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# Distributive Justice in Society and Among Peers: 8- to 14-Year-Olds' Views on Economic Stratification Inform Their Decisions About Access to Opportunities

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This study examined how children's and adolescents' beliefs about the distribution of wealth in society and the fairness of economic systems informed their behavior, judgments, and reasoning about access to opportunities among peers. The sample included 136 8- to 14-year-olds (47% girls, 60% White, majority middle- to higher-socioeconomic status [SES]) in the United States. Relative to older children, early adolescents viewed economic systems as less fair and wealth as less equally distributed, but still underestimated the true magnitude of existing economic disparities. Importantly, the stronger their system justification beliefs the fewer opportunities participants directed to poor peers over rich peers in an allocation scenario, but the more equally participants believed that wealth should be distributed in society the *more* opportunities they directed to poor peers. Moreover, participants were more supportive of allocating opportunities to poor peers when they had direct evidence that poor peers had been excluded in the past, and 40% reasoned explicitly about the implications of economic inequality when making their decision. Finally, exploratory associations of family SES and beliefs about distributive justice suggested that experiencing greater economic security may have enabled some participants to more readily critique societal inequality. Together, these findings provide correlational, experimental, and cross-sectional developmental evidence that older children's and early adolescents' beliefs about distributive justice in society inform their decisions about how to address disparities within their sphere of influence.

Keywords: moral development, distributive justice, system justification, economic inequality

In the United States today, economic inequalities affect many aspects of children's and adolescents' lives, including their relationships, learning, and health (Duncan et al., 2015). To address these inequalities, it is crucial to understand not only their impact on wellbeing, but also the beliefs about distributive justice that motivate people-youth and adults-to ignore, exacerbate, or challenge the status quo (Ruck et al., 2019). This study adopted a moral developmental perspective to investigate older children's and early adolescents' concepts of distributive justice in society and among peers. Specifically, we investigated 8- to 14-year-olds' perceptions, expectations, and beliefs regarding U.S. economic systems and the distribution of wealth at the societal level, their behavior, judgments, and reasoning about access to opportunities at the peer level, and relations between these societal-level and peer-level concepts of distributive justice. The primary goal of the

to address an inequality within their sphere of influence.

study was to examine how children's and adolescents' views on

distributive justice in society informed their decisions about how

#### Theoretical Framework: Distributive Justice

Distributive justice refers to the principles used to allocate economic benefits and burdens among people in a society, including (but not limited to) principles of equality, merit, need, ownership, and opportunity. Developmental scientists have a longstanding interest in distributive justice as a part of children's moral development (Damon, 1975). From the perspective of social domain theory, in particular, children are seen as having an early-emerging capacity to question and challenge unfairness, including distributive unfairness, on an interpersonal level (Turiel et al., 2016). For instance, young children judge it wrong to monopolize resources (e.g., to take all the toys for oneself), and reason about these actions as unfair (Killen et al., 2018).

Across the course of development, changes in social experiences and social cognition lead children and adolescents to consider new fairness issues, as well as weigh and prioritize familiar issues in new ways (Nucci et al., 2017). For instance, older children are more likely than younger children to view unequal access to resources based on group membership (e.g., gender, ethnicity) as wrong, and to reason about these issues in terms of moral concerns

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Complete measures are available on Open Science Framework: https:// osf.io/6adwy/

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about discrimination (Elenbaas et al., 2020). Research on adolescents' reasoning about civil rights and forms of government can also be interpreted in terms of distributive justice, as adolescents come to evaluate how decisions affecting people's access to resources are made (Helwig et al., 2014).

# **Distributive Justice Among Peers**

Because much of the research in this area to date has investigated the *origins* of fairness concerns, the majority of what is known about distributive justice in development pertains to early childhood. For instance, already by age 3 to 5 years, children allocate items such as stickers and candy equally, according to relative effort, and according to relative need, suggesting an early-emerging appreciation of these distributive principles in peer contexts (Baumard et al., 2012; Olson & Spelke, 2008).

By ages 8 to 10 years, children flexibly apply multiple distributive principles, taking into account the number and type of resources available, the degree of peers' contribution or need, and the interpersonal implications of different distribution strategies (Schmidt et al., 2016; Smith & Warneken, 2016). For instance, older children allocate essential items such as food equally between recipients in order to preserve others' health and wellbeing but allocate nonessential items such as candy according to relative effort (Essler & Paulus, 2021; Rizzo et al., 2016).

#### **Distributive Justice in Society**

Building on early-emerging concepts of distributive justice among peers, moral development researchers have recently called for greater attention to developing thinking about resources at the *societal* level (Arsenio, 2015; Killen & Dahl, 2021). This research seeks to understand the principles that people—primarily adolescents and adults—use to evaluate broad-scale distributive justice problems, including increasing economic inequality in many countries around the world. In the U.S., for example, Black, Latinx, and White 14- to 18 year-olds from diverse socioeconomic status (SES) backgrounds believe that, on average, wealth should be more equally distributed in society than it currently is (Arsenio & Willems, 2017; Flanagan & Kornbluh, 2019).

Yet, perceiving society to be economically *unequal* does not necessarily imply a belief that economic systems are *unfair* (Arsenio, 2018). Rather, research in related areas, including system justification theory, has demonstrated that adults are motivated to rationalize existing social and economic structures as fair, legitimate, natural, and desirable (Jost et al., 2015). From as early as age 12 to 13 years, U.S. adolescents, too, perceive their economic systems to be just and meritocratic, agreeing with statements such as "America is the land of opportunity where everyone who works hard can get ahead" (Godfrey et al., 2019). When asked to explain why some people are poor and others are rich, U.S. adolescents primarily cite individual differences in effort, motivation, and responsibility (Flanagan et al., 2014; Mistry et al., 2012).

