Children's concern for equity and ownership in contexts of individual-based and group-based
inequality

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Abstract

All societies have resource inequality, wherein some possess more resources than others. How should one respond to such inequality? We tested how children 4-13 years ($N = 298$) balance concerns about equity and ownership rights, when the two are at odds, in both individual (Study 1) and group (Study 2) contexts. Across these studies, children evaluated individuals who consumed their own or another's resources, and who themselves had similar or differing amounts of resources, which provided a comprehensive examination of children's competing concerns for ownership rights and equity. Overall, children evaluated the poor consuming resources of the rich as more acceptable than the rich consuming resources from the poor, suggesting that attention to redistributive justice is heightened in group-based contexts.

Keywords: ownership, inequity, inequality, children

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Wealth inequality is a global issue—one that routinely pits “haves” against “have-nots.” Even wealthy countries, like the United States, have severe gaps between rich and poor (Pew Research Center, 2018). In thinking about these inequalities, there are two key constructs that have opposing implications: equity and ownership rights. Equity considerations would encourage reducing inequalities, for example, by allowing someone with less to take resources from someone with more. In contrast, ownership considerations would focus on an owner's right to retain their property, even when doing so means maintaining inequalities. Here, we examine how children balance equity and ownership concerns in the context of (in)equality. To set the stage for this work, we start by reviewing how children grapple with these constructs.

From a young age, children are concerned with equity, considering what people have available to them and allocating resources in ways that redress inequalities. By age five, children distribute resources equitably and rate equitable distributions (i.e., allocating more resources to an individual with fewer resources) more positively than equal distributions (Rizzo & Killen, 2016). Additionally, older children (10-11 years) positively rate others who rectify group-based inequalities and themselves allocate more resources to disadvantaged groups (Elenbaas et al., 2016). More generally, children ages 5 to 11 years increasingly criticize, reject, and rectify inequalities in both first- and third-party contexts (Blake et al., 2015; Blake & McAuliffe, 2011; Elenbaas & Killen, 2016; Fehr et al., 2008; Olson et al., 2011; Shaw & Olson, 2012). Indeed, children's concern for redressing inequality spans well into the adolescent years (Arsenio & Willems, 2017; Barreiro et al., 2019).

At the same time, young children display a keen sense of ownership. By age three,

children respect and enforce the ownership rights of others (Friedman & Neary, 2008; Nancekivell et al., 2013, 2019; Ross et al., 2015; Rossano et al., 2011; Schmidt et al., 2013). For instance, young children readily track who owns what, side with owners versus non-owners during property disputes, protest when a third party attempts to take or throw away an item that does not belong to them, and use ownership information when distributing resources (Kim & Kalish, 2009; McEwan et al., 2016; Pesowski et al., 2019; Rossano et al., 2011). Taken together, children have clear sense of what ownership entails and respect the control over resources that ownership affords.

How do children balance concerns about equity and ownership rights when the two are at odds? Elenbaas (2019a) introduced children ages 5-7 years to two individuals: one who had many resources (i.e., crayons for a drawing task) and could therefore complete a task very well, and another who had fewer resources and could therefore not complete a task very well. After observing a third character give more resources to the advantaged individual than to the disadvantaged individual (because the advantaged individual performed better on the task), children rated the degree to which a further, equity-based redistribution conducted by a fourth character was acceptable (i.e., transferring rewards from the advantaged individual to the disadvantaged individual). The majority of children approved of the redistribution, but children who reasoned about the redistribution in terms of ownership were less approving than children who reasoned about it in terms of equality, highlighting how children's concern for ownership can override their concern for equity (see also Elenbaas, 2019b). However, Elenbaas (2019a) did not specify why the two individuals had different amounts of resources to begin with—perhaps the character presented as advantaged *earned* more crayons after previously working harder on another task—which could have lessened children's concern for equity.

To equate the merit of those with more versus fewer resources, Essler and Paulus (2020) introduced 3- to 8-year-olds to advantaged (“rich”) and disadvantaged (“poor”) individuals who both “work[ed] equal amounts and equally hard,” and showed them a third-party protagonist who redistributed resources between the two (i.e., they took from the rich individual to give to the poor individual or they took from the poor individual to give to the rich individual). The youngest children (age 3) evaluated these redistributions similarly, but older children were more accepting of taking from the rich individual than taking from the poor individual.

Collectively, these previous studies suggest that when asked to consider two differentially resourced individuals, children over the age of 3 were more accepting of taking from the rich and giving to the poor (which decreased inequality) and less accepting of taking from the poor to give to the rich (which increased inequality). Though these previous studies have provided important insights, key design considerations limit our understanding of how children balance concerns for ownership with concerns for equality. Specifically, prior work downplayed the role of ownership in several respects, leaving open how children would reason about inequality when faced with a stronger test of ownership.

First, resource redistributions were carried out by a neutral third-party protagonist who was licensed to do so (Elenbaas, 2019a; Essler & Paulus, 2020). For example, Elenbaas (2019a) explicitly presented the neutral third party as an authority figure “in charge” of the redistribution. Authority figures often have a greater right to redistribute resources (e.g., a preschool teacher redistributing art supplies or snacks, or a department chair redistributing lab space), as well as a greater obligation to consider factors other than ownership, such as the broader welfare of the group (Ross, 1996). For this reason, using neutral third parties to carry out redistributions may have underestimated the role of ownership in these judgments.

Second, resource distributions may be only temporary (e.g., as when a parent prompts a child to share their toys at the playground) and thus not necessarily a violation of ownership rights. Resources distributed at one point in time can be distributed back in the future. A clearer focus on ownership rights would involve consuming resources, thereby making future redistributions impossible. The prime example of this is eating (i.e., once consumed, food can no longer be returned). In such a scenario, ownership rights (eating your own food) or ownership violations (eating someone else's food) are particularly powerful because they are irreversible.

