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Children Hold Leaders Primarily Responsible, Not Entitled

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Do children construe leaders as individuals whose position of power entails primarily more responsibility or more entitlement, compared with nonleaders? To address this question, 5-year-old children ($n = 128$) heard a story involving a hierarchical dyad (a leader and a nonleader) and an egalitarian dyad (two nonleaders), and then assessed protagonists' relative contributions to a collaborative endeavor (Experiments 1 and 2) or relative withdrawals from a common resource pool earned jointly (Experiment 3). Children expected a leader to contribute more toward a joint goal than its nonleader partner, and to withdraw an equal share (not more) from a common pool. Children thus gave evidence that they construed leaders as more responsible, rather than more entitled, relative to nonleaders.

To effectively navigate their social world, children must figure out what to expect in interactions with others. These expectations are guided in part by a capacity to read others' minds, but also an understanding of the structure of their social environment. In particular, numerous studies have examined children's reasoning about others based on their group membership (Diesendruck, 2013; Killen, Rutland, Abrams, Mulvey, & Hitt, 2013; Patterson & Bigler, 2006; Rhodes, 2013). A further structural aspect of social environments relates to individuals' relative power over others, namely, people's social ranking within groups.

Social scientists have long distinguished between two types of ranking hierarchies. In *dominance* hierarchies, ranking is established in zero-sum interactions between individuals with conflicting goals, when some individuals achieve their goal at the expense of others, often via intimidation or force. Others defer as they have no choice (Henrich & Gil-White, 2001; Maner & Case, 2016). In *leadership* hierarchies, in contrast, individuals show respect and defer freely to those who take charge. In authority-based leadership hierarchies, individuals accept the legitimate power of leaders to give orders and

make decisions, and are expected to obey them (Fiske, 1992; French & Raven, 1959). In prestige-based leadership hierarchies, leaders generally have no authority to command obedience, but wield disproportionate influence, in that their opinions weigh more, and they attract more social attention and imitation due to their expertise or knowledge (Henrich & Gil-White, 2001). Both forms of leadership rely on acceptance by others. Thus, leaders are expected to behave responsibly and fairly (De Cremer & Van Dijk, 2008; Den Hartog et al., 1999; Tyler & Lind, 1992; Von Rueden, Gurven, Kaplan, & Stieglitz, 2014; Wit & Wilke, 1988).

Early research on children's concepts of social rank focused on familiar kinds of authority figures, marked by labels (e.g., "teacher," "parent"), and examined the scope and source of social power children attribute to them. Using hypothetical vignettes, researchers found that children aged 4–11 years are sensitive to (a) who can legitimately issue commands in different contexts (e.g., based on social position or knowledge), and to (b) boundaries on social power (e.g., some commands of authority figures should not be obeyed, see Laupa, 1994; Laupa & Turiel, 1986). In recent years, developmental researchers have examined whether the capacity to represent social rank extends beyond

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familiar kinds of high-ranking individuals, and whether it exists earlier in life.

Much of this research has focused on early sensitivity to dominance. It has revealed that children (and infants) identify which of two individuals is dominant and will thus prevail in a zero-sum interaction, based on a range of cues (e.g., size, decision power; see Bernard et al., 2016; Charafeddine et al., 2015, 2016; Gülgöz & Gelman, 2017; Mascaro & Csibra, 2012; Pietraszewski & Shaw, 2015; Pun, Birch, & Baron, 2016; Thomsen, Frankenhuys, Ingold-Smith, & Carey, 2011). Children also draw inferences about dominant individuals; they expect them to be more competent and wealthier than subordinates (Charafeddine et al., 2015). Finally, children prefer to interact with a dominant individual (Thomas, Thomsen, Lukowski, Abramyan, & Sarnecka, 2018; but see, Charafeddine et al., 2016), trust him/her (Bernard et al., 2016), and share resources with him/her (Charafeddine et al., 2016). Some cues revealed in dominance studies could apply to leadership too, thus indexing social rank more generally. In fact, children use various cues (e.g., posture, giving orders, age) to identify social rank even in noncompetitive contexts (Charafeddine et al., 2015; Terrizzi, Brey, Shutts, & Beier, 2019), and reliance on some cues undergoes development, with 5-year-olds using more cues than younger children (Brey & Shutts, 2015; Gülgöz & Gelman, 2017).

Considerably less attention has been devoted to children's representation of leadership. There is evidence that the ability to *distinguish* between dominance and leadership appears to exist in childhood. In particular, 21-month-olds expect individuals to obey a leader (one whom they reverently bow to and bestow their possession), even in his/her absence, but obey a bully (who hits them, and steals their possession) only when it is present (Margoni, Baillargeon, & Surian, 2018). Moreover, 5- to 12-year-olds infer high rank from cues of dominance (e.g., forcing opinion in harsh tone, subordinate resisting directive) and cues of prestige (e.g., sharing opinion in a friendly tone, subordinate seeking directive), but have divergent expectations about subordinates' attitudes toward these individuals; they expect a subordinate to fear a dominant individual, but approach and like a prestigious individual (Kajanus, Afshordi, & Warneken, 2020). Evidence further suggests that children as young as 5 years, can *identify* a leader based on a variety of cues, such as being imitated (Over & Carpenter, 2015), offering advice in a friendly tone, or having one's opinion sought (Kajanus et al., 2020). Even infants in their second year, do so based on

reverent bowing, bestowing goods to an individual, size, or implicit order giving (Margoni et al., 2018; Stavans & Baillargeon, 2019). Moreover, as mentioned, children hold expectations about the behaviors and attitudes of *followers toward leaders* (Kajanus et al., 2020; Margoni et al., 2018).

In turn, the evidence concerning early expectations about the behavior of *leaders toward followers* has been somewhat mixed, with different contexts probed. In one report, 17-month-olds expected a leader to intervene and rectify a fairness transgression within its group, but held no particular expectation of intervention from a nonleader, equal in standing to the conflicting parties (Stavans & Baillargeon, 2019). In contrast, a recent report found that 5- to 7-year-olds held no particular expectation about whether a leader or a follower would prevail in a competition over a limited resource (Kajanus et al., 2020). Of particular theoretical relevance, no study to date has assessed children's expectations about the roles of leaders versus nonleaders in social interactions involving collaboration, which is important in human social life. Some evolutionary accounts draw a connection between the collaborative tendencies that characterized our ancestors and leadership emergence. Specifically, it has been proposed that our ancestors lived in groups to achieve goals that individually would have been too difficult or risky (e.g., hunting, protection; see Henrich, 2016; Tomasello, 2014) and leadership emerged when some individuals, willing and able, took on themselves to coordinate collective action, resolve conflicts, and promote cooperation (Van Vugt, 2006). The present studies were motivated by such accounts and assessed collaborative situations, to gain insight into how children construe leaders relative to nonleaders.