On average, adolescents from lower-SES backgrounds tend to endorse even stronger beliefs that individual effort will lead to success than their peers from higher-SES backgrounds (Flanagan, 2013; Godfrey et al., 2019). One explanation is that, when adolescents from lower-SES backgrounds face systemic and institutional discrimination along class, race, and gender lines, believing that

economic systems reward individual effort may offer encouragement that their own perseverance will eventually pay off in the form of economic mobility (Flanagan, 2013). By contrast, starting out in life near the top of an economic-social-cultural hierarchy may afford adolescents from higher-SES backgrounds the possibility of critiquing economic systems and inequality from a relatively safe position of advantage. To date, the evidence for this explanation is indirect. In contrast to research on how adolescents from marginalized backgrounds come to critique and take action against unequal societal structures (Diemer et al., 2020), few studies have investigated how adolescents (or children) from advantaged backgrounds understand privilege (Rogers, 2019).

# **Integrating the Societal and Peer Levels**

Taken together, emerging developmental research on societal distributive justice has primarily focused on older adolescents, in notable contrast to the parallel body of research on young children's reasoning about distributive justice among peers. While the recent attention to societal distributive justice represents a crucial step forward, this gap—both developmental and conceptual—misses a valuable opportunity to connect insights from both areas. Integrating previously disparate perspectives and methods would enable an understanding of *relations between* developing moral thinking about distributive justice at the societal and peer levels.

Two recent studies provide some initial empirical support for the insights that such an integrative approach to distributive justice could offer. First, Elenbaas (2019) found that 8- to 14-year-old's who perceived a larger economic opportunity gap in broader society were more likely to prioritize poor peers over rich peers for access to a hypothetical learning opportunity and more likely to reason about fair access to learning (e.g., "Everyone has the right to education no matter what background they come from"). Similarly, Kornbluh et al. (2019) found that 12- to 18-year-olds who attributed poverty to individual factors (e.g., "They do not have the ambition") were more likely to prioritize effort over need when distributing resources among peers while those who attributed poverty to structural factors (e.g., "Mostly there is no work") were more likely to prioritize recipient need over effort. Together, these results suggest that children's and adolescents' reasoning about distributive justice in society may inform their decisions about distributive justice among peers. They also raise at least three questions for investigation.

# Moral and Social Developmental Considerations

First, an essential link between distributive justice at multiple levels involves moral reasoning about what *should* be, alongside perceptions of what is (Arsenio, 2015). However, neither perceptions of the scale of economic inequality (Elenbaas, 2019) nor attributions for the causes of poverty (Kornbluh et al., 2019) reveal whether children or adolescents consider the underlying distributions to be fair and just or very different from what they should be. Relations between developing thinking about how resources and opportunities should be distributed at the societal and peer levels have not yet been explored.

Second, these studies point to late childhood and early adolescence as a potential developmental period during which youth may begin to connect their understanding of distributive justice at multiple levels. Cognitively, this is a time of increasing capacity for abstract moral reasoning and coordination of multiple moral concerns (Helwig et al., 2014). Socially, in the U.S., the transition from elementary school to middle school can provide more opportunities to meet economically diverse peers, which may inform developing views on inequality (Elenbaas & Killen, 2019). Moreover, awareness, understanding, and investment in broader civic, economic, and political systems often increases with the transition from childhood to adolescence (Flanagan, 2013). However, because research questions to date have focused on either the origins of fairness principles in childhood or the social implications of beliefs in adolescence, this important developmental period in which older children and early adolescents may begin to integrate concepts of distributive justice across the societal and peer levels has been largely overlooked.

Third, children's beliefs about societal fairness have rarely been explored, in general or in relation to potential differences by family SES. Moreover, the evidence for SES differences in children's reasoning about distributive justice among peers is scarce and relatively inconsistent. Overall, more research is necessary to explore the potential role of children's (and adolescents') own socioeconomic background in their views on distributive justice at multiple levels.

# Overview and Hypotheses for the Study

Distributive justice is an important part of moral development (Killen & Dahl, 2021; Turiel et al., 2016). Current theories emphasize potential continuities in developing thinking about how resources and opportunities should be distributed at the societal and peer levels (Arsenio, 2015; Elenbaas et al., 2020), but these hypothesized relations are just beginning to be tested. To advance theory and integrate previously disparate areas of research, this study was designed to examine how children's and adolescents' views on distributive justice in society inform their decisions about how to address similar issues within their sphere of influence.

First, we assessed participants' perceptions of how wealth is distributed in U.S. society today, expectations for how it will be distributed in the future, beliefs about how it should be distributed, and beliefs about the fairness of current economic systems (system justification). Then, we tested the extent to which participants' views on economic stratification and economic systems informed their behavior, judgments, and reasoning about how access to an educational opportunity should be allocated between hypothetical rich and poor peers, when access had previously been restricted based on social class. We recruited a sample of 8- to 14-year-olds, capturing a period of development during which we anticipated that older children and early adolescents might begin to connect concepts of distributive justice across the societal and peer levels. Finally, our sample ranged from middle- to higher-SES, allowing for exploratory tests of how participants' own position in the economic hierarchy might relate to their views on distributive justice.

### Societal Level

We based our hypotheses about older children's and early adolescent's thinking about societal-level distributive justice on the moral and social developmental considerations outlined above as well as prior studies with adolescents (e.g., Arsenio & Willems, 2017; Flanagan & Kornbluh, 2019). We hypothesized that, between 8 and 14 years, participants would increasingly report that wealth *is currently* 

unequally distributed (H1a) and *should be* more equally distributed (H1b), and that U.S. economic systems are *more* unjust (H2). We predicted stronger beliefs that wealth should be more equally distributed (H3a) and lower system justification beliefs (H3b) among higher-SES participants; but because our participants were younger than those in previous studies H3a and H3b were considered exploratory.

