

**Fair Resource Allocation Among Children and Adolescents:  
The Role of Group and Developmental Processes**

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## **Abstract**

The fair exchange of resources provides a basis for developing morality, yet research has rarely examined the role of group processes that are central to children's world. In this article, we describe a new perspective as well as research demonstrating that group processes play a key role in the fair allocation of resources among children and adolescents. We contend that when children allocate resources, group processes and moral judgments are relevant, a developmental shift occurs in children's ability to coordinate moral and group concerns, and group processes contribute to intergroup bias regarding allocations but also to efforts to consider the status of disadvantaged groups. Our perspective informs efforts to reduce prejudice as well as increase fairness and equality in situations in which group processes are relevant for allocating resources fairly.

The fair allocation of resources is a central concept in theories of morality and has been widely studied in social science research, including psychology, sociology, and behavioral economics, as well as in related fields such as moral philosophy. Within the field of developmental science, the fair exchange of resources is fundamental to the *development* of morality. How individuals divide resources, evaluate the legitimacy of claims to resources, consider different legitimate claims, claim ownership, and prioritize fairness in allocation contexts is part of social life from early childhood into adulthood. Through exchanges over development, children and adolescents engage in processes that involve negotiating and compromising resources that contribute to acquiring concepts central to allocating resources fairly, such as equality, merit, need, and equity (1, 2).

However, until recently, developmental science research has devoted little attention to the role of group processes (processes that occur when social categories are salient within an intergroup context) in relation to the fair distribution of resources. Allocating resources involves more than moral judgments; group processes are also part of deliberations concerning who gets how much and why. In fact, the role of group processes affects children's social and moral development in many ways, starting in early childhood. In this article, we make three points: Group processes are relevant for decisions regarding the fair allocation of resources; the coordination of moral and group concerns when deciding about allocating resources shifts from childhood to adolescence; and group processes contribute not only to displays of intergroup bias when allocating resources (reflecting biased attitudes) but also to efforts to rectify social inequalities and consider disadvantaged group status (awareness of group status and group identity for ensuring social equality). To make these points, we draw on our developmental theoretical model to describe research on the role of group processes in the fair allocation of resources, and touch on how group processes can both foster and hinder children's and adolescents' efforts to allocate resources fairly (3-5).

## **Group Processes Are Relevant for Allocating Resources Fairly**

Individual moral decisions by children and adolescents, including those about allocating resources fairly, occur within contexts that require considering group processes. These processes include interpersonal friendships, which are known to influence children's moral decision making and sharing behavior (6). We know less about group processes when social categories (e.g., gender, race, ethnicity) are salient, and when children have to weigh both ingroup and outgroup considerations when deciding how to allocate resources.

These processes involve *group identification* with social categories that emerge at a young age (7, 8), contributing to how we position ourselves in the social world and to whom we are loyal (9, 10); understanding *group norms* (11, 12), allowing us to reflect on mutual values that define acceptable attitudes or behaviors within and between groups; and knowledge of *group status* so we pay attention to social inequalities and disadvantaged status based on group membership (13, 14). Allocating resources fairly is typically perceived as a moral duty, yet group processes add complexity to this decision-making process.

Children affiliate with groups early and these group identities significantly influence the development of their intergroup biases (e.g., 15). In addition, group norms matter. Supporting a norm of exclusion or a norm of inclusion is related to either promoting more negative or more positive attitudes toward the outgroup, respectively, and stronger group identification is related to more intergroup bias (16-18). From age 5, children are sensitive to the status of social groups, and awareness that their group holds high status increases the tendency to be biased to the ingroup, make judgments about exclusion, and reason using social conventions rather than morality when justifying these judgments (13, 14, 19).

We assert that each of these aspects of group processes is related not just to intergroup attitudes but also to moral decision making. Along with the emergence of group processes,

moral cognition surfaces early in childhood. Toddlers share spontaneously with others (20) and by early childhood, children's moral judgment reflects knowledge about the impartiality and generalizability of moral principles (21). Children judge that fairness and equality are not subject to personal preferences (e.g., it is not all right to give all toys to oneself or to only your best friend), and moral judgments become more complex throughout childhood and adolescence.

