} = 4.36$, $SD_{3-4\ \text{years}} = 1.94$; $M_{5-6\ \text{years}} = 3.41$, $SD_{5-6\ \text{years}} = 1.91$). Younger, 3.5- to 4-year-olds expected the group to be more favorable of this deviant than did older children. A follow-up *t* test, comparing means with neutral, indicated that younger children were significantly above the 3.5, neutral scale-midpoint ($t(38)$ 2.77 = $p < .01$; $d = 0.49$), whereas older children were not significantly different from neutral.

Thus, while both 3.5- to 4-year-olds and 5- to 6-year-olds anticipated the group to like the equal deviant group member more than the unequal group member, younger children anticipated that the group would be favorable of equal deviant while older children expected that the group would not be favorable. This was an interesting finding because the equal deviant was also challenging the unequal group norm of "more resources for the group." Results suggest that, with age, children expected groups to be favorable to a member who espoused an equal allocation.

Justification for group favorability of the target. To examine how children reason about the group's favorability toward deviant targets, two 2 (Group Favorability: like, not like) × 2

(Age Group: 3.5- to 4-year-olds, 5- to 6-year-olds) × 2 (Justification: fairness, group functioning) ANOVAs with repeated measures on the last factor were conducted for favorability ratings for each deviance condition. An interaction effect was found for target favorability by justification for both the equal deviant, $F(1, 54) = 22.27$, $p < .001$, $\eta_p^2 = .29$, and unequal deviant, $F(1, 58) = 15.82$, $p < .001$, $\eta_p^2 = .21$. Participants who thought the group would like the equal deviant used predominately fairness reasoning, $p < .001$, while those who thought the group would dislike the equal deviant predominantly used group functioning reasoning, $p < .05$ (e.g., "They won't like him because he is not doing what they are doing"). For justifications about group favorability toward the unequal deviant, participants also used more group functioning reasoning than reasoning about fairness, both at ps $< .01$ (see Figure 4).

Differences Across Act and Group Favorability Evaluations

Act evaluation and group favorability. In order to test predicted age-related differences for participants' Likert responses for their evaluation of the act (act evaluation) and rating of group favorability (group favorability evaluation), two 2 (Age Group: 3.5- to 4-year-olds, 5- to 6-year-olds) × 2 (Gender: male, female) × 2 (Allocation assessment: act evaluation, group favorability of the target) ANOVAs were conducted with repeated measures on the last factor, one for each condition (equal deviant, unequal deviant). A main effect for the equal deviant allocation condition was found, $F(1, 69) = 25.42$, $p < .001$, $\eta_p^2 = .27$; no significant differences were found for the unequal deviant condition (see Figure 5).

When evaluating the deviant who espouses equality in contrast to the group's norm to distribute unequally, children's ratings of the act were significantly more positive than their expectations of the group's favorability toward the deviating member. Children viewed the act of challenging the group's unequal norm positively, but expected the group to be more negative about this member

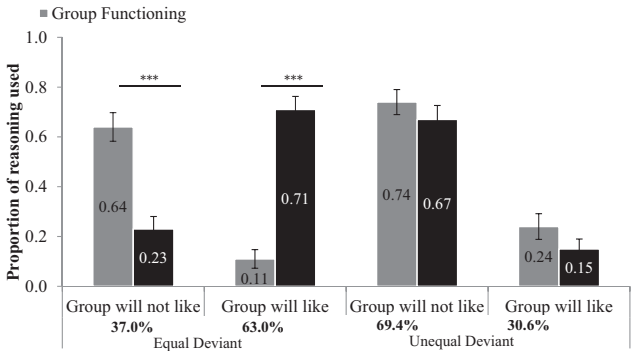

Figure 4. Proportions of fairness and group functioning reasoning for equal and unequal deviants by group favorability evaluation. Percentages on the *x*-axis indicate the proportion of participants represented in each evaluation group (i.e., 37.0% of participants thought the group "would not like" the equal deviant member). Error bars represent standard errors of the mean.

