AMERICAN PSYCHOLOGICAL ASSOCIATION

Journal of Experimental Psychology: General

ISSN: 0096-3445

2024, Vol. 153, No. 11, 2700–2714
https://doi.org/10.1037/xge0001505

Expectations of Intergroup Empathy Bias Emerge by Early Childhood

Rodney Tompkins[1, 2, 3], Katie Vasquez[3, 4], Emily Gerdin[3], Yarrow Dunham[3], and Zoe Liberman[2]

[1] Department of Psychology, University of California, San Diego
[2] Department of Psychological and Brain Sciences, University of California, Santa Barbara
[3] Department of Psychology, Yale University
[4] Department of Psychology, University of Chicago

Across two preregistered studies with children (3–12-year-olds; $N = 356$) and adults ($N = 262$) from the United States, we find robust expectations for intergroup empathic biases. Participants predicted that people would feel better about ingroup fortunes than outgroup fortunes and worse about ingroup misfortunes than outgroup misfortunes. Expectations of empathic bias were stronger when there was animosity and weaker when there was fondness between groups. The largest developmental differences emerged in participants' expectations about how others feel about outgroup misfortunes, particularly when there was intergroup animosity. Whereas young children (3–5-year-olds) generally expected people to feel empathy for the outgroup (regardless of the relationship between the groups), older children (9–12-year-olds) and adults expected Schadenfreude (feeling good when an outgroup experiences a misfortune) when the groups disliked one another. Overall, expectations of empathic biases emerge early but may be weaker when there are positive intergroup relationships.

Public Significance Statement

This set of studies demonstrates that expectations of empathy are biased even early in development. From preschool through adulthood, participants expected people to feel more empathy for ingroup members than outgroup members. Therefore, expectations that people will feel more empathy for their own group may be part of a suite of early emerging intergroup biases and expectations. Interestingly, the largest developmental differences were seen for expectations of outgroup Schadenfreude: Expectations that people would feel good about an outgroup member's misfortune only emerged in older children (9–12-year-olds) and adults, and only when there was acrimony between the groups, suggesting empathic biases may be driven more by early expectations of positive feelings for the ingroup rather than negative feelings for the outgroup.

Keywords: child development, empathy, intergroup biases, Schadenfreude

Supplemental materials: https://doi.org/10.1037/xge0001505.supp

Empathy can motivate prosocial behavior (see Batson, 2009, for a review). But people do not experience equal empathy toward all social partners, which can lead to egregious consequences (Bloom, 2016, 2017; Prinz, 2011). Notably, for familiar and novel groups, humans display intergroup empathic biases—they feel more empathy for members of their group than for outsiders (e.g., Cikara, Bruneau, &

This article was published Online First November 13, 2023.
Rodney Tompkins https://orcid.org/0000-0002-8798-5206
Rodney Tompkins presented this research in a symposium at the Society for Research in Child Development 2023 conference in Salt Lake City, Utah. This material is based upon work supported by the National Science Foundation Graduate Research Fellowship Program under DGE-2038238 awarded to Rodney Tompkins and DGE-2139841 awarded to Emily Gerdin. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation. The authors declare no conflicts of interest. We thank our participating families, as well as research assistants Annabelle Au, Julia Bainbridge, Vanessa Chao, Brennan Fahey, Maisie Edsall-Lingenfelter, Gaby Luna-Victoria, Marco Muñoz, Jordan Nyitrai, Emily Park, Keyla Ruiz, Quinn Schroeder, Tracey Tran, Delaney Whitaker, and Jingyi Zhu (University of California, Santa Barbara) for their help with data collection, and Sayda Martinez-Alvarado (Yale College) for her help during the initial phase of this work. We also thank MOXI, the Wolf Museum of Exploration + Innovation, and the Santa Barbara Zoo for serving as testing sites as part of our Living Labs collaborative model. Lastly, we thank members of the Social Cognitive Development Labs at the University of California, Santa Barbara and Yale University for their support and insight. Preregistrations, data, analysis code, and materials are available on Open Science Framework (https://osf.io/f2cv3/).

Rodney Tompkins served as lead for formal analysis, project administration, visualization, writing–original draft, and writing–review and editing. Zoe Liberman served as lead for project administration, resources, supervision, writing–original draft, and writing–review and editing and served in a supporting role for formal analysis and visualization. Rodney Tompkins, Katie Vasquez, Emily Gerdin, Yarrow Dunham, and Zoe Liberman contributed equally to conceptualization and methodology. Katie Vasquez, Emily Gerdin, and Yarrow Dunham contributed equally to writing–review and editing.

Correspondence concerning this article should be addressed to Rodney Tompkins, Department of Psychology, University of California, San Diego, 9500 Gilman Drive, McGill Hall, La Jolla, CA 92093, United States. Email: rtompkins@ucsd.edu

Saxe, 2011; Gutsell & Inzlicht, 2012; see Cikara & Fiske, 2013). Further, in some cases, empathy for the outgroup is not only reduced, but it is even reversed (i.e., feeling bad about an outgroup member's fortune [Glückschmerz] or good about an outgroup member's misfortune [Schadenfreude]; for reviews, see Cikara & Fiske, 2013; R. H. Smith et al., 2009). Lack of empathy can lead to mistreatment: Adults who feel more pleasure upon their rival group's loss report more willingness to aggress against members of the rival group (e.g., Cikara, Botvinick, & Fiske, 2011). Therefore, it is critical to understand the mechanisms behind lowered empathy for the outgroup.

Research on intergroup empathic biases has focused on first-party experiences of greater empathy for the ingroup. For instance, adults explicitly report feeling better about ingroup than outgroup fortunes, and worse about ingroup than outgroup misfortunes (e.g., Cikara et al., 2014), and they even exhibit more positive affect (e.g., smiling) when an envied target experiences a misfortune than when a liked target experiences the same misfortune (Cikara & Fiske, 2012). One possible reason why people may experience and report reduced empathy for the outgroup is because of their own envy and jealousy. Indeed, because people (a) experience their relationships and group memberships as connected and overlapping with the self (e.g., Aron & McLaughlin-Volpe, 2001), and (b) engage in zero-sum thinking (e.g., Meegan, 2010), they may experience jealousy at an outgroup member's fortune because it indicates a cost to their ingroup (and perhaps the self), and experience pleasure at an outgroup member's misfortune because it signals a benefit to their ingroup (and possibly the self).

Do people anticipate empathic gaps in intergroup contexts even when personal stakes are removed? That is, when the world is divided into social groups, do people generally hold third-party expectations that others will feel more empathy for their own group than for other groups? If so, these expectations of intergroup empathic biases may exist along with a myriad of other early emerging intergroup biases and expectations (see Dunham, 2018, for a review). For instance, past developmental research shows that 3–10-year-olds predict harmful behaviors will be directed toward novel outgroup members more than novel ingroup members (Rhodes, 2012). Such third-party studies allow researchers to investigate whether people have abstract expectations about how social categorization broadly impacts social expectations (apart from any personal stakes or preferences). More specifically, third-party methods can provide insight as to whether humans hold naïve expectations that others will experience more empathy for ingroups (see Smith-Flores & Powell, 2023), even when the people making these inferences are not at all involved in the interaction (and therefore experience no personal costs or benefits, reducing the roles of envy and jealousy). To investigate this question, we ran two preregistered studies using third-party vignettes to examine whether people expect empathy to be biased across novel group lines. In addition, we explored the developmental origins of expectations of empathic biases in 3–12-year-old children, and the role of intergroup relationships on these expectations. That is, we tested whether children and adults think that intergroup empathic biases are greater in cases of intergroup animosity and reduced in cases of intergroup fondness.

Our primary question of interest concerns understanding the mechanisms underlying intergroup empathic biases through studies of third-party expectations. Although a growing body of work demonstrates that individuals experience more empathy for their group (e.g., Cikara et al., 2014), further research is needed in order to determine the extent to which these empathic biases are due to personal experiences of emotions like jealousy. Research with both children and adults has shown that personal jealousy can impact people's judgments. For example, adults find it more difficult to empathize with envied outgroups (for a review, see Fiske, 2010), and children's own jealousy impacts their expectations of other peoples' jealousy (e.g., 10–11-year-olds who viewed "sports" as a central part of their identity were more likely to predict that a third-party character who lost a sport would be jealous of the winner; Bers & Rodin, 1984). Therefore, it is essential for researchers to investigate both first-party and third-party tasks in order to reveal potential similarities and differences between actual human behavior (first-party behaviors; e.g., Cikara, Botvinick, & Fiske, 2011; Cikara & Fiske, 2012; Cikara et al., 2014; Gutsell & Inzlicht, 2012) versus conceptions about how humans are expected to behave (third-party judgments, as investigated in the present work).

For example, in the domain of fairness, children preferentially create equal outcomes: 6–8-year-olds allocate resources equally between two third-party individuals and even discard resources to maintain equality (Shaw & Olson, 2012). However, when 6–8-year-olds can acquire resources themselves, they are willing to take an extra resource in order to be at an advantage (Shaw et al., 2014). Furthermore, in research directly comparing first-party behavior and third-party expectations, C. E. Smith et al. (2013) found that although 3–8-year-olds generally endorse equal sharing in a third-party resource allocation task, only 7–8-year-olds actually divide resources equally in a first-party task. Similarly, whereas children develop an aversion to being at a disadvantage in a resource allocation task relatively universally and early in life, cross-cultural studies reveal that aversion to being at an advantage is not universal (see Blake et al., 2015). Taken together, research on fairness suggests that although young humans treat fairness as normative in third-party tasks, such norms do not always extend to instances in which they are directly involved. Therefore, although people experience more empathy for the ingroup, third-party methods can elucidate whether people—when they are not clouded by jealousy or personal involvement—generally expect others to also experience more empathy for the ingroup, or instead expect empathy to extend to all people.

If people do hold third-party expectations of intergroup empathic biases, then that would coincide with past research suggesting that a constellation of biases and expectations arises due to social categorization (see Dunham, 2018). Indeed, having an "intuitive sociology," which includes expectations about other people's behaviors, interactions, and emotions (see Rhodes, 2013; Shutts & Kalish, 2021; Smith-Flores & Powell, 2023), may be leveraged in order to facilitate social coordination and cooperation. In this case, people may have specific expectations about intergroup relationships and therefore use group membership to make disparate predictions of empathy. Although research to date has not investigated whether people anticipate empathic biases in third-party contexts, prior work demonstrates that social group membership can impact reasoning about social behaviors and social interactions. Indeed, humans engage in categorical person perception, using group membership to infer people's likely traits and behaviors (see Macrae & Bodenhausen, 2001). Even by the preschool years, people expect others to engage in actions that are conventional to

their group (see Liberman et al., 2018; Schmidt et al., 2012). Therefore, it is possible that expectations of empathic biases belong to a larger system of intergroup biases and expectations that arise even in third-party contexts stripped of personal cost or benefit.