Third, prior research typically introduces a confound, in which making resources more equal involves redistributing them (i.e., taking from a rich individual and giving to a poor individual). However, sensitivity to inequality need not require resource redistribution. A more direct test would entail asking children to evaluate inequalities in which rich and poor people consume *their own* resources. Do children object more when a poor person consumes their own resources than when a rich person does so? This question not only provides a cleaner test of children's commitment to resource equality per se, but also raises a broader set of issues regarding how children think about the ownership rights of rich and poor individuals, including whether the poor may be afforded fewer rights over their resources than the rich.

Fourth, resources were always (re)distributed between individuals. Yet inequalities exist not only at the level of the individual, but also at the level of entire groups (e.g., inequality based on gender, nationality, or race). Indeed, the reasons for inequalities often differ as a function of whether it is with individuals (e.g., merit-based inequality; such that one individual works harder for their resources) or with groups (e.g., structural-based inequality; such that one group is systematically prevented from acquiring resources). Young children distinguish between those reasons, perceiving the former as fairer than the latter (Rizzo & Killen, 2020). Thus, one untested

possibility is that children reason that it is relatively unacceptable for a poor individual to consume resources from a rich individual, given concerns about meritocratic fairness, but relatively acceptable for a poor group to consume resources from a rich group, given concerns about structural unfairness. Alternatively, children might perceive group-based inequalities as normative (e.g., a group that *is* poor *should be* poor; see Roberts et al., 2017) and may therefore believe that it is particularly unacceptable for the poor to consume resources from the rich.

In short, although previous research provided compelling evidence that young children privilege equity over ownership (Elenbaas, 2019a; Essler & Paulus, 2020), what remains unclear is whether children do so under conditions that do not involve authority figures, temporary exchanges, resource distributions, or individual-based contexts, each of which could maximize children's attention to equality and minimize their attention to ownership.

The Present Research

We tested children's (4-13 years) evaluations of resource consumption in the context of inequality. By recruiting children across a wide age range, including those in Elenbaas (2019a) and Essler and Paulus (2020), we were able to test whether children's concern for equity and ownership changes across early childhood.

In contrast to prior work, we asked children to evaluate individuals who consumed another individual's resources or their own resources (Study 1), and to evaluate individuals who consumed another group's resources or their own group's resources (Study 2). In doing so, we 1) eliminated the use of a third party that could authorize the redistribution, 2) tested whether children distinguish between consuming another's resources and consuming one's own resources, and 3) examined whether children distinguish between resource consumption in individual and group contexts. Additionally, children evaluated resource consumption under

conditions of both inequality and equality. Data were collected from September 2015 through July 2016. Data and code are made available online via the OSF ([link](#)).

STUDY 1

If children privilege equity over ownership, they should be more accepting of a poor individual consuming resources from a rich individual than of a rich individual consuming resources from a poor individual. Alternatively, if children privilege ownership over equity, they should evaluate consuming another individual's resources similarly, irrespective of the resource distribution.

In Study 1 (see Table 1 for the full experimental design), we introduced children to novel characters and asked them to judge whether it was acceptable or unacceptable for one of these characters to consume a resource belonging to the other or to consume one of their own resources. We also varied the distribution of the resources. On half the trials, the resources were unequally distributed (one character was rich and another was poor), and on the remaining trials, the resources were equally distributed (both characters were rich, or both characters were poor). Thus, we tested the extent to which children's judgments about resource consumption varied as a function of a) whether the characters consumed another's resources or their own resources, b) whether the characters consumed resources from the rich or from the poor, and c) whether the resources were unequally or equally distributed.

Method

Participants

One-hundred and forty-two children 4-13 years completed the study (44% female, 56% male; $M = 8.26$ years, $SD = 2.47$ years). Children were predominantly White (75% White, 8% Multiracial, 4% Black/African American, 1% Asian/Asian American, 5% Hispanic/Latino, 5%

other, 1% not reported). An additional 19 children were excluded due to failing at least one of the comprehension checks, which required children to correctly indicate which of two characters had more resources, or whether they had the same number. Children were recruited via lab spaces in museums in a mid-sized university city located in the Midwestern United States and given a small thank-you gift for their participation.

Materials and Procedure

All materials were presented online via Qualtrics (stimuli available online via the OSF: [link](#)). First, children were randomly assigned to either the Other Condition (one character consumed another's resources) or the Own Condition (one character consumed their own resources). Across both conditions, children were introduced to cartoon drawings of novel characters (e.g., Hibble and Glerk): "This is Hibble [with an arrow pointing Hibble] and this is Glerk [with an arrow pointing to Glerk]." Characters were gender-neutral and appeared on opposite sides of the screen. In addition to the label provided, characters' clothing patterns differed (e.g., orange ovals, green stripes). Also, each character was positioned next to a pile of color-matched resources (berries) that reflected either abundant resource availability (15 berries, which for convenience we refer to hereafter as "rich") or minimal resource availability (2 berries, which for convenience we refer to hereafter as "poor").

There were four types of scenarios, each depicting a pair of novel characters in which we manipulated the resource distributions (i.e., rich vs. rich, rich vs. poor, poor vs. rich, poor vs. poor). Each character's resources were labeled with that character's name (e.g., Hibble eats Hibble berries), to aid with children's processing and recall of information and to emphasize ownership.

When each character was introduced, their resource level and availability were made

explicit (e.g., for rich characters: “Look, Hibble has lots and lots of Hibble berries. It has enough Hibble berries for the whole day.”; for poor characters: “Look, Glerk doesn’t have a lot of Glerk berries. It doesn’t have enough Glerk berries for the whole day.”). Next, participants completed a comprehension check (e.g., “Who has more berries, Hibble, Glerk, or do they both have the same?”). Children who did not answer these questions correctly were excluded from the analyses. Across children, we counterbalanced the order in which the pairs of characters were presented and randomized the order in which the characters within a pair and their associated questions were presented.

