

Group norms influence children's expectations about status based on wealth and popularity

1 Kathryn M. Yee, Jacquelyn Glidden, Melanie Killen

2 University of Maryland College Park, College Park, MD, United States

3 * Correspondence:

4 Kathryn M. Yee

5 katyee@umd.edu

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9 **Abstract**

10 Children's understanding of status and group norms influence their expectations about social
11 encounters. However, status is multidimensional and children may perceive status stratification (i.e.,
12 high- and low-status) differently across multiple status dimensions (i.e., wealth and popularity). The
13 current study investigated the effect of status level and norms on children's expectations about
14 intergroup affiliation in wealth and popularity contexts. Participants ($N = 165$; age range: 5-10 years;
15 $M_{age} = 7.72$ years) were randomly assigned to hear two scenarios where a high- or low-status target
16 affiliated with opposite-status groups based on either wealth or popularity. In one scenario, the group
17 expressed an inclusive norm. In the other scenario, the group expressed an exclusive norm. For each
18 scenario, children made predictions about children's expectations for a target to acquire social
19 resources. Novel findings indicated that children associated wealth status to some extent, but they
20 drew stronger inferences from the wealth dimension than from the popularity dimension. In contrast
21 to previous evidence that children distinguish between high- and low-status groups, we did not find
22 evidence to support this in the context of the current study. In addition, norms of exclusion
23 diminished children's expectations for acquiring social resources from wealth and popularity groups
24 but this effect was more pronounced in wealth groups. We found age differences in children's
25 expectations in regards to norms, but not in regards to status. The implications of how these effects,
26 in addition to lack of effects, bear on children's expectations about acquiring resources are discussed.

27 **1 Introduction**

28 Social status reflects the level of prestige and deference that an individual or group is afforded
 29 by others (Anderson et al., 2015). Status stratification is prevalent across societies and young
 30 children attend to status cues based on dimensions such as power, wealth, dominance, and social
 31 acceptance. By their preschool years, children accurately identify individuals who are high- or low-
 32 status, which further guides their expectations about others' traits, abilities, and behavior (Brey and
 33 Shutts, 2015; Charafeddine et al., 2015; Shutts et al., 2016; Gülgöz and Gelman, 2017; Enright et al.,
 34 2020). Often, children associate multiple dimensions of status. For example, they view wealthy
 35 targets as popular (Shutts et al., 2016) and associate physical dominance with competence and
 36 possessing more resources (Charafeddine et al., 2015). Moreover, studies examining various status
 37 dimensions find that children associate more positive attributes with high-status individuals and
 38 exhibit stronger preferences towards them than to low-status individuals (Horn, 2006; Newheiser et
 39 al., 2014; Mistry et al., 2015; Shutts et al., 2016; Enright et al., 2020).

40 Children may favor high-status peers over low-status peers for a variety of reasons. In
 41 addition to inferring that individuals possess similar rank across status dimensions, they may broadly
 42 infer positive traits from positive status information (Cain et al., 1997). For example, children
 43 associate the wealthy with more positive traits (e.g., smart, hardworking, clean, good, honest, polite)
 44 than the poor (Mistry et al., 2015). They may also infer positive traits in order to justify existing
 45 disparities observed between status groups (Baron and Banaji, 2009; Newheiser et al., 2014).

46 Alternatively, children may be motivated to identify with groups that are positively
 47 distinguished in order to enhance their own self-esteem (Abrams and Rutland, 2008; Nesdale, 2008).
 48 Status distinctions may indicate to children the extent to which an individual can functionally benefit
 49 others. Affiliation with popular peers, for instance, can enhance one's own social standing (Dijkstra
 50 et al., 2010). Children expect wealthy peers to share more resources than non-wealthy peers (Ahl and
 51 Dunham, 2019; Ahl et al., 2019) and also allocate more resources to peers who they expect to share
 52 with them and help them (Dunham, Baron, & Carey, 2011; Renno & Shutts, 2015).

53 Despite associations between multiple dimensions of status, no studies to date have compared
 54 children's expectations about the benefits of cross-status affiliation between different dimensions.
 55 Moreover, although children expect to receive material resources from the wealthy, less is known
 56 about whether children also expect to receive relatively more social benefits from wealthy peers than
 57 non-wealthy peers. The current study first aims to investigate children's associations between two
 58 dimensions of status: wealth and popularity. In addition, we aim to extend previous literature by
 59 comparing children's expectations about acquiring social benefits through cross-status affiliation in
 60 wealth and popularity contexts.

61 **1.1 Children's Conceptions of Wealth Status**

62 Children are aware of wealth stratification from a young age and often favor wealthy peers
 63 over non-wealthy peers. Children view wealthy individuals as more competent (Woods et al., 2005;
 64 Sigelman, 2012; Li et al., 2014; Mistry et al., 2015; Shutts et al., 2016), more likely to share (Ahl and
 65 Dunham, 2019; Ahl et al., 2019), and having more friends (Shutts et al., 2016) than non-wealthy
 66 individuals. Moreover, children as young as 4 years of age explicitly and implicitly prefer wealthy
 67 peers over non-wealthy peers (Olson et al., 2012; Horwitz et al., 2014; Li et al., 2014; Newheiser et
 68 al., 2014; Shutts et al., 2016).

69 Despite these biases, children are simultaneously sensitive to the needs of the economically
 70 disadvantaged. They view poverty as unfair and recognize that the poor lack basic necessities as well
 71 as a social network (Chafel and Neitzel, 2005). Children increasingly attempt to reduce inequality by
 72 allocating more resources and opportunities to low-wealth peers than high-wealth peers with age (Li

73 et al., 2014; Elenbaas and Killen, 2019; Zhang et al., 2021). In contrast to 4-year-olds, 8-year-olds
 74 reported more negative emotions after hypothetically excluding an economically disadvantaged peer
 75 (Dys et al., 2019). However, some evidence suggests that after age 11, children increasingly
 76 legitimize wealth inequality and their beliefs that the rich should give to the poor then decline
 77 (Leahy, 1990).

78 Children's preferences for the wealthy appear to be at odds with their egalitarian beliefs. Li et
 79 al. (2014) found that 4- and 5-year-olds preferred to be friends with a resource rich target than a
 80 resource poor target, but allocated more toys to the resource poor target. Interestingly, when children
 81 forgot which target initially possessed more resources due to a delay between the preference and
 82 allocation tasks, they favored the resource rich target in both their preferences and allocations. Thus,
 83 children's wealth preferences may be driven by automatic and unconscious positive associations.
 84 Moreover, their attitudes and behavior may not consistently favor the wealthy when moral concerns
 85 arise.