In addition to investigating third-party expectations, we take a developmental perspective by testing inferences about intergroup empathy bias in 3–12-year-old children as well as adults. Assessing the developmental trajectory of empathic biases can provide insight into the origins and plasticity of intergroup cognition. Indeed, it is possible that when confronted with novel, third-party scenarios, young humans initially expect others to have empathy for everyone. That is, young children may expect everyone to feel good about others' fortunes and bad about others' misfortunes, and only with more life experience (and perhaps through their own experiences of having more empathy for their ingroup), intuitions shift toward expecting biased empathy. In line with this possibility, infants and young children may show (and expect others to show) empathy for all people. Fourteen-month-olds willingly help strangers (Warneken & Tomasello, 2006, 2009), and 3–5-year-olds treat empathy as normative, negatively judging people who are indifferent to others' suffering or who act in counter-empathic ways (e.g., laughing at an injured character; Paulus et al., 2020). But, with age, children's expectations may become more differentiated based on relationship. For example, whereas 5–6-year-olds judge people who fail to help a friend or a stranger as equally mean, 8–9-year-olds think it is worse to fail to help a friend (Marshall et al., 2020).

On the other hand, even young children may expect group affiliations to guide empathy. Indeed, a growing body of research suggests that infants and children expect group membership to impact people's actions, interactions, and evaluations (see Dunham, 2018; Spelke & Kinzler, 2007; Liberman et al., 2017; Rhodes, 2013; Spelke, 2023). For example, 3–9-year-olds think that it is more permissible to harm outgroup compared to ingroup members (e.g., Rhodes & Chalik, 2013), and 4-year-olds use patterns of helping and harming to determine likely group membership (Switzer et al., 2020). Seeds of these expectations arise by infancy: 10–11-month-olds expect an agent to express happiness when their "friend" reaches their goal, but not when an unaffiliated character does the same (Smith-Flores et al., 2023). Most related to the current research, 4–7-year-olds predict that people will feel more empathy for their friends than for their enemies (Smith-Flores et al., in press) and 9–14-month-olds like actors who harm a disliked character (Hamlin et al., 2013), which could indicate early development of outgroup Schadenfreude. Therefore, we are interested in whether young children show broad expectations for empathy (even across group lines), or whether they already expect empathy to be biased.

Finally, we also tackle the open question of whether expectations for intergroup empathic biases vary based on the relationship between the groups in question. For adults, first-party experiences of outgroup empathy vary depending on context. That is, people feel less empathy for their outgroup when groups are competing and when their outgroup is perceived as threatening (for a review, see Chang et al., 2016). Perceptions of competition and threat impact experiences of empathic biases, regardless of whether groups hold real-world rivalries (e.g., sports teams; Cikara, Botvinick, & Fiske, 2011) or novel relationships (e.g., based on assignment during the task; Cikara et al., 2014). Here, we ask whether the relationship between novel social groups similarly alters expectations about intergroup empathy. We predicted that people would expect empathy to be more biased in favor of one's ingroup when there was animosity between the groups, and less biased in favor of one's ingroup when the groups were fond of one another. If so, then this could suggest that in order to predict patterns of empathy, people are focusing on the role of relationships for understanding the functions of groups (e.g., whether two groups are in a cooperative coalition) rather than on mere categorization alone.

Present Research

We present two preregistered studies investigating expectations of intergroup empathic bias. In Study 1, we probed the ontogeny of expectations of intergroup empathic biases by testing children's and adult's inferences in a third-party task. We were interested in whether children (a) initially expect others to experience empathy regardless of group membership but later develop expectations that people will feel more empathy for the ingroup, or (b) anticipate that people will be biased to feel more empathy for their own group, even early in life. In Study 2, we manipulated the relationship between the groups in order to test whether intergroup relationships impact expectations about intergroup empathic biases. In particular, we examined whether intergroup empathy biases were reduced when the groups shared a fond relationship and exacerbated when the groups shared an antagonistic relationship.

Study 1

Method

Power Analysis

We conducted a power analysis using the R package simr, version 1.0.5 (Green & MacLeod, 2016; R Core Team, 2021) with data collected from an adult pilot study ($N = 193$; all data, R code, materials, and preregistrations from the present studies are uploaded to Open Science Framework (OSF; see Tompkins et al., 2023). Based on the analysis, $N = 18$ would achieve 100% power (95% CI [99.26, 100.00]) to replicate the primary effect of interest (an interaction between Group [ingroup vs. outgroup] and Valence [fortune vs. misfortune]). To explore the additional effect of how intuitions regarding whether the groups like or dislike each other impacts expectations of empathy, we decided to test 110 children and 110 adults (which would provide 88% power (95% CI [84.82, 90.72]) to test for the interaction between Group, Valence, and Liking; see Tompkins et al., 2023, "Power Analysis" section for full details). Due to the large age range of children and to ensure that we would have enough power to investigate developmental trends, we also decided that we would try to test a relatively equal number of children in each of three age groups: 4–5-year-olds, 6–7-year-olds, and 8–10-year-olds (at least $n = 30$ per age group). We selected this age range based on past research which used similar methods to investigate the development of children's expectations about social relationships (e.g., Liberman & Shaw, 2020; Rhodes & Chalik, 2013). We preregistered that we would initially analyze the effect of Age as a continuous variable, and then perform follow-up analyses using age bins in cases for which there was a main effect of Age and/or interaction between Age and another predictor. Breaking a continuous age sample into age bins in order to more carefully investigate developmental trends is relatively

standard practice within developmental psychology (see Noyes et al., 2023; Roberts et al., 2021).

Transparency and Openness

The Study 1 sample size, data exclusions, manipulations, and measures are reported. This study was preregistered and the preregistration as well as all data, analysis code, and research materials are available on OSF (Tompkins et al., 2023). Data were analyzed using R, version 4.1.1 (R Core Team, 2021) and visualized using package ggplot2, version 3.3.5 (Wickham, 2016).

Participants

Adults. One hundred and two adults ($M = 41.66$ years, $SD = 11.99$ years; range = 25–70 years; 40 men, 62 women) were tested online via Prolific (www.prolific.co) in March 2022 and compensated $0.70. We tested an additional eight adults, who were excluded from analysis due to explicitly stating that they did not pay full attention to the study, and/or failing attention check questions (for preregistrations and data, see Tompkins et al., 2023). All exclusions were based on our preregistered plan.

Children. One hundred and fourteen children ($M = 6.94$ years, $SD = 1.71$ years; range = 4.11–10.93 years; 28 boys, 43 girls, 43 not reported) were tested at a local zoo ($n = 95$), in a lab ($n = 1$), or at a local science museum ($n = 23$) between March 2022 and May 2022. They received a sticker for participating. Five additional children were tested but excluded due to failing to understand the scale, caregiver or peer interference, and/or report of atypical development (for full details, see Tompkins et al., 2023). All exclusions were based on our preregistered plan and Institutional Review Board (IRB) protocol. We did not collect information on participants' race or ethnicity. However, the demographics of the child sample likely mirror those of the children tested in Study 2 (at the same locations). Study procedures were approved by the University of California, Santa Barbara IRB (Protocol Nos. 1-22-0089 and 9-21-0756), including a waiver of consent for child participants.

Procedure

Scale. The study's four dependent variables were answered using a six-point "Feelings–Response" scale ranging from "Very Bad" (0) to "Very Good" (5). Modified Likert scales, like the one used in the present studies, are regularly included in developmental research to assess valenced answers in younger populations (e.g., Liberman & Shaw, 2020). Before hearing the study vignette, children were trained on the scale by hearing two practice scenarios unrelated to our primary dependent variables of interest. An experimenter showed children a dichotomous "Good/Bad" scale with a green circle and a red circle. They were told that they could point to green if something was good, and red if something was bad. Then, based on which circle they initially chose, they would see another set of circles that varied in size, allowing them to provide a continuous rating of goodness or badness. First, children were asked, "Is it good or bad for someone to share with her friends?" If a child answered "Good," then they were able to select whether it was "A Little Good," "Good," or "Very Good." If a child answered "Bad" initially, they were corrected by the experimenter and were able to try again. One child initially said "Bad" and referenced COVID in her rationale for not sharing, but then responded "Good" when asked a second time. One additional participant continued to answer "Bad" even after a second prompting and was therefore excluded from the study. Participants were also asked, "Is it good or bad for someone to hit someone else in her class?" All children responded that it was bad (and following the initial indication of "Bad", they were able to select whether it was "A Little Bad," "Bad," or "Very Bad"). Therefore, all included child participants understood the scale.

Adults also answered by first using the dichotomous "Good/Bad" scale, and then by using the respective follow-up scale to indicate the degree of goodness or badness. In the interest of study conciseness, adult participants did not complete scale training.

Experiment. Participants were presented with a vignette about two groups. For child participants, a trained researcher flipped through a vignette booklet featuring pictures and read the script out loud. Adult participants independently viewed the vignette pictures and read the script. The vignette featured two novel groups, the Blues and the Yellows, who lived in the same town. Participants heard that everyone in the town received a lollipop except for one Blue ("Barth") and one Yellow ("Yud"), and there was only one lollipop left. The town mayor (who did not belong to either group) spun a wheel to determine who would get the last lollipop. Then, participants saw the actual outcome: Either the Blue "Barth" or the Yellow "Yud" received the last lollipop (for full script, see Tompkins et al., 2023). We operationalized getting the last lollipop as a fortune, and not getting the last lollipop as a misfortune.

Following the outcome, participants indicated how a different member of each group ("Belen" for the Blue group, and "Yanni" for the Yellow group) felt about the outcome. Specifically, there were four dependent within-participants variables: ingroup-fortune, outgroup-fortune, ingroup-misfortune, and outgroup-misfortune. For example, if Barth from the Blue group won the last lollipop, participants were asked how Belen felt about Barth winning (ingroup-fortune), how Belen felt about Yud losing (outgroup-misfortune), how Yanni felt about Barth winning (outgroup-fortune), and how Yanni felt about Yud losing (ingroup-misfortune). Participants provided answers to these four dependent variables by first using the dichotomous "Good/Bad" scale, and then by using the respective follow-up scale to indicate the degree of goodness or badness. Therefore, participants could respond that any character's feelings ranged from "Very Bad" (0) to "Very Good" (5). Following these four questions, participants were asked whether they thought the groups liked each other, which could be answered as either "yes" or "no." Across participants we counterbalanced which group won the lollipop (Blue group or Yellow group), and which character's feelings we asked about first (Belen or Yanni).

Results

Our primary research question regarded whether children and adults expected characters to experience less empathy for outgroup members compared to ingroup members. If so, they should have expected someone to feel better when an ingroup member (compared to an outgroup member) experienced a fortune, and worse when an ingroup member (compared to an outgroup member) experienced a misfortune. To ask whether this was indeed the case, we ran separate linear regression models for children and adults with Feelings–Response (0 = Very Bad to 5 = Very Good) as the outcome variable, and Group (ingroup vs. outgroup),

Valence (fortune vs. misfortune), and their interaction as predictors. If participants expected intergroup empathic biases, then there should be a significant interaction between Group and Valence, due to expectations about feelings for fortunes and misfortunes varying based on the identity of the person experiencing the event. For children, we also included Age (continuous in years, e.g., 4.58) and its interaction with Group and Valence to determine whether expectations about empathic biases become stronger with development.

