Should leaders conform?

Developmental evidence from the United States and China

Yuchen Tian¹ and Lin Bian²*

¹Department of Psychological and Brain Sciences, University of Massachusetts Amherst

²Department of Psychology, University of Chicago

* To whom correspondence should be addressed. E-mail: linbian@uchicago.edu (L.B.)

Author Note
The data and materials for the experiments reported are available on Open Science Framework: https://osf.io/w5ptq/?view_only=ad27b63f5c444f5389da4039ba978dd3. Some of the data and ideas were presented at the 2021 Biennial Meeting of the Society for Research in Child Development.

Acknowledgments
This research was supported by U.S. National Science Foundation CAREER Grant DRL #2145809 to L. Bian. We are very grateful to the children and families who participated in this project, and members of the EArly Social Thinkers Lab at the University of Chicago for helpful discussion of earlier manuscripts. Special thanks go to Jamie Amemiya and Yihan Qian for providing constructive feedback on multiple versions of the manuscript.
Abstract

Leadership is inextricably embedded in human groups. One central obligation of leaders is to embody the identity of their group by acting in line with group norms. Yet little is known about how leadership and conformity is initially associated in people’s minds, how this association develops in childhood, and how cultural values shape this association. The present research tested 4- to 11-year-olds in the US and China to address these questions by comparing children’s evaluations of a leader’s versus an ordinary group member’s non-conformity. In Experiments 1 and 3 ($N = 114$ and 116, respectively), children saw two novel groups engage in distinct behaviors (e.g., listening to different kinds of music). A leader or a nonleader acted against its respective group norms. Next, children provided evaluations of the non-conformity. In both populations, whereas younger children (4- to 7-year-olds) evaluated the leader’s non-conformity more positively relative to the nonleader’s, older children (10- to 11-year-olds) evaluated the leader’s non-conformity more negatively. Notably, children in China developed more negative attitudes towards a leader’s non-conformity than children in the US. Experiment 2 ($N = 66$) ruled out the possibility that younger children’s favorable evaluations of the leader’s non-conformity stemmed from their general positivity towards leaders. Taken together, children in the two countries gradually conceptualize leaders as central group members and expect them to follow group norms. These findings contribute to theories on early leadership cognition and highlight the importance of taking a cross-cultural approach to understand its development.

Key words: leadership, norm violation, prescriptive evaluation, development, cross-cultural
Public Significance Statement

Every now and then, leaders ranging from CEOs to presidents, violate their respective group norms, resulting in serious transgressive acts and group malfunction. Does leadership provide freedom to deviate, or should leaders follow group norms? We addressed this question in childhood to explore the early representation of leadership and conformity. Our studies asked 4-to 11-year-old children to evaluate nonconforming behaviors performed by a leader or an ordinary group member. We found that younger children granted more tolerance towards a leader’s deviance than a nonleader’s, whereas children at age ten began to disapprove the leader’s non-conformity. This pattern held in two different countries, the US and China, although children in China developed more negative attitudes towards a leader’s norm violations. These results suggest that following group norms is a critical aspect of leadership that takes root in childhood and may hold across societies.
“When you were made a leader, you weren't given a crown, you were given the responsibility to bring out the best in others.”

— Jack Welch, Former General Electric (GE) CEO

Leadership is inextricably embedded in groups throughout the history and across all human cultures. Leaders are privileged in social ranks within groups, yet leaders are also members of groups they lead (e.g., A basketball captain both leads the team and is a team member). From early in life, children identify social groups and expect group members to follow their respective ingroup norms (e.g., Bian & Baillargeon, 2022; Cooley & Killen, 2015; Schmidt et al., 2012; Roberts et al., 2017). However, group leaders in the real world, ranging from CEOs to presidents, commit norm violations every now and then, resulting in serious transgressive acts and group malfunction (Carreyrou, 2018). How does leadership and conformity initially represent in people’s minds? Do young children expect leaders to conform? Early beliefs about leadership and conformity may guide children’s elections of leaders and their own leadership strategies, which is likely to be carried into adulthood influencing the state of future leadership.

Here, we investigated early representation of leadership in group contexts, as indexed by children’s evaluations of leaders’ (versus nonleaders’) non-conformity. We tested children from two cultural contexts, the United States and China, to examine the influence of cultural values on early developing concepts of leadership.

As early as infancy, children attend to a number of cues to make inferences of hierarchical relations among individuals (Brey & Shutts, 2015; Charafeddine et al., 2015; Enright et al., 2020; Gazes et al., 2017; Gülköz & Gelman, 2017; Heck et al., 2021; Mandalaywala et al., 2020; Mascaro & Cisbra, 2012; Pun et al., 2016; Terrizzi et al., 2019; Thomsen et al., 2011; Zhang et al., 2021). Infants expect a larger character to win in a conflict
with a smaller character (Thomsen et al., 2011) and members of numerically larger groups to prevail over members of numerically smaller groups (Pun et al., 2016). Infants in the second year of life recognize individuals who exert influence over others as leaders and expect them to rectify unfair distributions of resources (Stavans & Baillargeon, 2019). By preschool age, children infer that individuals who provide instructions as opposed to seeking information are more likely to be “in charge” (Brey & Shutts, 2015) and that members of numerically smaller groups are more likely to be leaders (Heck et al., 2021).

Importantly, recent research further suggests that children distinguish between at least two different forms of hierarchical relations (see Heck et al., 2022 for a review): Dominance-based and prestige-based (Cheng et al., 2013; Hawley, 2015; Henrich & Gil-White, 2001). These two types of hierarchical relations are also referred to as “power-based” and “status-based,” respectively (Anicich et al., 2016; Hays & Bendersky, 2015; Magee & Galinsky, 2008). In dominance-based hierarchies, the dominant often achieves their own goals at the expense of others in a zero-sum interaction via physical coercion or intimidation (Savin-Williams, 1979; Van Vugt & Smith, 2019). In contrast, in prestige-based or leadership-based hierarchies, high-rank individuals are often acknowledged as leaders who acquire status through others’ respect and admiration (Henrich & Gil-White, 2001; Rai & Fiske, 2011). Infants in the second year of life readily distinguish dominant characters from leaders, such that they expected followers to obey a leader’s order even when she was absent, but to reject a bully’s order in her absence (Margoni et al., 2018). This distinction seems to be strengthened over development (Heck et al., 2021; Kajanus et al., 2020). For example, although children as young as age five inferred that followers would approach a prestigious character and avoid a dominant character, the ability to make these distinctive inferences improved with age (Kajanus et al., 2020).
Our experiments built on these findings in a new direction to determine whether and when children expect leaders to comply with group norms. As noted above, past work on early leadership cognition has primarily focused on the status differences between leaders and followers, overlooking the fact that leaders are also group members by nature. It is plausible that children in such scenarios perceive leaders solely as high-status individuals rather than being part of their respective groups. However, being a group member is an essential element of being a leader, thus our early leadership cognition is likely to be informed by recognizing a leader’s identity as a group member. By including this crucial missing piece in our studies and examining children’s evaluations of a leader’s non-conformity, we can provide a more complete picture of early cognition about leadership. A developmental approach can reveal how leadership is initially represented in people’s minds, as well as when and how children develop a more sophisticated understanding of leadership to encompass its group-related characteristics. Because early intuitive theories and societal input interact with one another in complicated ways in adults’ minds (Shtulman & Lombrozo, 2016), studying children developmentally provides a unique lens into the mechanisms shaping leadership cognition. More broadly, group memberships and hierarchical relations are two basic relational forms working together to structure human life (Baillargeon et al., 2015; Garfield et al., 2019; Rai & Fiske, 2011), yet most developmental research to date has examined children’s reasoning about groups or leadership separately. By investigating children’s beliefs about leaders’ behaviors in group contexts, our research speaks to children’s cognitive capacity of considering two relational forms simultaneously to navigate their social environments.