#### Peer Level

We based our hypotheses concerning participants' thinking about peer-level distributive justice on the moral and social developmental considerations outlined above as well as prior research on older children's understanding of equity (e.g., Elenbaas, 2019). We hypothesized that participants would be more likely to personally allocate (H4a), and positively evaluate allocating (H4b), more opportunities to poor peers over rich peers when they had direct evidence (from an experimental manipulation) that poor peers had been excluded in the past. We tested the role of participant SES on peer-level opportunity allocation, but due to inconsistencies in prior findings these were exploratory tests (H5).

### **Integrating Societal and Peer Levels**

Current moral developmental perspectives on distributive justice predict especially close connections between developing reasoning about how resources should be distributed at the peer and societal levels (Arsenio, 2015). Two prior studies provided some indirect support for this proposition (Elenbaas, 2019; Kornbluh et al., 2019), but the current study aimed to test it directly. Linking the societal and peer levels, we proposed two sets of hypotheses. (a) Participants who believed that the distribution of wealth in society should be more equal would personally allocate (H6a), and more positively evaluate allocating (H6b), more opportunities to poor peers over rich peers. (b) Participants who believed society was less just (i.e., held lower system justification beliefs) would personally allocate (H7a), and more positively evaluate allocating (H7b), more opportunities to poor peers over rich peers. Evidence confirming these hypotheses would indicate that the ways in which participants thought societal resources should be distributed informed their own decisions when they had an opportunity to influence access to resources among peers.

#### Method

# **Participants**

Participants were 8- to 14-year-olds (N=136) from 16 community sites (e.g., afterschool programs) in a midsized city in the northeastern U.S. A priori power analyses in G\*Power (Faul et al., 2009) based on the most complex models described in the Data Analytic Plan section indicted that a sample size of approximately 120 would be necessary to detect medium effects ( $f^2=.15$ ) with  $\alpha$  at .05 and power at .80. At each site, all youth in third through eighth grade were invited to participate via a letter distributed to parents by site staff on behalf of the study team.

Most parents agreed to provide demographic information for their family. The sample was fairly evenly balanced by child gender, and was primarily White and middle- to higher-SES (based on parents' education and family income); see Table 1 for complete sample details. The sample was slightly more advantaged on

**Table 1**Sample Demographics

	Chile	lren	Pare	nts
Demographics	%	n	%	n
Age				
8 years	8%	11		
9 years	15%	21		
10 years	15%	21		
11 years	28%	38		
12 years	18%	24		
13 years	13%	17		
14 years	3%	4		
Gender				
Girl/mother	47%	64	73%	99
Boy/father	38%	51	9%	12
Not provided	15%	21	18%	25
Race or ethnicity				
White	60%	82	66%	90
Black	8%	11	9%	12
Latinx	4%	6	2%	3
Asian	2%	2	4%	6
Other	2%	2	1%	1
Multiracial/multiethnic	5%	7	2%	3
Not provided	19%	26	15%	21
Approximate annual family income				
<\$10,000 <del>-</del> \$25,000			4%	6
\$25,000-\$50,000			6%	9
\$50,000-\$75,000			13%	18
\$75,000-\$100,000			13%	17
\$100,000-\$150,000			29%	39
\$150,000-\$200,000			9%	12
>\$200,000			9%	12
Not provided			17%	23
Highest level of education				
Some high school			1%	1
High school graduate			6%	9
Some college			23%	31
Bachelor's degree			22%	30
Graduate degree			33%	45
Not provided			15%	20
Total N	136			

average than the population in the county where the study took place; at the time of data collection the median annual family income in the area was \$72,653, 22% of families were classified as living in poverty based on the Federal Poverty Threshold, and 7% of adults were unemployed (U.S. Census Bureau, 2019). In this county, approximately 77% of children are White, 16% are Black, 4% are Asian, and 3% are multiracial; additionally, 9% are Latinx. Parents were not asked about their political affiliation. According to the Board of Elections, in 2019 approximately 42% of voters in the county were Democrats, 27% were Republicans, and 31% affiliated with another party or were unaffiliated.

#### **Procedure**

This study was approved by the Research Subjects Review Board at the University of Rochester; 00003009, "Peer Relationships and Emotional Wellbeing." Parent consent and child assent were obtained for all participants. Children completed their surveys for approximately 20 min in quiet spaces at each site in the winter and spring of 2019.

#### Measures

The surveys were comprised of two main sections. One section assessed perceptions, expectations, and beliefs about societal wealth distribution and system justification beliefs. The other section assessed behavior, judgments, and reasoning about allocating access to opportunities. Section order was counterbalanced between subjects. Complete measures are available on Open Science Framework: https://osf.io/6adwv/

#### Societal Level

Perceptions, Expectations, and Beliefs About Wealth Distribution. Participants responded to three questions using a measure from Flanagan and Kornbluh (2019), adapted from Evans et al.(1992). They were first presented with images of five types of societies with varying degrees of inequality and a description of each: (a) "a society with a small group at the top, very few people in the middle, and most people at the bottom"; (b) "a society like a pyramid, with a small group at the top, more people in the middle, and a lot at the bottom"; (c) "a pyramid, except that just a few people are at the very bottom"; (d) "a society with most people in the middle"; (e) "a society with many people at the top and only a few near the bottom." Thus, Society "a" is the most unequal because wealth is highly concentrated among a small population at the top and Society "e" is the most equal because almost everyone has access to wealth.

Participants indicated which picture they thought was: (a) "the closest to the United States as it is today" (current); (b) "what the United States will be like in 20 years" (future); and (c) "what the United States should be like" (should be). This measure is used in the International Social Survey Program and has been adapted for developmental research in several countries (e.g., Barreiro et al., 2019).

**System Justification Beliefs.** Participants responded to five questions using a measure from Arsenio and Willems (2017), adapted from Kay and Jost (2003), on a scale from 1 = *strongly disagree* to 6 = *strongly agree*. (a) "The United States is the best country in the world to live in"; (b) "Everyone has a fair chance at wealth and happiness"; (c) "Our society is getting worse every year" [reverse scored]; (d) "Society is set up so that people usually get what they deserve"; (e) "In general, society is fair." Scores were averaged across all five items; higher scores indicate greater system justification.