Yet children are clearly challenged by contexts that involve fair decision making, often prioritizing other considerations. These other considerations are not solely selfish desires as is often assumed when characterizing children's conflicts (e.g., that children are either moral *or* selfish). Rather, with age, other legitimate considerations, such as those about group identity and group loyalty, take priority in certain contexts. One of these contexts is intergroup settings, where group norms are increasingly enforced. For example, young children readily apply conventional norms to peers from their own group but often refrain from doing so when peers are identified as an outgroup (22).

Group membership becomes increasingly salient throughout childhood and adolescence, and is often viewed in terms of group functioning. Thus, while children reject purely selfish behavior, acts that support the group are often supported. Group affiliation is a necessary part of social life, creating a sense of community and collective action. Yet prioritizing group membership or group loyalty can directly contradict the moral obligation to allocate resources impartially and fairly. In such contexts, individuals reason that the ingroup needs more resources to function well and maintain a sense of group identity. Children recognize moral necessities but, depending on the salience of group identification or the nature of the resources, they also find decisions about allocating intergroup resources difficult for reasons related to group loyalty and identity.

While much of the research on moral development, including studies on allocating resources fairly, has examined the role of societal norms (e.g., the role of authority, punishment, or conventions on morality; see 1, 2), fewer studies have looked at how group processes result in biases or changes in moral decision making (5). To some extent, this lack of focus on group processes was because intergroup attitudes were considered the province of adulthood; knowledge about group status and norms was assumed to emerge in adulthood, not childhood. Two lines of research changed this focus: developmental intergroup studies, which revealed that young children are aware of status hierarchies and group norms around gender, race, and ethnicity; and research on morality, which demonstrated that even young children, not just adolescents, hold strong beliefs about fairness and equality [AU: I'm not clear on what the parenthetical phrase refers to]).

The social reasoning developmental (SRD) perspective reflects these new lines of research by integrating morality and group processes into a theory to investigate children's moral decision making in intergroup contexts (4, 5, 23). Drawing on developmental approaches to social identity (24) and group dynamics (11), and in conjunction with social domain theory (25, 26), the SRD perspective provides a guide for investigating moral and social-cognitive reasoning in the context of group processes. The SRD model contends that from early childhood, individuals increasingly reason about social relations while simultaneously considering issues of morality (fairness, equality, and rights), group processes (group identification, group norms, and status hierarchies), and psychological perspectives of the self and others (autonomy and mental state knowledge). Using this model, researchers have demonstrated how these concerns exist simultaneously when individuals decide about social inclusion and exclusion (5, 23). More recently, research has supported this model, demonstrating that, with age, children and adolescents reason about resource allocation while simultaneously considering issues of morality and group processes.

## **Age-Related Changes Regarding Allocating Resources**

In research on resource allocation, ingroup concerns prevail in several contexts; as a result, children discriminate by distributing resources to benefit their own group at the expense of an outgroup (27-30). Yet recent studies have identified important developmental trends in how individuals weigh concerns over moral and group processes when allocating resources.

In one study (31), young children did not always favor ingroup peers when considering how to allocate resources. When preschool-age children evaluated resource allocation norms held by peer groups (i.e., a norm that supported dividing equally *or* a norm that supported dividing to benefit the ingroup), they were more negative about ingroup members who deviated from a group norm of equality than a group norm of inequality. Children used fairness reasoning to support their rejection of an ingroup member who wanted to distribute unequally (benefitting the ingroup). This suggests that preschoolers prioritize fairness over ingroup concerns. Between 3½ and 6 years, children differentiated their view about the ingroup member's deviant act to distribute unequally from their expectations of what the group would like (more resources for their own group). This ability to differentiate the self's evaluation of group allocations from the group's preferences may be related to the emergence in early childhood of false belief theory of mind, the ability to recognize that others' intentions, beliefs, and desires may differ from one's own (32).