Consistent with the evolutionary argument, adults possess at least two construals of leaders that impinge on their expectations vis-à-vis leaders and nonleaders in social interactions. According to one, leaders have *increased responsibility* relative to nonleaders: Leaders are generally expected to advance the group's goals, serve as role models, and ensure the welfare of the group. In line with this construal, compared to nonleaders, individuals assigned to a leader role are more likely to help a group member in a simulated health emergency (Baumeister, Chesner, Senders, & Tice, 1988), and to report they would feel responsible to confront a perpetrator of a within-group conflict (Hershcovis et al., 2017). Moreover, in third-party evaluations, adults (a) judge and punish a leader more harshly than a nonleader (Haidt & Baron, 1996; Hamilton &

Sanders, 1981; Shultz, Jaggi, & Schleifer, 1987), and (b) anticipate a leader to be more likely than a nonleader, to punish wrongdoers (Gordon & Lea, 2016). Finally, in resource allocations, elected or endorsed leaders (a) promote more contributions to a common pool (Baldassarri & Grossman, 2011; Jack & Recalde, 2015), (b) are expected to share more resources with group members (Baldassarri & Grossman, 2013), and (c) to take equally (not more) from the group's pool, compared to nonleaders (De Cremer & Van Dijk, 2008; Von Rueden et al., 2014).

According to another construal, leaders are individuals with *increased entitlement*, relative to nonleaders: Leaders deserve beneficial treatment and more resources, which can be seen as legitimate or not (De Cremer & Van Dijk, 2005; Tomlinson, 2013). On the one hand, *because* leaders have more responsibility relative to nonleaders, they deserve more in their own eyes and in their group's eyes. Thus, a leader's privilege-seeking actions are acceptable to its group, and the group bestows privileges upon its leader, as long as it fulfills its responsibilities. On the other hand, leaders sometimes abuse their position of power. They become accustomed to their privileged position, and exploit others or act in self-interest beyond what is deemed appropriate by others. In these circumstances, a leader's privilege-seeking actions are resented by the group. Consistent with this construal, adults judge and punish a leader more leniently than a nonleader (Abrams, de Moura, & Travaglino, 2013), expect leaders to exert less effort in a joint task, often citing "role beliefs" and "privileges" as justification (Messé, Kerr, & Sattler, 1992), and expect a nonleader (but not a leader) to apologize after contributing little to a common pool (Stouten & Tripp, 2009). In fact, compared to nonleaders, individuals randomly assigned to a leader role tend to (a) take more than an equal share from a joint pool, and (b) report feeling entitled to do so (De Cremer & Van Dijk, 2005, 2008; Messé et al., 1992; Samuelson & Allison, 1994). Finally, in many cultures, leaders obtain more resources and do less menial labor than nonleaders (Fiske, 1992).

The Present Research

The present research explored how children construe leadership, as indexed by their predictions and evaluations of a leader's and a nonleader's behavior in collaborative interactions. Specifically, do children view leaders primarily as more entitled or more responsible individuals, relative to nonleaders? Because these construals do not depend on

particular skills or properties but rather constitute basic features of those in a leadership position, we kept the definition of leaders to a minimum. This way, children's responses would reflect their expectations regarding a leadership position, and not regarding the behavior of people with certain skills and properties.

In Experiments 1 and 2, 5-year-old children heard a story about a group who elect their leader and follow it to an amusement park. Participants were told that each ride requires two protagonists—thus establishing a joint goal—and that to activate it, protagonists must put "sufficient" coins (six) into the ride's piggy-bank box. Then, in each of two trials, children were presented either with a hierarchical dyad (a leader and a nonleader) or an egalitarian dyad (two nonleaders), and their respective coins, in counterbalanced order. Children were asked to, (a) anticipate how many coins (0–6) each protagonist would contribute to activate the ride, and (b) judge the acceptability of two "actual" contributions (small or large) of the target (leader in hierarchical dyad or nonleader in egalitarian dyad).

Following the adult literature, we reasoned that if children primarily construe leaders as individuals who are more entitled (relative to nonleaders), they should (a) anticipate that the leader would contribute *fewer* coins than an equal share (i.e., less than three coins), and (b) judge a leader's small contribution (one coin) as more acceptable than a large contribution (five coins). Conversely, if children construe leaders primarily as individuals who have more responsibility (relative to nonleaders), they should (a) anticipate that the leader would contribute *more* coins than an equal share (i.e., more than three coins), and (b) judge a leader's small contribution (one coin) as less acceptable than a large contribution (five coins). Finally, if children construe leaders as neither more entitled nor more responsible, they should (a) anticipate the leader would contribute equally to a joint goal, and (b) judge both contributions deviating from equality, as equally unacceptable. In light of findings on early concerns with fairness (Geraci & Surian, 2011; Melis, Altrichter, & Tomasello, 2013; Olson & Spelke, 2008; Yang, Choi, Misch, Yang, & Dunham, 2018), such results were posited for the egalitarian dyad, involving protagonists of equal rank.

In Experiment 3, children heard a similar story, except that protagonists were only required to ride together and would receive a joint prize (six coins) for this collaborative act. Using similar measures, we probed children's views about protagonists' relative withdrawals from a common pool earned

jointly as indices of increased entitlement or lack thereof. If children primarily construe leaders as more entitled individuals (relative to nonleaders), they should anticipate a leader would withdraw *more* coins than an equal share (i.e., more than three coins). Whether they would view this increased entitlement as legitimate or illegitimate, would manifest in judging a small withdrawal as less acceptable than a large withdrawal (legitimate) or a large withdrawal less acceptable than a small withdrawal (illegitimate). If, children do not associate leaders with increased entitlement, they should anticipate a leader would withdraw an equal share (i.e., three coins) and judge a large withdrawal less acceptable than a small withdrawal.

We tested 5-year-old children for two reasons. First, as mentioned, children this age robustly identify social rank in general and leadership more specifically (Brey & Shutts, 2015; Gülgöz & Gelman, 2017; Kajanus et al., 2020; Over & Carpenter, 2015; Terrizzi et al., 2019). Second, children this age are sensitive to relative contributions to collaboration (Melis et al., 2013; Yang et al., 2018), and relative withdrawals following collaboration (Ng, Heyman, & Barner, 2011), examined in this report. As this was a first attempt at investigating these leadership construals in children, we focused on one age group at which we believed—for the aforementioned reasons—children could manifest them, and leave an examination of their development for future research.

Experiment 1

The goal of Experiment 1 was to assess whether children primarily construe leaders as individuals with more entitlement or more responsibility toward their group, relative to nonleaders. To establish leadership, we told participants that three protagonists elected the fourth to be their leader, a fact which was then demonstrated in animations. We also built on the finding that children this age use decision power to identify high-ranking individuals (Bernard et al., 2016; Charafeddine et al., 2015, 2016). We modified this cue because our task involved a collaborative scenario and four protagonists. Thus, participants were told that one protagonist made decisions that others followed, and this was then demonstrated in animations. To assess the robustness of this modified cue, we varied how many decisions a leader made, such that children were randomly assigned either to a *full decision power* or a *partial decision power* condition.