Next, participants in the Other Condition were shown characters who consumed another’s resources (e.g., “Look, Hibble is eating one of the Glerk berries”), whereas participants in the Own Condition were shown characters who consumed their own resources (e.g., “Look, Hibble is eating one of the Hibble berries”). Across conditions, each time a character consumed a resource, one resource (i.e., berry) was removed from the initial pile of resources and displayed above the consuming character. Within each condition, there were eight trials, two within each of the four scenarios (see Table 1).

On each trial, participants were asked to evaluate each behavior (e.g., “Is it OK or not OK for Hibble to eat one of the Glerk berries?”). Children who responded “OK” were asked how positive the behavior was (1 = a little good, 2 = very good, 3 = very, very good) and participants who responded “not OK” were asked how negative the behavior was (1 = a little bad, 2 = very bad, 3 = very, very bad). Scores were then recoded to be on a single scale ranging from 1 (very, very bad) to 6 (very, very good). Participants were also asked whether they wanted to be friends with the person engaged in the behavior. Those data revealed patterns similar to those from the positivity/negativity scale and are available in our supplemental materials.

Results

We analyzed the data via a mixed-effects linear regression model with condition (other resources, own resources; effect-coded with taking another's resources = -1), individual target resources (poor, rich; effect-coded with poor = -1), resource distribution (inequality, equality; effect-coded with inequality = -1), age (mean-centered), and the interactions involving these variables, with random intercepts by participant ID. The dependent variable was children's evaluation of the behavior (1 = very, very bad, 6 = very, very good). This model yielded several significant effects, which were subsumed by a significant condition by target resources by resource distribution interaction (there were no significant effects involving age; see Table 2 for the full model output). We teased these interactions apart below by first analyzing participants' responses to consuming another's resources, followed by participants' responses to consuming one's own resources. Significant effects were additionally probed by paired-sample *t*-tests and *t*-test comparisons to the midpoint (i.e., 3.5). The data are depicted graphically in Figure 1 (bar chart) here and in Figure S1 (scatterplot) in the supplemental materials.

Consuming Another's Resources. Overall, children were generally *unaccepting* of consuming another's resource irrespective of target resource level and resource distribution, suggesting that ownership concerns outstripped equity concerns. All means fell significantly below the midpoint (i.e., 3.5), $ts \geq 4.23$, $ps < .001$ (see Figure 1). At the same time, ownership concerns were weighed differently depending on both target resource level and resource distribution. More specifically, we observed a significant main effect of resource distribution ($B = -.37$, $SE = .15$, $t = -2.46$, $p = .014$, 95% CI: [-.66, -.08]), which interacted with target resources ($B = .57$, $SE = .21$, $t = 2.73$, $p = .007$, 95% CI: [.16, .99]). Under conditions of *inequality*, children provided equivalent judgments of rich individuals who consumed resources from poor

individuals ($M = 2.82$) and poor individuals who consumed resources from rich individuals ($M = 2.76$; mean comparison: $t = 0.32, p = .715, 95\% \text{ CI } [-.32, .44]$). In contrast, under conditions of *equality*, children were more approving of rich individuals who consumed resources from other rich individuals ($M = 2.97$) than of poor individuals who consumed resources from other poor individuals ($M = 2.46$; mean comparison: $t = -2.94, p = .004, 95\% \text{ CI } [-.86, .17]$).

Consuming Own Resources. Overall, children were generally *accepting* of consuming one's own resources irrespective of target resource level and resource distribution. All means fell significantly above the midpoint (i.e., 3.5), $t_s \geq 2.62, p_s \geq .010$ (see Figure 1). However, again, children were sensitive to target resource level and resource distribution. More specifically, we observed a significant main effect of resource distribution ($B = -.47, SE = .15, t = -3.08, p = .002, 95\% \text{ CI: } [-.76, -.17]$), which interacted with target resources ($B = 1.25, SE = .21, t = 5.84, p < .001, 95\% \text{ CI: } [.83, 1.67]$). Under conditions of *inequality*, children provided equivalent judgments of rich individuals who consumed their own resources ($M = 4.27$) and poor individuals who consumed their own resources ($M = 4.35$; mean comparison: $t = -0.39, p = .697, 95\% \text{ CI } [4.27, 4.35]$). In contrast, under conditions of *equality*, children were more accepting of rich individuals who consumed their own resources ($M = 5.06$) than of poor individuals who consumed their own resources ($M = 3.89$; mean comparison: $t = -6.55, p < .001, 95\% \text{ CI } [-1.53, -.82]$).

Discussion

Recent research suggests that children privilege equity concerns over ownership concerns (Elenbaas, 2019a; 2019b; Essler & Paulus, 2020). However, we tested whether children privilege equity over ownership under conditions that more directly highlight ownership. Thus, Study 1 examined children's concern for equity and ownership while controlling for these and other

factors.

Collectively, our results indicate that children did not necessarily privilege equity over ownership rights. First, children were generally accepting of individuals consuming their own resources versus those of others. In this way, children were quite attentive to ownership. Indeed, children generally disapproved of individuals consuming others' resources and rated rich individuals consuming resources belonging to poor individuals and poor individuals consuming resources belonging to rich individuals similarly. This latter finding suggests that concerns about equity may be weaker in contexts where redistributions are irreversible and not sanctioned by authority figures. Even when consuming their own resources, children provided comparable ratings of rich consumers and of poor consumers, at least under conditions of inequality.