To extend this point, from approximately 7 to 8 years, children develop a theory of social mind (33-35): They begin to appreciate that the *emotions* and *intentions* they attribute to individuals or groups within social relationships are not always the same as those held by the self (36). These social-cognitive developments contribute to a more advanced understanding of groups and how they function, and the ability from middle childhood to

differentiate one's own viewpoint from that held by groups when deciding how to allocate resources (37). From this developmental point, as children become adolescents they begin to reflect on many group norms at different levels when deciding how to allocate resources. In a recent study those in middle childhood, as opposed to adolescence, were influenced by their own group's competitive norms and paid little attention to a generic cooperative norm when allocating resources (38).

To illustrate this point, researchers established a generic norm by telling children and adolescents about two versions of a national art gathering—the United Kingdom National Art Competition (competitive generic norm) and the United Kingdom Charity Art Event (cooperative generic norm). The study established the ingroup norm for the competition by telling students that their team had a secret message for its members that was cooperative (sharing resources with all groups) or competitive (maximizing resources for the ingroup). Children showed significantly more in-group bias in their allocations than did adolescents when the in-group norm was competitive and the generic norm was cooperative (see Figure 1). This indicated that, with age, there was increasing attention to both the in-group norm and generic norm when deciding to allocate resources. Unlike adolescents, children allocated resources consistent with the competitive in-group norm even when the larger generic norm was cooperative, revealing a lack of recognition that their own group goal was inconsistent with the larger cooperative goal underlying the allocation decision.

A more extensive examination of age-related changes in children's and adolescents' evaluations and reasoning surrounding fairly allocating resources revealed a developmental shift in how individuals coordinate moral (equal allocation of resources) and group (gender) concerns. Researchers investigated how individuals evaluated ingroup and outgroup members who challenged group norms that supported either an equal allocation of resources or an unequal allocation (39; see Table 1). For example, when a group had to decide whether to



give the same amount of resources to two groups (boys' and girls' groups) or more for the in-group, participants were asked whether they supported an in-group member who went against the group norm by supporting equal (if the group wanted to be unequal) or unequal (if the group wanted to be equal) allocations. Nine- to 13-year-olds were asked how much they favored the in-group member who rejected the group norm about how to divide resources. Consistent with the SRD model, with age, participants were more likely to consider the group goals of their ingroup and to recognize that groups would like someone who wanted to help the ingroup by distributing more resources to themselves.

Adolescents typically justified their evaluations by referring to issues of group functioning ("They would like how she wants her group to get more money") and personal choice ("He has his personal opinions"). Yet 9-year-olds used moral justifications almost exclusively when explaining why they thought it was wrong for the deviant to allocate resources unequally ("He is just being greedy, which is not fair."). Group concerns become highly salient by adolescence, which can be adaptive in an increasingly complex world of peers in which social exclusion from groups can have negative psychological consequences; the result can mean that youth prioritize group concerns over moral ones in some contexts.

As we discussed with younger children (31), with age, participants differentiated their own view of the best decision (dividing up equally) from what they expected the group would want. Younger participants expected that the group would make the same judgment as they would individually, which was to divide the resources equally. In this context, unlike the one for younger children, older youth considered more variables and reasoned more, reflecting a coordination of perspectives.

### **Knowledge About Group Processes Contributes to Efforts to Rectify Social Inequalities**

The context for much of resource allocation involves distributions to groups with differing statuses, so group status and equity are relevant concepts in studying fair resource

allocation. We propose that when individuals consider disadvantaged status when deciding how to allocate resources, the role of group membership becomes part of the decision. In society, social inequalities often come from differences in social status, with resources distributed unequally to high- and low-status groups (40). Individuals' awareness of social status and inequalities comes from knowledge of group processes, which develops early. Research into the emergence of fairness in the context of dyadic, triadic, and group interactions has paid little attention to the role of social status when examining fair allocation of resources. We contend that as children become aware of social hierarchies and social status, they focus on social inequalities and disadvantaged status based on group membership, using moral reasoning when prioritizing fairness and social conventional reasoning when prioritizing the status quo.