Method

Participants

Participants were forty-eight 5- to 6-year-old children (24 girls, $M_{\text{age}} = 5.49$ years, $SD = 0.30$, range = 4.96–6.27). Children were recruited from several public, secular kindergartens in Rehovot, a mid-size city (145,000 inhabitants) in central Israel. Although demographic information could not be formally collected, over 94% of Rehovot inhabitants are Jewish. Children came from neighborhoods comprised of a range of socioeconomic backgrounds, and all spoke Hebrew, the language used in this experiment. Sample size was determined based on recent studies on children's concepts of social rank, which involved between 22 and 53 children in this age group (e.g., Bernard et al., 2016; Brey & Shutts, 2015; Charafeddine et al., 2015, 2016; Gülgöz & Gelman, 2017). Only children with signed informed consent from parents participated. An additional seven children were excluded from analysis because they did not pass the manipulation check ($n = 2$), provided ambiguous answers ($n = 3$), did not complete the task ($n = 1$), or the teacher interfered ($n = 1$). Participants received a sticker for their participation. Data were collected between October 2017 and January 2018.

Design

The experiment had a mixed design with Dyad (hierarchical or egalitarian) and Contribution (small or large) as within-subjects factors, and Condition (full decision power or partial decision power), as a between-subjects factor.

Procedure and Materials

Children were tested individually in a quiet room in their kindergarten. The experimenter first oriented each participant to a 4-point smiley scale that the participant would later use to judge the behavior of protagonists (see Supporting Information for details). After explaining the scale, the experimenter proceeded with a story using a laptop PowerPoint presentation, with still pictures and audible animations. The story depicted a group of similar four protagonists, PLAYMOBIL® dolls, gender-matched to the participant (see Supporting Information). The procedure comprised a few phases.

Protagonist orientation phase. Participants were told that a group of children wanted to go to an amusement park (four rides appeared on screen

throughout all the phases up to the trials), and that they wanted to have a leader (the Hebrew word for “leader” would be too complex for children this age, so we labeled it “head of the group,” but refer to it as “leader” for simplicity). In the *full decision power condition*, the leader was defined as “a child who decides for the group who will go to a ride and which ride it will be.” In the *partial decision power condition*, the leader was defined as “a child who decides who will go to ‘open’ rides.” In this latter condition, participants were told that protagonists could only go to “open” rides, marked by a blinking light (in the animation, three rides had a blinking light, and one did not and was thus declared “closed”).

Leader election phase. In both conditions, the experimenter explained that three protagonists had elected the fourth to be their leader. These protagonists faced and pointed at the fourth, and declared: “We elect you! You will be ‘head of the group’ and decide [which rides we will go to and when—*full decision power condition*]/[when we will go to ‘open’ rides—*partial decision power condition*]” (protagonists’ heads moved as they spoke). Then, the protagonists gave their elected leader a hat (“Here is a ‘head of the group’ hat for you!”). We counterbalanced across participants, which of two protagonists served as leader. Following this election, the leader declared: “Alright, I will be ‘head of the group’! Follow me!”. The leader ordered the nonleaders to stand in a row, to which they complied, and the nonleaders followed the leader into the park entrance. Thus, the leader was marked by consensual group election and granted a mandate to make few or many decisions (depending on condition) over the group. We built on the finding that legitimate leadership is established in a relational manner: adults identify “A” as leader, if “B” bestows the status upon it and “A” accepts it (Marchiondo, Myers, & Kopelman, 2015).

Joint goal establishment phase. Participants were told that each ride in the amusement park required two children, and that in order to make the ride “work,” children must put “sufficient” coins into the ride’s piggy-bank box. Thus, each dyad had a joint goal. To increase the credibility of the story and ensure participants would later “activate” rides on behalf of protagonists, we included a brief training. The experimenter took out a wooden box that had six coin-slots (identical to the piggy-bank box on screen), and presented participants with six coins gradually (one coin, then three more coins, and two more coins), on alternating sides of the box. Participants were instructed to place the coins

inside the box and inform the experimenter each time “if you see the seesaw swing work.” As soon as the child placed the last coin, the experimenter surreptitiously activated an animation of the swing swinging and a bell ringing. Finally, the experimenter remarked: “You see? *Only* when there are sufficient coins in the box, the ride works!”. Children’s reactions indicated they understood and believed they made the ride work by inserting coins into the box.

Trials. Participants received two trials. Each trial began with all protagonists in a row standing inside the amusement park, in front of the two rides that were closer to the parks’ entrance. Then, one dyad at a time (hierarchical or egalitarian, counterbalanced) went to a ride. Order of rides was fixed (unbeknownst to participants)—seesaw swing first, then bumper cars. In the *full decision power condition*, for half of the participants the leader decided to go with a nonleader to the seesaw swing first, and that the egalitarian dyad (remaining two nonleaders) would go to the bumper cars next. For the other half of participants, the reverse order was true (egalitarian dyad went to seesaw swing first). The *partial decision power condition* was similar except that the leader only determined who would go to a ride, and then each dyad went to whichever ride was “open.”

The experimenter reminded participants of the dyad’s joint goal (to activate the ride and ride it together). Next, the experimenter placed the real two protagonist dolls on either side of the piggy-bank box (in front of the laptop, so the ride appeared in the background; all participants recognized that the dolls were the same protagonists that appeared on screen), each with its six coins inside a clear container (“These are the coins of the ‘head of the group’, and these are the coins of this boy/girl [*hierarchical dyad*]/These are the coins of this boy/girl, and these are the coins of this boy/girl” [*egalitarian dyad*]; Figure 1). The two measures were then collected.

Measure 1: Anticipation of relative contribution. Children were asked how many coins the protagonists would contribute to make the ride “work” and ride it together. The experimenter described three options for children to consider carefully. In the *hierarchical dyad*: “The head of the group will put coins and this boy/girl will put coins too, *or* only the head of the group will put coins, *or* only this boy/girl will put coins.” In the *egalitarian dyad*, the options were the same but “head of the group” was substituted by “this boy/girl,” pointing to the target nonleader. Children were instructed to



Figure 1. An example of the setup of a hierarchical dyad trial in Experiments 1 and 2, involving the leader (right) and a non-leader (left), each with its own set of six coins, and the box into which coins must be placed to “activate” the ride the protagonists go to. [Color figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

place coins in the box on behalf of the protagonists according to what they anticipated would happen. We recorded the number of coins (0–6) children placed for each target (leader in hierarchical dyad; nonleader in egalitarian dyad). To maintain story credibility, following the anticipation, participants were shown a slide depicting the protagonists on the ride.