Under conditions of equality, however, children rated rich individuals consuming their own resources more positively than poor individuals doing so. Here, we see that resource level does matter, even when evaluating consumption of one's own resources. That is, under conditions of equality among two rich individuals, children might see no issue with consuming one's own resources (i.e., resources are abundant). However, under conditions of equality among two poor individuals, children might be less positive toward consuming one's own resources because doing so makes scarce resources even scarcer. Thus, these findings suggest that although children are generally accepting of individual's consuming their own resources, they are nonetheless sensitive to the number of resources available (i.e., more accepting under conditions of abundance and less accepting under conditions of scarcity).

Taken together, results from Study 1 add to the growing body of work examining the ways in which children balance ownership and equity concerns by demonstrating that the extent to which these concerns are weighed differ as a function of context. In contrast to prior work (cf.

Elenbaas, 2019a, 2019b; Essler & Paulus, 2020), in our individual context, children did not clearly privilege equity over ownership, even in cases where poor individuals consumed resources belonging to rich individuals who had more than enough for themselves.

STUDY 2

In Study 1, children did not systematically privilege equity concerns over ownership concerns. In Study 2, we tested whether reframing these scenarios as involving group contexts would yield different judgments. Groups involve people working together to achieve joint goals and who may compete with other groups for resources (Dunham, 2018). Additionally, resource distributions (i.e., whether one group is relatively advantaged or disadvantaged) become particularly important for the preservation of the group. Attention to the implications of differences in resources may be heightened in group-based contexts, yielding more favorable evaluations of poor group members consuming resources belonging to rich groups versus rich group members consuming resources belonging to poor groups. Relatedly, children are especially attentive to norms in group-based versus individual-based contexts, which again highlights the greater potential for sensitivity to resource distribution to emerge (Roberts et al., 2017). Lastly, children view group-based inequalities as less fair than individual-based inequalities, which may motivate them to rectify the inequality (Rizzo & Killen, 2020). Thus, resource-based decisions made in the context of groups may differ from those made in the context of individuals.

If children privilege equity over ownership in a group context, they should be more accepting of a poor group member who consumes resources from a rich outgroup than of a rich group member who consumes resources from a poor outgroup. Alternatively, if children privilege ownership over equity in the context of group-based inequality, they should disapprove

of consuming outgroup resources, irrespective of the resource distribution. Also, if children privilege equity over ownership in a group context, they should be more accepting of a rich group consuming their own resources than of a poor group consuming their own resources, because the former reduces inequality (i.e., the rich get poorer) whereas the latter increases it (i.e., the poor get poorer). To test these possibilities, children completed a task that was identical to the one used in Study 1, with the exception that we introduced them to groups instead of individuals (see Method).

Method

Participants

One-hundred and fifty-six children 4-13 years completed the study (49% females, 51% males; $M = 8.38$, $SD = 2.56$). Children were predominantly White (67% White, 6% Black/African American, 7% Asian/Asian American, 2% Hispanic/Latino, 5% Multiracial, 9% other; 4% not reported). An additional 11 children were excluded due to failing at least one of the comprehension checks. Children were recruited via lab spaces in museums in a mid-sized university city located in the Midwestern United States and given a small thank-you gift for their participation.

Materials and Procedure

The materials and procedure paralleled those in Study 1, with the exception that children were introduced to groups (e.g., “This group is called Hibbles and this group is called Glerks”), rather than to individuals (e.g., “This is Hibble and this is Glerk”). Thus, instead of being shown one character on each side of the screen, participants were shown three characters on each side of the screen. Children were then randomly assigned to either evaluate individual group members consuming resources belonging to other groups (Outgroup Condition) or consuming their own

group's resources (Ingroup Condition). Examples of children's explanations for their evaluations in the Outgroup Condition, which were collected from a subset of children for exploratory purposes, are available in the online supplemental materials.

Results

We analyzed the data via a mixed-effects linear regression model with condition (Outgroup, Ingroup; effect-coded with intergroup = -1), target resources (poor, rich; effect-coded with poor = -1), resource distribution (inequality, equality; effect-coded with inequality = -1), age (mean-centered), and the interactions among these four variables as our primary fixed effects of interest, with random intercepts by participant ID. The dependent variable was children's evaluation of the behavior (1 = very, very bad, 6 = very, very good). This model yielded mostly significant effects, including the highest-order age by condition by resource distribution by target resources interaction (see Table 3 for the full model output). Below, we tease apart these interactions by first analyzing children's responses in the intergroup condition, followed by children's responses in the intragroup condition. Significant effects were additionally probed by paired-sample *t*-tests. The data are depicted graphically in Figure 2 here (bar chart) and in Figure S2 (scatterplot) in the supplemental materials.

Consuming the Outgroup's Resources. Overall, children were generally *unaccepting* of each scenario, with means falling significantly below the midpoint (i.e., 3.5), $t_s \geq 3.85$, $p_s < .001$, except when the poor group member consumed resources from the rich outgroup, $t = 0.76$, $p = .448$ (see Figure 2). At the same time, results from our model revealed that ownership concerns were weighed differently depending on both target resource level and resource distribution. More specifically, we observed significant main effects of target resources ($B = 1.48$, $SE = .13$, $t = 11.71$, $p < .001$, 95% CI: [1.23, 1.73]), and resource distribution ($B = .42$, $SE = .13$, $t = 3.29$, $p =$

.001, 95% CI: [0.37, 0.66]), which were qualified by a significant interaction between target resources and resource distribution ($B = -1.00$, $SE = .18$, $t = -5.59$, $p < .001$, 95% CI: [-1.35, -0.65]). Under conditions of inequality (i.e., when resource levels differed across groups), children were more accepting of the poor group member who consumed resources from the rich outgroup ($M = 3.60$) and less accepting of the rich group member who consumed resources from the poor outgroup ($M = 2.12$; mean comparison: $t = -7.84$, $p < .001$, 95% CI [-1.84, -1.10]). Under conditions of equality (i.e., when resource levels were the same across groups), children were more accepting of the rich group member who consumed resources from the rich outgroup ($M = 3.02$) and less accepting of the poor group member who consumed resources from the poor outgroup ($M = 2.54$; mean comparison: $t = -2.59$, $p = .01$, 95% CI [-.85, -.11]).