86 Studies focusing on children's trait associations with wealth groups, suggest that children's
 87 preferences may be particularly driven by beliefs that wealthy individuals are competent and likely to
 88 share (Woods et al., 2005; Sigelman, 2012; Li et al., 2014; Mistry et al., 2015; Shutts et al., 2016;
 89 Ahl and Dunham, 2019; Ahl et al., 2019). At the same time, children as young as 8 years view
 90 wealthy individuals as greedy, selfish, and exclusive (Elenbaas and Killen, 2019; Burkholder et al.,
 91 2020). Preferences for the wealthy may not merely be driven by beliefs that they are particularly
 92 likeable. Rather, affiliating with individuals who are viewed as competent and able to share their
 93 resources may provide certain economic and social benefits that children find attractive.

94 1.2 Children's Conceptions of Popularity Status

95 Peer popularity is another important dimension of status for children and is defined as
 96 individual's prestige, visibility, and reputation among peers (Cillessen and Marks, 2011). Traditional
 97 sociometric methods (for review, see Cillessen, 2009) have assessed popularity using peer
 98 nomination procedures, where children rank their peers by who they like the most to the least. Those
 99 who received the most nominations were then classified as popular and those with the least were
 100 classified as unpopular. However, peer relation studies now distinguish popularity from mere peer
 101 preference. For example, a study of 9- to 13-year-olds found that children who were explicitly
 102 nominated as the most popular exhibited more social dominance (i.e., ability to compete for or
 103 control material and social resources) than those who were nominated as the most well-liked (Lease
 104 et al., 2002). The same study also found an association between popularity and wealth in terms of
 105 having money to spend and high-quality possessions such as expensive clothing and a very nice
 106 house. Younger children in grades 3-5 also identify popular peers as those who influence others'
 107 behavior and set social norms (Lease et al., 2020). However, peers who were considered both popular
 108 and well-liked were distinguished from the broader popular group by prosocial qualities and being
 109 less likely to use ridicule or model misbehavior in order to influence others. Thus, popular peers are
 110 viewed as both prosocial and antisocial (LaFontana and Cillessen, 2002).

111 Children's associations between popularity and peer preference decline between early
 112 childhood and adolescence (Cillessen and Marks, 2011). This may be due, in part, to children's
 113 increasing consideration of group dynamics (e.g., status hierarchies, norms, and distinctions between
 114 personal and consensus-based judgments). There is also evidence that popularity becomes
 115 increasingly related to antisocial behavior such as aggression (Sandstrom, 2011). In addition,
 116 children increasingly prioritize popularity status. Compared to children in grades 1-4, children in
 117 grades 5-8 were more likely to make decisions that increase or maintain their popularity status at the
 118 expense of friendship, compassion, achievement, and rule adherence (LaFontana and Cillessen,
 119 2010).

120 In addition, children may be more willing to disregard or admire a high-status peer's
 121 antisocial behavior than a low-status peer's. Children explicitly prefer popular peers over unpopular
 122 peers even if they hold implicit negative attitudes towards them (Lansu et al., 2012), and choose to
 123 include them in activities over unpopular peers (Horn, 2006). While prosocial behavior predicted
 124 higher perceived friendship quality among unpopular children, popular children were viewed as
 125 possessing high quality friendships regardless of their prosocial tendencies (Poorthuis et al., 2012).
 126 Even in the absence of prosocial traits, popular peers may possess other redeeming qualities such as
 127 being powerful and influential, which may help others enhance their social standing (Cillessen and
 128 Marks, 2011). A study among adolescents found that an individual's popularity and likeability
 129 increased the closer they affiliated with popular peers (Dijkstra et al., 2010). However, it's unclear
 130 whether elementary school-aged children view affiliation with popular peers as a means for achieving
 131 status or acquiring additional social resources.

132 1.3 Group Norms and Status

133 Children's understanding of social norms can powerfully regulate their intergroup attitudes and
 134 behavior (Nesdale et al., 2005; Rutland et al., 2005; Bennett, 2014; McGuire et al., 2017). Social
 135 norms promote group functioning by establishing a sense of common ground and by regulating
 136 within-group behavior (Feldman, 1984; Abrams et al., 2003a, 2003b). The manifestation of prejudice
 137 and discrimination depends on the strength of one's group identification, perceptions of threat and
 138 competition, and the extent to they view these attitudes and behaviors as in line with group standards
 139 (Rutland and Killen, 2015). For instance, children who were assigned to a group with a norm of
 140 exclusion favored their own group and expressed attitudes that were consistent with their group's
 141 norm (Nesdale et al., 2008). Under some circumstances, norms can also moderate children's biases
 142 towards their own group. When children view an outgroup as holding a competitive or exclusive
 143 norm, they are more likely to dislike and lack empathy for outgroup members than when the
 144 outgroup is perceived to be cooperative or inclusive (Nesdale et al., 2005, 2007; Nesdale and Dalton,
 145 2010). However, children are inclined to view their own group's positively and therefore, may be
 146 more likely to view their own group as more inclusive than an outgroup when norms are not explicit.
 147 For example, Non-Arab American adolescents expected their own group to include peers based on
 148 shared interests, but expected Arab American peers to include peers based on ethnicity (Hitti and
 149 Killen, 2015). Whether they show out-group prejudice or not will depend in part on the strength of
 150 their identification with their group, how much they feel their group is being threatened, and if they
 151 understand and believe that showing such prejudice is consistent with the expectation of their group
 152 (i.e., the in-group norm).

153 Further, the way in which norms guide children's behavior depends on group status. In a
 154 study where participants were assigned to an advantaged or disadvantaged group that held either a
 155 norm of equality or equity, disadvantaged adolescents allocated more resources to their in-group
 156 when their group held a norm of equity, rather than equality (McGuire et al., 2019). In contrast,
 157 advantaged adolescents distributed resources equally even when their group prescribed an equity
 158 norm. Group norms are based on a consensus among peers. However, individuals who possess
 159 substantial social status have greater influence over the attitudes and behaviors of others. For
 160 example, popular children have the ability to exert control over group norms by serving as visible
 161 models of group standards and reenforcing norms through their social networks (Sandstrom, 2011).
 162 While wealthy children vary in their visibility and social connectedness, they may have the ability to
 163 influence others due to their control over material resources (Ahl and Dunham, 2019; Ahl et al.,
 164 2019). Thus, norms may be more strongly determined by high status groups and they may impact
 165 status groups differently.