Measure 2: Judgment of “actual” relative contributions. Next, the experimenter told the child, “Do you want to see how many coins they really put in the piggy-bank box in order to ride together?” and then revealed sequentially two “actual” contributions of the target: large (five of six coins) or small (one of six coins). For example, for the large contribution, the experimenter pointed at the relevant doll and said “The ‘head of the group’ put all these coins [*hierarchical dyad*]/this boy/girl put all these coins [*egalitarian dyad*],” while taking five coins from the target’s container and placing them in the box. Next, the experimenter pointed at the other doll and said “And this boy/girl put only this coin,” while taking one coin from the nonleader (in each dyad) and placing it in the box. Then the experimenter said, “So, the ‘head of the group’ put more [*hierarchical dyad*]/So, this boy/girl put more

[*egalitarian dyad*].” Order of contributions (large or small first) was counterbalanced but fixed across relationships (i.e., participants first judged a large or a small contribution when evaluating both dyads). Participants judged the acceptability of each contribution using the 4-point smiley scale they had previously been familiarized with (i.e., from highly unacceptable, scored as 1, to highly acceptable, scored as 4; see Supporting Information). After judging one contribution (e.g., large), the experimenter corrected herself saying she had made a mistake, and then demonstrated the other contribution (e.g., small) to be judged.

Manipulation check. Finally, participants saw a slide, depicting all protagonists in a row (the leader had its hat on), and were asked to identify (by pointing) which of them was the leader. Two participants did not identify correctly the leader, and were thus excluded from analysis.

Results

Preliminary analyses revealed no effects of gender or leader identity, $ps > .05$, and we thus collapsed across these two factors in the main analyses.

Anticipation of Relative Contribution

Egalitarian dyad. We first analyzed children’s anticipation of a nonleader’s contribution when paired with another nonleader, as a baseline of children’s response in our task (Figure 2). A two-way analysis of variance (ANOVA) with Condition (full decision power or partial decision power) and Dyad Order (hierarchical first or egalitarian first) as between-subjects factors, yielded no significant main effects or interactions, all $F_s(1, 44) < 2.50$, indicating that children anticipated a similar nonleader contribution across conditions and dyad orders. In fact, a one-sample t -test of the target nonleader’s contribution ($M = 3.21$ coins, $SD = 1.68$) revealed that children did not expect a nonleader to contribute an amount different from an equal share (i.e., three coins) when paired with another nonleader, $t(47) = 0.86$, $p = .393$, Cohen’s $d = 0.12$.

Hierarchical dyad. We next analyzed, in the same manner, children’s anticipation of a leader’s contribution to the joint goal when paired with a nonleader (Figure 2). The ANOVA yielded no significant main effects or interactions, all $F_s(1, 44) < 1.09$, indicating that children anticipated a similar leader contribution regardless of the extent of decision power (full or partial) it had, and which

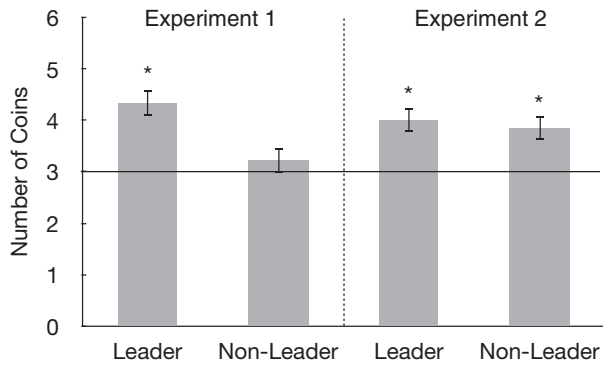


Figure 2. Number of coins (0–6) participants anticipated a leader (hierarchical dyad) and a nonleader (egalitarian dyad) would contribute to the joint goal, in Experiments 1 and 2. Each column represents data collapsed across the two conditions. Error bars represent standard errors, and an asterisk denotes a significant difference from an equal contribution (i.e., three coins).

dyad they first evaluated. We then addressed our main question, namely, did children expect a leader to contribute less or more than an equal share? Given the null effects of Condition and Dyad Order, we collapsed across them. A one-sample t -test revealed that children expected the leader to contribute more ($M = 4.33$ coins, $SD = 1.65$) than an equal (i.e., three coins) share, $t(47) = 5.58$, $p < .0001$, $d = 0.81$ (thus more than its nonleader partner).

Egalitarian dyad versus hierarchical dyad. Finally, we compared children's anticipation of the leader and nonleader contributions across dyads in a paired t -test (Figure 2). Children anticipated a leader would contribute significantly more than a nonleader, $t(47) = 3.41$, $p = .001$, $d = 0.49$.

Judgment of "Actual" Relative Contributions

Overall, participants rated the acceptability of both "actual" unequal contributions (small and large) relatively low ($M = 2.02$, $SD = 0.66$, out of a 4-point scale). This conforms with children's valuation of equal allocations (Damon, 1975; Olson & Spelke, 2008). Importantly, they did judge a small contribution ($M = 1.85$, $SD = 0.76$) to a joint goal less acceptable than a large contribution ($M = 2.19$, $SD = 0.92$), $F(1, 47) = 4.90$, $p = .032$, $d = 0.30$, suggesting that these unequal contributions vary in acceptability and our measure captured this. Of interest was whether this pattern of judgment held alike for a leader and a nonleader.

Egalitarian dyad. A mixed ANOVA with nonleader Contribution (small or large) as a within-subjects factor, and Condition and Dyad Order as

between-subjects factors, yielded no main effects of Condition and Dyad Order or their interaction, $F_s(1, 44) < 2.42$. More importantly, there was no significant effect of Contribution, $F(1, 44) = 0.44$, $p = .512$, $d = 0.09$, nor did Contribution interact with Condition or Dyad Order, $F_s(1, 44) < 0.44$, suggesting that children viewed either contribution by a nonleader in an egalitarian dyad as equally unacceptable (small: $M = 1.90$, $SD = 0.99$; large $M = 2.02$, $SD = 0.98$; Figure 3).

Hierarchical dyad. We next analyzed children's judgment of the contributions made by the leader in the same manner (Figure 3). This analysis yielded only a significant effect of Contribution, $F(1, 44) = 7.84$, $p = .008$, $d = -0.40$, indicating that children viewed a leader's small contribution ($M = 1.81$, $SD = 0.82$) to be less acceptable than a leader's large contribution ($M = 2.35$, $SD = 1.16$). The null effect of Condition suggests that, as in the anticipation measure, the extent of leaders' decision power did not affect children's response.