Previous research on children’s group cognition shows that from early on, children learn, obey and enforce group norms. In first-party tasks, children act in accordance with group norms
CHILDREN’S EVALUATIONS OF LEADER’S NON-CONFORMITY

(Corriveau & Harris, 2010; Corriveau et al., 2009; Fusaro & Harris, 2008; Haun & Tomasello, 2011; Legare et al., 2015; Walker & Andrade, 1996). For example, four-year-olds accepted an incorrect answer after being informed that their ingroup members agreed to the answer unanimously (Haun & Tomasello, 2011). In third-party tasks, children believe that members of a group should conform to their respective group norms and negatively evaluate non-conforming members (Bian & Baillargeon, 2022; Cooley & Killen, 2015; Schmidt et al., 2012; Roberts et al., 2017). For example, when children were introduced to two novel groups displaying distinct groups norms, they disapproved members who violated their ingroup norms (Roberts et al., 2017). The preceding results highlight a general tendency to enforce group norms in early childhood. Open questions concern whether children perceive a leadership-based hierarchical landscape within a group and enforce norms on group leaders.

Because of the scarcity of developmental data on this topic, we look to adults’ judgments of leaders’ non-conformity, which has yielded mixed results. On the one hand, adults grant leaders with more tolerance to deviate from group norms in some contexts (Abrams et al., 2008; Fiske, 2010; Hollander, 1958). This increased tolerance towards leaders could be driven by two considerations. First, leaders have gained more privilege by assuming the leadership role (even though they may acquire the role via respect and admiration). This increased privilege may permit leaders to deviate, both in their own eyes and in others’ eyes (Blader et al., 2016; Galinsky et al., 2008). Second, being innovative is often perceived as a positive and sometimes essential attribute of leadership (Fielding & Hogg, 1997; de Moura et al., 2010). Leaders under some circumstances are supposed to challenge the existing system and forge an innovative path that is different from established norms. For example, adults evaluated a future leader’s
nonconformity more favorably relative to an ordinary group member’s violation of norms (Abrams et al., 2008).

On the other hand, a large body of findings suggest that adults expect leaders to adhere to group norms. For example, adults expressed stronger affection and more respect to leaders who represented group values than deviant leaders (Hains, Hogg, & Duck, 1997; Platow & van Knippenberg, 2001). Similarly, psychology undergraduate students provided more negative evaluations of a nonconforming leader, chair of the Psychology Society, than a nonconforming student (Abrams et al., 2008; see also de Moura et al., 2011). These findings align with the Social Identity Theory of Leadership (Hogg & van Knippenberg, 2003), which indicates that leaders are exemplars of their respective group and thus are expected to act in accordance with group norms (Eagly et al., 1995; Fiske, 1992).

Although no studies have directly examined early beliefs about leaders’ adherence to group norms, developmental research provides distant support suggesting that children may shift from tolerating leaders’ nonconformity to protesting it. Infants expect individuals with privileged influence to achieve their own goals at the expense of sacrificing others’ goals (Thomsen et al., 2011). However, five-year-old children expect a leader to contribute more resources than a nonleader in collaborative contexts (Stavans & Diesendruck, 2021), suggesting that children gradually attribute stronger responsibilities rather than increased entitlement to leaders. These findings accord with the changes in children’s own leadership behaviors, such that they become more likely to employ prosocial and cooperative strategies to elicit respect from others in order to gain leadership over elementary school years (Hawley, 1999, 2002; also see Redhead et al., 2018). Thus, children may gradually recognize conformity is a crucial aspect of leadership and
expect leaders to follow group norms. As a result, they would become increasingly negative about a leader’s violations of group norms with age.

The present research took a cross-cultural approach to examine this possibility by including children from China and the United States. Social psychological research on leadership has been primarily focused on adults in Western cultures (Avolio, 2007), making it difficult to identify cultural mechanisms underlying leadership cognition. Exploring how children in different cultural contexts construe leadership will shed light on how cultural values give rise to nuanced expectations of leader action across development. A common framework that has been widely used to characterize cultures is “individualism” and “collectivism” (e.g., Fiske et al., 1998; Hofsed, 1980; Markus & Kitayama, 1991; Triandis, 1995). Specifically, Western cultures including the United States, are described as more individualistic, such that they value autonomy and independence, and promote self-expression and independent self-concepts. In contrast, Eastern Asian cultures including China, are described as more collectivistic, such that they value social relations and foster relatedness and responsibilities to the community.

This overall characterization is overly simplistic as independence and interdependence often coexist in most cultures, cultural values are dynamic rather than static, and there are large variations within cultures (Oyserman et al., 2002; Raeff, 2010; Talhelm et al., 2014; Tamis-Lemonda et al., 2008). However, this framework has guided much of the cross-cultural work on leadership cognition (Kajanu et al., 2020; Stamkou et al., 2019; Zhong et al., 2006). In line with an emphasis on independence, leaders in Western cultures are expected to blaze the trail by introducing and implementing positive innovations (Bray et al., 1982; Grint, 2005). In contrast, Eastern Asians expect leaders to take care of the community and to protect group identity (Menon et al, 2010). For example, Eastern Asians held more favorable attitudes towards
leadership that prioritized group protection than Westerners (House et al., 2004). Similarly, leaders who violated norms were more likely to lose followers’ support and eventually their status in interdependent than independent cultures (Stamkou et al., 2019). These cultural values may be reflected in socialization processes in children’s home and school environments (Tamis-LeMonda et al., 2008) that can shape children’s leadership beliefs. For example, adults from UK encourage their children to stand up for themselves to win high social status, whereas Chinese parents and teachers praise children who hold back their ideas and yield to others, especially those in lower in rank to children themselves (Kajanus et al., 2020). From this perspective, relative to children in the US, children from China might be especially likely to believe that leaders should follow group norms and thus provide more negative evaluations of a leader’s non-conformity.