Moreover, children were more accepting of the poor group member who consumed resources from the rich outgroup, and less accepting of the rich group member who consumed resources from the rich outgroup (mean comparison: $t = 3.17$, $p = .001$, 95% CI [.22, .94]), suggesting that children privileged equity concerns over ownership (i.e., it was more acceptable for the poor to consume from the rich outgroup than it was for the rich to do so). Also, children were more accepting of the poor group member consuming resources from the poor outgroup and less accepting of the rich group member consuming resources from the poor outgroup (mean comparison: $t = -2.17$, $p = .03$, 95% CI [-.78, -.04]), again suggesting that children privilege equity concerns over ownership (i.e., it was more acceptable for the poor to consume from the poor outgroup than it was for the rich to do so, which would increase the existing inequality).

We additionally observed a significant interaction involving age and target resources ($B = .71$, $SE = .13$, $t = 5.59$, $p < .001$, 95% CI [0.46, 0.95]). Simple slopes analyses revealed that older children more positively rated the poor group member who consumed resources from the rich

group ($B = .59$, $SE = .16$, $t = 3.67$, $p < .001$, 95% CI [.28, .90]), as well as increased acceptance of the rich group member who consumed resources from another rich outgroup ($B = .39$, $SE = .16$, $t = 2.36$, $p = .019$, 95% CI [.07, .69]). In short, older children were more accepting of consuming resources from a rich outgroup, irrespective of the resource distribution.

Consuming the Ingroup's Resources. Here, children were generally *accepting* of rich group members consuming their group's resources, with means falling significantly above the midpoint (i.e., 3.5), $ts \geq 12.51$, $ps < .001$, but generally *unaccepting* of poor group members doing so, with means falling significantly below the midpoint (i.e., 3.5), $ts > 5.71$, $ps < .001$ (see Figure 2). Indeed, a main effect of target resources ($B = 2.34$, $SE = .15$, $t = 15.37$, $p < .001$, 95% CI: [2.04, 2.64]) revealed that it was more acceptable for the rich group member to consume ingroup resources ($M = 4.91$) than it was for the poor group member to do so ($M = 2.61$). We additionally observed a main effect of age ($B = -0.34$, $SE = .14$, $t = -2.47$, $p = .014$, 95% CI: [-0.60, -0.07]), revealing that acceptance declined with age. No other effects were statistically significant.

Discussion

Study 2 suggests that children do privilege equity over ownership rights, in the context of groups. Children were relatively more accepting of poor group members consuming resources from rich outgroups than they were of rich group members consuming resources from poor outgroups, and they were relatively less accepting of poor groups member consuming ingroup resources and more accepting of rich group members consuming ingroup resources. Interestingly, these data suggest two seemingly contradictory ways by which young children evaluate resource inequities in group-based contexts. On the one hand, it was relatively acceptable for poor group members to consume resources from rich outgroups, which reduces

the inequality by redistributing the resources, but does so by violating the ownership rights of the rich. At the same time, it was relatively unacceptable for poor group members to consume *their own* group's resources, suggesting that ownership rights of individuals within poor groups may be limited. This asymmetry in evaluations has parallels in policies enacted to regulate the resources of the poor (see Rodger, 2012). That is, policies that restrict how people on social welfare systems can use their resources limit the agency and ownership rights of those people. In sum, unlike the children in Study 1, children in Study 2 were willing to violate the ownership rights of both the rich *and* the poor, albeit in different contexts and with different consequences. For rich groups, this meant positively evaluating poor group members consuming their resources; for poor groups, this meant negatively evaluating the consumption of their own resources.

General Discussion

Young children care about equity (e.g., they criticize, reject, and rectify inequalities; Blake et al., 2015; Shaw & Olson, 2012), and they care about the ownership rights of others (e.g., they use information about ownership when distributing resources and they protest when others take items that do not belong to them; McEwan et al., 2016; Pesowski et al., 2019). But how do children balance concerns of equity and ownership? Previous research found that when concerns of equity and ownership were at odds (e.g., transferring rewards from a rich person to a poor person), children ages 3 to 8 prioritized equity over ownership (Elenbaas, 2019a; 2019b; Essler & Paulus, 2020). We built on these prior findings to probe the robustness of children's tendency to privilege equity over ownership. More specifically, our set of studies differed from prior work in four key ways. First, resource redistributions were not regulated by third-party authority figures, which prevented children from inferring that the redistributions were allowed.

Second, when resources were redistributed between individuals or groups, they could not be returned to the original owner (i.e., resources were consumed). Third, characters consumed either *others'* resources (i.e., another individual or an outgroup) or *their own* resources (i.e., from themselves or their ingroup), thereby testing children's concern for equity in the presence versus absence of resource redistributions. Fourth, across studies, children made evaluations in individual and group contexts, moving beyond prior work which tested children's reasoning about individuals. Together, our design allowed for a comprehensive examination of children's concerns for ownership rights and equity when these two factors were in direct conflict. In Study 1, children evaluated individuals who consumed another individual's resources or their own resources. In Study 2, children evaluated group members who consumed outgroup resources or ingroup resources. Across both studies, the resource distributions were either equal (both poor, both rich) or unequal (one poor, one rich).

Study 1 suggests that in the context of individuals, children did not privilege equity over ownership. That is, rather than accepting poor individuals consuming resources from rich individuals more than rich individuals consuming resources from poor individuals, children evaluated these behaviors similarly. In short, children were relatively unaccepting of consuming another's resources, irrespective of resource distribution. In contrast, children were relatively accepting of individuals consuming their own resources, again, irrespective of resource distribution. Together, these results suggest that children did not necessarily privilege equity over ownership in these individual-based contexts.