Egalitarian dyad versus hierarchical dyad. Finally, we compared children's judgments of a leader's and a nonleader's contributions across dyads (hierarchical vs. egalitarian; Figure 3), in a mixed ANOVA with Target (leader or non-leader) and Contribution (small or large) as within-subjects factors (given the null effect of Dyad Order in each dyad, we collapsed across this factor). Target \times Contribution interaction did not reach statistical significance, $F(1, 47) = 3.33$, $p = .074$. Importantly, however, children judged a large contribution to a

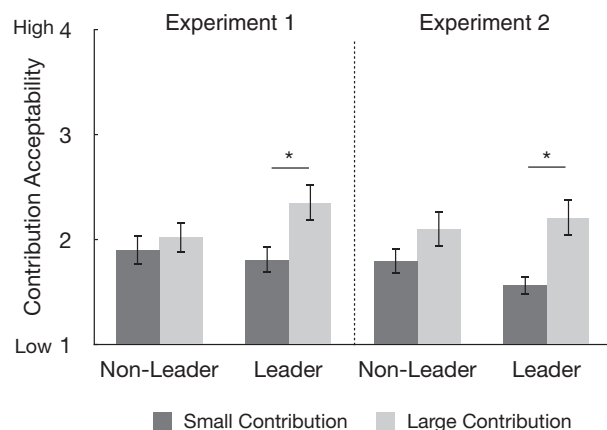


Figure 3. Acceptability judgments (1 = low, 4 = high) of a leader's (hierarchical dyad) and a nonleader's (egalitarian dyad) small (one of six coins) and large (five of six coins) contributions to the joint goal in Experiments 1 and 2. Each bar represents data collapsed across the two conditions. Error bars represent standard errors, and an asterisk denotes a significant difference in acceptability judgments of the different contributions.

joint goal as significantly more acceptable, if made by a leader compared to a nonleader partnered with another nonleader, $F(1, 47) = 4.42$, $p = .041$, $d = 0.30$, and judgments did not differ significantly between a leader and a nonleader when making a small contribution to a joint goal, $F(1, 47) = 0.34$, $p = .561$, $d = 0.09$.

Discussion

Across two measures, children gave evidence that they construe leaders as individuals with increased responsibility toward others, rather than increased entitlement. First, children anticipated that a leader would contribute more resources to a joint goal than its nonleader partner. Given that both parties possessed the same amount of coins, children's anticipation could not have been driven by an expectation that whoever has more resources, should contribute more. Second, children judged a leader's small contribution less acceptable than its large contribution to the joint goal. In contrast, when evaluating an egalitarian dyad, children expected a nonleader partnered with another nonleader to contribute equally, and judged small and large contributions similarly unacceptable. Finally, children's differential anticipation and judgment of leaders' and nonleaders' contributions applied not only when they were partners in the activity, but also across dyads. Thus, children hold general differential construals of these hierarchical positions.

What features of leadership instantiated in Experiment 1 contributed to children's attribution of increased responsibility? One possibility is that election, effectively granting someone a position of influence, generates an expectation of increased responsibility. Adult elected leaders feel more socially responsible compared to randomly selected ones (De Cremer & Van Dijk, 2008), and thus (a) promote contributions to the group's pool (Baldassarri & Grossman, 2011; Jack & Recalde, 2015), and (b) are judged more harshly if they harvest more than an equal share from a group's pool. Another possibility is that decision power begets more responsibility.

Experiment 2

Experiment 2 had two goals. First, it assessed more specifically what features of leadership manipulated in Experiment 1 contribute to the attribution of increased responsibility in collaborative endeavors.

To this end, (a) we manipulated whether the elected leader in the hierarchical dyad had decision power (Leader with Decision Power condition) or not (Leader without Decision Power condition), and (b) in each condition, we added some decision power to one of the nonleaders in the egalitarian dyad (e.g., in one condition it decided who would join it for a ride; in another condition, it decided which ride it would be). Note that we refer to the partners in the egalitarian dyad as "non-leaders" because there was no explicit and consensual election of one of them as a leader. Children were randomly assigned to one of these two conditions. This design allowed us to assess (a) in the hierarchical dyad, whether election alone was sufficient to drive expectations of increased responsibility, and (b) in the egalitarian dyad, whether some decision power, even of someone not elected as a leader, would raise expectations of responsibility. The second goal was to replicate our findings concerning the leader and its increased responsibility.

Method

Participants

Participants were forty-eight 5- to 6-year-old children (24 girls, $M_{\text{age}} = 5.72$ years, $SD = 0.36$, range = 4.96–6.38). Children were recruited in the same manner and from similar places as those in Experiment 1. An additional five children were excluded from analysis because they did not pass the manipulation check ($n = 1$), provided ambiguous answers ($n = 2$), or due to teacher interference ($n = 2$). Data were collected between February 2018 and June 2018.

Design, Procedure, and Materials

These were all generally similar to Experiment 1. The only differences were in the "Leader Election Phase." In particular, in the *leader with decision power* condition, the three protagonists faced the fourth, pointed at it, and declared: "We elect you! You will be 'head of the group' and decide when we will go to rides." The rest of the instructions were as in Experiment 1. In the *leader without decision power* condition, all cues of decision power were removed. First, the three protagonists faced the fourth, pointed at it, and declared: "We elect you! You will be 'head of the group,'" giving it 'the head of group' hat. They then followed it into the park, without the leader ordering them in any way.

Trials. As in Experiment 1, participants received two trials. In each, a dyad (hierarchical or egalitarian, order counterbalanced) went to a ride. Order of rides was fixed as in Experiment 1.

In the *leader with decision power* condition, the leader determined (a) which dyad would go to a ride first, and (b) which ride the hierarchical dyad would go to. In the egalitarian dyad, one nonleader decided which ride they would go to. For half of the participants, the leader decided the hierarchical dyad would go to the seesaw swing first, and the egalitarian dyad would go to whichever ride they want (the nonleader then decided on the bumper cars). For the other half of the participants, the reverse order held; the leader decided that the egalitarian dyad would go first to whichever ride they want (the nonleader then decided on the seesaw swing), and the hierarchical dyad would go to the bumper cars next.

In the *leader without decision power* condition, the leader and its nonleader partner stepped forward, spoke in unison, and decided jointly that they would go together to whichever ride was “open” (“We will go now to an open ride”). The nonleader in the egalitarian dyad, stepped forward, declared, “It is my turn to go to an open ride,” and then turned toward one of the nonleaders, and said: “You! Come with me.” The chosen nonleader stepped forward and replied: “Ok.” Thus, one nonleader had decision power about who would go with it to a ride.

Results

Preliminary analyses revealed no effects of gender or leader identity, $ps > .05$, and we thus collapsed across these factors in the main analyses.

Anticipation of Relative Contribution

Egalitarian dyad with decision power. A two-way ANOVA with Condition (leader with decision power or leader without decision power) and Dyad Order (hierarchical first or egalitarian first) as between-subjects factors, yielded significant main effects of Condition, $F(1, 44) = 4.06$, $p = .050$, Dyad Order, $F(1, 44) = 9.47$, $p = .004$, and a significant Condition \times Dyad Order interaction, $F(1, 44) = 4.06$, $p = .050$. We followed-up on the interaction by comparing anticipation of contributions between conditions, within each dyad order.