After investigating our main prediction, we then asked whether expectations for intergroup empathic biases were stronger among participants who expected animosity between the groups. In some prior research testing first-party experiences (e.g., Cikara, Botvinick, & Fiske, 2011), participants who experienced intergroup empathy bias were ardent fans of polarized sports teams such as the Boston Red Sox and the New York Yankees. Assumed animosity may therefore enhance the expectation of intergroup empathic biases (compared to situations in which groups are fonder and more cooperative). Therefore, in a second set of models we also included participants' response to the Liking question (whether participants said "yes" or "no" when asked if the groups liked each other) as a predictor variable. If people who expected animosity (dislike) between the groups showed stronger expectations of empathic biases, then we would see an interaction between Group, Valence, and Liking.

Across all models, we included a random effect of participant to account for the repeated measures design.

Adults

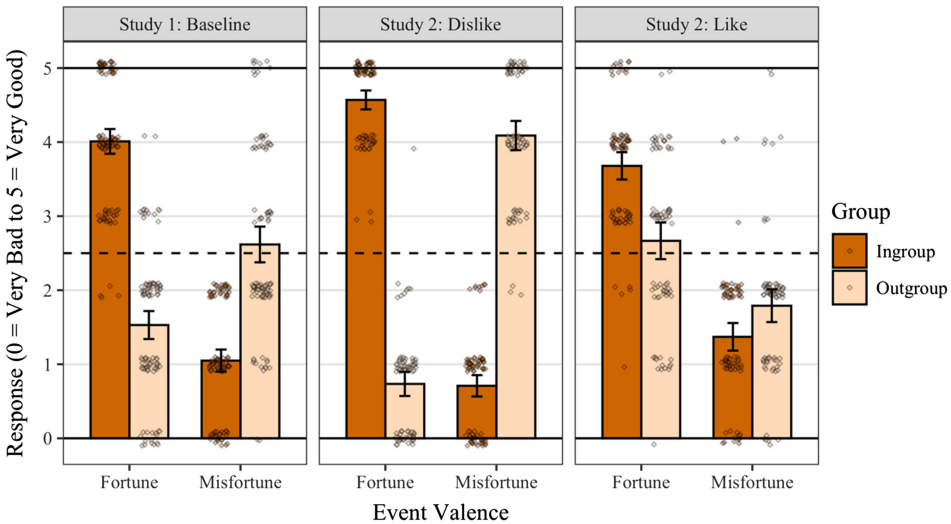
As described above, the initial model focused on anticipation of intergroup empathic biases by predicting ratings of characters' feelings based on Group, Valence, and their interaction. The model revealed significant effects of Group ($\beta = -2.48$, $SE = 0.14$, $t(404.00) = -18.33$, partial-$R^2 = .05$, $p < .001$; see Figure 1) and Valence, ($\beta = -2.96$, $SE = 0.14$, $t(404.00) = -21.88$, partial-$R^2 = .19$, $p < .001$), and their interaction ($\beta = 4.05$, $SE = 0.19$, $t(404.00) = 21.16$, partial-$R^2 = .53$, $p < .001$). This interaction indicates that adults anticipated intergroup empathic biases. Specifically, the interaction was due to the fact that adults anticipated people would feel better about ingroup fortunes than outgroup fortunes ($t(101.00) = 17.48$, 95% CI [2.20, 2.76], $p < .001$), and worse about ingroup misfortunes than outgroup misfortunes ($t(101.00) = -10.48$, 95% CI [−1.87, −1.27], $p < .001$).

Following our preregistered plan, we next asked whether each rating differed from chance (2.50). Because there were four tests, we used the Bonferroni corrected α of .0125 as a threshold for significance. Adults anticipated that characters would have empathy for the ingroup: They expected someone to feel good about an ingroup fortune ($M = 4.01$, 95% CI [3.84, 4.18]; $t(101.00) = 17.94$, $p < .001$) and bad about an ingroup misfortune ($M = 1.05$, 95% CI [0.90, 1.20]; $t(101.00) = -19.21$, $p < .001$). Adults also anticipated that people would feel Glückschmerz for the outgroup. That is, they expected someone to feel bad about an outgroup member's fortune ($M = 1.53$, 95% CI [1.34, 1.72]; $t(101.00) = -10.19$, $p < .001$). However, adults did not show evidence of expecting Schadenfreude toward the outgroup—rather than expecting a character to feel good about an outgroup misfortune, adults' ratings for an outgroup member's misfortune were at chance ($M = 2.62$, 95% CI [2.38, 2.86]; $t(101.00) = 0.97$, $p = .335$).

Next, to investigate whether these effects were stronger for participants who expected animosity between the groups, we included responses to the Liking variable in the model. All effects and interactions in the model were significant ($ps < .001$; see Table S1 in the online supplemental materials). Of particular importance, and as predicted, the model showed a significant three-way interaction

Figure 1

Adults' Expectations of Intergroup Empathy in Studies 1 and 2



Note. The bar graph exhibits mean values, 95% confidence intervals, and a dashed line representing chance (= 2.50). Individual data points represent participant responses, jittered to better show response distribution. See the online article for the color version of this figure.

between Group, Valence, and Liking ($\beta = -3.02$, $SE = 0.35$, $t(400.00) = -8.66$, partial-$R^2 = .16$, $p < .001$), suggesting stronger expectations of intergroup empathy bias among adults who indicated that the groups dislike each other (see Figure S1 in the online supplemental materials). Although all four dependent variables differed significantly between adults who expected the groups to like versus dislike one another, the most pronounced difference was that of expectations for outgroup misfortunes. Adults who expected the groups to like each other anticipated that characters would feel empathy toward the outgroup: They said that someone would feel bad about an outgroup member's misfortune ($M = 1.91$, 95% CI [1.66, 2.16]; $t(45.00) = -4.75$, $p < .001$). However, adults who expected the groups to dislike each other anticipated that characters would feel Schadenfreude toward the outgroup. Indeed, they expected someone to feel good about an outgroup member's misfortune ($M = 3.20$, 95% CI [2.88, 3.52]; $t(55.00) = 4.35$, $p < .001$).

Children

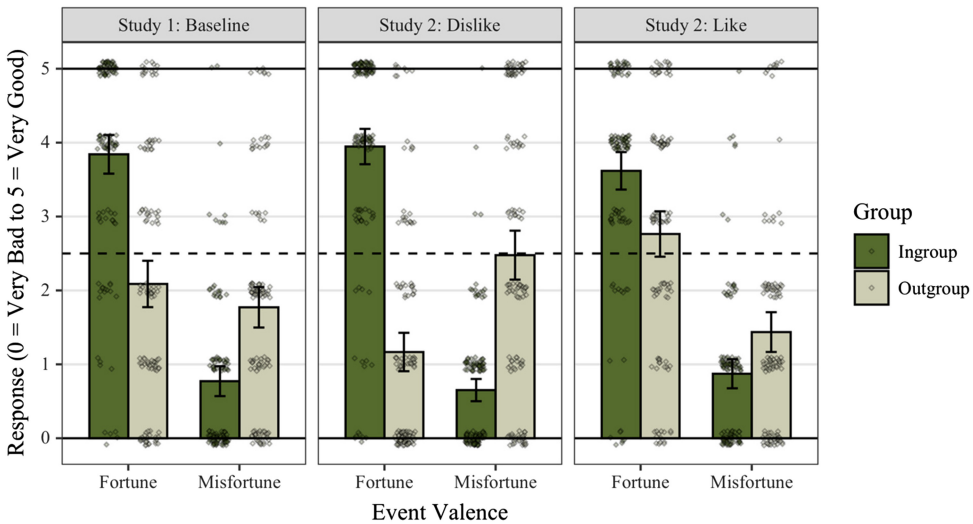
The initial model for children included Feelings–Response as the outcome variable, and Group, Valence, Age (continuous in years), and all their interactions as predictor variables. However, there were no significant effects or interactions of the continuous Age variable ($ps > .303$; see Table S2 in the online supplemental materials). Therefore, as outlined in our preregistration, we dropped Age (and its interactions) from the model. The model with Group, Valence, and their interaction as predictors revealed significant effects of Group ($\beta = -1.75$, $SE = 0.18$, $t(339.00) = -9.55$, partial-$R^2 = .02$, $p < .001$) and Valence ($\beta = -3.07$, $SE = 0.18$, $t(339.00) = -16.71$, partial-$R^2 = .33$, $p < .001$), and the predicted interaction between the two variables ($\beta = 2.75$, $SE = 0.26$, $t(339.00) = 10.60$, partial-$R^2 = .25$, $p < .001$; see Figure 2). Therefore, children, like adults, anticipated intergroup empathic biases.

This interaction was due to children's anticipation that people would feel better about ingroup fortunes than outgroup fortunes ($t(113.00) = 9.94$, 95% CI [1.40, 2.10], $p < .001$) and worse about ingroup misfortunes than outgroup misfortunes ($t(113.00) = -6.73$, 95% CI [−1.29, −0.71], $p < .001$). Following our preregistered plan, we next asked whether each rating differed from chance (2.50). Because there were four tests, we again used the Bonferroni corrected α of .0125 as a threshold for significance. Children anticipated that characters would experience empathy for ingroup members: They expected someone to feel good when an ingroup member experienced a fortune ($M = 3.84$, 95% CI [3.58, 4.10]; $t(113.00) = 10.15$, $p < .001$) and bad when an ingroup member experienced a misfortune ($M = 0.77$, 95% CI [0.57, 0.97]; $t(113.00) = -16.94$, $p < .001$). When reasoning about outgroup members, children, like adults, anticipated Glückschmerz—they expected someone to feel bad when an outgroup member experienced a fortune ($M = 2.09$, 95% CI [1.77, 2.40]; $t(113.00) = -2.60$, $p = .010$). However, rather than showing evidence of expecting others to feel Schadenfreude, children expected people to feel empathy even for the outgroup. That is, children predicted that someone would feel bad when an outgroup member experienced a misfortune ($M = 1.77$, 95% CI [1.50, 2.05]; $t(113.00) = -5.27$, $p < .001$).

Next, we investigated whether intergroup empathic biases were stronger for participants who expected animosity between the groups. Similar to the adult model, we included responses to the Liking variable in the model. As in the initial model, there were no significant effects of interactions with Age ($ps > .500$), so we removed Age (and its interactions) from the model. The three-way interaction between Group, Valance, and Liking was not significant ($\beta = -0.95$, $SE = 0.54$, $t(336.00) = -1.77$, partial-$R^2 = .01$, $p = .078$), suggesting children's expectations did not differ significantly based on their inferred relationship between the groups. It is possible that the lack of significance is due to relative lower power in the child sample—only 35.96% ($n = 41$ of 114) indicated that the groups liked one another, which may have meant the model was underpowered to detect the three-way interaction.

Figure 2

Children's Expectations of Intergroup Empathy in Studies 1 and 2



Note. The bar graph exhibits mean values, 95% confidence intervals, and a dashed line representing chance (= 2.50). Individual data points represent participant responses, jittered to better show response distribution. See the online article for the color version of this figure.