Study 2 suggests that in the context of groups, children did privilege group-based inequality. That is, children were more accepting of poor group members consuming resources from rich outgroups than of rich group members consuming resources from poor outgroups.

Additionally, children were more accepting of rich group members consuming their own group's resources than of poor group members doing so. Thus, our results suggest that children privileged equity over ownership in these group-based contexts.

Collectively, our findings are consistent with previous research in which children are shown to conceptualize individual- and group-based inequalities differently (Rizzo et al., 2018; Rizzo & Killen, 2020). Indeed, we found that children were relatively *unaccepting* of a poor individual consuming resources from a rich individual (Study 1), but that they were relatively *accepting* of a poor group member consuming resources from a rich outgroup (Study 2). These findings are important in the context of real-world inequality. Group-based inequalities often reflect structural inequalities that disadvantage individuals by virtue of their group membership (e.g., by virtue of systemic racism, Black Americans and women have fewer opportunities for employment and have lower incomes than White American men; Bloome, 2014; Bobbitt-Zeher, 2007). Because such group-based inequalities disadvantage individuals by virtue of their group membership, and not by virtue of merit, they motivate individuals to criticize and seek to rectify them (Coghlan & Huggins, 2004). Of course, we did not directly examine whether children construed the individual-based inequality as merit-based and the group-based inequality as structure-based, though previous research suggests that this is precisely how such inequalities are construed (Rizzo & Killen, 2020). Ultimately, we propose that when children balance concerns of equity and ownership, they may consider the kind of resource inequality, privileging ownership rights in the context of individual-based inequality and equity in the context of group-based inequality.

Overall, we did not observe many age effects. In Study 2, there was a significant interaction involving age and target resources in the Outgroup condition such that, with

increasing age, children more favorably evaluated consuming resources belonging to the rich. Such a finding may reflect children's increasing attention to equity concerns. That is, children reinforce the ownership rights of others before they display a keen desire to redress inequalities. Thus, it makes sense that this effect of age emerged in Study 2, which involved groups, and not Study 1, which involved individuals, as our individual-based context elicited greater concern for ownership among our child participants. We additionally observed a significant fixed effect of age in the Ingroup condition in Study 2, revealing that children evaluated consuming ingroup resources more negatively as they got older. More generally, these results—privileging ownership over equity in individual-based contexts and equity over ownership in group-based contexts—require further examination.

Limitations and Future Directions

The present work has several limitations that we hope future research can address. First, we did not specify *why* the characters consumed resources or *why* the inequality existed. Given our complex design, we specifically chose not to vary this as an additional factor. It will be important for future research to explicitly manipulate the reasons for these actions and inequalities, in order to test some of our theorizing outlined above (e.g., whether group-based inequalities were indeed attributed to structural causes; see Rizzo & Killen, 2020).

Second, an open question is the importance of the relative availability of resources, in children's reasoning. In the present studies, the advantaged group had more resources than they needed whereas the disadvantaged group did not have even one resource per group member. This design choice was intentional; we wanted the rich group to have an *abundance* of resources and the poor group to have a *scarcity* of resources. Yet it is possible that this level of resource inequality amplified children's judgments of the permissibility of poor group members

consuming resources belonging to rich groups. Had there been at least one resource per character, children may have provided less positive ratings of those consuming resources belonging to the rich when poor, and more positive ratings of poor group members consuming group resources. Testing this latter possibility would also inform our understanding of the extent to which group members can act as individuals when making decisions about group resources. Future research should test for boundary conditions of the present results.

Third, we specifically chose to label the resources as, for example, “Hibble berries” and “Glerk berries” to ensure that ownership information was clear and explicit. Importantly, this aspect of the design cannot account for effects involving rich versus poor, nor effects involving equality versus inequality, as labeling was held constant across trial types. Nonetheless, this linguistic cue may have highlighted ownership and prompted children to respond more negatively to consuming another individual’s or group’s resources. Future research should examine the extent to which varying linguistic cues emphasizes or de-emphasizes ownership and subsequently influences children’s evaluations.

Fourth, another factor to consider is the extent to which our results are unique to children from WEIRD populations (Western, Educated, Industrialized, Rich, Democratic; Henrich et al., 2010). Relevant cultural variation (e.g., emphasis on autonomy, market integration) could yield different sets of evaluations across individual- and group-based contexts and/or resource distribution levels. Blake et al. (2015), for example, found that children from WEIRD populations as well as Uganda displayed an aversion to advantageous inequity with age more so than children from a set of other non-WEIRD populations. It is possible that children growing up in areas with greater market integration and/or less communal ownership of resources would evaluate resource consumption in line with what we observed in our studies. In contrast, children

growing up in areas where resources are viewed as more communal may not distinguish between consuming resources from the rich when poor and consuming resources from the poor when rich.

In addition to assessing the robustness of these results across cultures, there is also a need to examine the extent to which these results reflect the evaluations of different communities of children within cultures, as variation may emerge (e.g., Rhodes & Gelman, 2009). For example, the degree of interwealth contact affects resource distributions, with increased interwealth contact corresponding to children distributing resources more equitably to low-wealth peers (Elenbaas, 2019c). It would also be interesting to know how children would reason about familiar social groups, about which they have a priori assumptions and expectations (e.g., groups differing in race, nationality, or gender). For example, it may be that children's concern for the poor could be either heightened or attenuated depending on their attitudes toward existing disadvantaged groups. This question also raises the question of how children from different political or cultural contexts would respond.

Overall, our results contribute to a growing body of work examining how children balance equity and ownership concerns and do so by offering a robust assessment assessing the extent to which patterns of individual-based evaluations extend to group-based contexts in children 4-13 years of age. We found that children's evaluations of resource consumption differ according to whether evaluations are made in individual- versus group-based contexts. As many children are growing up in increasingly unequal societies, future research should continue examining factors influencing children's (and adults') evaluations of resource redistributions, especially those that work to redress inequities.