166 Children's understanding of group dynamics becomes increasingly sophisticated with age

(Nesdale et al., 2005; Abrams and Rutland, 2008; Abrams et al., 2009; Rutland et al., 2010). For example, a study by McGuire et al. (2019) found differences in how children considered their group's relative social standing and group norms when deciding how to allocate resources. Adolescents allocated more resources to their disadvantaged in-group over a disadvantaged outgroup when their ingroup held a norm of equity. In contrast, children prioritized equal allocations regardless of the norm and even when it perpetuated their own disadvantage. Studies that investigate children's reasoning further shed light on changes in their cognition. For instance, older children are more likely to prioritize group loyalty (Rutland and Killen, 2015) and cite concerns about group functioning in order to justify exclusion than younger children (Hitti and Mulvey, 2021). This increasing awareness of competing factors contributes to a shift in children's motivations and behavior during intergroup encounters.

1.4 The Current Study

The first goal of this study was to investigate children's associations between wealth and popularity status. **H1:** We expected that participants in the current sample would demonstrate a bidirectional association between wealth and popularity status, such that they would view wealthy targets as more popular than non-wealthy targets and would view popular targets as wealthier than unpopular targets. Investigating these associations served to clarify existing literature about the relationship between wealth and popularity. Despite some evidence that children conflate features of wealth and popularity (Lease et al., 2002; Charafeddine et al., 2015; Shutts et al., 2016; Gülgöz and Gelman, 2017; Enright et al., 2020), studies have not compared the relative strength of inferences across these two dimensions.

Our second goal was to investigate and compare children's expectations about acquiring social resources through cross-status affiliation in wealth and popularity contexts. Specifically, we examined children's expectations about 1) positive group attitudes towards a cross-status target, 2) the target's personal enjoyment from cross-status affiliation, and 3) the group's future inclusion of the target. The interplay between group norms and social status was a primary focus of our investigation and we predicted that several factors would contribute to children's expectations for social resources.

H2: We predicted that overall, participants would have higher expectations for a target to acquire social resources from a group that held a norm of inclusion rather than exclusion, but that the extent to which the norm influenced expectations would depend on the group's status level. Children's expectations about others' attitudes and behavior are sensitive to their perceptions of how individuals conform or deviate from group standards (Rutland and Killen, 2015). Exclusive norms can exacerbate in-group biases and facilitate prejudice, while inclusive norms can elicit positive intergroup attitudes and have been shown to mitigate prejudice towards low-status groups (Nesdale et al., 2007; Nesdale and Lawson, 2011).

We anticipated that children would also have higher expectations for a target to acquire social resources through affiliation with a high-status group than a low-status group. Children expect to receive material resources from wealthy peers (Ahl and Dunham, 2019; Ahl et al., 2019) and to increase their social network from popular peers (Dijkstra et al., 2010). If wealth and popularity status are associated, children may expect there to be social benefits to affiliation with the wealthy as well. These expectations may contribute to children's preferences for high-status groups, which have been well-documented (Horn, 2006; Newheiser et al., 2014; Mistry et al., 2015; Shutts et al., 2016; Enright et al., 2020). As a result, children might have higher expectations for acquiring social resources from a high-status group than a low-status group, even when both groups have a norm of inclusion. Further, children may also be willing to overlook antisocial attributes of peers when they have redeeming qualities such as high-status (Cillessen and Marks, 2011; Poorthuis et al., 2012).

214 Compared to an inclusive low-status group, for instance, children may still have relatively high
 215 expectations for an individual to acquire social resources from an exclusive high-status group.

216 Alternatively, children might have relatively low expectations for acquiring resources from an
 217 exclusive high-status group. Children view high-status peers as setting norms (Gülgöz and Gelman,
 218 2017; Lease et al., 2020) so a norm of exclusion could be viewed as a more difficult barrier to
 219 overcome with a high-status group. In addition, a high-status group might ultimately reject a low-
 220 status individual because affiliation with them could be viewed as a threat to their group's positive
 221 social standing (Nesdale et al., 2005). They may also view high-status group as particularly exclusive
 222 even when one member is inclusive (Lease et al., 2002; Cillessen and Marks, 2011; Elenbaas and
 223 Killen, 2019; Burkholder et al., 2020).

224 **H3:** We also expected the effect of norm on children's expectations for acquiring resources to
 225 be more pronounced when affiliation occurs between wealth groups than between popularity groups.
 226 Wealth distinctions may be more salient to children than popularity distinctions. Children view the
 227 wealthy as competent and hardworking, while the view the poor as incompetent and lazy (Woods et
 228 al., 2005; Sigelman, 2012; Li et al., 2014; Mistry et al., 2015; Shutts et al., 2016). Some children are
 229 also more favorable to the poor and distinguish the wealthy as selfish and entitled, while the poor are
 230 viewed as generous (Elenbaas and Killen, 2019; Burkholder et al., 2020). Evidence that children
 231 readily endorse stereotypes about high- and low-wealth groups suggests that wealth is a particularly
 232 informative status distinction. Moreover, children expect their peers to preferentially include others
 233 on the basis of wealth due to more perceived comfort with their own group (Burkholder et al., 2021).
 234 They may assume that groups are exclusive even in the absence of an explicit norm (Burkholder et
 235 al., 2020, 2021) and thus, more readily generalize an individual group member's exclusive
 236 preferences to a wealth group than a popularity group. On its own, popularity status may be less
 237 informative for predicting behavior during childhood. Children may be less inclined to generalize an
 238 exclusive preference to a popularity group since there's no evidence that they stereotype popularity
 239 groups as particularly exclusive or negative towards each other before adolescence. Rather, they may
 240 expect more variability among the members of popularity groups some group members more readily
 241 than they do among wealth groups. For example, they recognize that some popular individuals are
 242 more well-liked by their peers than others and that popular individuals exhibit both prosocial and
 243 antisocial qualities (LaFontana and Cillessen, 2002; Lease et al., 2020).