#### Peer Level

Behavior, Reasoning, and Judgments About Access to Opportunities. Participants responded to five questions using a measure from Elenbaas (2019). They were first presented with hypothetical peers, some described as rich and some described as poor, who lived in a city where a local zoo put on an annual science summer camp. In a between-subjects manipulation, half the participants learned that the camp had excluded poor children in the past and half learned that the camp had excluded rich children in the past. This year, many rich and poor peers wanted to attend but only 10 spaces were available.

First, participants were asked to divide the spaces between poor and rich peers on a scale from 10/0 (all to poor peers) to 0/10 (all to rich peers), including all options in between, and explain their decision in an open-ended format. Participants' reasoning was later coded into one of six mutually exclusive conceptual categories from Elenbaas (2019). Table 2 presents the categories, their

 Table 2

 Reasoning Coding System

Conceptual category	Definition	Examples
Addressing economic inequality	References to economic inequality in society and its implications	"Rich people have already got a lot of privilege so they can go another time, unlike the people with a little bit of money."
	for access to opportunities	"Kids who are poor don't usually have the chance to do things like Zoo Camp."  "I said for the kids who have a little money to get all 10 spots [] when rich kids want things that the poor kids want it always goes to them."
		"Some families cannot afford trips, and the people that are rich can go a lot."
		"I think that if a family that can't afford a lot of fun things, if there is an opportunity, there should be a few more poor families that get to go."
		"Because kids that have money have a lot of choices and kids that don't barely got choices."
Ensuring equal representation	References to ensuring that mem-	"People should treat others equally, so five of the rich should go and five of the poor."
	bers of both groups are equally	"Because then it is even and even kids get to go."
	represented	"I gave those spaces to five rich and five poor because it needs to be fair."
		"This is an equal amount, so five rich kids can go and five poor kids can go."
		"I gave out the spaces that way because it seemed fair to take one half of each group."
		"This way is fair, half and half."
Rectifying access inequality	References to corrective action by giving greater opportunities to	"Because I feel the kids that have gone before should not go, they should give another kid a chance to have fun."
	the group that had been excluded in the past	"Only the kids with a lot of money have gone and the kids with little bit of money have not gone. They should get a chance to go."
		"Because the kids who have little money have never gone and kids who have a lot of money have."
Avoiding biased decisions	References to avoiding bias in the	"They should not be judged by the amount of money they have."
C	decision-making process	"The poor people get less [] but the rich should still go because it would be biased to not."
		"Everyone should be treated fairly, not depending on their amount of money."
Avoiding conflict	References avoiding potential disputes over access	"This way no one needs to fight about more rich people are getting in the camp or the other way around."
Ensuring access to learning	References to the opportunity as a learning experience	"They would want to learn about animals."

definitions, and examples of reasoning from each. Responses that did not fit into any category were coded as "Other." Coding was conducted by two research assistants unaware of the hypotheses. Using a subset of 30% of the data, interrater reliability (Cohen's  $\kappa$ ) was .89.

Next, participants evaluated four options on a scale from  $1 = really \ not \ okay$  to  $6 = really \ okay$ . (a) Equal: splitting the camp spaces evenly between poor and rich peers; (b) Impartial: using a random draw to determine who would attend; (c) Prioritize Poor: allocating more spaces to poor peers; or (d) Prioritize Rich: allocating more spaces to rich peers.

# Child Age

Participants reported their age in years, from 8 years to 14 years.

# **Parent Education**

As displayed in Table 1, parents reported their highest level of educational attainment on a scale from  $1 = some \ high \ school$  to  $5 = graduate \ degree$ , and their approximate annual family income on a scale from  $1 \le \$10,000$  to \$25,000 to  $7 \ge \$200,000$ . Parent education and family income were correlated at r = .57, p < .001. Parent education was used as the SES variable of interest for this study, in line with prior research on similar topics. For example, Flanagan and colleagues observed that higher levels of parental educational attainment were associated with a greater likelihood among adolescents of ascribing poverty to structural

factors and prioritizing need over merit in resource distribution decisions (Flanagan et al., 2014; Kornbluh et al., 2019).

# **Covariates**

Parents reported their child's gender and race and/or ethnicity (see Table 1). Gender was coded as 1 = boy and 0 = girl; no parents used the option to write in a different gender identity. To report race and/or ethnicity, parents were asked to "check all that apply," including an option to write in a racial/ethnic identity not listed. For analyses purposes, child race/ethnicity was coded as 1 = Person of Color and 0 = White.

#### **Data Analytic Plan**

All analyses were conducted in SPSS 25 (IBM, Armonk, NY, USA). We used general linear models to assess system justification beliefs (H2, H3b) and opportunity allocations (H4a, H5, H6a, H7a), and linear mixed models with an unstructured repeated covariance matrix to assess societal wealth distributions (H1a, H1b, H3a) and judgments about access to opportunities (H4b, H5, H6b, H7b). Model fit was assessed using ML estimation; RML estimation was used to interpret parameter estimates. All follow-up mean comparisons were conducted with Bonferroni correction for multiple comparisons. All confidence intervals reported are 95% CIs. Standardized regression coefficients are provided as indices of effect size. All models included participant gender and race/ethnicity as covariates. ICCs indicated little shared variance on any outcomes among participants from the same sites; site was not included in the models.

#### Results

#### **Descriptives**

Table 3 displays descriptive statistics and bivariate correlations for all study variables. At the societal level, participants perceived wealth to be somewhat unequally distributed (M = 2.98, SD 1.12) but moving toward less inequality in the future (M = 3.46, SD = 1.36). They also believed that wealth should be more equally (but not completely equally) distributed (M = 3.94, SD = 1.06), and believed U.S. economic systems were relatively fair, M = 3.93 (SD = .87).