Recently, researchers investigated how children evaluate social inequalities when deciding how to allocate resources in intergroup contexts (41). Considering social inequalities in this context is difficult because in many cases, dividing resources equally perpetuates, or at least fails to correct, social inequality. In a test of whether children consider disadvantaged status when allocating resources, African American and European American kindergartners and fifth graders observed an unequal distribution norm that gave more resources to hospitals frequented by African American or European American children (41). Thus, the study presented both racial groups (which differ in terms of their access to hospital resources) as either advantaged or disadvantaged. Children judged the acceptability of an unequal allocation of medical resources on the basis of race, allocated medical supplies, evaluated different strategies for allocating resources, and completed a measure of status awareness (which was the extent to which children associated occupational status – high, low - with race).

With age, children were increasingly aware of disparities in wealth between African Americans and European Americans, and they judged an inequality of medical resource between groups more negatively. Furthermore, with age, children rectified the inequality of resources instead of perpetuating it, but only when African American children were disadvantaged. When European American children were disadvantaged, children did not systematically allocate more resources to one group over another. Thus, as shown in Figure 2, when African American hospitals were disadvantaged, children who viewed inequality as wrong and were aware of wealth disparities in society between the two groups were more likely to rectify than perpetuate the resource inequality (and with age, to reason based on rights).

To determine whether even younger children's allocation decisions reflect social inequalities, researchers (42) investigated whether children ages 3 – 8 years allocated resources to rich and poor fictional characters based on equality (i.e., everybody should receive the same resources irrespective of differences) or equity (i.e., social inequalities should be rectified so everybody receives the same resources). Three- to 4-year-olds considered equity in their judgments about allocations, supporting another peer who allocated more resources to a poor character than a rich one, but nonetheless allocated resources equally when asked to divide resources between a poor and a wealthy character. By contrast, 5- to 6-year-olds rectified the inequality of resources in their actual allocations, and judged both equitable and equal allocations as fair, indicating their developing concern for equity and their ability to coordinate the concerns of equity and equality. Seven- to 8-year-olds focused on rectifying the inequality in their allocations and judgments, and judged equal allocations less positively, demonstrating an increasing concern for rectifying inequalities. These findings indicate that children's concerns for rectifying inequalities begins in early

childhood and that their ability to coordinate different modes of allocating resources and reasoning about distributing those resources increases between ages 3 and 8 years.

In summary, supporting the SRD perspective, these studies indicate that children's reasoning for their decisions changed with age. Starting from a focus on equality, their reasoning evolved into a more complex notion of equity involving considerations of group processes, such as rectifying previous inequalities and ensuring rights to resources by giving more supplies to a disadvantaged group. Knowledge about group processes contributed to moral judgments about fairness and equality, such as rectifying social inequalities. This new research demonstrates a potentially positive role that group processes play in moral judgments. Thus, knowledge and awareness of group processes can lead to ingroup bias, but also to moral judgments that consider group status and patterns of disadvantaged status.

### **Conclusion**

In this article, we have made a case for considering group and developmental processes when investigating how children develop in their decisions about allocating resources fairly. Group identity, group norms, and social status hierarchies are part of the world of children (and become increasingly salient and differentiated throughout life). Applying the SRD model to fair resource allocation, we have demonstrated that group and developmental processes are part of decisions about allocating resources, and that by middle childhood and adolescence, individuals reject members of their in-group who support allocating resources unequally and rectify social inequalities based on disadvantaged status.

Understanding how people develop the ability to allocate resources is important and urgent because social inequalities have widened and deepened over the past several decades (40). Social equality, or creating a society of equals, is both a moral principle and a pressing societal goal, with accompanying challenges (43). This new knowledge from developmental

science can inform our efforts to teach children how to share resources, focus on fairness and equality while considering disadvantaged status, and weigh both morality and group concerns when allocating resources.