244 In addition, we predicted that children's expectations about wealth and popularity groups
 245 would further depend on the group's status level. Although evidence suggests that wealth and
 246 popularity are associated, children may be more likely expect a popular individual to have a large
 247 social network than a wealthy individual. Therefore, a less popular individual might socially profit
 248 from a popular peer to a greater extent than they would from a wealthy peer. While children expect
 249 there to be benefits from affiliating with wealthy (Ahl and Dunham, 2019; Ahl et al., 2019) and
 250 popular peers (Dijkstra et al., 2010; Cillessen and Marks, 2011; Lease et al., 2020), these
 251 expectations for wealthy children may be specific to material resources (Ahl and Dunham, 2019). For
 252 instance, they may be expected to share more than a poor individual due to having more resources to
 253 spare, rather than due to a broader prosocial tendency. In contrast, children expect popular
 254 individuals to help others in need and mediate conflict between others (Cillessen and Marks, 2011;
 255 Lease et al., 2020). For this reason, we included measures to examine children's associations between
 256 wealth and popularity with prosocial helping and sharing behavior as an exploratory part of our
 257 investigation to examine children's relative associations of wealth and popularity status groups with
 258 prosocial behavior.

259 **H4:** Lastly, we predicted that the effects of status and group norms would become
 260 increasingly pronounced with age. During middle childhood (ages 5-7 children generally have
 261 positive perceptions of high-status wealth and popularity groups (Cillessen and Marks, 2011; Shutts
 262 et al., 2016; Enright et al., 2020). However, by late childhood (ages 8-10) children attribute selfish

263 motives to wealthy groups (Elenbaas and Killen, 2019) and overt and relational aggression to popular
 264 groups (Sandstrom and Cillessen, 2006).

265 Previous research also shows between middle and late childhood, children's understanding of
 266 how groups function (e.g., considerations of status, threat, group loyalty) becomes increasingly
 267 advanced (Nesdale et al., 2005; Abrams and Rutland, 2008; Abrams et al., 2009; Rutland et al.,
 268 2010). Evidence suggests that this is due, in part, to advanced perspective-taking abilities that emerge
 269 after the age of 8 (Banerjee, 2000) and allow children to better predict mental states within and
 270 between groups (Abrams et al., 2009). In addition, they become better at simultaneously weighing
 271 competing factors, such as the dynamics between status groups, norms, and their own personal
 272 preferences, when strategically reasoning about intergroup encounters (Abrams et al., 2003a; Killen
 273 and Rutland, 2011; Mulvey, 2016). The current study compared 5- to 7-year-old children's
 274 expectations to those of 8- to 10-year-old children in order to examine differences in children's
 275 conceptions of wealth and popularity status in relation to changes in their understanding of group
 276 dynamics and developing cognitive abilities.

277 2 Method

278 2.1 Participants

279 The study included 165 5- to 10-year-old children (52.7% female, $M_{age} = 7.72$ years).
 280 Participants' racial-ethnic background was indicated by parental report as follows: 60% White,
 281 14.5% Black, 8.5 % Latinx, 3.6% Asian, 6.1% multiethnic, 3.6% other, and 6% undisclosed.
 282 Participants were recruited from afterschool programs in the Mid-Atlantic region of the United States
 283 and through online venues. Identical protocol was used to test participants in-person and via Zoom,
 284 an online video conferencing software. All participants were shown colorful illustrations on a
 285 computer screen and interviewed individually by a researcher face-to-face.

286 2.2 Design

287 The study utilized a 2 (Status Dimension: wealth, popularity) x 2 (Status Composition: low-
 288 status protagonist with high-status group, high-status protagonist with low-status group) x 2
 289 (Participant Age: 5-7, 8-10) x 2 (Gender: female, male) x 2 (Norm Presentation Order: inclusive first,
 290 exclusive first) x 2 (Norm: inclusive, exclusive) mixed design with repeated measures on the last
 291 factor. An a priori power analysis conducted in G*Power (Faul et al., 2009) determined that a sample
 292 size of 160 participants would be required to detect an effect size of $f = 0.22$ with 80% power, based
 293 on previous research utilizing similar designs which found effect sizes of $\eta_p^2 = .04$ and $.055$ (Nesdale
 294 and Lawson, 2011; McGuire et al., 2015). This number was subsequently rounded up to include 165
 295 participants in order to account for counterbalancing and potential exclusion from the final analyses
 296 due to reasons such as experimental error or attrition. In this study, all participants finished the
 297 protocol and there were no errors or attrition.

298 2.3 Procedure

299 Participants were randomly assigned to one of four between-subjects conditions based on status
 300 composition (low-status protagonist/high-status group vs. high-status protagonist/low-status group)
 301 and status dimension (wealth, popularity). Participants were first introduced to a protagonist, who
 302 was described by their status dimension and level.

303 **2.3.1 Wealth Status Descriptions**

304 For participants in the wealth condition, status was depicted in terms of the target's monetary
 305 resources, type of car, and type of house. Participants who saw a low-wealth target were told, "This is
 306 [protagonist/host]. [Protagonist/host]'s family has very little money. They drive a car like this, and they
 307 live in a house like this." Low-wealth characters were shown with a small stack of dollar bills, an old
 308 rusty car, and a small and modest looking house. Participants who saw a high-wealth character and
 309 told, "This is [protagonist/host]. [Protagonist/host]'s family has lots and lots of money. They drive a
 310 car like this, and they live in a house like this." High-wealth characters were shown with a large stack
 311 of dollar bills, a new luxury sports car, and a large and expensive looking house. The depictions were
 312 comparable to previous studies examining children's conceptions of wealth (Mistry et al., 2015;
 313 Elenbaas and Killen, 2019; Burkholder et al., 2020).

314 **2.3.2 Popularity Status Descriptions**

315 For participants in the popularity condition, status was depicted in terms of friend group size (two =
 316 "low-popularity"; ten = "high-popularity), visibility, and influence. Participants who saw a low-
 317 popularity target were told, "This is [protagonist/host]. [Protagonist/host] has a friend group like this.
 318 Only a few kids know who [Protagonist/Host] is. At recess, [protagonist/host] always joins what
 319 someone else is doing." Participants who saw a high-popularity target were told, "This is
 320 [Protagonist/Host]. [Protagonist/Host] has a friend group like this. All of the other kids know who
 321 [Protagonist/Host]. is. At recess, a lot of kids always want to do what [Protagonist/Host] is doing."
 322 The depictions were designed to be comparable to the wealth manipulation and were adapted from
 323 sociometric descriptions of popularity (Lease et al., 2002).

324 Participants were told that the protagonist was going to attend two birthday parties for two
 325 different peers (i.e., the hosts). The first party vignette was introduced by describing the host as being
 326 the opposite status level (same dimension) from the protagonist using the descriptions from above.
 327 Participants were informed that, apart from the protagonist, all of the other party attendees (i.e., the
 328 group) were the same status as the host (i.e., wealth: "Other kids with [very little/lots and lots] of
 329 money are going to the party"; popularity: "Other kids with [only a few/a lot of] friends are going to
 330 [Host]'s party"). The protagonist and host were both gender-matched to the participant to control for
 331 potential confounds with gender preferences.