At the peer level, participants allocated slightly more opportunities to poor peers (M = 6.24, SD = 2.56) than to rich peers, t(121) = 5.34, p < .001. When evaluating strategies to grant access to the opportunity, they evaluated equal positively (M = 4.63, SD = 1.44), impartial (M = 3.89, SD = 1.64) and prioritize poor (M = 3.80, SD = 1.79) more neutrally, and prioritize rich negatively (M = 2.68, SD = 1.61).

Older participants believed that wealth should be distributed more equally, r = .31, p < .001, reported lower system justification beliefs, r = -.25 p = .004, and evaluated the impartial allocation strategy more positively, r = .22, p = .01. Participants whose parents had higher educational attainment evaluated the prioritize rich strategy more negatively, r = -.20, p = .03. Finally, participants with lower system justification beliefs (r = -.19, p = .04) and participants who believed wealth should be distributed more equally (r = .19, p = .04) allocated more opportunities to poor peers.

# Societal Level: H1a, H1b, H2, H3a, H3b

# Perceptions, Expectations, and Beliefs About Wealth Distribution

The overall model was significant,  $\Delta \chi^2(21) = 333.41$ , p < .001. Perceptions, expectations, and beliefs differed, F(1, 96.55) = 18.39, p < .001. On average, participants believed that wealth should be (M = 3.84, SE = .11) and expected that it will be (M = 3.52, SE = .16) more equally distributed than it *currently is* today (M = 2.79, SE = .12), both ps < .001. Overall, beliefs about how wealth should be distributed and expectations for how it will be distributed in the future did not differ significantly, p = .63.

However, perceptions and beliefs also differed with age, F(3, 96.68) = 8.05, p < .001, supporting H1a and H1b. As illustrated in Figure 1, the older the participant the more *unequal* they perceived the *current* wealth distribution to be, b = -.17, 95% CI [-.30, -.03], p = .02,  $\beta = -.24$ , 95% CI [-.44, -.04], and the more *equal* they believed that it *should* be, b = .23, 95% CI [.11, .36], p < .001,  $\beta = .35$ , 95% CI [.16, .54]. Age was not significantly related to expectations for how wealth *will* be distributed, p = .88.

Finally, an exploratory test of H3a, F(3, 97.61) = 3.03, p = .03, found that the higher their parent's educational attainment the more equally participants believed that wealth should be distributed, b = .26, 95% CI [.06, .45], p = .02,  $\beta = .26$ , 95% CI [.06, .45]. Parent education was not significantly related to perceptions of the current wealth distribution (p = .17) or expectations for the future (p = .36). Participant gender and race were not significant covariates, p = .06 and p = .19.

# System Justification Beliefs

The overall model was significant, LR  $\chi^2(4) = 21.80$ , p < .001. Specifically, the older the participant the lower their system

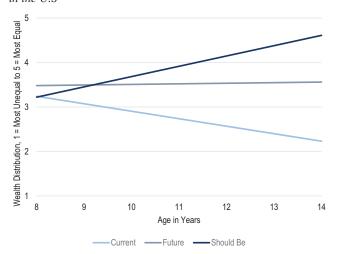
 Table 3

 Descriptive Statistics and Correlations for Study Variables

10.81 1.56 8 14  .44 .50 0 1  .25 .44 0 114 .11  .3.94 1.02 1 524**0122**  4.24 1.77 1 7150537** .57**  3.91 .87 1.60 5.8025** .28** .0606  2.98 1.12 1 511 .0511 .0102 .21*  3.46 1.36 1 511 .0511 .0102 .21*  3.46 1.36 1 513 .05000017  3.94 1.06 1 531** .22* .22*0009 .06  ial 3.89 1.64 1 622*19*04101102  ize poor 3.80 1.79 1 60606061410101003  ize rich 2.68 1.61 1 603071320*1102	Variables	M	M SD Mi	Min	Max	1	2	3	4	5	9	7	8	6	10	11	12	13
.44 .50 0 1 .04 .25 .44 0 114 .11 .394 1.02 1 524**0122** 4.24 1.77 1 7150537** .57** 3.91 .87 1.60 5.8025** .28** .060602 2.98 1.12 1 511 .0511010221* 3.46 1.36 1 531** .22*22*130604 4.63 1.44 1 6071305100906 tize poor 3.80 1.79 1 6060614101102 tize rich 2.68 1.61 1 603071320*1102	1. Child age	10.81	1.56	∞	14													
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2. Child gender	4.	.50	0	_	.00												
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4.63     1.44     1     6    07    13     .05     .10     .09     .06       trial     3.89     1.64     1     6     .22*    19*     .04    10    11    02       tize poor     3.80     1.79     1     6     .06     .06    14    10    10    0       tize rich     2.68     1.61     1     6    03     .07     .13    20*    11     .02	9. Wealth distribution: Should be	3.94	1.06	_	5	.31**	.22*	22*	.13	90:	04	.12	.18*					
3.89     1.64     1     6     .22*    19*     .04    10    11    02       3.80     1.79     1     6     .06     .06    14    10    10    03       2.68     1.61     1     6    03     .07     .13    20*    11     .02	10. Opportunity evaluation: Equal	4.63	1.44	-	9	70.—	13	.05	.10	60:	90:	90.	90:	07				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	11. Opportunity evaluation: Impartial	3.89	1.64	-	9	.22*	19*	.04	10	11	02	04	<b>–</b> .07		.34**			
2.68 1.61 1 603 .07 .1320*11 .02	12. Opportunity evaluation: Prioritize poor	3.80	1.79	-	9	90:	90:	14	10	10	03	.04	01		04	18		
	13. Opportunity evaluation: Prioritize rich	2.68	1.61	1	9	03	.07	.13	20*	11	.02	01	.00	05	17	.15	29**	
6.24  2.56  0  10  .10  .20*  .07 09 09 19*  -	14. Opportunity allocation to poor	6.24	2.56	0	10	.10	.20*	.07	09	09	19*	60	80.		36**	15	.31**	90