Adults and Children Comparisons

Following our preregistered analysis plan, we compared the findings for adults and children using pairwise comparison *t*-tests. Adults and children expected people to feel empathy for the ingroup. Indeed, adults' and children's responses suggest they expect people to feel equally good about ingroup fortunes (adults: $M = 4.01$, 95% CI [3.84, 4.18]; children: $M = 3.84$, 95% CI [3.58, 4.10]; $t(188.52) = 1.07$, 95% CI [–0.14, 0.48], $p = .286$). However, children expected people to feel even worse about ingroup misfortunes ($M = 0.77$, 95% CI [0.57, 0.97]) than adults ($M = 1.05$, 95% CI [0.90, 1.20]; $t(202.68) = -2.18$, 95% CI [−0.53, −0.03], $p = .030$). On the other hand, adults generally expected less empathy for the outgroup than children. That is, adult participants ($M = 1.53$, 95% CI [1.34, 1.72]), expected others to feel worse about outgroup fortunes than did children ($M = 2.09$, 95% CI [1.77, 2.40]; $t(182.75) = -3.02$, 95% CI [−0.92, −0.19], $p = .003$). Similarly, adult participants expected that other people would feel better about outgroup misfortunes ($M = 2.62$, 95% CI [2.38, 2.86]) compared to children ($M = 1.77$, 95% CI [1.50, 2.05]; $t(212.89) = 4.60$, 95% CI [0.48, 1.21], $p < .001$).

Discussion

Children and adults expected other people to experience intergroup empathic biases. Although there were strong expectations of empathy for others' ingroup, this did not always extend to the outgroup. Indeed, the expectation for Glückschmerz toward the outgroup was early developing: Children and adults expected people to feel bad about an outgroup fortune. Interestingly, expectations for outgroup misfortunes showed the biggest changes across development—whereas children expected others to experience empathy, adults overall were at chance, and the subset of adults who thought there was animosity between the groups actually anticipated people to feel Schadenfreude toward the outgroup (i.e., expecting someone to feel good about the outgroup's misfortune). Although the inferred relationship between the groups impacted adults' responses, the data were correlational in nature. Therefore, in Study 2, we explicitly manipulated the relationship between the groups. We predicted that expectations of intergroup empathic biases would be exacerbated when there was overt animosity between the groups and reduced when the groups were fond of one another.

Study 2

Method

Transparency and Openness

Like Study 1, the sample size, data exclusions, manipulations, and measures for Study 2 are reported here. Study 2 was preregistered as well. All materials, including the preregistration, data, analysis code, and research materials, can be found on OSF (Tompkins et al., 2023). Data were analyzed using R, version 4.1.1 (R Core Team, 2021) and visualized using package ggplot2, version 3.3.5 (Wickham, 2016).

Participants

Sample Size Determination. Although there were no age effects within the child sample of Study 1, adults and children did respond differently, particularly in terms of expectations about outgroup-directed empathy. Therefore, we decided to slightly expand the age range of children tested to include children between 3- and 12-years-old. We attempted to collect a relatively equal sample of preschoolers (3–5 years), younger children (6–8 years), and older children (9–12 years). As in Study 1, we decided that the minimum sample size per age bin would be $n = 30$. Given the two-condition between-participants design of the study (Like vs. Dislike), testing 30 participants per age group per condition meant that the minimum sample size would be 180 children. Given the variability in the number of participants tested per day at our partner locations, we planned to collect data until we hit this minimum sample, and to analyze all usable data collected through the end of that day. We also planned to test 180 adults.

Adults. One hundred and sixty adults were included in the final sample ($M = 40.02$ years, $SD = 12.78$ years; range = 24–75 years; 71 men, 83 women, six nonbinary, gender-diverse, or gender-fluid people) online via Prolific (www.prolific.co) in June 2022 and were compensated $0.80. In line with our preregistered plan, we excluded an additional 20 adults who were tested but explicitly indicated inattention, and/or failed the manipulation checks or bot-check questions (for full details, see Tompkins et al., 2023). The adult sample reported the following racial/ethnic backgrounds: 6.25% Asian or Asian American, 6.88% Black or African American, 3.75% Hispanic or Latine, 0.63% Native American or Alaska Native, 0.63% Native Hawaiian or Pacific Islander, 78.13% White, and 3.75% two or more races/ethnicities.

Children. Two hundred and forty-two children were included in the final sample ($M = 7.58$ years, $SD = 2.46$ years; range = 3.14–12.96 years; 95 boys, 146 girls, one not reported). Participants were recruited and tested at a local zoo ($n = 96$) or science museum ($n = 146$) between July 2022 and August 2022. The sample was larger than 180 because we tested children through the day for which we had at least 30 children per condition per age bin. Because the rate of older children participating was slower, this meant that we ended up with a larger sample overall. An additional 39 children were tested but excluded due to not completing the study, a caregiver providing non-English translation, failing scale training, failing a manipulation check, a caregiver not completing a demographics form, experimenter error, report of atypical development, and/or having already participated in the study (for full details, see Tompkins et al., 2023). Twenty-eight children were corrected during scale training and answered correctly on a second try, and were therefore not excluded from the study. Exclusions followed our preregistered criteria and IRB protocol. Children were given a sticker or eraser for participating. Based on caregiver self-report, the racial/ethnic background of the sample was 8.7% Asian or Asian American, 2.1% Black or African American, 18.2% Hispanic or Latine, 0.4% Native American or Alaska Native, 1.2% Native Hawaiian or Pacific Islander, 50% White, 2.1% another race or ethnicity, 16.9% two or more races/ethnicities, and 0.4% not reported.

All study procedures, including a waiver of consent for child participants, were approved by the IRB at the University of California, Santa Barbara (Protocol Nos. 1-22-0089 and 9-21-0756).

Procedure

The present study's procedure was similar to Study 1, with one key difference. Participants were randomly assigned to one of two between-participants conditions: Like (110 children and 81 adults), or Dislike (132 children and 79 adults). After being introduced to the two groups, participants in the Like condition were told that the

groups really liked one another ("The Blues and the Yellows really like each other. They like to share, they like spending time together, they always help one another, and they always say nice things about each other!"), whereas participants in the Dislike condition were told that the groups really did not like one another ("The Blues and the Yellows really do not like each other. They do not like to share, they do not like spending time together, they never help one another, and they always say really mean things about each other!"; for full scripts, see Tompkins et al., 2023).

All participants completed two manipulation checks. First, immediately after hearing about the relationship between the groups, participants were asked, "Do the Blues and the Yellows like each other? Yes, or no?"). Then, after answering the four dependent variables (about ingroup and outgroup fortunes and misfortunes), participants were again asked, "Can you remind me, do the Blues and the Yellows like each other? Yes, or no?" As in our preregistered plan, any participants who failed to correctly answer one or both questions were excluded from the study (for details, see Tompkins et al., 2023, "Outliers and Exclusions" section in the Study 2 preregistration).

Results

Our primary research question regarded whether expectations of intergroup empathic biases changed based on explicit information regarding group fondness or animosity. If intergroup empathic biases are sensitive to animosity, then participants in the Dislike condition could be more likely than those in the Like condition to anticipate that people would feel bad when an outgroup member experiences a fortune (Glückschmerz) and good when an outgroup member experiences a misfortune (Schadenfreude). To test this question, we ran linear regression models separately for adults and children with Feelings–Response (0 = "Very Bad" to 5 = "Very Good") as the outcome variable, and Group (ingroup vs. outgroup), Valence (fortune vs. misfortune), Condition (Like vs. Dislike), and their interactions as predictor variables. We also included a random effect of participant to account for the repeated measures nature of the design. As in Study 1, the model using children's data also included Age (continuous in years, e.g., 4.58) and its interactions to examine if intergroup empathic bias expectations change across development. If participants account for group fondness versus animosity when reasoning about intergroup empathic bias, then we would predict a significant interaction between Group, Valence, and Condition.

Adults

All effects and interactions in the adult model were significant ($ps < .001$; see Table S3 in the online supplemental materials). In particular, as hypothesized, there was a significant three-way interaction between Group, Valence, and Condition ($\beta = -5.78$, $SE = 0.27$, $t(632.00) = -21.64$, partial-$R^2 = .43$, $p < .001$), indicating that expectations about intergroup empathy varied based on the relationship between the groups. To better understand whether intergroup empathic biases are enhanced in the Dislike condition and dampened in the Like condition, we investigated each condition separately.

Dislike Condition. We predicted the strongest effects of intergroup empathic bias in the Dislike condition. To ask whether expectations are heightened in the Dislike condition, we ran a linear regression model with Feelings–Response as the outcome variable and Group, Valence, and their interaction as predictors. Our model revealed main effects of Group ($\beta = -3.84$, $SE = 0.11$, $t(312.00) = -33.72$, partial-$R^2 = .03$, $p < .001$) and Valence ($\beta = -3.86$, $SE = 0.11$, $t(312.00) = -33.94$, partial-$R^2 = .03$, $p < .001$), as well as the critical interaction between the two variables ($\beta = 7.22$, $SE = 0.16$, $t(312.00) = 44.85$, partial-$R^2 = .87$, $p < .001$; see Figure 1).

Following up on this interaction, we found that participants expected ingroup fortunes to feel better than outgroup fortunes ($t(78.00) = 29.98$, 95% CI [3.58, 4.09], $p < .001$), and ingroup misfortunes to feel worse than outgroup misfortunes ($t(78.00) = -22.54$, 95% CI [−3.68, −3.08], $p < .001$). We next ran Bonferroni corrected t-tests comparing each of the four dependent variables to chance (2.50; corrected $\alpha = .0125$). Unsurprisingly, adults expected people to feel empathy for the ingroup: They anticipated that a character would feel good when an ingroup member experienced a fortune ($M = 4.57$, 95% CI [4.44, 4.70]; $t(78.00) = 32.26$, $p < .001$), and bad when an ingroup member experienced a misfortune ($M = 0.71$, 95% CI [0.56, 0.85]; $t(78.00) = -24.74$, $p < .001$). Strikingly, adults anticipated both Glückschmerz and Schadenfreude toward the outgroup. Indeed, they expected someone to feel bad when an outgroup member experienced a fortune ($M = 0.73$, 95% CI [0.57, 0.90]; $t(78.00) = -21.54$, $p < .001$), and good when an outgroup member experienced a misfortune ($M = 4.09$, 95% CI [3.89, 4.29]; $t(78.00) = 16.05$, $p < .001$).

Like Condition. We predicted reduced effects of intergroup empathic bias in the Like condition. To test this, we ran the same model with Feelings–Response as the outcome variable and Group, Valence, and their interaction as predictor variables. Interestingly, this model continued to reveal main effects of Group ($\beta = -1.01$, $SE = 0.15$, $t(320.00) = -6.75$, partial-$R^2 = .02$, $p < .001$), Valence ($\beta = -2.31$, $SE = 0.15$, $t(320.00) = -15.38$, partial-$R^2 = .41$, $p < .001$), and their interaction ($\beta = 1.43$, $SE = 0.21$, $t(320.00) = 6.75$, partial-$R^2 = .13$, $p < .001$). Therefore, even when groups liked one another, adults anticipated intergroup empathic biases.