To sum up, the present research was designed to address three interrelated questions: (1) Do children believe that leaders should conform? Specifically, how do children evaluate leaders’ (versus nonleaders’) norm violations? (2) How does children’s prescriptive evaluation of leaders’ non-conformity unfold across development? (3) What are the differences and similarities in US and Chinese children’s evaluations of leaders’ non-conformity? We tested 4- to 11-year-old children from the US and China for several important reasons. As noted earlier, children as young as age 4 show robust sensitivity to leadership markers (e.g., Heck et al., 2021). Moreover, cultural values seem to shape children’s reasoning about social ranks in this age range. When asked whether a prestigious character or a subordinate would win a resource conflict, 5- to 7-year-olds showed no preference; 9- to 12-year-old children from the UK predicted the prestigious character would win, whereas children in China demonstrated awareness that the
prestigious character may yield (Kajanus et al., 2020), aligning with their respective cultural value systems.

We employed a minimal group paradigm (e.g., Dunham et al., 2011; Roberts et al., 2017; Tajfel et al., 1971) and introduced children to two novel groups displaying distinct group norms. Children provided prescriptive evaluations of non-conforming behaviors performed by either a group leader or an ordinary group member. Presenting two groups at the same time highlights the nonconformist’s group membership. This paradigm has been used in past work with 4- to 13-year-olds from the US (e.g., Roberts et al., 2017) and China (e.g., Roberts et al., 2018) to assess their reasoning about group norms. Using the same paradigm across a similar age span allows us to conduct a systematic, closely matched comparison of children’s construal of leadership and its relation to conformity. Evidence that children evaluate the leader’s non-conformity more favorably than the nonleader’s would indicate an association between leadership and privilege or distinctiveness. However, evidence that children evaluate the leader’s non-conformity more harshly than the nonleader’s would indicate an association between leadership and greater responsibility to embody their group identity.

**Experiment 1**

Experiment 1 examined whether children in the US would consider leadership in their evaluations of non-conformity. Specifically, we recruited 4- to 11-year-old children from the US and measured their prescriptive evaluations of nonconforming behaviors performed by a group leader or an ordinary group member.

**Methods**

**Power Analysis.** We conducted a priori power analysis (G*Power 3.1; Faul et al., 2007) for a regression model with three predictors (i.e., participant age, condition, and their
interaction). Based on previous studies published on this topic (e.g., Roberts et al., 2017), we specified a small to medium effect size \((f^2 = 0.1)\) with alpha set at .05. The analysis suggested that the minimum number of participants was 114 to provide 80% power to detect significant predictors.

**Participants.** Four- to 11-year-old children \((N = 114, M = 7.85, SD = 2.16; 56 \text{ girls and } 58 \text{ boys})\) were recruited from the lab database and through the Children Helping Science platform (childrenhelpingscience.com). Children were from diverse geographic locations in the US, though we did not formally collect their geographic information.

Prior to the testing session, parents completed an optional demographic questionnaire reporting their child’s gender (a free-response box), race/ethnicity, their family income (a free-response box), and primary caregivers’ highest level of education. For child’s race/ethnicity, parents were provided with 6 options: American Indian or Alaskan Native, Asian or Pacific Islander, African American, Latino/Hispanic, White American (not of Hispanic origin) and other. If parents chose other, they had the option to specify their child’s race/ethnicity in a free-response box. For primary caregivers’ highest level of education, parents were provided with six levels to choose from: Less than a high school diploma, High school diploma, Associate’s degree, Bachelor’s degree (B.A., B.S.), Master’s degree (M.A., M.S.), and Professional degree (M.D., Ph.D., etc.).

Ethnicity information was available for 93.9% of our participants. Of these children, 58.9% were White American, 27.1% were Asian American/Pacific Islander, 5.6% were Latino/Hispanic, 1.9% were African American, 1.9% were American Indian or Alaskan, and 4.7% were Multiracial American/Other. Family income information was available for 83.3%
participants. The median household income of these participants was $115,000 (middle-class). According to the economic class categories based on annual household income (World Economic Forum, 2022), the majority of children came from middle-class families (61.1%), with 12.6% from lower class and 26.3% from upper class. Parental education information was available for 92.1% participants. Of these participants, 86.7% have parents holding at least a bachelor’s degree. Five additional children were tested but excluded from the final sample because they failed the comprehension check questions (see below). The research project was approved by the [blind for review] Institutional Review Board.

**Materials and Procedure.** Due to the COVID-19 pandemic, we conducted this and the following experiments online via Zoom (Experiments 1 and 2) or Tencent Meeting (Experiment 3). In all studies, parents completed an online consent form prior to the testing session, and children provided oral assent. Next, an experimenter asked the parent to remain silent during the study, shared her screen, videotaped the sessions and recorded children’s responses in a Qualtrics survey. At the end of the sessions, children were debriefed and thanked for their participation with a $5 Amazon gift card.

Participants received either a leader or a nonleader condition. In both conditions, children were introduced to two novel groups simultaneously, each of which consisted of three individuals with identical body size. Group membership was marked by distinct outfits (i.e., green stripes, orange triangles) and category labels (i.e., hibbles, glerks). Whether hibbles were shown on the left or the right side of the screen was counterbalanced. Children were asked to label the two groups to ensure that they could identify the two groups correctly. This minimal-group paradigm was adapted from Roberts et al. (2017).
Next, a target individual who belonged to either the hibble or the glerk group (counterbalanced) was present between the two groups. For ease of communication, we use hibble in our descriptions. In the leader condition, the target hibble was of 1.5 times the body size as other hibbles. The experimenter described the target hibble as being the leader of the group, “This hibble is powerful and in charge of other hibbles. Every day, this hibble decides how many cookies to give to other hibbles.” Past work has demonstrated that children infer leadership from physical size and decision-making power (Enright et al., 2020; Stavans & Baillargeon, 2019).

The nonleader condition was identical with two exceptions. First, the target hibble was of the same body size as other hibbles. Second, the experimenter described the target hibble as an ordinary group member, “This hibble has the same power as other hibbles. Every day, this hibble and other hibbles, receive cookies to eat.” To assess and reinforce children’s understanding of the key information, we asked two comprehension questions (i.e., “Do you think this hibble is in charge?”, “Do you think other hibbles listen to this hibble?”). Correct answers were provided after children responded (yes/yes for the leader condition, no/no for the nonleader condition). Five children failed both comprehension checks and were excluded from the final sample.

**Evaluations.** Next, children in both conditions received three trials in random order. In each trial, the two groups performed different actions in the domain of music, language or activities. We chose these actions because they are arbitrary and morally neutral, which allows us to assess children’s general evaluations of norm violations. The actions matched with the group in color (e.g., orange outfits corresponded with an orange musical note). This display allowed children to recognize the behavioral norms established in the two groups (e.g., Roberts et al., 2017). Critically, the target hibble engaged in behaviors violating the hibbles’ norms (e.g., the
target hibble is listening to music more typical of glerks). We then asked children to evaluate the target hibble’s non-conformity (e.g., “Is it good or bad for this [powerful] hibble to listen to this kind of music?”). These questions had been used in past research to elicit children’s prescriptive evaluations (e.g., Bian & Markman, 2020). Children answering “good” were then asked, “Is it a little good, pretty good, or very, very good?” with a scale showing three increasingly smiley faces. Children answering “bad” were then asked, “Is it a little bad, pretty bad, or very, very bad?” with a scale showing three increasingly frowny faces. Overall, these questions were rated on a 6-point scale (1 = very, very bad to 6 = very, very good).