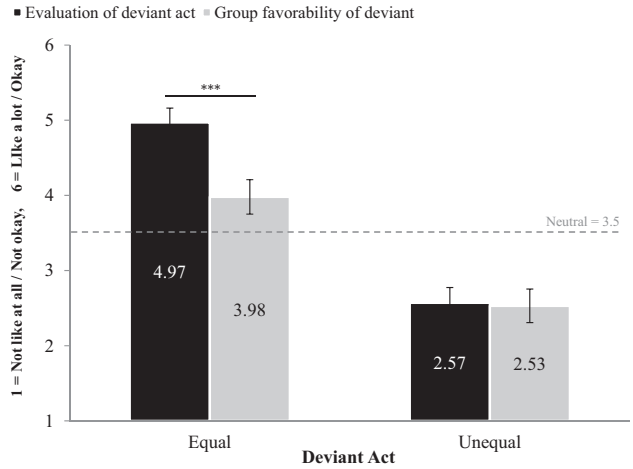

Figure 5. Group favorability evaluations and evaluations of deviant act for equal and unequal deviants. y-axis indicates 1–6 Likert response from 1 = *not like at all/really not okay*, 6 = *like a lot/really okay*. Error bars represent standard errors of the mean. Horizontal line indicates scale midpoint (representing neutral).

An interaction was found for age by allocation assessment in children's evaluations of the deviant act and group favorability for the equal condition, $F(1, 69) = 4.47$, $p < .05$, $\eta_p^2 = .06$ (see Figure 6). Older children made a greater distinction between their own evaluations of the deviant act to espouse equal allocation and their expectations of the group's favorability toward the deviant target member ($p < .001$) than younger children ($p < .05$). Although older children were favorable toward the deviant member for being equal, they also expected that the group would not like the deviant target, less so than younger children ($p < .01$).

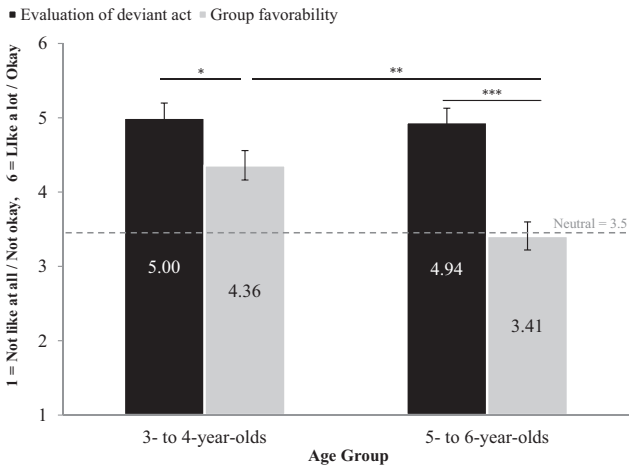

Figure 6. Group favorability evaluations and evaluations of deviant act for equal deviant by age. y-axis indicates 1–6 Likert response from 1 = *not like at all/really not okay*, 6 = *like a lot/really okay*. Error bars represent standard errors of the mean. Horizontal line indicates scale midpoint (representing neutral).

Classroom Identification

Lastly, in a separate analysis the group identity measure, modified from Cameron and Rutland (2008), confirmed that the vast majority of participants had a very high level of identification with their classroom. There was a significant effect for identification, $t(70) = 13.77$, $p < .001$, such that majority of children were favorable of their ingroup classroom ($M = 5.6$, $SD = 1.1$), based on a split score of 1–3 as not favorable, and 4–6 as favorable.

Discussion

The novel findings of the current study were that children as young as 3.5 to 6 years of age supported ingroup members who deviated from the group norms of inequality ("more for us") by advocating for equal allocations of resources. To make this judgment, children had to both suppress their group loyalty desires as well as their preference for resources that benefit ingroups. These findings support previous research on equality preferences demonstrated for older children (Blake & McAuliffe, 2011) and preschool aged children (Fehr et al., 2008) using a more stringent test, one that required the necessary suppression of competing concerns such as group loyalty. Further the findings expand previous research on group dynamics to the context of resource allocation regarding an actual group context, and contribute to research on social acumen and group nous in childhood by demonstrating that, with age, during the preschool years, children begin to differentiate their own evaluation of a group act with their expectations about group favorability (Nesdale, 2013).