When participants evaluated the egalitarian dyad first, conditions differed significantly, $F(1, 22) = 6.03$, $p = .023$, $d = 1.03$. One-sample t -tests revealed that

children expected a nonleader with decision power to contribute more than an equal share of three coins, in the leader without decision power condition, $M = 5.25$, $SD = 1.36$, $t(11) = 5.74$, $p < .0001$, $d = 1.66$, but not in the leader with decision power condition, $M = 3.67$, $SD = 1.78$, $t(11) = 1.30$, $p = .220$, $d = 0.38$. When participants evaluated the egalitarian dyad last, conditions did not differ significantly, $F(1, 22) = 0.00$, $p = 1.00$, $d = .00$. In both, children anticipated that a nonleader with decision power, would not contribute differently from an equal share, $t(11) = 0.90$, $p = .389$, $d = 0.26$ (leader with decision power condition, $M = 3.25$, $SD = 0.97$) and $t(11) = 0.71$, $p = .491$, $d = 0.20$ (leader without decision power condition, $M = 3.25$, $SD = 1.22$). In sum, only when participants evaluated the egalitarian dyad first, they attributed increased responsibility to a nonleader with decision power, doing so, though, in only one of the conditions.

Hierarchical dyad. We then analyzed, in the same manner, children’s anticipation of a leader’s contribution to the joint goal when paired with a nonleader (Figure 2). The ANOVA yielded no significant main effects or interactions, all $F_s(1, 44) < 1.61$, indicating that children anticipated a similar contribution by a leader, regardless of whether it had decision power or not, and regardless of which dyad they evaluated first. Importantly, a one-sample t -test of the anticipated leader contribution ($M = 4.00$ coins, $SD = 1.57$) against the value of three coins (conditions and dyad orders collapsed), showed that children expected a leader to contribute significantly more than an equal share, $t(47) = 4.41$, $p < .0001$, $d = 0.64$.

Egalitarian dyad with decision power versus egalitarian dyad without decision power. Finally, in order to assess how much decision power contributed to a nonleader’s responsibility, we compared children’s anticipation regarding the contributions of a nonleader who had some decision power (Experiment 2, collapsed across conditions) and a nonleader who lacked decision power (Experiment 1, collapsed across conditions). A two-way ANOVA with Experiment (1 or 2) and Dyad Order as between-subjects factors, yielded only significant main effects of Experiment, $F(1, 92) = 4.11$, $p = .046$, $\eta_p^2 = .043$, and Dyad Order, $F(1, 92) = 7.90$, $p = .006$, $\eta_p^2 = .079$. In particular, children anticipated that a nonleader with decision power (Experiment 2, $M = 3.85$, $SD = 1.56$) would contribute more than a nonleader without decision power (Experiment 1, $M = 3.21$ coins, $SD = 1.68$), and more than an equal share, $t(47) = 3.80$, $p < .001$, $d = 0.55$ (Figure 2).

Judgment of "Actual" Relative Contributions

Egalitarian dyad with decision power. A mixed ANOVA with nonleader Contribution (small or large) as a within-subjects factor, and Condition and Dyad Order as between-subjects factors revealed no significant effects. Even though children judged the small contribution ($M = 1.79$, $SD = 0.82$) less acceptable than the large contribution ($M = 2.10$, $SD = 1.12$), this difference did not reach statistical significance, $F(1, 44) = 2.59$, $p = .115$, $d = 0.24$ (Figure 3).

Hierarchical dyad. We next analyzed children's judgment of the leader's contributions in the same manner (Figure 3). The analysis yielded only a significant effect of Contribution, $F(1, 44) = 12.48$, $p = .001$, $d = 0.53$, indicating that children viewed a leader's small contribution ($M = 1.56$, $SD = 0.65$) as less acceptable than a leader's large contribution ($M = 2.21$, $SD = 1.15$). This effect did not interact with Condition or Dyad Order, both $F_s(1, 44) < 0.12$. Thus, decision power did not add to children's attribution of responsibility to elected leaders.

Egalitarian dyad with decision power versus egalitarian dyad without decision power. Finally, we compared children's judgments regarding contributions of a nonleader who had some decision power (Experiment 2) and a nonleader who lacked decision power (Experiment 1). A mixed ANOVA with Contribution (small or large) as a within-subjects factor, and Experiment (1 or 2) and Dyad Order (hierarchical first or egalitarian first) as between-subjects factors, yielded no significant main effects or interactions, $F_s(1, 92) < 2.65$, indicating that small or large contributions were judged equally unacceptable (small: $M = 1.84$, $SD = 0.91$; large: $M = 2.06$, $SD = 1.04$), whether a nonleader had decision power over another nonleader or not. Thus, contrary to anticipations, no differences were found in children's judgments of contributions between experiments.

Discussion

In Experiment 2, we sought to understand which elements of leadership manipulated in Experiment 1, contributed to children's attribution of increased responsibility. Children attributed increased responsibility to an elected leader, regardless of whether it had decision power over others or not; in either case, children anticipated that an individual with such status would contribute more to a joint goal than its partner, and judged its small contribution less acceptable than its large contribution. Thus,

election by a group, alone, was sufficient to attribute increased responsibility. With respect to individuals lacking an elected and consensual status (a nonleader), decision power did increase children's attribution of responsibility; they anticipated such an individual would contribute more to a joint goal than a nonleader without decision power. However, this effect was only observed (a) in one of two conditions, and (b) when children evaluated the relationship between nonleaders first. This latter finding suggests that being first presented an individual with authority over an entire group (i.e., a leader in a hierarchical dyad), apparently trumped any increased responsibility children otherwise attributed to an individual in this group without status who decided over another individual, lacking status, in this group. Moreover, children's judgments of a nonleader's contributions did not differ significantly, whether it had (Experiment 2) or lacked (Experiment 1) decision power. Taken together, whereas election as a leader played a robust role in children's attribution of increased responsibility, evinced in their responses in our two measures, decision power by itself played a limited and more circumstantial role, not evinced in both measures, and susceptible to an order effect.

Experiment 3

The goal of Experiment 3 was to examine whether children might construe leaders as more entitled individuals, relative to nonleaders, in a context more prone to self-interested behavior—harvesting from a common resource pool. Would children expect a leader to take more than an equal share from a common pool of resources, and how acceptable would they view such behavior? To this end, we modified the story so that protagonists received a joint prize (from which they could harvest) for their collaboration in fulfilling the requirement to get on rides together. Protagonists were not required to contribute coins to make rides "work," nor did collaboration require effort, so children's responses regarding harvesting could not be rooted in meritocracy. Two patterns of results were theoretically plausible. One is that children might view leaders as more entitled than nonleaders. Hence, children should anticipate the leader would take more resources from the common pool, relative to a nonleader, and judge small withdrawals less acceptable than large ones. Alternatively, because fairness is desirable in leaders (Den Hartog et al., 1999; Tyler & Lind, 1992), and endorsed leaders do not

take more from a common pool than nonleaders (Von Rueden et al., 2014), arguably due to their feelings of increased responsibility (De Cremer & Van Dijk, 2008), children might *not* view leaders as more entitled individuals, and thus *not* anticipate that the leader would take more resources from the common pool, relative to a nonleader, and judge large withdrawals less acceptable than small withdrawals.