**Explanations.** After evaluating each of the non-conforming behaviors, children were asked to provide justifications. We coded these justifications to probe the reasoning underlying children’s prescriptive evaluations of non-conformity. Informed by past work (Roberts et al., 2017), we reasoned that a tendency to focus on (1) group or (2) individual differences was likely to guide children’s judgments of nonconforming behaviors. Based on this theoretical framework, explanations were coded into two categories: (1) group-based (e.g., “That’s what the glerks listen to”, “The leader should be loyal to other hibbles”) and (2) individual-based (e.g., “Because he loves to”, “The leader can do whatever he wants”). In each trial, participants received 1 in each category if they provided explanations related to the respective theme and 0 otherwise. The first author and an independent coder who was blind to the hypotheses conducted the coding (Cohen’s κ = 0.91 and 0.93 for group-based and individual-based explanations, respectively). Disagreements were resolved by discussion. We calculated the number of trials that each type of explanations was provided; thus, each participant received two explanation scores (i.e., group-based, individual-based).
**Transparency and openness.** The materials for this experiment, and the data and syntax for all three experiments, are available on Open Science Framework:

https://osf.io/w5ptq/?view_only=ad27b63f5c444f5389da4039ba978dd3. This experiment, and the following experiments were not pre-registered.

**Results and Discussion**

**Evaluations.** The primary goal of this experiment was to examine whether and how children consider leadership in their evaluations of non-conformity. Preliminary analyses of the data revealed no significant interaction of condition with participant gender or the target’s group label, we thus collapsed the data across these factors. We submitted children’s evaluation scores to a mixed-effects ordinal logistic regression model, with condition (leader vs. nonleader), age (continuous), and their interaction as fixed effects and random intercepts for participant and trial (music, toy, language). The analyses yielded a significant condition by age interaction, $\chi^2(1) = 12.81, p < .001$, Cohen’s $\omega = 0.34$. Children evaluated the nonleader’s non-conformity more positively with age, $\chi^2(1) = 5.26, p = .022$, Cohen’s $\omega = 0.31$ (Figure 1 left), which was consistent with past studies on children’s evaluations of an ordinary group member’s deviance (Roberts et al., 2017). In contrast, children’s evaluations of the leader’s non-conformity became more negative with age, $\chi^2(1) = 7.93, p = .005$, Cohen’s $\omega = 0.37$ (Figure 1 left). Neither the main effect of age ($\chi^2(1) = 0.93, p = .340$, Cohen’s $\omega = 0.09$), nor the main effect of condition ($\chi^2(1) = 1.54, p = .215$, Cohen’s $\omega = 0.12$), reached significance.
Figure 1. **Left**: The association between age and evaluation scores (from 1 = very very bad to 6 = very very good) by condition in Experiment 1 (children in the US). The lines show the predicted values from a linear regression model predicting children’s evaluation scores from age; the circles and triangles represent the data of individual participants; the shaded areas represent 95% CI. **Right**: The Johnson-Neyman plot of Experiment 1. The line reflects differences in simple slopes of condition predicting participants’ evaluation scores as a function of participant age.

As supplementary analyses, we performed a mixed-effects linear regression model with identical predictors to explore the precise age at which children began to draw distinct evaluations of the leader’s versus the nonleader’s non-conformity. We adopted the Johnson-Neyman “regions of significance” approach (Johnson & Neyman, 1936). Children provided more positive evaluations of the leader’s than the nonleader’s non-conforming behaviors until 7.4 years of age (see Figure 1 right). Children between the ages of 7.4 and 10.4 provided similar evaluations of the leader’s and nonleader’s non-conformity. However, starting at 10.4 years of age, children evaluated the leader’s non-conformity more harshly. These results suggest that older children ascribe group-based responsibilities to leaders, expect them to comply with group norms, and thus judge their nonconforming behaviors more negatively.

**Explanations.** Children’s explanation scores were submitted to an ordinal logistic regression model, with explanation category (group-based vs. individual-based), condition
(leader vs. nonleader), age (continuous), plus all possible interaction terms as predictors. The three-way interaction was significant, $X^2(1) = 8.81, p = .003$, Cohen’s $\omega = 0.28$. In line with our prediction that children gradually associate leaders with their respective groups, children in the leader condition became more likely to justify their evaluations by appealing to group-based reasons with age, $X^2(1) = 6.67, p = .010$, Cohen’s $\omega = 0.34$, whereas their tendency to appeal to individual differences did not vary by age, $X^2(1) = 0.01, p = .937$, Cohen’s $\omega = 0.01$. In contrast, children in the nonleader condition became more likely to appeal to individual differences with age, $X^2(1) = 4.10, p = .043$, Cohen’s $\omega = 0.27$, whereas their group-based explanations did not change by age, $X^2(1) = 2.14, p = .143$, Cohen’s $\omega = 0.20$.

**Moderated mediation.** To further explore whether children’s evaluations of leaders’ non-conformity was related to their tendency to perceive leaders as representative group members, we performed a conditional process analysis using Model 7 of the PROCESS macro (Hayes, 2017) in R (Figure 2). Specifically, we expected that children’s growing negativity about a leader’s non-conformity was due to their increased tendency to apply a group-based (vs. an individual-based) lens to conceptualize leadership; In contrast, this indirect effect should be reversed or absent for children in the nonleader condition.

We first calculated a difference score in children’s explanations reflecting their likelihood to appeal to group-based than individual-based justifications. We also calculated an average evaluation score across three trials. Age was entered into the moderated mediation model as the independent variable, with explanation as the mediator and evaluation as the dependent variable; Condition was entered as the moderator. Consistent with our prediction, this analysis revealed significant condition-moderated effects, $index = -0.24, SE = 0.01$, 95% $CI = [-0.43, -0.06]$. In the leader condition, there was a marginal significant indirect effect of age on evaluation via
explanation, indirect effect = -0.12, $SE = 0.06$, 95% CI = [-0.24, 0.001], suggesting that children’s increasing disapproval of a leader’s non-conformity was related to their increased tendency to perceive leaders as central group members. In the nonleader condition, the indirect effect was marginally significant but in the opposite direction, indirect effect = 0.12, $SE = 0.07$, 95% CI = [-0.01, 0.26]. Because of children’s increased awareness of ordinary group members’ individual differences, they provided more license to a nonleader’s non-conformity with age.

**Figure 2.** Condition-moderated mediation of the age effect on children’s evaluations of non-conformity through their explanations. We report unstandardized coefficients and 95% CI in brackets.