Replicating previous findings, adults continued to expect people to feel better about an ingroup fortune than an outgroup fortune ($t(80.00) = 6.42$, 95% CI [0.70, 1.33], $p < .001$), and worse about an ingroup misfortune than an outgroup misfortune ($t(80.00) = -2.99$, 95% CI [−0.70, −0.14], $p = .004$). Bonferroni corrected t-tests comparing each of the four dependent variables to chance (2.50; corrected $\alpha = .0125$) revealed that adults expected people to show empathy for the ingroup: They expected someone to feel good about an ingroup member's fortune ($M = 3.68$, 95% CI [3.49, 3.86]; $t(80.00) = 12.72$, $p < .001$), and bad about an ingroup member's misfortune ($M = 1.37$, 95% CI [1.18, 1.56]; $t(80.00) = -12.06$, $p < .001$). However, unlike adults in the Dislike condition, adults in the Like condition did not demonstrate expectations of outgroup Glückschmerz or Schadenfreude. In particular, they were at chance when asked how someone would feel about an outgroup member's fortune ($M = 2.67$, 95% CI [2.42, 2.91]; $t(80.00) = 1.34$, $p = .184$), and they expected someone to feel empathy (i.e., feel bad) following an outgroup member's misfortune ($M = 1.79$, 95% CI [1.57, 2.01]; $t(80.00) = -6.41$, $p < .001$).

Children

The initial child model, including all factors, yielded a significant interaction with Age (continuous; see Table S4 in the online

supplemental materials), suggesting the patterns of responses varied across development. Therefore, following our preregistered analysis plan which was designed to investigate developmental trends more specifically, we present each of our planned analyses separated by the predetermined age bins (3–5-year-olds = "Younger", 6–8-year-olds = "Middle", 9–12-year-olds = "Older").

Within each age bin, we ran linear regression models with Feelings–Response (0 = "Very Bad" to 5 = "Very Good") as the outcome variable, and Group (ingroup vs. outgroup), Valence (fortune vs. misfortune), Condition (Like vs. Dislike), and their interactions as predictor variables. For all age groups, the interaction between Group, Valence, and Condition was significant ($ps < .010$), indicating that expectations about intergroup empathy varied based on the relationship between the groups (see Table S3 in the online supplemental materials). Thus, we followed up by investigating the two conditions separately.

Dislike Condition. As with adults, we predicted the strongest effects of intergroup empathic bias in the Dislike condition. To ask whether expectations are heightened in the Dislike condition, we ran a linear regression model with Feelings–Response as the outcome variable and Group, Valence, and their interaction as predictors for each age bin. All models revealed main effects of Group and Valence, qualified by the predicted interaction between the two variables ($ps < .001$; Table S5 in the online supplemental materials). Indeed, follow-up tests revealed that children in all age groups expected ingroup fortunes to feel better than outgroup fortunes and ingroup misfortunes to feel worse than outgroup misfortunes ($ps < .010$; Table S6 in the online supplemental materials), suggesting expectations of intergroup empathic biases emerge by the youngest age bin in the sample.

We then ran Bonferroni corrected *t*-tests comparing each of the four dependent variables to chance (2.50; corrected $\alpha = .0125$). Empathy for the ingroup was seen at all ages: Children expected characters to feel good about an ingroup member's fortune and bad about an ingroup member's misfortune ($ps < .001$; Table S7 in the online supplemental materials). Expectations of Glückschmerz toward the outgroup were also seen across development—children in all age bins expected a character to feel bad about an outgroup member's fortune ($ps < .010$; Table S7 in the online supplemental materials). On the other hand, expectations of Schadenfreude toward the outgroup emerged with age. Only the oldest children, 9–12-year-olds, expected a character to feel good about an outgroup member's misfortune ($M = 3.26$, 95% CI [2.76, 3.75]; $t(34.00) = 3.11$, $p = .004$; Table S7 in the online supplemental materials). Expectations of Schadenfreude toward the outgroup continued to develop with age. That is, adults expected people to feel better about outgroup misfortunes ($M = 4.09$, 95% CI [3.89, 4.29]) than did 9–12-year-olds ($M = 3.26$, 95% CI [2.76, 3.75]; $t(45.60) = 3.16$, 95% CI [0.30, 1.36]; $p = .003$; Figure 3).

Like Condition. As with adults, we were interested in whether expectations of intergroup empathic biases were reduced or ameliorated in the Like condition. Thus, we ran a linear regression model with Feelings–Response as the outcome variable and Group, Valence, and their interaction as predictors for each age bin. The patterns were different for Younger children compared to Middle and Older children. That is, the predicted interaction between Group and Valence was present for 6–8-year-olds and 9–12-year-olds, but not for 3–5-year-olds (Table S5 in the online supplemental materials). Therefore, we first discuss the patterns seen for Younger children, and then the patterns seen for Middle and Older children.

Younger children's (3–5-year-olds') responses were only impacted by Valence ($\beta = -2.47$, $SE = 0.43$, $t(124.00) = -5.69$, partial-$R^2 = .26$, $p < .001$): They thought that people would feel better when others experienced fortunes compared to misfortunes. Indeed, comparisons to chance (2.50) for each valence (collapsed across Group; corrected $\alpha = .025$) revealed that Younger children in the Like condition expected people to feel good when someone experienced a fortune ($M = 3.25$, 95% CI [2.80, 3.70]; $t(63.00) = 3.32$, $p = .002$) and bad when someone experienced a misfortune ($M = 1.25$, 95% CI [0.83, 1.67]; $t(63.00) = -5.98$, $p < .001$).

Children in the Middle (6–8 years) and Older (9–12 years) age bins responded similarly to each other. These children expected ingroup fortunes to feel better than outgroup fortunes and ingroup misfortunes to feel worse than outgroup misfortunes ($ps < .050$; Table S6 in the online supplemental materials). Bonferroni corrected *t*-tests comparing each of the four dependent variables to chance (2.50; corrected $\alpha = .0125$), again revealed that expectations of empathy for the ingroup: 6–12-year-olds expected characters to feel good about an ingroup member's fortune and bad about an ingroup member's misfortune ($ps < .001$; Table S7 in the online supplemental materials). However, unlike in the Dislike condition, there were no expectations of outgroup Glückschmerz: Middle and Older children were at chance when responding about how someone would feel about an outgroup member's fortune ($ps > .231$; Table S7 in the online supplemental materials). And, they even displayed expectations of outgroup empathy—they predicted that a character would feel bad about an outgroup member's misfortune ($ps < .001$; Table S7 in the online supplemental materials).

Discussion

Information about the relationship between the groups impacted expectations about empathy. In fact, expectations of Glückschmerz and Schadenfreude toward the outgroups emerged only when groups disliked one another. Indeed, when there was animosity between the groups, outgroup Glückschmerz was anticipated even early in life, but expectations of outgroup Schadenfreude only presented with 9–12-year-olds and adults. Alternatively, when the groups liked one another, the youngest children (3–5-year-olds) did not demonstrate any expectations of intergroup empathic biases, and participants of all ages expected others to experience empathy for an outgroup member's misfortune. Therefore, the relationship between the groups is highly predictive of the likelihood of anticipated empathic biases.

Comparing Studies 1 and 2

Results

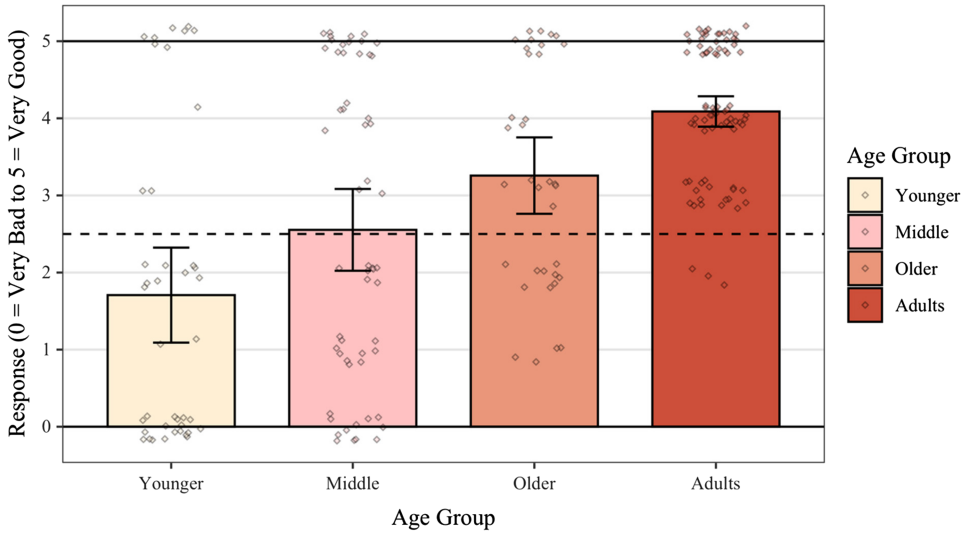
To ask whether expectations of intergroup empathy are increased when there is animosity between the groups and decreased when the groups are fond of one another, we compared empathic biases across Studies 1 and 2. To do so, we ran the same models as in Study 2 (separately for children and adults) but with Study 1 data as an additional condition. Study 1 ("Baseline" condition) was set as the reference condition in the data set.

Adults

The model revealed the predicted interactions between Group, Valence, and Condition, $F(2) = 209.57$, partial-$R^2 = .29$, $p < .001$.

Figure 3

Development of Expectations of Schadenfreude Against the Outgroup in Cases of Animosity



Note. The bar graph exhibits mean values of participant responses to outgroup misfortunes in the Study 2 Dislike condition, 95% confidence intervals, and a dashed line representing chance (= 2.50). Individual data points represent participant responses (3-5-year-olds or "Younger": n = 41; 6-8-year-olds or "Middle": n = 56; 9-12-year-olds or "Older": n = 35; Adults: n = 79), jittered to better show response distribution. See the online article for the color version of this figure.

In particular, the interaction comparing the Like condition to the Baseline condition ($\beta = -2.62$, $SE = 0.27$, $t(1036.00) = -9.83$, $p < .001$) indicated that the interaction between Group and Valence was weaker in the Like condition than the Baseline condition, and the interaction comparing the Dislike condition to the Baseline condition ($\beta = 3.17$, $SE = 0.27$, $t(1036.00) = 11.81$, $p < .001$) indicated that the interaction between Group and Valence was stronger in the Dislike condition than in the Baseline condition (see Figure 1; see Table S8 in the online supplemental materials for full output).

Children

As with adults, the model revealed the predicted interactions between Group, Valence, and Condition, $F(2) = 38.66$, partial-$R^2 = .07$, $p < .001$. In particular, the interaction comparing the Like condition to the Baseline condition ($\beta = -1.34$, $SE = 0.38$, $t(1059.00) = -3.52$, $p < .001$) indicated that the interaction between Group and Valence was weaker in the Like condition than in the Baseline condition, and the interaction comparing the Dislike condition to the Baseline condition ($\beta = 1.85$, $SE = 0.36$, $t(1059.00) = 5.11$, $p < .001$) indicated that the interaction between Group and Valence was *stronger* in the Dislike condition than in the Baseline condition (see Figure 3; see Table S8 in the online supplemental materials for full output).