Child Gender 1 = boy. Child Race/Ethnicity 1 = person of color. Correlations are point-biserial, and correlations between continuous variables are Pearson'

Figure 1
Perceptions, Expectations, and Beliefs About Wealth Distribution in the U.S



Note. See the online article for the color version of this figure.

justification beliefs, supporting H2, Wald's  $\chi^2$  (1) = 12.64, b = -.18, 95% CI [-.28, -.08], p < .001,  $\beta$  = -.33, 95% CI [-.51, -.15]. The exploratory test of H3b was also significant; the higher their parent's educational attainment the lower the participant's system justification beliefs, Wald's  $\chi^2$  (1) = 5.03, b = -.18, 95% CI [-.34, -.02], p = .03,  $\beta$  = -.22, 95% CI [-.41, -.03]. Finally, boys scored higher in system justification than girls (p = .002), but participant race was not a significant covariate (p = .44).

# Integrating Societal and Peer Levels: H4a, H4b, H5, H6a, H6b, H7a, H7b

# Behavior, Reasoning, and Judgments About Access to Opportunities

**Allocations.** The overall model was significant, LR  $\chi^2(9) = 21.08$ , p = .01. Specifically, the more equally participants believed that wealth should be distributed, Wald's  $\chi^2(1) = 6.64$ , b = .73, 95% CI [.17, 1.28], p = .01,  $\beta = .30$ , 95% CI [.07, .53], and the lower their system justification beliefs, Wald's  $\chi^2(1) = 5.79$ , b = -.78, 95% CI [-1.41, -.14], p = .02,  $\beta = -.26$ , 95% CI [-.48, -.05], the more opportunities they allocated to poor peers. These findings supporting H6a and H7a are illustrated in Figure 2.

Allocations did not differ significantly by experimental condition, providing no support for H4a, Wald's  $\chi^2$  (1) = 2.11, b = .75, 95% CI [-.26, 1.75], p = .15,  $\beta$  = .15, 95% CI [-.05, .34]. Finally, allocations did not differ significantly based on participant age (p = .54), gender (p = .05), race (p = .20), parent education (p = .06), perceptions of the current wealth distribution (p = .70), or expectations for the future (p = .81).

**Reasoning.** When explaining their decision, 40% of participants reasoned about addressing economic inequality, 28% referenced ensuring equal representation, 15% reasoned about rectifying access inequality, 10% referenced avoiding biased decisions, 2% reasoned about avoiding conflict, 2% referenced ensuring access to learning, and 5% of reasoning was coded as "other." As displayed

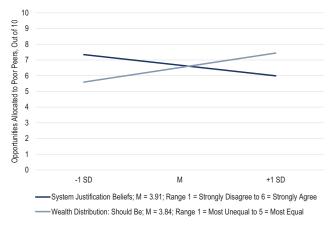
in Figure 3, participants' reasoning and allocation behavior were closely related,  $\chi^2(60) = 116.90$ , p < .001.

Most strikingly, almost all participants who reasoned about ensuring equal representation allocated the spaces at the summer camp equally between the two groups, while the majority of participants who reasoned about addressing economic inequality allocated more spaces or all of the spaces to poor peers. The smaller number of participants who allocated more to rich peers gave more mixed explanations for their decisions.

**Judgments.** The overall model was significant,  $\Delta \chi^2(36) =$ 77.72, p < 001. As illustrated in Figure 4, judgments differed by experimental condition, supporting H4b, F(4, 88.73) = 8.53, p < .001. When poor peers had been excluded in the past, participants supported dividing opportunities equally (M = 4.77, SE = .24)or prioritizing poor peers (M = 4.57, SE = .26) to a comparable degree, p = .99, and supported both strategies over dividing opportunities impartially (M = 3.79, SE = .27) or prioritizing rich peers (M = 2.03, SE = .24), all ps < .01. Dividing impartially was further preferred to prioritizing rich peers, p < .001. By contrast, when rich peers had been excluded in the past, participants supported dividing opportunities equally (M = 4.61, SE = .23) or impartially (M = 4.07, SE = .25) to a comparable degree, p = .28, and supported both strategies over prioritizing rich peers (M = 3.19, SE = .22), p < .001 or poor peers (M = 2.89, SE = .25), all ps < .05. Strategies prioritizing rich or poor peers were equally supported, p = .99.

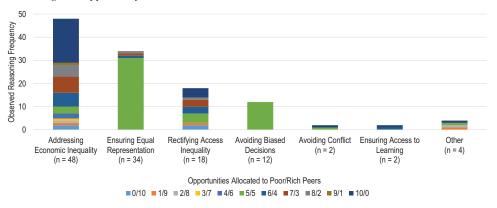
Participants' judgments did not differ significantly according to their beliefs about how wealth should be distributed or their system justification beliefs, providing no support for H6b or H7b; F(4, 88.83) = .09, p = .98 and F(4, 89.02), p = .85, respectively. Finally, for exploratory H5, parent education was related to one strategy, F(4, 89.30) = 3.23, p = .02; the higher their parent's educational attainment the more negatively participants evaluated prioritize rich, b = -.42, 95% CI [-.75, -.10], p = .01.  $\beta = -.28$ , 95% CI [-.49, -.07], all other ps > .05. Age was also related to one strategy; F(4, 89.84) = 2.68; older participants evaluated Impartial more positively, b = .28, 95% CI [.03, .54], p = .03,  $\beta = .28$ , 95% CI [.03, .52]; all other ps > .05. Participants' judgments did not differ significantly based on their perceptions (p = .97) or expectations (p = .44) about societal wealth distribution, or based on their gender (p = .16) or race (p = .52).