Taken together, despite a general tendency to be more lenient with non-conformity with age, children from the US gradually judged a leader’s violations of group norms more harshly. As reflected in children’s justifications, disapproving a leader’s non-conformity was in part due to children’s increased tendency to conceptualize leaders as central group members.

**Experiment 2**

In Experiment 1, four- to seven-year-old children expressed more positive attitudes toward a leader’s than a nonleader’s non-conforming behaviors. This finding was open to an
alternative explanation: Perhaps children of this age held a general positivity towards people of high social status (e.g., Shutts et al., 2011) and thus demonstrated favoritism in their evaluations. To address this alternative, children in Experiment 2 were asked to evaluate *conforming behaviors* conducted by either a group leader or an ordinary group member. We expected that young children’s evaluative advantage for leaders’ behaviors would be diminished such that there would be no condition difference.

**Methods**

**Power Analysis.** In Experiment 1, the effect size of the condition difference among the 4- and 7-year-olds was 0.44 (Cohen’s $f^2$). Based on this effect size, we conducted a priori power analysis (G*Power 3.1; Faul et al., 2007) for a regression model with three predictors (i.e., participant age, condition, and their interaction) with alpha set at .05. The analysis suggested that the minimum number of participants was 21 to provide 80% power to detect significant predictors. Nevertheless, we increased the sample size to 66 to be consistent with Experiment 1. To examine the statistical power of this sample to detect the effect of interest, we also performed a sensitivity analysis. Our hypothesis was that children would provide similar evaluations in the two conditions, thus we calculated the minimum effect size for the condition difference that our sample would allow us to detect in the context of this regression model. The sensitivity analysis indicated that a sample of 66 participants affords 80% power to detect small-to-medium condition effect (Cohen’s $f^2 = 0.12$).

**Participants.** Four- to 7-year-old children ($N = 66, M = 6.14, SD = 1.04; 35$ girls and $31$ boys) were recruited from diverse locations in the US, via the lab database and through the Children Helping Science platform (childrenhelpingscience.com).
Parents received the same demographic questionnaire as in Experiment 1. Race/ethnicity information was available for all the participants. In this sample, 81.8% were White American, 9.1% were Asian American/Pacific Islander, 4.5% were Hispanic/Latino, and 4.5% were Multiracial American/Other. Family income information was available for 81.8% participants. The median household income of these children was $115,000 (middle-class). The majority of children (59.3%) came from middle-class families, with 13.0% of children from lower class and 27.8% from upper class. Parental education information was available for 97.0% participants. Of these participants, 90.6% have parents who held at least one bachelor’s degree. Six additional children were excluded from the final sample because they failed the comprehension check questions.

**Materials and Procedure.** As in Experiment 1, children received either the leader or the nonleader condition. The materials and procedure were essentially identical to Experiment 1, except that the target hibble in both conditions acted in accordance with their group norms (e.g., The target hibble is listening to the same music as other hibbles). Children were prompted to provide explanations for their evaluations, yet we chose not to consider these justifications as we predicted that children would provide similar evaluations of conforming behaviors by a leader and a nonleader.

**Results and Discussion**

As in Experiment 1, we submitted children’s evaluation scores to a mixed-effects ordinal logistic regression, with condition (leader vs. nonleader), age (continuous), and their interaction as fixed effects and random intercepts for participant and trial (music, toy, language). There was no evidence for an interaction between condition and age, $\chi^2(1) = 1.56, p = .212$, Cohen’s $\omega = 0.15$. The effect of age was marginally significant, $\chi^2(1) = 3.51, p = .061$, Cohen’s $\omega = 0.23$,.
suggesting that children evaluated conforming behaviors slightly more positively with age. More
relevant to our argument, children’s evaluations of conformity did not differ by condition, $X^2(1) = 0.10, p = .750$, Cohen’s $\omega = 0.04$. This result was consistent with our prediction that children
do not favor leaders over nonleaders when evaluating conforming behaviors (null hypothesis).

However, the alternative account on children’s general favoritism towards leaders
predicted that children in the leader condition would provide higher evaluations than children in
the nonleader condition (experimental hypothesis). To further explore whether these negative
results merely failed to reject the null hypothesis or in fact provided evidence for it, we
calculated a Bayes Factor (BF) using JASP (JASP team, 2020). We first calculated the mean
evaluation score across the three trials for each participant, and then conducted a Bayesian
independent-samples $t$ test that compared these scores by condition. According to conventional
cut-offs, a BF above 3 indicates at least moderate support for a hypothesis (Beard et al., 2016;
Jarosz & Wiley, 2014). Our analysis yielded a BF of 3.70, suggesting that these data were over
3.70 times more likely to occur under the null as opposed to the experimental hypothesis.

These results speak against the possibility that younger children’s favorable evaluations
of leaders’ non-conformity were simply due to their general positive views of individuals with
high status. When leaders and nonleaders followed their respective group norms, 4- to 7-year-old
children provided similar evaluations of their conformity.

**Experiment 3**

In Experiment 3, we took a cross-cultural approach to examine how children growing up
in the Chinese culture evaluate a leader’s (versus a nonleader’s) violations of group norms.
Similar to US children, Chinese children of preschool age are sensitive to leadership markers
(Kajanus et al., 2020). Past work with adults suggests that Chinese culture places emphasis on a
leader’s role in protecting group identities (House et al., 2004). Being socialized in this cultural context, we expected children in China to demonstrate earlier and/or stronger sensitivities to leaders’ group-based responsibilities, such that they would evaluate a leader’s non-conformity more negatively than children from the US.

**Methods**

**Participants.** Children aged 4 to 11 from China were included ($N = 116, M = 7.90, SD = 2.15; 60 girls and 56 boys; 62 4- to 7-year-olds and 54 8- to 11-year-olds). Child participants were primarily recruited from a middle-sized city in China (Shijiazhuang, Hebei Province). Prior to the testing session, parents completed an optional demographic questionnaire reporting their child’s gender (a free-response box), ethnicity (a free-response box), their family income (a free-response box), and primary caregivers’ highest level of education. For primary caregivers’ highest level of education, parents were provided with six levels to choose from: Less than a high school diploma, High school diploma, Associate’s degree, Bachelor’s degree (B.A., B.S.), Master’s degree (M.A., M.S.), and Professional degree (M.D., Ph.D., etc.). Ethnicity information was available for 77.6% of the participants. Of these children, 97.8% identified as Han, 1.1% as Man, and 1.1% as Hui. Family income information was available for 55.2% participants. The median family income of these participants was 200,000 Chinese yuan (approximately $31,000, middle-class). Similar to the sample of Study 1, children primarily came from middle-class (62.5%), with 7.8% from lower-class and 29.7% from upper-class families. Parental education information was available for 77.6% participants. Of these participants, 61.1% participants have parents who held at least a bachelor’s degree. Six additional children were excluded from the final sample because they did not complete the experiment (3), were distracted (1), or failed the comprehension check questions (2).
**Materials and Procedure.** The materials and procedure were essentially identical to Experiment 1. The script was translated from English into Chinese by the first author and then back translated into English by an independent, bilingual translator to ensure accuracy. Any discrepancies between the back-translated script and the original version were resolved through discussion.