Discussion

These analyses indicate that expectations of intergroup empathic biases are malleable based on intergroup relationships. Compared to cases in which no information is provided about the groups' relationship, children and adults were more likely to infer empathic biases when there was intergroup animosity, and less likely to infer such biases when groups were fond of one another. Interestingly, responses to an outgroup misfortune were the most variable. Whereas participants (by ages 9–12-years) expected others to experience outgroup Schadenfreude when there was animosity between groups, participants (across all ages) expected others to experience empathy for the outgroup when the groups were fond of each other.

General Discussion

Across two studies, we provide evidence that people expect intergroup empathic biases: Both children and adults predicted that others would feel more empathy for ingroup members than for outgroup members. In addition to highlighting that people have general expectations that others will feel more empathy toward their ingroups, our third-party methods provide insight on cognitive processes relevant to intergroup empathic biases. For example, the fact that expectations of intergroup empathic biases arise in third-party situations featuring novel groups suggests that people do not need to favor a particular group or have a personal stake in the outcome in order to predict empathic biases. Indeed, the third-party design controlled for emotions that could potentially bias a person's own experience of empathy (e.g., jealousy, envy, and shame; see the following for reviews: Fiske, 2010; R. H. Smith et al., 2009; Tangney & Salovey, 1999). Thus, while it is certainly possible that a person's own level of empathy might vary based on their feelings of group loyalty or jealousy, such emotions are not required in order to expect a link between group membership and empathic responses.

Therefore, we suggest that empathic biases may exist as part of a constellation of intergroup biases and expectations which emerge

whenever groups are present (see Dunham, 2018). For example, research on minimal groups has shown that people evaluate their ingroup more positively (e.g., Dunham, 2013; Dunham et al., 2011), share more with members of their ingroup (e.g., Tajfel, 1970), and expect members of their ingroup to do positive things (e.g., Howard & Rothbart, 1980). Indeed, expectations that group membership will bias social interactions emerge early in life: Infants expect members of a group to be similar to one another (e.g., Liberman et al., 2016; Powell & Spelke, 2013), interact positively with one another (e.g., Bian & Baillargeon, 2022; Liberman et al., 2014), and favor their own group when distributing resources (Bian et al., 2018; for reviews, see Dunham, 2018; Liberman et al., 2017; Rhodes, 2013). 3- to 9-year-olds even hold intuitive theories that people within a social group are obligated to avoid harming one another (e.g., Rhodes & Chalik, 2013), and 3–10-year-olds expect that harmful intergroup interactions are likely caused by outgroup members (Rhodes, 2012). Therefore, greater expectations of ingroup empathy (e.g., expecting someone to feel worse about an ingroup misfortune than an outgroup misfortune) may be another such intergroup bias and expectation that emerges when people are categorized into social groups.

Such expectations may stem in-part from early life experiences of intergroup phenomena (e.g., playing on a particular sports team). For example, children might expect others to feel more empathy for ingroup members because they can recall times at which they personally felt more empathy for their ingroup. The present work cannot elucidate whether children need to have had previous experiences of intergroup empathy bias in order to form third-party expectations, but we demonstrate that such expectations arise even when people have no current stake in the outcome. Our work aligns with recent studies finding early emerging third-party expectations that people will feel more empathy for their friends (Smith-Flores et al., in press) and that group membership guides social actions and interactions (e.g., breaking or conforming to rules; Liberman et al., 2018; helping or harming; Rhodes, 2012; Rhodes & Chalik, 2013), Thus, humans may be naturally predisposed to track social allegiances in order to capably navigate the social world, including how those allegiances impact empathic responding (see Smith-Flores & Powell, 2023). Future work can investigate whether expectations of intergroup empathic biases are seen in infancy, which could suggest that such expectations are part of an innate social core (see Spelke & Kinzler, 2007; Spelke, 2023).

Our work revealed both developmental continuity and developmental change in expectations of intergroup biases. In terms of developmental continuity, by the preschool years (between ages 3 and 5 years) participants consistently anticipated that people would experience empathy for their ingroup. That is, participants of all ages expected others to feel good about ingroup fortunes and bad about ingroup misfortunes. In each age group, participants also expected people to feel more empathy for the ingroup than for the outgroup. Namely, regardless of participants' expectations of whether people would feel empathy for the outgroup (described in more detail below), participants at all ages expected people to feel greater empathy for ingroup members. Another consistent pattern across ages was that expectations of empathic biases were exacerbated when groups shared an aversive relationship and reduced when groups were fond of one another. These findings align with the literature on first-party experiences of intergroup empathy bias, which also find that altering the relationship between groups impacts the level of empathy people have for the outgroup (e.g., Cikara et al., 2014). In general, these patterns suggest that although people may expect there to be more empathy across group lines when groups have a positive relationship, expectations of empathic bias emerge reliably and early in development.

Strikingly, our findings suggest that expectations of feeling bad about an outgroup fortune (Glückschmerz) and feeling good about an outgroup misfortune (Schadenfreude) have distinct patterns of development. Indeed, expectations of Glückschmerz at an outgroup member's fortune emerged early in development (by ages 3–5 years), regardless of whether the relationship between the group was ambiguous (Study 1) or negative (Dislike condition of Study 2), and remained relatively stable across the ages tested. On the other hand, the largest developmental differences seen in these two studies were for expectations of outgroup Schadenfreude (i.e., expectations that outgroup misfortunes will feel good). Indeed, expectations that people would feel good about outgroup misfortunes only emerged when there was intergroup animosity and only emerged for older participants. When the groups disliked one another and children were asked to predict how someone would feel about an outgroup member's misfortune, the youngest children (3–5-year-olds) trended toward expecting empathy, middle children (6–8-year-olds) were at chance in their expectations, but older children (9–12-year-olds) and adults anticipated outgroup Schadenfreude (that someone would feel good about an outgroup member's misfortune).

Therefore, although expectations of empathy for the ingroup were robust and early emerging, in most cases people did not predict Schadenfreude toward the outgroup. One possible explanation is that the disparate patterns of development of Glückschmerz and Schadenfreude may be related to the separable components of ingroup love and outgroup hate (e.g., Brewer, 1999). Indeed, in first-party studies, ingroup favoritism arises earlier in development (by age 6) than outgroup derogation (by age 8; see Buttelmann & Böhm, 2014), suggesting intergroup biases may be primarily motivated by positivity within a group. It is possible that a similar pattern explains these differences in third-party expectations of empathy: Children's biases may be initially and primarily driven by expecting people to want good things for their group without necessarily wanting bad things to befall other groups. In this case, early in childhood, expectations about people's feelings with respect to fortunes (who receives an item) may be differentiated based on group membership whereas expectations about people's feelings with respect to misfortunes (who loses out) may be less sensitive to group membership. In other words, expectations of Glückschmerz may emerge from early developing concepts of ingroup favoritism, whereas expectations of Schadenfreude may only emerge from later developing concepts of outgroup derogation.

Indeed, the low levels of outgroup Schadenfreude align with other research on the development of this complicated emotion. In particular, although 4–8-year-olds report feeling better when a character with malevolent (compared to benevolent) intentions experiences a misfortune (Schulz et al., 2013), children did not actually report feeling good in these contexts. That is, children's ratings of Schadenfreude were quite low (an average of ~2.00 on a scale ranging from 0 to 8, even in cases for which Schadenfreude was the highest). Therefore, it is possible that Schadenfreude—both in expectations and experience—is relatively rare and context dependent. Furthermore, people may not expect others to (or they themselves) experience Schadenfreude unless the person experiencing the misfortune belongs to a group with a perceived antagonistic relationship or has distinguished malevolent goals.

Indeed, adults and children (3–5-year-olds) tend to condemn behaviors indicative of Schadenfreude (e.g., Gromet et al., 2016; Paulus et al., 2020), suggesting Schadenfreude is not a default. Future research should continue to investigate the developmental origins and contexts that result in the expected emergence and experiences of Schadenfreude (for discussion, see Smith-Flores & Powell, 2023).

Constraints on Generality

Child participants were tested in the United States and primarily at the lab's offsite testing locations, and adult participants were from the United States and tested online via Prolific (www.prolific.co). It is possible that the results would not generalize to other groups of participants. Therefore, future work should take a cross-cultural perspective in order to more fully understand the development of expectations about intergroup empathic biases. For example, recent work has demonstrated that there are cultural differences in the extent to which social obligations vary across relationships: Whereas children in all cultures expect others to be obligated to their children, older children in Uganda and India were more likely to expect people to be obligated to a stranger than older children in the United States and Japan (Marshall et al., 2022). Therefore, it is possible that cultures would also vary in the extent to which they see group membership as relevant to empathy. Some cultural values to consider in future research are interdependence (e.g., Iyengar et al., 1999; Markus & Kitayama, 1991), and resource scarcity (e.g., Bowman et al., 2009). For example, it is possible that people from cultures that experience higher levels of resource scarcity will have stronger expectations about people's feelings for others' misfortunes.

The present findings are limited to a scenario in which one group received a lollipop and the other group did not receive a lollipop. This situation is relatively low stakes (the lollipop is not essential to human-survival) and the fates of the teams are linked (one person winning inherently means the other person loses). Both factors may impact expectations about intergroup empathy. To test whether groups' dependent or independent fates influence predictions of intergroup empathy, future research could test scenarios in which one group's fortune or misfortune does or does not impact another group. In recent work testing empathy predictions in interpersonal social relationships (i.e., friendships), Smith-Flores et al. (in press) included scenarios in which an affiliate of a protagonist experienced a misfortune that hinged on another character's fortune (e.g., the protagonist's friend lost a race to another character), as well as scenarios in which the affiliate's misfortune was independent (e.g., the protagonist's friend dropped a cookie on the floor). 4- to 7-year-olds responded similarly to these dependent and independent low-stakes scenarios of interpersonal empathy (Smith-Flores et al., in press), suggesting that children and adults may continue to expect intergroup empathic biases for scenarios in which the groups' fates are also unlinked.

Future research should also vary the stakes in order to ask whether group membership matters less when the stakes are high and harms are large. Indeed, adults who read about someone experiencing a serious harm judged characters who felt Schadenfreude (and even characters who felt indifferent) as immoral (Gromet et al., 2016). Children also differentiate between cases that are high and low stakes: Whereas 6–8-year-olds allocate luxury resources (e.g., things that people like to have) according to merit (i.e., who worked harder), they allocate necessary resources (e.g., things that people require to live) equally, even when one person worked harder (Rizzo et al., 2016). Although neither of these studies manipulated group membership directly, they do suggest that people could overcome outgroup Schadenfreude when the harm inflicted on an individual is grave. Indeed, a different study finds that whereas adults in the United States and China expect people to favor their own group when the stakes are low, they expect people to share equally when the stakes are high (F. Yang et al., 2023). Therefore, in cases with very high stakes, or cases involving resources that are needed by everyone (e.g., water), expectations of intergroup empathy biases may be reduced.