A novel feature of this study was to integrate prior research on resource allocation with the literature on group norms and group identity. Resource allocation decisions are made in dyadic, triadic, and group interactions and thus understanding group dynamics is a central aspect for a comprehensive understanding the origins of resource allocation decisions in childhood. Somewhat surprisingly, children ages 3.5- to 6-years-old gave priority to fairness norms about equal allocation rather than to group loyalty, despite previous research on group conformity (Haun & Tomasello, 2011).

Demonstrating children's full understanding of their decisions, participants used moral reasoning such as fairness to support a deviant member who advocated for equal allocation when the group wanted an unequal allocation of resources. In contrast, children's evaluations of unequal allocation of resources (advantaging the ingroup) were based on group functioning reasoning. By also measuring children's evaluations of resource allocation in a group context we were able to determine how children view a member's decisions to challenge the group norm about equal allocation of resources as well as the group norm about unequal allocation. Young children's support of a deviant member who advocated for equality, and rejection of a deviant member who advocated for inequality, reveals the underlying strength of their social cognition about equality and fairness. Young children supported a deviant (counter—normative) group member who espoused equality, even when it did not conform to the established group norm.

These findings provide a new lens on resource allocation knowledge in early childhood by demonstrating that children differentiate group preferences from fairness judgments. This test provided a different assessment from one in which children's equality preferences are measured by asking participants how to divide up a small number (two or three) of resources among two deserving peers. In the current assessment group loyalties have to be suppressed as well as a desire to benefit the ingroup. Further, with age, children recognized that groups may not support this type of deviance, preferring more for the ingroup. When a member of the group (ingroup or outgroup) challenged the group by distributing the resources unequally, children viewed this act as unfair. In fact, 5- to 6-year-olds did not expect groups to like members who deviated from the norms, even when the deviant recommended an equal allocation of resources. This has implications for contexts in which contesting group behavior is important, such as when the group is being unfair to others, as witnessed with research on bystanders (Abbott & Cameron, 2014).

Young children are sensitive to group norms, and to the consensus of a group (Haun & Tomasello, 2011). Yet, the current study demonstrated that children's adherence to group norms, and their views about the consensus of a group, depended on the type of norm. Our conclusion is that the moral nature of the group norm significantly contributed to children's acceptance or rejection of group norms, and the extent to which they would support ingroup members who challenge their own norms; not all children supported the equal deviant, however, and further research on individual differences and developmental pathways that lead to supporting deviant members who advocate for equality is warranted.

While children explained their evaluation of the act by using group functioning and fairness reasoning, the predominance of reasoning about fairness indicated that children not only preferred strict equality, even though the unequal allocation gave advantage to the ingroup, but they did so because "this way, it's fair." This is concurrent with past research on sharing, which has found young children understand fairness (Smetana et al., 2014) and with recent studies on children's early cooperative and helping orientations (Warneken & Tomasello, 2007) and rightful ownership (Blake et al., 2012). We found that fairness reasoning increased from 3.5 to 6 years of age. This finding has implications for the claims about the mechanisms of change regarding group norms and fairness-related behavior during the preschool years.

Social acumen (see Nesdale, 2013) and group nous (see Abrams et al., 2009), identified by researchers as reflecting a social–cognitive competency that increases with age, provides one interpretation of the findings. The age-related change in children's expectations about a group's favorability toward an equal deviant suggests young children, too, have an emergent ability to distinguish group desires from their own evaluations of the deviant act. Previous studies on social acumen and group nous have been conducted with children between age 6 and 9 years; no studies have been conducted with younger children. The current study demonstrated that with age, children's judgments about group favorability changed, even though their fairness preferences did not. In fact, a novel finding was that older children anticipated that the group would like the equal deviant significantly less than would younger children. This finding contrasts with past research that has predicted that young children would not have the complex coordination skills required to understand a group's perspective in a resource allocation paradigm.