As in Experiment 1, we coded children’s justifications into two categories: (1) group-based and (2) individual-based. In each trial, participants received 1 in each category if they provided explanations related to the respective theme and 0 otherwise. The first author and an independent bilingual coder who was blind to the hypotheses conducted the coding (Cohen’s \( \kappa = 0.83 \) and 0.87 for group-based and individual-based explanations, respectively). Disagreements were resolved by discussion. The number of trials that each type of explanations was provided was calculated as explanation scores (i.e., group-based, individual-based).

**Results and Discussion**

**Evaluations.** We submitted children’s evaluation scores to a mixed-effects ordinal logistic regression model, with condition (leader vs. nonleader), age (continuous), and their interaction as fixed effects and random intercepts for participant and trial (music, toy, language). Replicating Experiment 1, there was an interaction between age and condition, \( \chi^2(1) = 8.30, p = .004, \) Cohen’s \( \omega = 0.27 \). Similar to children from the US, children from China evaluated a leader’s non-conformity more negatively with age, \( \chi^2(1) = 3.77, p = .052, \) Cohen’s \( \omega = 0.25 \) (Figure 3 left). Conversely, children judged a nonleader’s violations more positively with age, \( \chi^2(1) = 4.74, p = .029, \) Cohen’s \( \omega = 0.29 \) (Figure 3 left). Neither the main effect of age (\( \chi^2(1) = 0.02, p = .878, \) Cohen’s \( \omega = 0.01 \)) nor the main effect of condition (\( \chi^2(1) = 0.91, p = .340, \) Cohen’s \( \omega = 0.09 \)) reached significance.
Figure 3. Left: The association between age and evaluation scores (from 1 = very very bad to 6 = very very good) by condition in Experiment 3 (Chinese children). The lines show the predicted values from a linear regression model predicting children’s evaluation scores from age; the circles and triangles represent the data of individual participants; the shaded areas represent 95% CI. Right: The Johnson-Neyman plot of Experiment 3. The line reflects differences in simple slopes of condition predicting participants’ evaluation scores as a function of participant age.

Next, we explored the precise age at which children began to draw distinct evaluations in the two conditions (Figure 3 right) with the Johnson-Neyman “regions of significance” approach (Johnson & Neyman, 1936). Children in China provided more positive evaluations of the leader’s than the nonleader’s non-conforming behaviors until 6.9 years of age. Children between the ages of 6.9 and 10.5 provided similar evaluations of the leader’s and the nonleader’s deviance. However, starting at 10.5 years of age, children evaluated the leader’s non-conformity more negatively than that of the nonleader.

Explanations. Children’s explanation scores were submitted to an ordinal logistic regression model, with explanation category (group-based vs. individual-based), condition (leader vs. nonleader), age (continuous), plus all possible interaction terms as predictors. The three-way interaction was significant, $\chi^2(1) = 9.40, p = .002$, Cohen’s $\omega = 0.28$. Similar to Experiment 1, children in the leader condition became more likely to justify their evaluations of
non-conformity by appealing to group-based reasons with age, $X^2(1) = 4.96, p = .026$, Cohen’s $\omega = 0.29$, whereas their tendency to appeal to individual differences did not vary by age, $X^2(1) = 0.43, p = .511$, Cohen’s $\omega = 0.09$. In contrast, there was suggestive evidence that children in the nonleader condition became more likely to appeal to individual differences with age, $X^2(1) = 3.24, p = .072$, Cohen’s $\omega = 0.24$, and less likely to appeal to group-based explanations, $X^2(1) = 3.28, p = .070$, Cohen’s $\omega = 0.24$.

**Moderated mediation.** To test whether children’s evaluations of leaders’ non-conformity was related to their tendency to perceive leaders as representative group members, we performed a conditional process analysis using Model 7 of the PROCESS macro (Hayes, 2018) in R. Age was entered into the moderated mediation model as the independent variable, with explanation as the mediator and evaluation as the dependent variable; Condition was entered as the moderator. Replicating Experiment 1, this analysis revealed condition-moderated effects, $\text{index} = -0.28, SE = 0.09, 95\% CI = [-0.45, -0.11]$ (Figure 2). In the leader condition, the indirect effect of age on evaluation via explanation was significant, indirect effect = -0.15, $SE = 0.06, 95\% CI = [-0.28, -0.03]$. This result suggests that children gradually held more negative attitudes towards a leader’s non-conformity because of their increased tendency to conceptualize leaders as central group members. In the nonleader condition, the indirect effect was reversed, indirect effect = 0.13, $SE = 0.06, 95\% CI = [0.01, 0.24]$. Children appealed to more individual-based explanations when explaining an ordinary member’s non-conformity, which led them to be more tolerant of the member’s norm violations.

These results suggest that children in China, like children in the US, with age become increasingly likely to perceive leaders as representative group members and believe that they
should follow group norms; as a result, they evaluated leaders’ non-conforming behaviors more harshly.

**Overall Analyses**

We pooled the data from Experiments 1 and 3 to provide a systematic test of the cross-cultural similarities and variations in children’s construal of leadership. Given this particular interest, we reported only the effects involving either condition or culture.

**Evaluations.** We performed a mixed-effects ordinal logistic regression model with condition (leader vs. nonleader), age (continuous), and culture (US vs. China), plus all possible interaction terms, as fixed-effect predictors, and random intercepts for participant and trial (music, toy, language). There was a significant interaction between condition and age, $X^2(1) = 20.40, p < .001$, Cohen’s $\omega = 0.30$. With age, children evaluated a nonleader’s deviant behaviors more positively, $X^2(1) = 9.54, p = .002$, Cohen’s $\omega = 0.29$, but they showed decreased positivity toward a leader’s non-conformity, $X^2(1) = 11.19, p < .001$, Cohen’s $\omega = 0.31$. Importantly, neither the two-way interaction between culture and condition, $X^2(1) = 0.02, p = .894$, Cohen’s $\omega = 0.01$, nor the three-way interaction between these two factors and age, $X^2(1) = 0.06, p = .812$, Cohen’s $\omega = 0.02$, was significant. Thus, culture did not moderate the developmental course of children’s sensitivity to leadership in their evaluations of non-conformity. Children in both cultures provided more negative evaluations of the leader’s non-conforming behaviors over development.

However, this analysis revealed a main effect of culture, $X^2(1) = 4.65, p = .031$, Cohen’s $\omega = 0.14$, showing that children in the US ($M = 3.58, SD = 1.44$) judged non-conforming behaviors more positively than children in China ($M = 3.16, SD = 1.50$). This pattern held in children’s evaluations of leaders’ (children in the US: $M = 3.73$; children in China: $M = 3.24$)
and nonleaders’ non-conformity (children in the US: $M = 3.43$; children in China: $M = 3.08$). These results were consistent with past work suggesting that children in China place a stronger emphasis on social conformity than children in the US (Clegg & Legare, 2016; Roberts et al., 2018).