332 **2.3.3 Trait Associations**

333 In order to examine children's associations with wealth and popularity status participants in
 334 each of the four conditions made inferences about the host's traits: wealth ("How wealthy is
 335 [Host]?"'); popularity ("How many friends does [Host] have?"'); sharing ("How often does [Host]
 336 help other kids who are sad and lonely?"'); and helping ("How often does [Host] share the things
 337 he/she has with other kids?"') For each of these measures, participants indicated their responses on a 4-
 338 point Likert-type scale. The wealth measure served as a manipulation check in the two wealth
 339 conditions. Similarly, the popularity measure served as a manipulation check in the two popularity
 340 conditions.

341 **2.3.4 Group 1 Norm Manipulation**

342 Following the trait measures, participants heard that the host held either an inclusive or
 343 exclusive norm regarding their status group.

344 For the inclusive host, participants heard, "[Host] says they like to be friends with kids who
 345 have any amount of [money/friends]. Some of their friends have only a [little bit of money/few

346 friends] and some of their friends have a lot of [money/friends]. [Host] doesn't think it matters how
 347 [much money/many friends] other kids have and they like kids who have any amount of
 348 [money/friends].

349 For the exclusive host, participants heard, “[Host] says they only like to be friends with kids
 350 who have [the same amount] of [money/friends]. None of their friends have [the opposite amount] of
 351 [money/friends] and all of their friends have [the same amount] of [money/friends]. [Host] thinks it
 352 really matters how much [money/friends] other kids have and they only like kids who have [the same
 353 amount] of [money/friends].”

354 **2.3.5 Expectations for Social Resources**

355 To examine how social status and normative information influences children's expectations
 356 about acquiring social resources in cross-status encounters, participants predicted the group's
 357 attitudes towards the protagonist (“How much will the other kids at this party like [Protagonist]?”),
 358 the protagonist's enjoyment (“How much fun do you think the party will be for [Protagonist]?”), and
 359 group inclusion of the protagonist. For the attitude and enjoyment measures, participants indicated
 360 their responses on a 4-point Likert-type scale. For the inclusion measure, six targets (gender-matched
 361 to the participant) were displayed in an array and participants were told, “Here are some kids from
 362 the party. They're each going to have their own birthday parties later this year.” Each target was then
 363 displayed individually and participants were asked, “Do you think this kid will invite [Protagonist] to
 364 their birthday party?” The number of “yes” responses (0-6) were recorded as a raw score.

365 Since we did not predict differences between these three measures, we created a composite
 366 score from participant ratings of group attitudes towards the protagonist, the protagonist's enjoyment,
 367 and inclusion of the protagonist. For each measure, raw scores were transformed into z-scores and
 368 subsequently added to create a composite “expectations for acquiring social resources” score.

369 **2.3.6 Group 2 Norm Manipulation**

370 Next, the second party was introduced. Similar to the first vignette, the host and group were
 371 described as being the opposite status from the protagonist. However, participants were told that the
 372 second host held the opposite norm as the first host regarding their status group (host/group are same
 373 status in both vignettes). For this vignette, participants again predicted the group's attitudes towards
 374 the protagonist, the protagonist's enjoyment, and group inclusion of the protagonist. The order in
 375 which the participant received the inclusive or exclusive host in the first vignette was
 376 counterbalanced.

377 **2.4 Data Analytic Plan**

378 Data were analyzed using the lme4 package for mixed-effects models in R (Bates et al., 2015;
 379 R Core Team, 2017). Preliminary analyses did not find significant effects of the interview method
 380 (i.e., in-person vs. online), gender, or the presentation order of the norm vignettes, which were
 381 unrelated to our hypotheses ($p > .05$). Therefore, these variables were excluded from subsequent
 382 analyses. To test trait associations with wealth and popularity, we examined the effect of status
 383 dimension, status level, and participant age on ratings of the target's wealth, popularity, sharing
 384 behavior, and helping behavior using analysis of variance (ANOVA).

385 The expectations for acquiring social resources composite score had acceptable internal
 386 consistency (3 items; $\alpha = .74$). Thus, in order to test predictions about acquiring social resources, we
 387 examined the effect of status dimension, status level, group norm, and participant age on children's
 388 expectations of social resources using mixed ANOVA with group norm as the within-subjects factor
 389 (See Supplementary Materials for separate analyses by item). For each model, pairwise comparisons

390 of the estimated marginal means were used to test expected differences between the factors and
 391 Bonferroni post-hoc tests were conducted to control for Type I errors.

392 **3 Results**

393 **3.1 Associations between wealth and popularity**

394 First, we confirmed that the status descriptions use in the study effectively manipulated
 395 children's beliefs about the targets' wealth and popularity status. Children rated the high-wealth
 396 target ($M = 3.81, SE = .08$) as wealthier than the low-wealth target ($M = 1.74, SE = .14$), $t(161) =$
 397 $13.70, p < .001$ (Figure 1A, Wealth Dimension). Children also rated the high-popularity target ($M =$
 398 $3.93, SE = .05$) as more popular than the low-popularity target ($M = 1.62, SE = .17$), $t(161) = 13.80, p$
 399 $< .001$ (Figure 1B, Popularity Dimension).

400 As predicted (H1), we found a bidirectional association between wealth and popularity
 401 dimensions. An interaction between status dimension and status level on ratings of the target's
 402 wealth, $F(1, 157) = 58.22, p < .001, \eta_p^2 = .27$ (Figure 1A, Popularity Dimension), revealed that
 403 children rated high-popularity targets ($M = 3.20, SE = .09$) as more wealthy than low-popularity
 404 targets, ($M = 2.78, SE = .12$), $t(161) = 2.72, p < .001$. Similarly, there was an interaction between
 405 status dimension and status level on ratings of the target's popularity, $F(1, 157) = 56.70, p < .001, \eta_p^2$
 406 $= .27$ (Figure 1B, Wealth Dimension), such that children rated high-wealth targets ($M = 3.91, SE =$
 407 $.07$) as more popular than low-wealth targets, ($M = 3.29, SE = .14$), $t(161) = 3.76, p < .001$.

408 Participants' wealth ratings did not significantly differ across age groups. However, there was
 409 an interaction between age and status level on popularity ratings, $F(1, 157) = 6.84, p < .01, \eta_p^2 = .04$.
 410 Participants did not differ by age in how they rated high-status targets, but older children ($M = 2.15,$
 411 $SE = .19$) rated low-status targets as significantly less popular than did young children ($M = 2.76, SE$
 412 $= .20$), $t(161) = 2.94, p < .01$.