Figure 2
System Justification Beliefs, Beliefs About How Wealth Should be Distributed, and Opportunity Allocation Decisions



*Note.* See the online article for the color version of this figure.

**Figure 3** *Reasoning and Opportunity Allocation Decisions* 



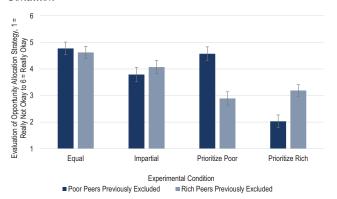
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#### Discussion

Recent research has brought important attention to developing moral reasoning about societal distributive justice problems, including high levels of economic inequality in the U.S. and around the world (Arsenio, 2018). Thus far, however, few studies have examined how developing beliefs about societal distributive justice may apply when children and adolescents have the opportunity to personally address inequalities among peers. To advance an integrative understanding of distributive justice in development, this study brought together previously disparate approaches to investigate how 8- to 14-year-olds' beliefs regarding the distribution of wealth and the fairness of U.S. economic systems informed their behavior, judgments, and reasoning about access to opportunities among rich and poor peers.

The results make three primary contributions to the literature. First, and most theoretically important, they provide direct evidence that children's and adolescents' views on distributive justice in society informed their decisions about distributive justice among peers. Specifically, the more equally participants believed that wealth should be distributed and the less they endorsed system justification beliefs the more opportunities they allocated to poor

Figure 4
Evaluations of Opportunity Allocation Strategies by Experimental
Condition



Note. See the online article for the color version of this figure.

peers. Moreover, many participants reasoned about their decision in terms of the need to address broader economic disparities. Second, prior research on societal distributive justice has focused on adolescents and adults, but this study found that participants as young as age 8 perceived economic inequality in society yet simultaneously believed current economic systems to be fair. This points to late childhood and early adolescence as an important developmental period during which youth begin to make connections between multiple distributive justice issues. Third, exploratory findings suggested that experiencing greater relative SES privilege (i.e., higher parental educational attainment) may have afforded some participants greater freedom to critique economic inequality. Each of these contributions is discussed in detail below.

# **Developing Beliefs About Societal Distributive Justice**

Building on a small but growing body of recent findings with adolescents (e.g., Arsenio & Willems, 2017; Flanagan & Kornbluh, 2019; Godfrey et al., 2019), this study found that even the youngest participants in this sample of 8- to 14 year-olds already believed that wealth *should* be more equally distributed in U.S. society than it currently *is*. However, they also believed that economic systems are set up so that people usually "get what they deserve," and expected that society will be more economically equal in the future than it is today. Overall, children's responses seemed to reflect a relatively optimistic view that, despite current disparities, the system operates as it should and economic conditions will improve in the future.

Relative to older children, early adolescents viewed economic systems as *less* fair and the current wealth distribution as *more* unequal, pointing to meaningful developmental shifts in beliefs about societal distributive justice. However, early adolescents still underestimated the magnitude of wealth inequality in society, overestimated the degree to which economic systems give everyone "a fair shot at wealth and happiness," and predicted that wealth will be more equally distributed in the future than it is today. U.S. adults, as well, typically underestimate the true scale of wealth disparities and believe that economic systems operate fairly (Arsenio, 2018). These beliefs are partly rooted in ideology; the idea that anyone can achieve upward mobility with enough

effort and ambition is widely available to children, adolescents, and adults in U.S. social, educational, and political discourse (Hunt & Bullock, 2016).

Moreover, most participants attended public schools in majority middle class neighborhoods, and most of their parents reported middle to higher levels of income and education for the area. Perceiving society to be somewhat (but not highly) economically stratified and somewhat (but not highly) economically unfair may also be consistent with participants' personal experiences. In the U.S. today, less than half of children grow up to make more than their parents (Chetty et al., 2017), but increasing economic segregation has resulted in affluent families clustering in neighborhoods that are spatially distant from lower- and middle-income households (Reardon & Bischoff, 2011). Thus, alongside meritocracy beliefs, a tendency to extrapolate from their own experiences may have further influenced participants' perceptions and expectations about economic inequality in the present and future.

# Integrating Distributive Justice at Societal and Peer Levels at a Key Time in Development

When asked who should have access to an educational opportunity, participants who believed that wealth should be more equally distributed and participants who reported lower system justification beliefs allocated relatively more opportunities to poor peers over rich peers. Thus, holding even slightly critical beliefs about the fairness of economic systems or even slightly more equitable beliefs about access to wealth resulted in a meaningful difference in the opportunity allocation scenario (in favor of poor peers). In fact, 40% of participants reasoned explicitly about the implications of economic inequality when explaining their opportunity allocation decision (e.g., "Kids who are poor do not usually have the chance to do things like Zoo Camp").

Moreover, consistent with past research (Elenbaas, 2019), when participants had direct evidence (from the experimental manipulation) that poor peers had been excluded from the summer camp in the past, they supported others' decisions to prioritize poor peers "this year." When they had evidence that rich peers had been excluded, participants supported others' decisions to divide the spaces equally or impartially. Children often support equitable resource allocation among peers even if they do not personally enact such distributions (Paulus & Essler, 2020). In fact, in the context of the current study, even with evidence of past discrimination 28% of participants reasoned about equality (e.g., "This is an equal amount, so five rich kids can go and five poor kids can go") and 10% directed more opportunities to *rich* peers. The evidence that participants often supported others' actions to redress past disparities—particularly those reflecting broader societal patterns of economic exclusion—indicates that they were open to arguments for correcting inequality even if they did not initially do so "on their own." Notably, the judgment questions asked participants to evaluate each approach in isolation, while the behavioral allocation task (implicitly) asked them to weigh all possibilities and arrive at an optimal conclusion. Overall, participants' support for prioritizing poor peers correlated positively with the number of spaces at the summer camp that they personally allocated to poor peers, r = .31, p < .001(see Table 3), indicating continuity in judgments and behavior.