**Explanations.** Children’s explanation scores were submitted to an ordinal logistic regression model including culture (US vs. China), explanation category (group-based vs. individual-based), condition (leader vs. nonleader), age (continuous), plus all possible interaction terms as predictors. The analysis revealed an interaction between age and condition, $X^2(1) = 4.20, p = .040$, Cohen’s $\omega = 0.14$, which was qualified by a three-way interaction among explanation category, condition and age, $X^2(1) = 18.18, p < .001$, Cohen’s $\omega = 0.28$. In line with previous results, children with age provided more group-based explanations ($X^2(1) = 12.69, p < .001$, Cohen’s $\omega = 0.33$), but not individual-based explanations ($X^2(1) = 0.31, p = .581$, Cohen’s $\omega = 0.05$), to justify their evaluations of a leader’s non-conformity. However, when justifying their evaluations of a nonleader’s non-conformity, children provided more individual-based explanations ($X^2(1) = 7.32, p = .007$, Cohen’s $\omega = 0.25$), and fewer group-based explanations ($X^2(1) = 5.30, p = .021$, Cohen’s $\omega = 0.22$). Culture did not moderate the effect of condition or any interactions involving condition, suggesting cross-cultural continuity in children’s conceptualizations of leadership.

With respect to cross-cultural differences, there was an interaction between explanation category and culture, $X^2(1) = 4.89, p = .027$, Cohen’s $\omega = 0.15$. Relative to children in the US, children in China provided slightly fewer individual-based explanations (China: $M = 0.33, SD = 0.77$; US: $M = 0.44, SD = 0.81$; $X^2(1) = 2.30, p = .130$, Cohen’s $\omega = 0.10$) and more group-based explanations to justify their evaluations (China: $M = 1.72, SD = 1.24$; US: $M = 1.43, SD = 1.23$;
CHILDREN’S EVALUATIONS OF LEADER’S NON-CONFORMITY

$\chi^2 (1) = 2.90, p = .088, \text{Cohen’s } \omega = 0.11$). These cultural differences were consistent with past work (Markus & Kitayama, 1991) suggesting that children in Chinese cultural contexts place more emphasis on groups than on individuals than children in the US.

Overall, these analyses revealed cross-cultural similarities and differences in children’s reasoning about leadership and conformity. Children from both the US and China changed from holding favorable views to holding negative attitudes about a leader’s non-conformity, yet children in China judged a leader’s non-conformity more harshly than children in the US, aligning with their respective cultural values.

**General Discussion**

In human society, group membership and hierarchical relations are inextricably interwoven and jointly impact social cognition and group dynamics (Haidt & Graham, 2007; Rai & Fiske, 2011). One prominent hierarchical relation enacted in social groups is leadership (Hogg, 2001). Our present research provided initial evidence showing that perceiving leadership through a group-based lens takes root in childhood. Specifically, children integrate leadership information into their prescriptive evaluations of norm violations. Experiments 1 and 3 compared children’s evaluations of non-conformity performed by a group leader or an ordinary group member in the US and China. Results revealed cross-cultural similarities: Although children between ages 4 and 11 became increasingly tolerant of a nonleader’s non-conformity, they held more negative attitudes toward a leader’s non-conformity with age. More specifically, younger children (4- to 7-year-olds) provided more positive evaluations of the leader’s than the nonleader’s deviance, whereas older children (10- to 11-year-olds) showed the opposite pattern. Experiment 2 found that, US children between ages of 4 and 7 held similar positive attitudes about a leader’s and a nonleader’s conformity, ruling out the possibility that younger children’s
positive evaluations of the leader’s non-conformity stem from their general positivity towards high-status individuals such as leaders.

This research speaks to children’s ability to simultaneously factor two fundamental relational forms, hierarchical relations and group memberships, into their social judgments. Children do not perceive a uniform social landscape in which all ingroup members are equivalent. Instead, they detect an asymmetrical social landscape with some ingroup members possessing higher status via leadership roles than others. This abstract understanding of leadership within groups modifies young children’s enforcement of group norms and guides them to apply different standards in evaluating nonconforming behaviors. This work sets a foundation for future research to shift from focusing on one relational form to integrating multiple social relations when investigating children’s reasoning about social interactions.

These findings make notable contributions to our understanding of early construal of leadership in several respects. This research adds important knowledge to the content of early reasoning about leadership. Emerging literature has shown that children as early as infancy use a wide range of cues to infer leadership and hold certain expectations about the interactions between leaders and followers (Margoni et al., 2018; Stavans & Baillargeon, 2019). Yet, a crucial feature of leadership that has been overlooked in developmental research is that a leader is also a group member. We present the first investigation to explore whether children apply the psychology of group membership to understand leadership by investigating children’s evaluations of a leader’s non-conformity. Children in our studies became increasingly negative about a leader’s nonconforming behaviors with age, suggesting that they gradually conceptualize leaders as prototypical group members who should follow their group norms and embody the
group identity. These findings highlight the importance of considering the psychology of group membership to enrich our theoretical analysis of leadership cognition in early life.

By taking a developmental approach, this work provides insights on when and how our reasoning about leadership develops to encompass leaders’ group-related characteristics. Although older children showed a tendency to disapprove a leader’s non-conformity, similar to adults (de Moura et al., 2011; Hollander, 1958; Yukl, 2010), younger children were more likely to approve it. What developmental mechanisms drive this change? One possibility is that children’s conceptualizations of leadership mature over development to include more complex characteristics of leaders. Although children as early as infancy show some understanding of leadership (Margoni et al., 2018), this understanding undergoes a prolonged developmental trajectory and becomes more sophisticated over time (Heck et al., 2021). Younger children may initially conceptualize leaders as individuals with privileged influence and thus provide more tolerance to a leader’s non-conformity. However, as children’s understanding of leadership becomes more complex, they gradually recognize leaders’ group-based responsibilities, one of which is to embody the identity of their groups by following group norms. Children’s explanations provided some initial evidence for this mechanism: With age, children became more likely to appeal to a leader’s group membership to justify their evaluations of the leader’s non-conformity.

A complementary possibility is that, whereas older children associate leadership with compliance more strongly, younger children attend to a leader’s distinctiveness. In fact, studies with adults indicate that being normative and distinctive are two important features of leaders (Abrams et al., 2008). As Fielding and Hogg (1997) suggested, “leaders should adhere to group norms (e.g., Hollander, 1958) and be representative group members (e.g., Eagly, Karau, &
Makhijani, 1995; Eagly, Makhijani, & Klonsky, 1992), but that they should also be innovative and thus “deviant” from the group (e.g., Bray, Johnson, & Chilstrom, 1982; Hollander, 1958; see Levine, 1989).” Children may develop sensitivity to a leader’s distinctiveness at an earlier age, resulting from their daily observations of authority figures’ decision-making power at home and in preschool contexts. With socialization, they gradually recognize that leaders also conform to represent their community. A third possibility relates to children’s increasing ability to attend to a person’s multiple social identities. Younger children may have limited capacity so that they mainly focus on one particular identity (e.g., only seeing a leader as a leader), while older children can consider multiple identities (e.g., seeing a leader as both a leader and a group member) to construct their social beliefs. Indeed, recent development findings suggest that children attend to multiple social dimensions (e.g., race, gender) in forming their social assumptions (Lei et al., 2020) and this ability seems to improve with age (Shu et al., 2022).