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Figure 1. Study 1: Mean scaled ratings by vignette type and condition (error bars represented 95% CI).

Figure 2. Study 2: Mean scaled ratings by vignette type and condition (error bars represented 95% CI).

Table 1

Study 1 and Study 2 experimental design.

Study	Condition	Target Resources	Resource Distribution	
			Inequality	Equality
1	Other	Rich	A poor individual and a rich individual. The poor individual consumes from the rich one.	Two rich individuals. One rich individual consumes from the other.
		Poor	A rich individual and a poor individual. The rich individual consumes from the poor one	Two poor individuals. One poor individual consumes from the other.
	Own	Rich	A poor individual and a rich individual. The rich individual consumes their own resource.	Two rich individuals. One rich individual consumes their own resource.
		Poor	A rich individual and a poor individual. The poor individual consumes their own resource.	Two poor individuals. One poor individual consumes their own resource.
2	Outgroup	Rich	A poor group and a rich group. A poor group member consumes from the rich outgroup.	Two rich groups. One rich group member consumes from the rich outgroup.
		Poor	A rich group and a poor group. A rich group member consumes from the poor outgroup.	Two poor groups. One poor group member consumes from the poor outgroup.
	Ingroup	Rich	A poor group and a rich group. A rich group member consumes from their own ingroup.	Two rich groups. One rich group member consumes from their own ingroup.
		Poor	A poor individual and a rich individual. The poor individual consumes from the rich one.	Two rich individuals. One rich individual consumes from the other.

Note. Condition was between-participants. Consumer and Resource Distribution were within-subjects.

Table 2

Covariates and fixed effects of children's responses to consuming resources on the positivity/negativity scale.

Variable	Study 1				Study 2			
	B(SE)	<i>t</i>	<i>p</i>	95% CI	B(SE)	<i>t</i>	<i>p</i>	95% CI
Age	.04(.11)	0.37	.714	[-.17, .26]	-.10(.11)	-0.99	.322	[-.31, .10]
Condition	.79(.11)	7.16	< .001	[.58, 1.01]	1.37(.11)	12.98	< .001	[1.16, 1.57]
Target Resources (TR)	-.01(.11)	-0.12	.907	[-.22, .20]	-.45(.10)	-4.52	< .001	[-.64, -.25]
Resource Distribution (RD)	-.39(.11)	-3.68	< .001	[-.60, -.18]	-.88(.10)	-8.95	< .001	[-1.08, -.69]
Age * Condition	.12(.11)	1.07	.287	[-.10, .33]	.02(.11)	0.19	.853	[-.19, .23]
Age * TR	-.03(.11)	-0.31	.753	[-.24, .17]	.25(.10)	2.55	.011	[.06, .45]
Age * RD	-.10(.11)	-0.90	.369	[-.30, .11]	-.10(.10)	-1.04	.298	[-.30, .09]
Condition * TR	-.07(.11)	-0.63	.528	[-.28, .14]	-1.90(.10)	-19.21	< .001	[-2.09, -1.71]
Condition * RD	-.07(.11)	-0.69	.493	[-.28, .14]	-1.29(.10)	-13.09	< .001	[-1.49, -1.10]
TR * RD	.87(.15)	5.73	< .001	[.57, 1.16]	1.82(.14)	12.99	< .001	[1.54, 2.09]
Age * Condition * TR	.04(.11)	0.33	.743	[-.17, .24]	-.49(.10)	-4.93	< .001	[-.68, -.30]
Age * Condition * RD	.10(.11)	0.97	.333	[-.10, .31]	-.24(.10)	-2.44	.015	[-.44, -.05]
Age * TR * RD	.27(.15)	1.76	.078	[-.03, .56]	.19(.14)	1.36	.176	[-.08, .46]
Condition * TR * RD	.38(.15)	2.51	.012	[.09, .68]	2.80(.14)	20.05	< .001	[2.53, 3.08]
Age * Condition * TR * RD	-.17(.15)	-1.12	.261	[-.46, .12]	.55(.14)	3.92	< .001	[.28, .82]

Figure S1. Study 1: Mean scaled ratings by age by vignette type and condition where the top set of plots reflect evaluations in the Other condition and the bottom set of plots reflect evaluations in the Own condition.

Figure S2. Study 2: Mean scaled ratings by age by vignette type and condition where the top set of plots reflect evaluations in the Outgroup condition and the bottom set of plots reflect evaluations in the Ingroup condition.

STUDY 1

Here we report the extent to which participants indicated a willingness to be friends with the targets in Study 1.

Results

Data analyses were identical to those in Study 1 on the positivity/negativity scale, with the exception that generalized mixed-effects regression models were run, and the dependent variable was participants' decision to be friends with the person engaged in the behavior as the dependent variable (0 = no, 1 = yes). There were significant effects of condition, age and condition, resource distribution and condition, and resource distribution and target resources (see Table S1). We tease these interactions apart below. Significant effects were additionally probed by chi-square analyses.

Consuming Another's Resources. There was only a significant effect of age ($B = -1.42$, $SE = .51$, $z = -2.78$, $p = .005$, 95% CI: $[-2.41, -0.42]$), revealing that overall, friendliness toward the target declined with age.

Consuming Own Resources. There were no significant effects. Overall, children were friendly toward individuals consuming their own resources ($M = 0.78$).

STUDY 2

Here we report the extent to which participants indicated a willingness to be friends with the targets in Study 2.

Results

Data analyses were identical to those in Study 2 on the positivity/negativity scale, with the exception that generalized mixed-effects regression models were run, and the dependent variable was participants' decision to be friends with the person engaged in the behavior as the

dependent variable (0 = no, 1 = yes). There were several significant effects, all of which were qualified by a significant age by condition by resource distribution by target resources interaction (see Table S1). We tease these interactions apart below. Significant effects were additionally probed by chi-square analyses.