Even though members of groups who allocated unequally enhance group functioning by providing more resources for the ingroup, 5- to 6-year-old children either expected the group to have a preference for equality or to dislike the deviant member for disagreeing with the group's norm. However, children were favor-

able toward members who went against the group by allocating equally, which means that they also recognized a context in which one should disagree with the group. Research using this paradigm with older children has found, though, that 9- and 13-year-olds expect that individuals who disagree with the group will also be excluded by the group (Hitti et al., 2014).

Further, findings among older children and adolescents with different assessments have demonstrated that children allocated resources equally in situations even where their material self-interests conflicted with norms of fair-sharing (Gummerum, Keller, Takezawa, & Mata, 2008). Gummerum, Keller, Takezawa, and Mata (2008) found that when placed in a group that has a fairness norm, 9- to 17-year-olds maintained the group's equal norm and were less likely to allocate unequally, giving advantage to the ingroup. Gummerum et al. (2008) suggest that children and adolescent's expectations about group functioning may be associated with later maintenance of group fairness norms regarding children's allocation decision-making in group contexts.

While children highly identified with their classroom "color coded" group as demonstrated by the group identity measure, an unexpected finding was that children did not differentiate between the ingroup and the outgroup regarding their judgments about deviating from the group norm; participants viewed it just as wrong for an ingroup member to deviate from an equal group norm as it was for an outgroup member to do so. Given that minimal group studies reveal ingroup bias (Dunham, Baron & Carey, 2011) we expected a strong finding for the ingroup effect when the identification was not marked solely by an ad hoc criterion but by actual classrooms (member of the Orange room or the Red room) which reflected an assigned group membership two which children were assessed as being high in identification.

There are several potential explanations for our lack of an ingroup preference finding, which warrant further investigation. First, we did not administer a measure of outgroup attitudes prior to administering the resource allocation task. This type of measure would provide more information regarding whether children's ingroup identification with their own classroom was stronger than an identification with the outgroup. In fact, it appeared that children had a high identity with their own group, but did not display a dislike for the outgroup (the other classroom). Future research could include an outgroup favorability measure. Second, in the actual school context, children interacted with members of the outgroup (other classrooms) and the extent to which children's friendships across classrooms were salient this type of "contact" may have reduced the intergroup effect. Thus, it may be important to include a measure of contact as well as friendship regarding intergroup categories in studies with young children. Third, it would be valuable to examine resource allocation in the context of group dynamics for other forms of group identity (such as nationality or religion).

Additionally, in future research, the inclusion of a behavioral task would enhance our knowledge of how children negotiate these decisions in their own classroom interactions. One advantage of using actual classrooms (as identified by the use of photos) with hypothetical peers was that we were able to control for friendships and prior histories of interactions, which has been shown to play a role in resource allocation decisions (Paulus & Moore, 2014). Yet, actual interactive behavioral measures also provide more information regarding decision-making "in the moment" and future research could be designed to expand the current paradigm in an actual interactive task. Thus, determining which groups reflect highly salient group identity in young children should be examined for future research.

Overall, children positively evaluated a group members' advocacy for equal allocation, even when the group wanted to distribute more for them, but they expected that the group would not like the deviant member. Older (5- to 6-year-olds) children a distinction between their ratings of the act and the group's perception of the deviant while younger children (3.5- to 4-year-olds) did not. Thus, with age, children expected the group to be less favorable toward the deviant member.

Given that many social contexts for young children are influenced by social contextual factors such as friendships and prior histories of moral action (Kenward & Dahl, 2011; Killen & Cooley, 2014; Rutland et al., 2012), these findings point to the importance of examining resource allocation decisions in the context of group norms. Group membership can be defined in multiple ways, from the use of minimal criteria to criteria that include variables such as race, ethnicity, and gender. Thus, determining how children coordinate moral concepts with attitudes about different forms of group membership and group identity will continue to shed new light on the emergence of moral judgments and social cognition in development.

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