Future Directions

The present research investigated participants' responses to novel groups. One benefit of this focus is that the research is highly controlled—participants are not members of either group and have no preconceived expectations about the groups. However, it is quite possible that people would reason differently about intergroup empathy, even in third-party situations, if the vignettes involved real-world groups (e.g., race, language, and nationality; for an example of research comparing familiar and novel groups, see X. Yang et al., 2022). Comparing participants' expectations about empathy involving different types of groups will allow researchers to discover whether (a) there are similar expectations about empathic biases in real-world contexts, and (b) participants' own identities play a role in their expectations, particularly for groups with which they identify themselves. For example, positivity toward ingroups sometimes varies based on a participant's demographic characteristics: White people from the United States tend to show higher levels of own-group racial biases than people from minoritized groups (e.g., Newheiser & Olson, 2012; Nosek et al., 2002). Therefore, it would be interesting to examine whether participants' social identities (i.e., beyond sports' team and novel group membership; e.g., Cikara et al., 2014; Cikara, Bruneau, & Saxe, 2011; see Cikara & Fiske, 2013) influence both their own experiences as well as their expectations about intergroup empathy. For example, are expectations of intergroup empathy bias larger when people are reasoning about groups with which they identify themselves compared to novel groups? Furthermore, positive intergroup contact can decrease some negative interethnic attitudes (e.g., Burrows et al., 2022; for a review, see Pettigrew & Tropp, 2006), highlighting the importance of testing whether expectations of intergroup empathic biases also vary based on intergroup contact (e.g., Do people who have more diverse interpersonal networks or who attend more diverse schools predict more outgroup empathy?).

Another essential future direction is to compare studies of first-party experiences of intergroup empathic biases and those of third-party expectations of intergroup empathic biases. Research on personal experiences of intergroup empathic biases documents nefarious consequences, such as increased willingness to aggress against the outgroup (see Chang et al., 2016; Cikara & Fiske, 2013; Cikara, Bruneau, & Saxe, 2011). Here, we suggest that intergroup empathic biases may emerge even without envy and personal stakes. That is, perhaps intergroup empathy biases are based on expectations that group members should exhibit certain types of social feelings and behavior. Future work, however, should vary participants' levels of envy and personal stakes in order to fully understand their roles.

Lastly, to our knowledge, only one study investigates first-party experiences of intergroup empathic biases in childhood (Masten et al., 2010). This study finds that intergroup empathic bias emerges for 5–11-year-olds who are high in anxiety, highly identified with

their group, and placed in a stressful situation. Further work is therefore necessary in order to uncover whether children experience more empathy for their ingroup earlier in development (e.g., by ages 3–5 years, the age range by which children expect empathic biases to vary along group lines), as well as whether empathic biases emerge in less stressful situations. Such work could also shed light on whether experiences of outgroup Glückschmerz (sadness for an outgroup member's fortune) emerge earlier in development than experiences of outgroup Schadenfreude (happiness for an outgroup member's misfortune). Furthermore, research in this vein could set the stage for understanding how empathic biases influence social behavior, and whether these biases are responsible for downstream societal issues like ingroup favoritism and hostile intergroup interactions and relationships.

Conclusion

Overall, we find that expectations of intergroup empathic biases emerge early in life and are especially strong when there is intergroup animosity. By the preschool years, people anticipate intergroup empathic biases—even in the absence of their own self-interest—suggesting that expecting less empathy for the outgroup may arise as one of a suite of expected biases in intergroup contexts. Future work should continue to investigate the nature of intergroup empathic biases, their predicted influence on social behavior, and how biases that result in harm can be mitigated.

References

Aron, A., & McLaughlin-Volpe, T. (2001). Including others in the self: Extensions to own and partner's group memberships. In C. Sedikides & M. B. Brewer (Eds.), *Individual self, relational self, collective self* (pp. 89–108). Psychology Press.

Batson, C. D. (2009). These things called empathy: Eight related but distinct phenomena. In J. Decety & W. J. Ickes (Eds.), *The social neuroscience of empathy* (pp. 3–15). MIT Press. https://doi.org/10.7551/mitpress/9780262012973.003.0002

Bers, S. A., & Rodin, J. (1984). Social-comparison jealousy: A developmental and motivational study. *Journal of Personality and Social Psychology*, *47*(4), 766–779. https://doi.org/10.1037/0022-3514.47.4.766

Bian, L., & Baillargeon, R. (2022). When are similar individuals a group? Early reasoning about similarity and in-group support. *Psychological Science*, *33*(5), 752–764. https://doi.org/10.1177/09567976211055185

Bian, L., Sloane, S., & Baillargeon, R. (2018). Infants expect ingroup support to override fairness when resources are limited. *Proceedings of the National Academy of Sciences of the United States of America*, *115*(11), 2705–2710. https://doi.org/10.1073/pnas.1719445115

Blake, P. R., McAuliffe, K., Corbit, J., Callaghan, T. C., Barry, O., Bowie, A., Kleutsch, L., Kramer, K. L., Ross, E., Vongsachang, H., Wrangham, R., & Warneken, F. (2015). The ontogeny of fairness in seven societies. *Nature*, *528*(7581), 258–261. https://doi.org/10.1038/nature15703

Bloom, P. (2016). *Against empathy: The case for rational compassion*. Random House.

Bloom, P. (2017). Empathy and its discontents. *Trends in Cognitive Sciences*, *21*(1), 24–31. https://doi.org/10.1016/j.tics.2016.11.004

Bowman, N. A., Kitayama, S., & Nisbett, R. E. (2009). Social class differences in self, attribution, and attention: Socially expansive individualism of middle-class Americans. *Personality and Social Psychology Bulletin*, *35*(7), 880–893. https://doi.org/10.1177/0146167209334782

Brewer, M. B. (1999). The psychology of prejudice: Ingroup love and outgroup hate? *Journal of Social Issues*, *55*(3), 429–444. https://doi.org/10.1111/0022-4537.00126

Burrows, B., Tropp, L. R., Dehrone, T. A., & Čehajić-Clancy, S. (2022). How intergroup contact shapes intergroup attitudes and construals of relations between ethnic groups: Evidence from Bosnia and Herzegovina. *Peace and Conflict: Journal of Peace Psychology*, *28*(3), 372–383. https://doi.org/10.1037/pac0000629

Buttelmann, D., & Böhm, R. (2014). The ontogeny of the motivation that underlies in-group bias. *Psychological Science*, *25*(4), 921–927. https://doi.org/10.1177/0956797613516802

Chang, L. W., Krosch, A. R., & Cikara, M. (2016). Effects of intergroup threat on mind, brain, and behavior. *Current Opinion in Psychology*, *11*, 69–73. https://doi.org/10.1016/j.copsyc.2016.06.004

Cikara, M., Botvinick, M. M., & Fiske, S. T. (2011). Us versus them: Social identity shapes neural responses to intergroup competition and harm. *Psychological Science*, *22*(3), 306–313. https://doi.org/10.1177/0956797610397667

Cikara, M., Bruneau, E., & Saxe, R. (2011). Us and them: Intergroup failures of empathy. *Current Directions in Psychological Science*, *20*(3), 149–153. https://doi.org/10.1177/0963721411408713

Cikara, M., Bruneau, E., Van Bavel, J. J., & Saxe, R. (2014). Their pain gives us pleasure: How intergroup dynamics shape empathic failures and counter-empathic responses. *Journal of Experimental Social Psychology*, *55*, 110–125. https://doi.org/10.1016/j.jesp.2014.06.007

Cikara, M., & Fiske, S. T. (2012). Stereotypes and Schadenfreude: Affective and physiological markers of pleasure at outgroup misfortunes. *Social Psychological and Personality Science*, *3*(1), 63–71. https://doi.org/10.1177/1948550611409245

Cikara, M., & Fiske, S. T. (2013). Their pain, our pleasure: Stereotype content and Schadenfreude. *Annals of the New York Academy of Sciences*, *1299*(1), 52–59. https://doi.org/10.1111/nyas.12179

Dunham, Y. (2013). Balanced identity in the minimal groups paradigm. *PLoS ONE*, *8*(12), Article e84205. https://doi.org/10.1371/journal.pone.0084205

Dunham, Y. (2018). Mere membership. *Trends in Cognitive Sciences*, *22*(9), 780–793. https://doi.org/10.1016/j.tics.2018.06.004

Dunham, Y., Baron, A. S., & Carey, S. (2011). Consequences of "minimal" group affiliations in children. *Child Development*, *82*(3), 793–811. https://doi.org/10.1111/j.1467-8624.2011.01577.x

Fiske, S. T. (2010). Envy up, scorn down. How comparison divides us. *American Psychologist*, *65*(8), 698–706. https://doi.org/10.1037/0003-066X.65.8.698

Green, P., & MacLeod, C. J. (2016). simr: An R package for power analysis of generalised linear mixed models by simulation. *Methods in Ecology and Evolution*, *7*(4), 493–498. https://doi.org/10.1111/2041-210X.12504

Gromet, D. M., Goodwin, G. P., & Goodman, R. A. (2016). Pleasure from another's pain: The influence of a target's hedonic states on attributions of immorality and evil. *Personality and Social Psychology Bulletin*, *42*(8), 1077–1091. https://doi.org/10.1177/0146167216651408

Gutsell, J. N., & Inzlicht, M. (2012). Intergroup differences in the sharing of emotive states: Neural evidence of an empathy gap. *Social Cognitive and Affective Neuroscience*, *7*(5), 596–603. https://doi.org/10.1093/scan/nsr035

Hamlin, J. K., Mahajan, N., Liberman, Z., & Wynn, K. (2013). Not like me = bad: Infants prefer those who harm dissimilar others. *Psychological Science*, *24*(4), 589–594. https://doi.org/10.1177/0956797612457785

Howard, J. W., & Rothbart, M. (1980). Social categorization and memory for in-group and out-group behavior. *Journal of Personality and Social Psychology*, *38*(2), 301–310. https://doi.org/10.1037/0022-3514.38.2.301

Iyengar, S. S., Lepper, M. R., & Ross, L. (1999). Independence from whom? Interdependence with whom? Cultural perspectives on ingroups versus outgroups. In D. A. Prentice & D. T. Miller (Eds.), *Cultural divides: Understanding and overcoming group conflict* (pp. 273–301). Russell Sage Foundation.