Consuming the Outgroup's Resources. There were significant effects of age ($B = -1.36$, $SE = .65$, $z = -2.09$, $p = .036$, 95% CI: [-2.63, -0.09]), target resources ($B = 3.13$, $SE = .49$, $z = 6.37$, $p < .001$, 95% CI: [2.17, 4.10]), age and target resources ($B = 1.72$, $SE = .49$, $z = 3.48$, $p = .001$, 95% CI: [0.75, 2.69]), and of resource distribution and target resources ($B = -1.71$, $SE = .59$, $z = -2.88$, $p = .004$, 95% CI: [-2.87, -0.55]). Under conditions of inequality, children were friendlier toward poor group members consuming resources belong to rich outgroups ($M = 0.62$) than toward rich group members consuming resources from poor outgroups ($M = 0.35$; mean comparison: $\chi^2 = 20.10$, $p < .001$). Under conditions of equality, children were friendlier toward rich group members consuming resources belonging to rich outgroups ($M = 0.53$) than toward poor group members consuming resources belonging to poor outgroups ($M = 0.40$; mean comparison: $\chi^2 = 4.17$, $p = .041$). Also, with age, children became less friendly toward rich group members consuming resources belonging to poor outgroups ($B = -1.36$, $SE = .65$, $z = -2.09$, $p = .036$, 95% CI: [-2.63, -0.09]). No other comparisons were significant.

Consuming the Ingroup's Resources. There was only a significant effect of target resource ($B = 3.04$, $SE = .38$, $z = 8.01$, $p < .001$, 95% CI: [2.30, 3.79]), revealing that children were friendlier toward rich group members consuming their own group's resources ($M = 0.84$) compared to poor group members consuming their own group's resources ($M = 0.46$).

Table S1

Covariates and Mixed Effects of Children's Friendship Responses.

Variable	Study 1				Study 2			
	B(SE)	z	p	95% CI	B(SE)	z	p	95% CI
Age	-0.22(.35)	-0.62	.536	[-.91, .47]	-0.42(.35)	-1.20	.232	[-1.10, .27]
Condition	1.63(.37)	4.38	< .001	[.90, 2.36]	2.35(.36)	6.54	< .001	[1.64, 3.05]
Resource Distribution (RD)	-0.06(.27)	-0.21	.833	[-.59, .48]	-1.22(.29)	-4.26	< .001	[-1.78, -0.66]
Target Resources (TR)	0.04(.27)	0.15	.881	[-.48, .56]	-0.39(.29)	-1.33	.184	[-.97, .19]
Age * Condition	1.02(.36)	2.85	.004	[.32, 1.73]	0.79(.35)	2.29	.022	[.12, 1.47]
Age * RD	-0.34(.30)	-1.13	.257	[-.92, .25]	-1.00(.31)	-3.29	.001	[-1.60, -.41]
Age * TR	-0.30(.29)	-1.04	.297	[-.86, .26]	0.09(.31)	0.29	.771	[-.52, .70]
Condition * RD	0.58(.27)	2.12	.034	[.04, 1.12]	-1.81(.29)	-6.25	< .001	[-2.38, -1.24]
Condition * TR	0.06(.27)	0.22	.829	[-.46, .58]	-3.12(.31)	-10.00	< .001	[-3.74, -2.51]
RD * TR	0.77(.39)	1.97	.049	[.00, 1.53]	2.75(.43)	6.38	< .001	[1.91, 3.60]
Age * Condition * RD	0.11(.30)	0.36	.722	[-.48, .69]	-1.33(.31)	-4.34	< .001	[-1.94, -.73]
Age * Condition * TR	-0.14(.29)	-0.50	.619	[-.70, .42]	-1.50(.32)	-4.75	< .001	[-2.12, -.88]
Age * RD * TR	0.65(.43)	1.53	.127	[-.19, 1.49]	1.52(.45)	3.35	< .001	[.63, 2.41]
Condition * RD * TR	-0.18(.39)	-0.47	.642	[-.95, .58]	4.23(.45)	9.49	< .001	[3.35, 5.10]
Age * Condition * RD * TR	-0.16(.43)	-0.38	.706	[-1.00, .68]	2.56(.46)	5.58	< .001	[1.66, 3.47]

STUDY 2

Here we include sample explanations provided by a subset of children in the Outgroup Condition who were asked, “Why is it [very, very bad / pretty bad / a little bad / a little good / pretty good / very, very good] for this [GROUP LABEL] to eat one of the [GROUP LABEL] berries?” For example, if a child responded that it was “pretty bad” for a Hibble to eat one of the Glerk berries, they would be asked, “Why is it pretty bad for this Hibble to eat one of the Glerk berries?” Sample explanations provided for both positive and negative responses.

		Outgroup Condition	
		Appeals to Ownership	Appeals to (In)Equality
Inequality	Consuming group member poor; other group rich	<i>Because the Blickets are supposed to eat the Blicket berries.</i> <i>Because it's theirs.</i>	<i>Because they don't have enough.</i> <i>Because they have more and they have less, so it's better if they have one more for the day.</i>
	Consuming group member rich; other group poor	<i>Because it's from the other group.</i> <i>It's not his berry.</i>	<i>Because they have less and they have more, so they don't need more.</i> <i>Because the other group only has one left.</i>
Equality	Both groups poor	<i>Because it's really called stealing.</i> <i>Because it's not his berries.</i>	<i>Because the Zases are not gonna have as many as the Flurps.</i> <i>They have less.</i>
	Both groups rich	<i>Because that's called stealing.</i> <i>It's not theirs and they have their own food.</i>	<i>Because they don't need it.</i> <i>Because both groups have enough berries for the day so it's okay.</i>