Method

Participants

Participants were thirty-two 5- to 6-year-old children (13 girls, $M_{\text{age}} = 5.68$ years, $SD = 0.36$, range = 5.01–6.31). Children were recruited as in Experiments 1 and 2. Data were collected between November 2017 and April 2018.

Design

The experiment had a within-subject design with Dyad (hierarchical or egalitarian) and Withdrawal (small or large) as within-subject factors.

Procedure and Materials

The procedure was similar to Experiment 1, except that harvesting from an earned common pool of resources due to collaboration being assessed here. The, "Protagonist Orientation Phase," "Leader Election Phase," and "Manipulation Check" were identical to that of the *full decision power* condition in Experiment 1.

Joint goal establishment phase. The experimenter told participants that each ride in the amusement park required two children, and "only children who ride together, receive afterwards coins as a prize from the ride's piggy-bank box; those who ride alone, do not receive a prize." This was demonstrated with novel protagonists who rode alone or together. The experimenter then asked the participant to help "prepare the prize" by placing six coins into the wooden piggy-bank box for "those who rode together." The box was then removed and hidden from participants' view.

Trials. As in Experiments 1 and 2, participants had two trials, each depicting a dyad (hierarchical or egalitarian, counterbalanced) going on a ride. The experimenter reminded participants of the dyad's joint goal (to ride together to receive the prize), and revealed that the dyad indeed rode together. Then the experimenter took out the box

with six coins in it, placed the real two protagonist dolls on either side of it, and pointed out their empty containers (e.g., "This is the plate of the 'head of the group', and this is the plate of this boy/girl [*hierarchical dyad*]").

Measure 1: Anticipation of relative withdrawals. Children were then asked how many coins the protagonists would take from their prize. The experimenter described three options for children to consider carefully, similar to those presented in Experiments 1 and 2, but here asking about how many coins each protagonist would *take*. We recorded the number of coins (0–6) placed in each target's (leader in hierarchical dyad; nonleader in egalitarian dyad) container.

Measure 2: Judgment of "actual" relative withdrawals. Next, the experimenter revealed sequentially two "actual" withdrawals by the target: large (five of six coins) or small (one of six coins), similar to how these were presented in Experiments 1 and 2 (see Supporting Information for more details). Participants judged the acceptability of each withdrawal using the 4-point smiley scale. After judging one withdrawal (e.g., large), the experimenter corrected herself saying she had made a mistake, and then demonstrated the other one (e.g., small) to be judged.

Results

Preliminary analyses revealed no effects of gender or leader identity, $p > .05$, and we thus collapsed across these two factors in the main analyses.

Anticipation of Relative Withdrawal

Given that in this study there were no unique conditions pertinent to each type of dyad, we focused on a direct analysis comparing the Egalitarian to the Hierarchical dyad (though see Supporting Information for analyses of each dyad). We compared children's anticipation of withdrawals across dyads in a mixed ANOVA with Dyad Order (hierarchical first or egalitarian first) as a between-subjects factor and Target (leader in hierarchical dyad or nonleader in egalitarian dyad) as a within-subject factor. This analysis revealed no significant effect of Target, indicating that overall children anticipated leaders and nonleaders would withdraw a similar number of coins. The analysis also revealed a significant Target \times Dyad Order interaction, $F(1, 30) = 9.56$, $p = .004$, which we further explored. Specifically, when children evaluated the

egalitarian dyad first, anticipated withdrawals of the nonleader ($M = 3.06$ coins, $SD = 1.06$) were smaller than of the leader ($M = 3.67$ coins, $SD = 1.14$), though this difference was not significant, $F(1, 17) = 2.37$, $p = .142$, $d = 0.36$. In turn, when children evaluated the hierarchical dyad first, anticipated withdrawals of the leader ($M = 2.93$ coins, $SD = 0.27$) were smaller than of a nonleader ($M = 4.07$ coins, $SD = 1.49$), and that difference was significant, $F(1, 13) = 8.58$, $p = .012$, $d = 0.78$. Thus, there was a general tendency to anticipate an equal withdrawal from the first target children were asked about, and then anticipate larger than an equal withdrawal from the second target. Crucially, this disparity was more pronounced in favor of a nonleader, thus if anything, it indicated that children felt a nonleader was more entitled than a leader.

Judgment of "Actual" Relative Withdrawals

As with the analysis of anticipation, here too we focused on a direct comparison between children's judgments of a leader's and a nonleader's withdrawals across dyads (hierarchical vs. egalitarian) in a repeated-measures ANOVA with Target (leader or nonleader) and Withdrawal (small or large) as factors (given the null effect of Dyad Order in each dyad, see Supporting Information, we collapsed across this factor). The analysis revealed a main effect of Withdrawal, $F(1, 31) = 9.18$, $p = .005$, but no significant Target \times Withdrawal interaction, $F(1, 31) = 2.58$, $p = .119$. Thus, children viewed a target's small withdrawal from a common resource pool more acceptable ($M = 1.94$, $SD = 0.92$) than a large withdrawal ($M = 1.42$, $SD = 0.64$), regardless of the target's identity. Overall, given that both "actual" withdrawals deviated from equality, it was no surprise that participants rated the acceptability of these withdrawals relatively low ($M = 1.68$, $SD = 0.63$).

Discussion

In Experiment 3, we sought to examine whether children might construe leaders as more entitled individuals, relative to nonleaders, in a context more prone to self-interested behavior; harvesting from a common resource pool. Neither their anticipation of withdrawals, nor their judgments of small and large withdrawals, differed when evaluating a leader versus a nonleader. Regardless of the target evaluated first, children anticipated it would withdraw an equal share from the common pool. This

initial and thus more natural response to the vignette, suggests they did not associate increased entitlement with leaders more than nonleaders. Moreover, children judged a large withdrawal as less acceptable than a small withdrawal, for leader and nonleader alike. Together, these results echo adult findings from laboratory and field studies, that endorsed leaders do not take more resources from the group's pool (De Cremer & van Dijk, 2008; Von Rueden et al., 2014), and leaders are expected to behave fairly (Den Hartog et al., 1999; Tyler & Lind, 1992). It also resonates with findings from similar aged children in Kajanus et al. (2020), who did not expect a clear winner between a leader protagonist and a follower protagonist.