Liberman, Z., Howard, L. H., Vasquez, N. M., & Woodward, A. L. (2018). Children's expectations about conventional and moral behaviors of ingroup and outgroup members. *Journal of Experimental Child Psychology*, *165*, 7–18. https://doi.org/10.1016/j.jecp.2017.03.003

Liberman, Z., Kinzler, K. D., & Woodward, A. L. (2014). Friends or foes: Infants use shared evaluations to infer others' social relationships. *Journal of Experimental Psychology: General*, *143*(3), 966–971. https://doi.org/10.1037/a0034481

Liberman, Z., Woodward, A. L., & Kinzler, K. D. (2017). The origins of social categorization. *Trends in Cognitive Sciences*, *21*(7), 556–568. https://doi.org/10.1016/j.tics.2017.04.004

Liberman, Z., & Shaw, A. (2020). Even his friend said he's bad: Children think personal alliances bias gossip. *Cognition*, *204*, Article 104376. https://doi.org/10.1016/j.cognition.2020.104376

Liberman, Z., Woodward, A. L., Sullivan, K. R., & Kinzler, K. D. (2016). Early emerging system for reasoning about the social nature of food. *Proceedings of the National Academy of Sciences of the United States of America*, *113*(34), 9480–9485. https://doi.org/10.1073/pnas.1605456113

Macrae, C. N., & Bodenhausen, G. V. (2001). Social cognition: Categorical person perception. *British Journal of Psychology*, *92*(1), 239–255. https://doi.org/10.1348/000712601162059

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*(2), 224–253. https://doi.org/10.1037/0033-295X.98.2.224

Marshall, J., Gollwitzer, A., Mermin-Bunnell, K., Shinomiya, M., Retelsdorf, J., & Bloom, P. (2022). How development and culture shape intuitions about prosocial obligations. *Journal of Experimental Psychology: General*, *151*(8), 1866–1882. https://doi.org/10.1037/xge0001136

Marshall, J., Wynn, K., & Bloom, P. (2020). Do children and adults take social relationship into account when evaluating other peoples' actions? *Child Development*, *91*(5), 1395–1835. https://doi.org/10.1111/cdev.13390

Masten, C. L., Gillen-O'Neel, C., & Brown, C. S. (2010). Children's intergroup empathic processing: The roles of novel ingroup identification, situational distress, and social anxiety. *Journal of Experimental Child Psychology*, *106*(2-3), 115–128. https://doi.org/10.1016/j.jecp.2010.01.002

Meegan, D. V. (2010). Zero-sum bias: Perceived competition despite unlimited resources. *Frontiers in Psychology*, *1*, Article 191. https://doi.org/10.3389/fpsyg.2010.00191

Newheiser, A., & Olson, K. R. (2012). White and Black American children's implicit intergroup bias. *Journal of Experimental Social Psychology*, *48*(1), 264–270. https://doi.org/10.1016/j.jesp.2011.08.011

Nosek, B. A., Banaji, M. R., & Greenwalk, A. G. (2002). Harvesting implicit group attitudes and beliefs from a demonstration web site. *Group Dynamics: Theory, Research, & Practice*, *6*(1), 101–115. https://doi.org/10.1037//1089-2699.6.1.101

Noyes, A., Gerdin, E., Rhodes, M., & Dunham, Y. (2023). A developmental investigation of group concepts in the context of social hierarchy: Can the powerful impose group membership? *Cognition*, *236*, Article 105446. https://doi.org/10.1016/j.cognition.2023.105446

Paulus, M., Wörle, M., & Christner, N. (2020). The emergence of human altruism: Preschool children develop a norm for empathy-based comforting. *Journal of Cognition and Development*, *21*(1), 104–124. https://doi.org/10.1080/15248372.2019.1693375

Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, *90*(5), 751–783. https://doi.org/10.1037/0022-3514.90.5.751

Powell, L. J., & Spelke, E. S. (2013). Preverbal infants expect members of social groups to act alike. *Proceedings of the National Academy of Sciences of the United States of America*, *110*(41), e3965–e3972. https://doi.org/10.1073/pnas.1304326110

Prinz, J. (2011). Against empathy. *The Southern Journal of Philosophy*, *49*(s1), 214–233. https://doi.org/10.1111/j.2041-6962.2011.00069.x

R Core Team. (2021). *A language and environment for statistical computing*. R Foundation for Statistical Computing.

Rhodes, M. (2012). Naïve theories of social groups. *Child Development*, *83*(6), 1900–1916. https://doi.org/10.1111/j.1467-8624.2012.01835.x

Rhodes, M. (2013). How two intuitive theories shape the development of social categorization. *Child Development Perspectives*, *7*(1), 12–16. https://doi.org/10.1111/cdep.12007

Rhodes, M., & Chalik, L. (2013). Social categories as markers of intrinsic interpersonal obligations. *Psychological Science*, *24*(6), 999–1006. https://doi.org/10.1177/0956797612466267

Rizzo, M. T., Elenbaas, L., Cooley, S., & Killen, M. (2016). Children's recognition of fairness and others' welfare in a resource allocation task: Age related changes. *Developmental Psychology*, *52*(8), 1307–1317. https://doi.org/10.1037/dev0000134

Roberts, S. O., Ho, A. K., & Gelman, S. A. (2021). Should individuals think like their group? A descriptive-to-prescriptive tendency toward group-based beliefs. *Child Development*, *92*(2), e201–e220. https://doi.org/10.1111/cdev.13448

Schmidt, M. F. H., Rakoczy, H., & Tomasello, M. (2012). Young children enforce social norms selectively depending on the violator's group affiliation. *Cognition*, *124*(3), 325–333. https://doi.org/10.1016/j.cognition.2012.06.004

Schulz, K., Rudolph, A., Tscharaktschiew, N., & Rudloph, U. (2013). Daniel has fallen into a muddy puddle—Schadenfreude or sympathy? *British Journal of Developmental Psychology*, *31*(4), 363–378. https://doi.org/10.1111/bjdp.12013

Shaw, A., Montinari, N., Piovesan, M., Olson, K. R., Gino, F., & Norton, M. I. (2014). Children develop a veil of fairness. *Journal of Experimental Psychology: General*, *143*(1), 363–375. https://doi.org/10.1037/a0031247

Shaw, A., & Olson, K. R. (2012). Children discard a resource to avoid inequality. *Journal of Experimental Psychology: General*, *141*(2), 382–395. https://doi.org/10.1037/a0025907

Shutts, K., & Kalish, C. W. (2021). Intuitive sociology. *Advances in Child Development and Behavior*, *61*, 335–374. https://doi.org/10.1016/bs.acdb.2021.05.004

Smith, C. E., Blake, P. R., & Harris, P. L. (2013). I should but I won't: Why young children endorse norms of fair sharing but do not follow them. *PLoS ONE*, *8*(8), Article e59510. https://doi.org/10.1371/annotation/4b9340db-455b-4e0d-86e5-b6783747111f

Smith, R. H., Powell, C. A. J., Combs, D. J. Y., & Schurtz, D. R. (2009). Exploring the when and why of Schadenfreude. *Social and Personality Psychology Compass*, *3*(4), 530–546. https://doi.org/10.1111/j.1751-9004.2009.00181.x

Smith-Flores, A. S., Bonamy, G. J., & Powell, L. J. (in press). Children's reasoning about empathy and social relationships. *Open Mind*. https://direct.mit.edu/opmi.

Smith-Flores, A. S., Herrera-Guevara, I. A., & Powell, L. (2023). Infants expect friends, but not rivals, to be happy for each other when they succeed. *Developmental Science*. Advance online publication. https://doi.org/10.1111/desc.13423

Smith-Flores, A. S., & Powell, L. J. (2023). Joint reasoning about social affiliation and emotion. *Nature Reviews Psychology*, *2*, 374–383. https://doi.org/10.1038/s44159-023-00181-0

Spelke, E. S. (2023). Précis of what babies know. *Behavioral and Brain Sciences*. Advance online publication. https://doi.org/10.1017/S0140525X23002443

Spelke, E. S., & Kinzler, K. D. (2007). Core knowledge. *Developmental Science*, *10*(1), 89–96. https://doi.org/10.1111/j.1467-7687.2007.00569.x

Switzer, J. L., San Juan, V., & Graham, S. A. (2020). Preschoolers use helpful and harmful interactions to predict social category membership. *Developmental Psychology*, *56*(6), 1057–1072. https://doi.org/10.1037/dev0000925

Tajfel, H. (1970). Experiments in intergroup discrimination. *Scientific American*, *223*(5), 96–102. https://doi.org/10.1038/scientificamerican1170-96

Tangney, J. P., & Salovey, P. (1999). Problematic social emotions: Shame, guilt, jealousy, and envy. In R. M. Kowalski & M. R. Leary (Eds.), *The social psychology of emotional and behavioral problems: Interfaces of social and clinical psychology* (pp. 167–195). American Psychological Association. https://doi.org/10.1037/10320-006

Tompkins, R., Vasquez, K., Gerdin, E., Dunham, Y., & Liberman, Z. (2023). *Expectations of intergroup empathy bias emerge by early childhood*. https://osf.io/f2cv3/

Warneken, F., & Tomasello, M. (2006). Altruistic helping in human infants and young chimpanzees. *Science*, *311*(5765), 1301–1303. https://doi.org/10.1126/science.1121448

Warneken, F., & Tomasello, M. (2009). The roots of human altruism. *British Journal of Psychology*, *100*(3), 455–471. https://doi.org/10.1348/000712608X379061

Wickham, H. (2016). *Ggplot2: Elegant graphics for data analysis*. Springer-Verlag. https://ggplot2.tidyverse.org

Yang, F., Yang, X., & Dunham, Y. (2023). Beyond our tribe: Developing a normative sense of group-transcendent fairness. *Developmental Psychology*, *59*(7), 1203–1217. https://doi.org/10.1037/dev0001545.

Yang, X., Yang, F., Guo, C., & Dunham, Y. (2022). Which group matters more: The relative strength of minimal vs. gender and race group memberships in children's intergroup thinking. *Acta Psychologica*, *229*, Article 103685. https://doi.org/10.31219/osf.io/qw2gt

Received January 27, 2023
Revision received August 29, 2023
Accepted September 9, 2023 ■

Call for Nominations

The Publications and Communications (P&C) Board of the American Psychological Association has opened nominations for the editorships of *Behavioral Neuroscience, Journal of Applied Psychology, Journal of Educational Psychology, Psychological Bulletin,* and *Psychology of Addictive Behaviors*. Geoffrey Schoenbaum, PhD, Lillian T. Eby, PhD, Panayiota Kendeou, PhD, Blair T. Johnson, PhD, and Katie Witkiewitz, PhD, respectively, are the incumbent editors.

Candidates should be members of APA and should be available to start receiving manuscripts in early 2026 to prepare for issues published in 2027. The APA Journals program values equity, diversity, and inclusion and encourages the application of members of all groups, including women, people of color, LGBTQ psychologists, and those with disabilities, as well as candidates across all stages of their careers. Self-nominations are also encouraged.

Search chairs have been appointed as follows:

- *Behavioral Neuroscience,* Chair: Heejung Kim, PhD
- *Journal of Applied Psychology,* Chair: Steve W. J. Kozlowski, PhD
- *Journal of Educational Psychology,* Chairs: Michael Roberts, PhD, and Catherine Haden, PhD
- *Psychological Bulletin,* Chair: Hortensia Amaro, PhD
- *Psychology of Addictive Behaviors,* Chair: Mo Wang, PhD

Nominate candidates through APA's Editor Search website (https://editorsearch.apa.org).

Prepared statements of one page or less in support of a nominee can also be submitted by email to Jen Chase, Journal Services Associate (jchase@apa.org).

The deadline for accepting nominations is Monday, January 13, 2025, after which the first phase of vetting will begin.