Our studies also provide new insights on how cultural values may shape the developmental trajectory of leadership cognition, which was lacking in previous work (but see Kajanus et al., 2020). Replicating past work (Roberts et al., 2018), children from both China and the US evaluated an ordinary group member’s non-conformity more positively with age, suggesting that children become more aware of individual differences. Importantly, our work extends this past research by showing that children in China and the US held more negative evaluations of a group leader’s non-conformity with age. Around age ten, children began to evaluate a leader’s non-conformity more harshly than a nonleader’s. In addition, children from both cultures gradually provided more group-based explanations to justify their evaluations of a leader’s non-conformity. Thus, the notion that leadership embodies group norms may be
consistent across cultures, reflecting the very nature of leadership that it is universally embedded in groups.

Despite these cross-cultural similarities, children in the two cultural contexts demonstrated several nuances in their evaluations of a leader’s action. First, the transitional point at which children begin to associate leadership with conformity seems to vary across cultures. Among children in China, their favorable attitudes of a leader’s non-conformity (6.9 years of age) came offline slightly earlier than children in the US (7.4 years of age), suggesting that children in China may form an earlier link between leadership and conformity. Second, we found that children growing up in Chinese culture rated a leader’s non-conformity more harshly than children growing up in the US, which indicates that children in China associate leadership with conformity more strongly. Third, children in China were slightly more likely to appeal to group-based explanations than children in the US, consistent with past studies indicating that cultural contexts prioritizing interdependence over independence encourage their young generation to value social conformity (Clegg & Legare, 2016). These results provide initial evidence showing that children’s cognition about leadership is guided by the value systems of the cultures they are embedded in. It would be worthwhile for future studies to compare specific leadership practices across societies to identify the precise social structures and cultural pathways shaping children’s beliefs about leadership.

**Constraints on Generality.** Our findings mark an exciting first step in demonstrating how cultural values may influence children’s reasoning about leadership and conformity. Future research should involve a broader range of cultural contexts to explore the generality of our results. Moreover, since there are notable local variations in terms of the extent to which interdependence and independence are valued within a country (e.g., Talhelm et al., 2014), it is
important to examine within-culture variations in children’s leadership cognition. Recent work assessing children’s cooperative behaviors provide initial evidence for within-culture variations in children’s social behaviors. In particular, Kajanus and colleagues (2019) tested two groups of Chinese children from Nanjing China and found that children who attend a community school valuing communal goals were more likely to reject resource allocations advantaging themselves than children from an elite university school emphasizing competition. In the present research, the Chinese children in Experiment 3 were recruited from Shijiazhuang, an urban region identified as relatively independent (Talhelm et al., 2014). It is possible that children from more interdependent regions would protest a leader’s non-conformity more strongly. Similarly, the majority of children across all three studies were recruited from middle-class families, thus more evidence is needed to explore how children of other socioeconomic backgrounds reason about leadership and conformity.

Children’s evaluations of leaders’ non-conformity likely influence their beliefs about who can become leaders, who should be elected as leaders, as well as their own interactions with leaders. One direction worthy of further exploration is the impacts of a leader’s non-conformity on early judgments of the leader’s ability to represent their respective group as well as children’s tendency to follow the leader’s orders. It would also be interesting to explore how children’s beliefs about leaders’ conforming responsibilities relate to their own leadership strategies. Are children who believe leaders should conform more likely to adopt prestige-based strategies such as cooperation to acquire leadership? These beliefs and behaviors may be carried into adulthood, further influencing important leadership decisions.

It would also be important to explore whether children consider different types of hierarchical relations in their evaluations of non-conformity. As noted earlier, representations of
social ranks are relatively fine-grained even in young children, such that they distinguish leadership from dominance-based hierarchies (Enright et al., 2020; Heck et al., 2021; Kajanus et al., 2020; Margoni et al., 2018). Although children with age expect leaders to conform, they may not extend this expectation to a dominant ingroup member who gains its power via coercion. In addition, the motivation behind a leader’s nonconforming behaviors may influence children’s evaluations as well. Since one central responsibility of leaders is to take care of their group, we expect children to hold more negative attitudes when the leader breaks the law to pursue their self-interests, but children may grant leaders with more freedom as long as their non-conformity benefit the group.

Beyond the domain of group norms, another fruitful direction is to explore whether children expect leaders to adhere to moral standards. In the real world, leaders ranging from political arena to business settings sometimes commit unethical acts (e.g., Dubois et al., 2015; Piff et al., 2012). Studies on children’s beliefs about leaders’ morality are only emerging and provide conflicting results. One study finds that children become increasingly likely to predict someone in charge to be indifferent to others’ needs (Terrizzi et al., 2020), whereas another studying finds that children expect leaders to rectify unfair resource allocations (Stavans & Baillargeon, 2019). More studies are needed to understand children’s moral expectations of leaders to present a complete picture of the freedom and responsibilities that come along with leadership in children’s minds.

To conclude, the present research highlights how considerations of leadership shape children’s evaluations of non-conformity over development and across societies. Four to 11-year-old American and Chinese children become more tolerant of an ordinary group member’s non-conformity, yet their evaluations of a group leader’s non-conformity decline over
development. Our results provide the first evidence showing that children conceptualize leaders as central group members and associate them with greater responsibilities to conform. From early in life, it is acknowledged that, “One who wears the crown, bears the crown.”
References


Eagly, A. H., Makhijani, M. G., & Klonsky, B. G. (1992). Gender and the evaluation of leaders:


JASP Team (2021). JASP (Version 0.16)[Computer software].


https://doi.org/10.1177/0956797620920360


and consequences of power and status. *SSRN Electronic Journal.*

https://doi.org/10.2139/ssrn.1298493


198, 104867. https://doi.org/10.1016/j.jecp.2020.104867

The one chart you need to understand how income is distributed in the US. (2022, July 12). World Economic Forum. https://www.weforum.org/agenda/2022/07/household-income-distribution-wealth-inequality-united-states/


Tian, Y. & Bian, L. (2022, December 8). Children's Evaluations of Leader's Non-conformity. https://osf.io/w5ptq/?view_only=ad27b63f5e444f5389da4039ba978dd3


https://doi.org/10.1016/j.jecp.2021.105147


https://doi.org/10.1016/j.cogdev.2021.101086


https://doi.org/10.1016/S1534-0856(06)09003-7