These results not only lend further support to our finding that children do not view leaders as primarily more entitled individuals relative to nonleaders, but also rule out two alternative explanations for the findings from Experiments 1 and 2. It could be suggested that children's responses were driven by the social salience of the leader relative to the nonleaders, rather than leadership status. Had this been the case, however, children's responses in Experiment 3 should have differed for a leader and a nonleader, given that leadership was established as in Experiment 1, but they did not. It could also be suggested that children were sensitive to the leadership status, but view rank differences inherently unfair, and thus attempted to "balance" these by expecting a leader to contribute more to a joint goal (and remain with fewer resources). Had this been the case, however, children in Experiment 3 could have expected the leader to withdraw less resources from the common pool than a nonleader, to balance the unfairness in hierarchy, but they did not.

General Discussion

How do children construe leaders, relative to nonleaders? Are leaders individuals whose position entails primarily more responsibility or more entitlement, compared with nonleaders? The present research addressed this question, using stories, in which 5-year-old children assessed relative resource contributions to a collaborative endeavor (Experiments 1 and 2) or relative resource withdrawals from a common pool earned as a result of collaboration (Experiment 3).

Experiment 1 revealed that when evaluating an egalitarian relationship, children anticipated nonleaders would contribute equally to the joint goal,

and judged small and large contributions to be equally unacceptable, in line with findings on early concerns about fairness and free-riding in infants and children (Geraci & Surian, 2011; Melis et al., 2013; Olson & Spelke, 2008; Yang et al., 2018). In contrast, when evaluating a hierarchical relationship, children anticipated a leader would contribute significantly more than an equal share to the joint goal, and judged a leader's small contribution less acceptable than its large contribution to a joint goal. This suggests that children hold an *increased responsibility* construal of leaders, relative to nonleaders.

Experiment 2 revealed that both features of leadership manipulated in Experiment 1—election by a group and decision power—contributed to attribution of increased responsibility. Nevertheless, decision power played a less robust role in this construal. A possible explanation for this latter finding is that our manipulation of decision power might have been weaker than that in prior research. In prior research (Bernard et al., 2016; Charafeddine et al., 2015, 2016; Gülgöz & Gelman, 2017), two protagonists expressed conflicting goals repeatedly until one imposed a decision, and participants only had to identify who is “in charge.” In our task, participants were told which of four protagonists is the leader who was bestowed decision power by others, and they had to track four protagonists' ranks during a long story, and evaluate them multiple times. Tracking decision power might have been more challenging due to these differences. A further explanation we find most likely, is that election by a group is a powerful cue that trumps transient decision power of a nonleader over another, in shaping increased responsibility. A group endorsing a particular individual, highlights its social significance to the *entire* group (not only one activity-partner), and triggers an expectation of reciprocity (De Cremer & Van Dijk, 2008).

Particularly noteworthy here is the condition in Experiment 2 in which children were presented with an elected leader but received no indication that it had decision power over others. Even though it only held a title of leader, children construed it as having increased responsibility. Interestingly, we sampled 10 children from this condition to assess (after the manipulation check) which one was more influential: leader status or decision power. Participants were shown the four protagonists in a row, and then the elected leader and the nonleader who previously had decision power in the egalitarian dyad, each told the remaining protagonists to move, but in opposite directions. All participants reported that the group should follow the elected leader, despite receiving no information

about what it meant to hold a leader title. It seems that conferred leader status, implicitly licensed effective power over a group but decision power within a dyad did not.

Finally, Experiment 3 revealed that even in a context more prone to self-interested behavior because it is not about keeping more resources to oneself (by investing less in joint causes), but about obtaining resources for oneself, children gave no evidence that they expected leaders to act more entitled than nonleaders, and they judged such behavior unacceptable for both alike.

The present research adds to existing literature on children's understanding of leadership. To our knowledge, it is the first to show that children construe leaders as individuals with more responsibility, relative to nonleaders (for related findings in infants, see Stavans & Baillargeon, 2019), and that this construal is more salient than viewing leaders as more entitled individuals. Second, our focus on collaborative situations, extends prior research that had probed social rank concepts only in competitive or neutral contexts. This allowed us to test the salience of leader construals as more responsible or more entitled, which would be unviable in competitive situations wherein other regarding behaviors are untenable. Moreover, leadership arguably evolved to facilitate collaboration, making this context appropriate. Finally, we show that children infer leadership from election, which has not been revealed in prior research.

Our research offers a number of future directions. First, it will be important to assess the scope of responsibility children attribute to leaders. For instance, would children hold a leader more accountable than a nonleader for carrying out a misdeed or failing to prevent it? Would children expect a leader to be the first of the group to charge against a competing group? Second, it would be useful to explore what factors affect the salience of this leader construal. One such factor might be *how a leader obtained its power position*. The typical distinction in adult studies has been between leaders *elected* by a group or *appointed randomly*, with the former preferred and are more effective in promoting collaboration, due to their legitimacy (Baldassarri & Grossman, 2011; De Cremer & Van Dijk, 2008; Van Vugt & De Cremer, 1999). In the present research, a group elected its leader, and granted it a mandate to rule. Would children construe a leader similarly, if it emerged in a less legitimate manner (e.g., by force, by random lottery, by inheritance)? Do children distinguish between different leadership hierarchies (authority- or prestige-based) and

apply this construal similarly across them? Third, it would be important to explore *why* children think leaders have more responsibility. In our studies we did not provide cues about the leaders that could speak to this issue. Leaders and nonleaders were of the same age, gender, size, and wealth. It will be interesting to examine whether children nevertheless attribute these or other hidden qualities to the leader (e.g., high moral character or general competence), by assessing their explanations for behaviors of leaders and for their election. In this regard, it would also be valuable to assess cross-cultural differences in the construal of leaders in general (e.g., Kajanus et al., 2020).

Finally, turning attention to the increased entitlement construal, one may ask whether children represent it *at all* in relation to leaders in light of our findings, and if they do, under what circumstances. The present research focused on behaviors in collaborative interactions, but behaviors consistent with increased entitlement may manifest when collaboration is made less salient, or nonexistent (e.g., who is entitled to a privilege of activating a fun game for one person, or who is entitled to play it for a longer time). Moreover, our tasks measured increased entitlement in the leader's actions, but it could manifest in the group's action toward its leader (e.g., bestowing benefits to the leader, out of respect). A final consideration is that, whereas the present studies examined entitlement in the context of an elected leader, such a construal may apply differently toward high-ranking individuals who achieve their status via dominance. In fact, recent developmental studies are potentially indicative of an increased entitlement construal in dominance relationships (Charafeddine et al., 2016; Enright, Gweon, & Sommerville, 2017). In such cases, nevertheless, although increased entitlement might be expected from a high-ranking individual, it might be viewed as illegitimate.

In summary, the present studies provide initial evidence, across two collaborative contexts, that children construe leaders primarily as having increased responsibility toward their group, rather than increased entitlement relative to their group. Understanding the developmental trajectory and scope of these two leader construals are valuable next steps.

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Supporting Information

Additional supporting information may be found in the online version of this article at the publisher's website:

Appendix S1. Pictures of stimuli, explanation of judgment scale, and further results