413 **3.2 Expectations about acquiring social resources**

414 Overall, children had greater expectations for the target to acquire social resources from a
 415 group that held norm of inclusion ($M = 0.93, SE = .15$) rather than from group that held and norm of
 416 exclusion ($M = -0.93, SE = .20$), $F(1, 157) = 91.36, p < .001, \eta_p^2 = .40$. Although we expected this
 417 effect to be influenced by the group's status level, we did not find support for this prediction (H2).
 418 Children's expectations about a high-status group ($M = 0.09, SE = .18$) and a low-status group ($M = -$
 419 $0.09, SE = .20$) did not differ significantly. In addition, there were no significant interactive effects of
 420 status level on children's expectations for acquiring social resources. Children's expectations were
 421 slightly greater for a high-status inclusive group ($M = 1.15, SE = .18$) than for a low-status inclusive
 422 group ($M = 0.69, SE = .24$) but they did not differ from chance.

423 However, consistent with our predictions (H3), there was a significant main effect of status
 424 dimension, $F(1, 157) = 5.90, p = .02, \eta_p^2 = .04$, and a interaction between norm and status dimension
 425 on children's expectations for acquiring social resources, $F(1, 157) = 7.40, p < .001, \eta_p^2 = .05$.
 426 Overall, children had lower expectations in the wealth dimension ($M = -0.33, SE = .21$) than in the
 427 popularity dimension ($M = 0.34, SE = .16$). When the group held a norm of inclusion, children
 428 exhibited similar expectations across both dimensions. However, the negative effects of a norm of
 429 exclusion on children's expectations for acquiring resources were particularly pronounced for wealth
 430 groups ($M = -1.54, SE = .30$) compared to popularity groups ($M = -0.30, SE = .24$) independent of
 431 their status level.

432 Although we speculated that this finding might be due to differences in children's associations
 433 of wealth and popularity with prosocial behavior, we did not find evidence for this. Participants

434 generally viewed the target positively regardless of their status dimension or level. However,
 435 participant age did influence the extent to which children associated a target with sharing, $F(1, 157) =$
 436 $15.37, p < .001, \eta_p^2 = .09$, and helping, $F(1, 157) = 14.37, p < .001, \eta_p^2 = .08$. Younger children ($M =$
 437 $3.29, SE = .10$) were more likely to expect targets to share material resources than older children ($M =$
 438 $2.77, SE = .08$) and younger children were also more likely to expect targets to help others in need ($M =$
 439 $3.37, SE = .09$), than older children ($M = 2.88, SE = .09$).

440 We found partial evidence for our hypothesis that the effect of norms and status become more
 441 pronounced with age. Overall, older children ($M = -0.67, SE = .19$) had lower expectations for a
 442 target to acquire social resources than younger children ($M = 0.60, SE = .18$), $F(1, 157) = 22.54, p <$
 443 $.001, \eta_p^2 = .13$. There was also an interaction of participant age and norm on expectations for
 444 acquiring social resources, $F(1, 157) = 13.41, p < .001, \eta_p^2 = .08$. When the group held an inclusive
 445 norm, older children ($M = 0.09, SE = .18$) and younger children did not differ in their expectations, $p > .05$. However, when the group held an exclusive norm, older children ($M = -1.93, SE = .26$),
 446 expected fewer resources than younger children ($M = 0.02, SE = .26$), $t(157) = 6.00, p < .001$. Neither
 447 status dimension nor status level, however, interacted with participant age.
 448

450 4 Discussion

451 Previous research suggests that children infer rank across multiple dimensions of social status
 452 and favor high-status groups over low-status groups. We speculated that children's biases could be,
 453 in part, due to associations between wealth and popularity dimensions and expectations about the
 454 benefits of intergroup affiliation might contribute to children's biases. The present study extended
 455 previous research by comparing the relative strength of children's associations between wealth and
 456 popularity status, and examining children's expectations acquiring social resources (i.e., positive
 457 attitudes, enjoyment, and inclusion) through cross-status affiliation in wealth and popularity contexts.
 458 Two primary novel findings emerged.

459 First, we found that children positively associated wealth and popularity status. Children
 460 viewed high-popularity targets as wealthier than low-popularity targets (provided with no
 461 information about wealth) and viewed high-wealth targets as more popular than low-wealth targets
 462 (provided with no information about popularity). This finding is consistent with previous work
 463 showing that children associate features of wealth and popularity (Lease et al., 2002; Charafeddine et
 464 al., 2015; Shutts et al., 2016; Gülgöz and Gelman, 2017; Enright et al., 2020). However, we extend
 465 previous research by providing evidence of a bidirectional association and comparing the relative
 466 strength of inferences across these two dimensions.

467 Children inferred popularity from wealth descriptions more strongly than they inferred wealth
 468 from popularity descriptions. They viewed high-wealth targets as equally popular as high-popularity
 469 targets but did not view high-popularity targets as equally wealthy as high-wealth targets. Moreover,
 470 older children distinguished between high- and low-wealth targets in their inferences about
 471 popularity to a greater extent than younger children. Evidence suggests that young children make
 472 inferences on the basis of one's quantity of physical resources such as possessions and friends (Pun et
 473 al., 2016; Ahl and Dunham, 2019). However, they may view non-physical resources as less
 474 indicative of status. For example, 3- to 4-year-old children view individuals who control access to
 475 material resources as powerful, but do not view an individuals who gives orders as powerful until 7-9
 476 years of age (Gülgöz and Gelman, 2017). In addition, children in grades 3-5 view peers who
 477 influence others' behavior and set social norms as high-status (Lease et al., 2020). We suspect that
 478 young children do not necessarily view social visibility and influence over others' behavior as
 479 attributes that contribute to status while older children likely do. However, we can only speculate

480 about children's relative prioritization of physical and non-physical resources. More investigation is
 481 needed to determine whether children distinguish between these types of resources.