It is likely that developing thinking about societal-level and peerlevel distributive justice is reciprocal. For example, older children draw on comparisons with peers' possessions and lifestyle to understand their own socioeconomic status (Mistry et al., 2015). These comparisons may help to explain why early adolescents in the present study increasingly recognized that U.S. society is not actually a level playing field where everyone has the same chance at upward mobility. While cross-sectional data do not allow for empirical conclusions regarding developmental directionality, future longitudinal work could illuminate the extent to which concepts of distributive justice in society and among peers may be reciprocally related across childhood and adolescence.

# **Exploring Children's and Adolescents' Own Position in** the Economic Hierarchy

When adolescents face multiple systemic barriers to upward mobility, believing in meritocracy may offer a sense of confidence that their persistence will eventually lead to economic success (Flanagan, 2013). Interestingly, exploratory findings from this study revealed that participants whose parents had higher levels of education reported lower system justification beliefs, stronger beliefs that wealth should be distributed more equally, and more negative evaluations of prioritizing rich peers for the educational opportunity. These differences were relative; for instance, participants whose parents had a graduate degree still believed that economic systems were fair (just less fair than participants whose parents had completed less formal school). Nevertheless, higher-SES participants may have been better positioned to acknowledge that the systems that benefit them are unfair, while at the same time not having to interrogate the implications of that unfairness for families such as theirs.

Adults are less likely to advocate for changes to unequal systems when they personally benefit from those systems (Brown-Iannuzzi et al., 2015). From a developmental perspective, children and adolescents from higher-SES families may simultaneously believe that society should be more economically equal while resisting changes that would lower their own likelihood of accessing opportunities. Future studies might investigate the extent to which greater economic security, in addition to higher levels of parental education, enables greater critique of economic inequality—so long as one's own resources are not at stake. Some participants in the present study reasoned explicitly about privilege when explaining their opportunity allocation decision (e.g., "Rich people have already got a lot of privilege so they can go another time, unlike the people with a little bit of money"). This suggests that assessing reasoning about the implications of economic inequality for everyday life may be an especially useful way to examine developing understanding of privilege.

#### **Limitations and Future Directions**

There are three primary limitations to the present study that point to important directions for continued investigation. This section also raises three additional considerations for future research. First, as noted above, longitudinal research is needed to examine potential reciprocal developmental relations between reasoning about distributive justice in society and among peers. Second, by including a majority White, majority middle- to higher-SES sample, this study mirrors sampling imbalances in developmental science more broadly (Roberts et al., 2020). Moreover, within the developmental research on economic and social inequality in particular, most studies on *beliefs* have sampled middle class White

children while most studies on the *effects* of inequality have included poor families and families of color (Brown et al., 2019).

Children occupying different points on an economic-social-cultural hierarchy may develop different beliefs about distributive justice in society and among peers. In fact, even with a relatively small range of family SES, this study found exploratory differences in children's and adolescents' beliefs and judgments. Research questions may call for either a socioeconomically diverse sample or a sample sharing a particular background, but in either case it is clear that a wider variety of perspectives is necessary and must be a priority for future studies in this area. For example, fully investigating the roles of economic privilege and neighborhood economic segregation in developing reasoning about distributive justice will require samples that are both higher and lower on the SES spectrum than the participants in this study.

A third potential limitation is that participants were asked to make decisions about access to an educational opportunity, but there are other peer contexts in which perceptions of societal distributive justice may play a different or more limited role. Older children distinguish between resources that are necessary for healthy development (e.g., food, education) and resources that are fun to have but best understood as luxuries (e.g., brand new toys, candy; Rizzo et al., 2016). Future studies could investigate whether system justification beliefs, for example, still influence decisions about access to opportunities with less clear connections to societal-level inequalities or less serious implications for recipients' wellbeing.

Future studies should also continue to investigate *children's* views on distributive justice at the societal and peer levels. Elementary-aged children perceive economic stratification in their neighborhoods, and rate majority middle-class neighborhoods as more fair than neighborhoods with many rich families or many poor families (Hazelbaker et al., 2018). These findings seem to echo adolescents' and adults' beliefs that wealth should be more equally distributed. The question of whether young children's perceptions of neighborhood wealth stratification predict their early attempts to rectify everyday inequalities among peers is open for investigation.

Additionally, future studies might investigate how developing political affiliations relate to developing views on distributive justice. Research on sociopolitical development has typically focused on adolescents, yet children pay attention to politics (Patterson et al., 2019), and activities related to political engagement may be one way in which children and adolescents are exposed to others' beliefs about distributive justice. For instance, although most adults rationalize aspects of the status quo, system justification beliefs are higher among political conservatives (Jost et al., 2015). Likewise, although most adults report that wealth should be more equally distributed, political liberals perceive a greater degree of current inequality (Arsenio, 2018). On the other hand, political affiliation is not significantly related to adolescents' capacity to acknowledge and critique structural causes of racial, gender, and economic inequalities (Diemer et al., 2019). In short, political affiliations are proxies for a variety of beliefs, including beliefs about how certain distributive justice issues can or should be resolved.

As a final note, this study was conducted in 2019, prior to the coronavirus pandemic and the ramp-up of the 2020 presidential election in the U.S. These major economic and political changes are affecting many aspects of U.S. children's and adolescents' development (Benner & Mistry, 2020), and may likewise influence developing views on distributive justice. The health and economic

impacts of the pandemic have been most severe for families who already faced significant stressors (i.e., lower-income families, families of color), again raising the question of how children's "place" in their stratified society shapes their views on distributive fairness.

In conclusion, this study provided correlational, experimental, and cross-sectional developmental evidence of relations between older children's and early adolescents' concepts of distributive justice at the societal and peer levels. These new findings demonstrate how developing beliefs about distributive justice in society inform children's and adolescents' decisions to ignore, exacerbate, or challenge disparities in access to resources and opportunities within their sphere of influence.

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