482 The second novel finding was that norms of exclusion diminished children's expectations for
 483 acquiring social resources from wealth and popularity groups but was more pronounced in wealth
 484 contexts. Surprisingly, we did not find evidence that children's expectations were dependent on the
 485 group's status level. This is in contrast to an overwhelming body of research that suggests that
 486 considerations of wealth status (Woods et al., 2005; Sigelman, 2012; Li et al., 2014; Mistry et al.,
 487 2015; Shutts et al., 2016; Ahl and Dunham, 2019; Ahl et al., 2019; Enright et al., 2020) and
 488 popularity status (LaFontana and Cillessen, 2002; Lease et al., 2002, 2020; Cillessen and Marks,
 489 2011; Sandstrom, 2011) do indeed impact children's attitudes and expectations about others. Our
 490 results do not imply that children's broader evaluations, or even their more specific expectations
 491 about acquiring social resources, are not informed by status differences. In fact, additional analyses
 492 conducted on each independent social resources sub-measure found that children expected that
 493 attending a low-wealth party would be significantly less enjoyable than attending a party with a high-
 494 wealth or either type of popularity group (see Supplementary Materials). Rather, our findings suggest
 495 that group norms and status dimension are relatively more informative for children's expectations
 496 about acquiring resources than status level. Norms of inclusion and exclusion had a particularly
 497 powerful effect on children's expectations overall, but operated differently for wealth and popularity.
 498

499 We suspect that children more readily generalized the host's exclusive preferences to other
 500 wealth group members than they did to popularity group members due to their pre-existing beliefs
 501 about wealth groups. Regardless of whether children make more favorable assumptions about high-
 502 or low-wealth groups, they may generally believe that both groups prefer their in-group. This
 503 explanation would be consistent with evidence that children expect peers to prefer affiliation with
 504 their own wealth group even those wealth in-group members are out-group members on another
 505 dimension such as race (Burkholder et al., 2021). Also in line with evidence that norms of inclusion
 506 can mitigate prejudice (Nesdale et al., 2007; Nesdale and Lawson, 2011), our findings suggest that
 507 although children may hold pre-existing beliefs about wealth groups are exclusive, norms of
 508 inclusion may broadly reduce their perceptions of social barriers between high- and low-status
 509 groups.

510 However, given that the current study already included multiple factors that could influence
 511 children's, we could not control for the influence of norms, for instance, by including a condition that
 512 would allow us to examine children's expectations in a more neutral context (i.e., without the
 513 influence of an explicit norm). Therefore, we could not draw conclusions about the relative impact of
 514 norms on children's pre-existing expectations about cross-status affiliation. Children may hold
 515 different stereotypes about how inclusive or exclusive wealth and popularity groups are in general.
 516 For instance, in the absence of explicit information, children could expect wealth peers to be
 517 exclusive while viewing popular peers as inclusive. If this were the case, then our finding that
 518 children's expectations about an inclusive wealth group were just as optimistic as they were for an
 519 inclusive popularity group would suggest that the norm was relatively more powerful for wealth
 520 groups than for popularity groups.

521 This limitation of the study design may have also obscured potential status level differences.
 522 The negative effects of an exclusive norm may have been due to negative assumptions about
 523 the group's status or the protagonist's status. Children differentiate more between malevolent and
 524 benevolent forms of status (Gülgöz and Gelman, 2017; Kajanus et al., 2020). Although they infer
 525 similar rank between prestigious and dominant targets, children expect a character to prefer
 526 affiliation with a prestigious target who shares their opinion when asked over a dominant target who
 527 forces their opinion (Kajanus et al., 2020). Yet, the participants in our sample generally rated all
 528 targets positively prior to hearing the norm manipulation so we do not believe that the main effects of
 the norm were strongly based on children's assumptions that a target would be more or less likely to

529 acquire social resources from a certain status group. However, more evidence is needed to understand
 530 why children's expectations were lower for an exclusive wealth group than an exclusive popularity
 531 group and future research should investigate how children's expectations about similarly ranked
 532 wealth and popularity groups might differ in more ambiguous contexts.

533 In addition to the previously described findings, we found age-related differences in
 534 children's expectations for acquiring social resources. The participant age groups included in this
 535 study held similar expectations for inclusive wealth and popularity groups, but 8- to 10-year-old
 536 children's expectations for acquiring social resources were significantly lower than 5- to 7-year-old
 537 children's expectation. This is consistent with previous evidence that children become increasingly
 538 sensitive to group norms with age (Nesdale et al., 2005; Abrams and Rutland, 2008; Abrams et al.,
 539 2009; Rutland et al., 2010; Rutland and Killen, 2015). However, we did not find evidence that age
 540 differences in children's expectations about obtaining social resources were specifically linked status
 541 groups based on wealth and popularity. This in contrast to evidence that children's conceptions of
 542 wealth and popularity status change between middle- and late-childhood (Cillessen and Marks, 2011;
 543 Shutts et al., 2016; Enright et al., 2020). It's possible that the interaction of norms and participant age
 544 could be explained by a stronger positivity bias among younger children than among older children,
 545 however, there are many instances in which younger children are seemingly more pessimistic or
 546 negative than older children in in their trait attributions and expectations for behavior (Aboud, 2008).
 547 For example, younger children are more willing than older children and adults to condone retribution
 548 and punish a transgressor regardless of intention (Mulvey et al., 2020).

549 In the current study, children's expectations about wealth and popularity dimensions appear
 550 to be similarly informed by norms and their prioritization of norms increases with age. However, we
 551 suspect that the effects of how younger and older children differentially consider norms in relation to
 552 different aspects of status may be too subtle to detect between middle and late childhood (Nesdale et
 553 al., 2007; McGuire et al., 2019). Adolescents' (13-16 years), but not children's (7-11 years), resource
 554 allocations to disadvantaged in-groups than disadvantaged out-groups (i.e., low-status) were
 555 dependent on group norms (McGuire et al., 2019). In other words, child had to coordinate
 556 considerations of status level, how each norm applied to each level, and how their own group
 557 membership interacted with these factors. Similarly, the current study asked children to consider
 558 these same factors in relation to different status dimensions instead of group membership. The added
 559 consideration of the group membership distinction in the McGuire et al. (2019) study and of the
 560 dimension distinction in the current study, in conjunction with group norms, may be beyond
 561 children's abilities to systematically coordinate late childhood. Given that with age, children
 562 differentially coordinate how they apply norms to different groups (including those based on status
 563 level), we posit that the absence of an interactive effect on either status level or status dimension was
 564 had more to do with a limited to coordinate multiple competing factors, rather than due to a limitation
 565 in children's ability to differentiate between dimensions and levels of status.

566

567 5 Conclusions

568 Reasoning about status can become rather complex, perhaps overwhelmingly so for children,
 569 given its multifaceted features. Therefore, children's expectations about status appear to be highly
 570 dependent social contexts. It's possible that in some contexts (i.e., regarding material resources)
 571 children's expectations about acquiring resources may be more informed by the relative status rank
 572 between groups than the dimension of status. In the context of the current study, exclusive norms
 573 across status dimensions appeared to lead to lower expectations for acquiring social resources than
 574 exclusive norms across groups of different status levels. This is a promising finding because sheds
 575 light on the possibility for mitigating children's biases towards high-status groups. Emphasizing

576 positive qualities among low-status groups or negative qualities among high-status groups across
 577 broader dimensions may, to some extent, reduce children's tendency to favor high-status groups
 578 more generally. Understanding the nuances in how children prioritize multiple features of status is
 579 thus, critical to devising methods that mitigate status biases.

580 6 Conflicts of Interest

581 *The authors declare that the research was conducted in the absence of any commercial or financial
 582 relationships that could be construed as a potential conflict of interest.*

583 7 Author Contributions

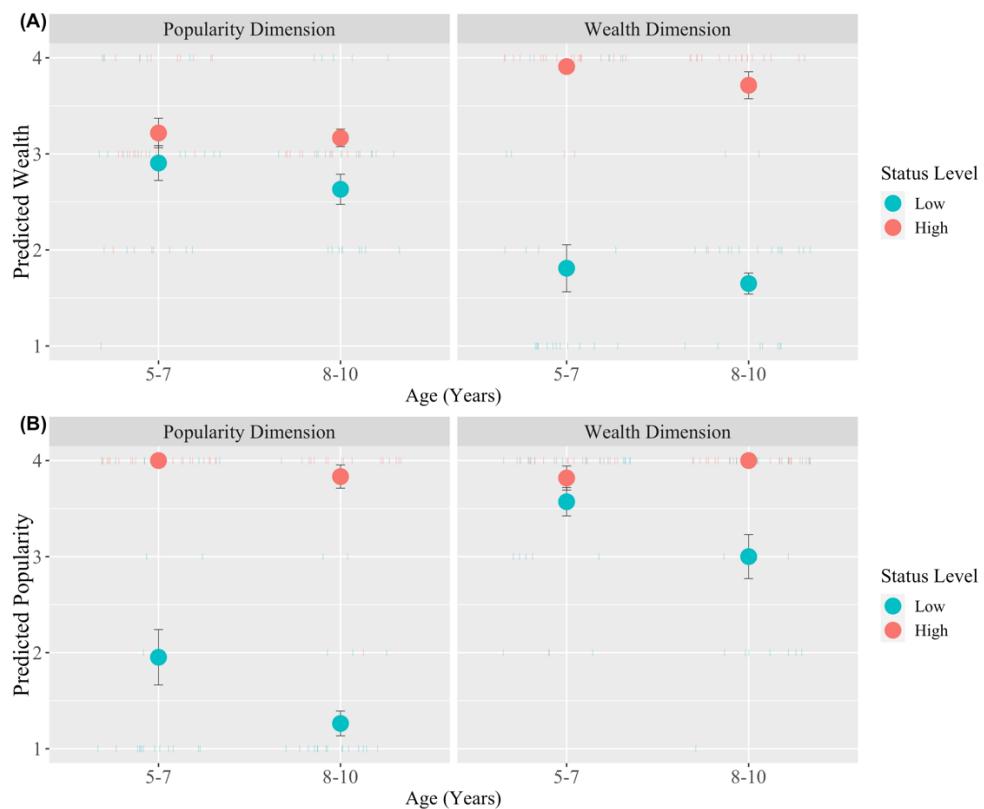
584 KY, JG, and MK contributed to the design of the study. KY and JG contributed to data collection.
 585 KY conducted the statistical analyses and wrote the first draft of the manuscript. KY, JG, and MK
 586 contributed to the revisions. All authors read and approved the submitted version.

587 8 Supplementary Material

588 Additional findings about social resource sub-measure differences can be found in the available
 589 Supplementary Material.

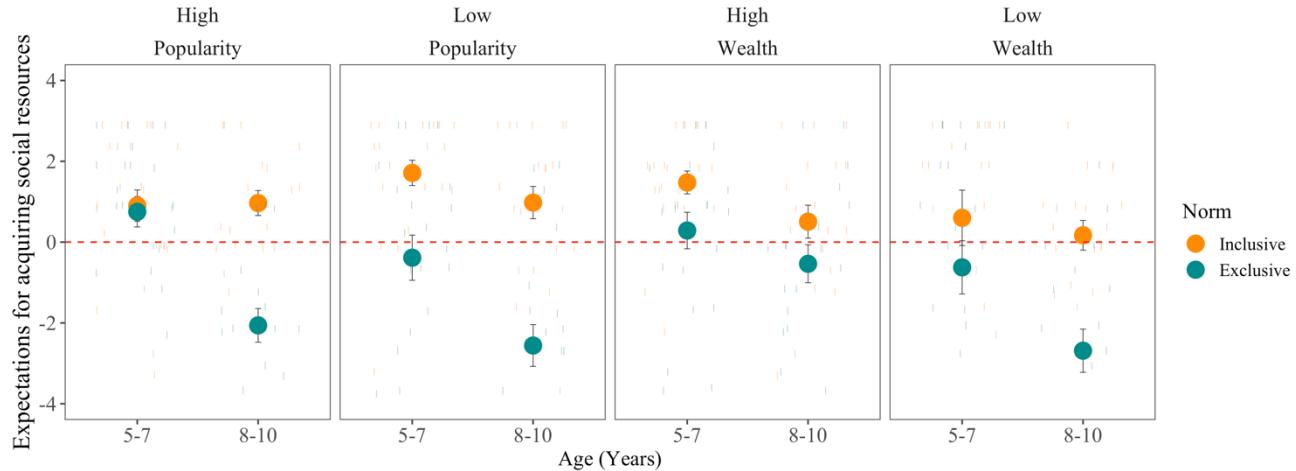
590 9 Figures

591 **Figure 1.** Children's associations between wealth and popularity (with standard error bars). (A)
 592 Predicted wealth as a function of age, status dimension, and status level. (B) Predicted popularity as a
 593 function of age, status dimension, and status level.



594

595 **Figure 2.** Children's expectations for acquiring social resources as a function of norm, status
 596 dimension, status level, and participant age (with standard error bars). Expectations for acquiring
 597 social resources are based on a composite of z-scores for children's predictions of the group's
 598 attitudes towards the protagonist, the protagonist's enjoyment, and the group's inclusion of the
 599 protagonist. A score of zero indicates the mean of each sub-measure.



600

601 10 References

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