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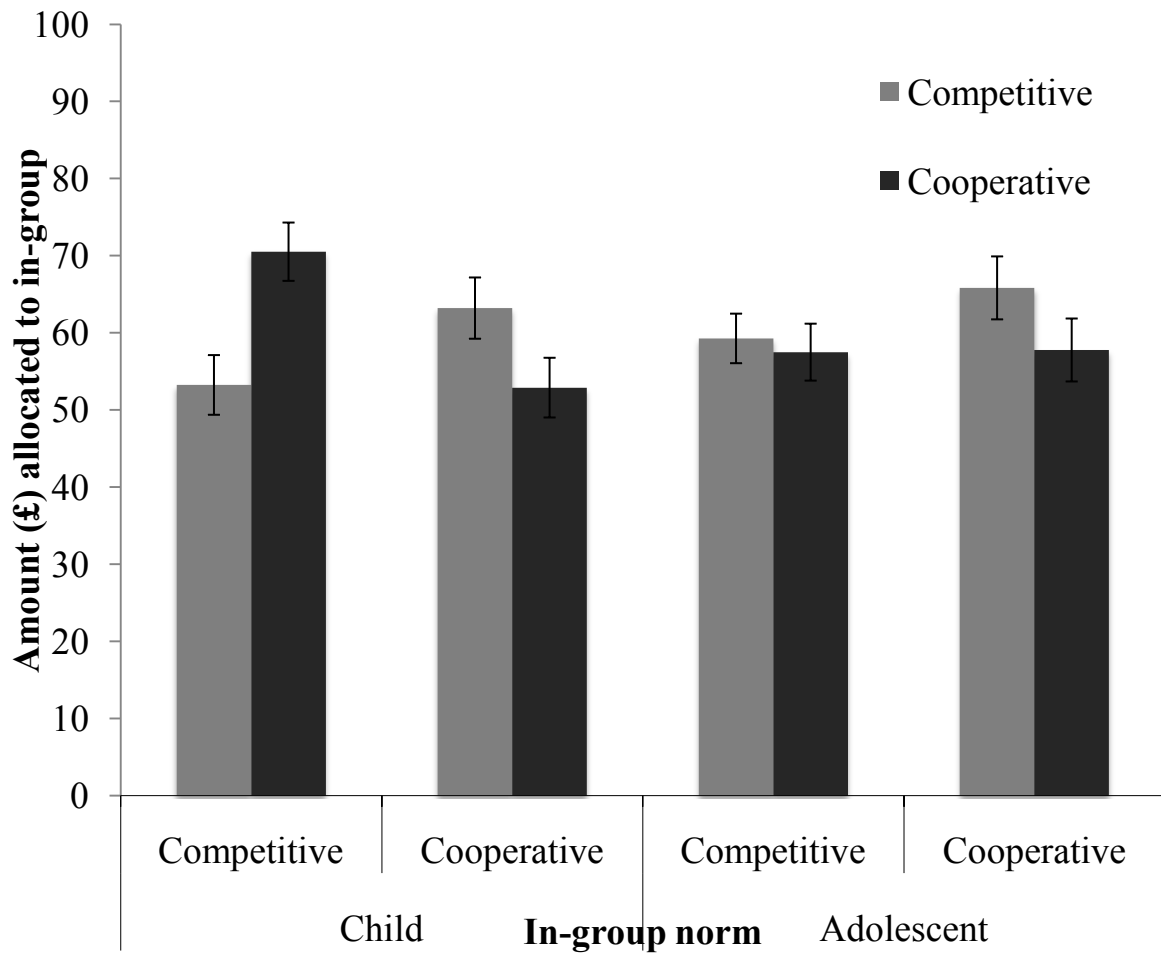
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**Figure 1. Resources allocated to in-group as a function of age, in-group norm, and generic norm (with Standard Error Bars). Source: (38).**

[Production note: Please change heading on figure to read “in-group” instead of “in-group” (removing the hyphen).]

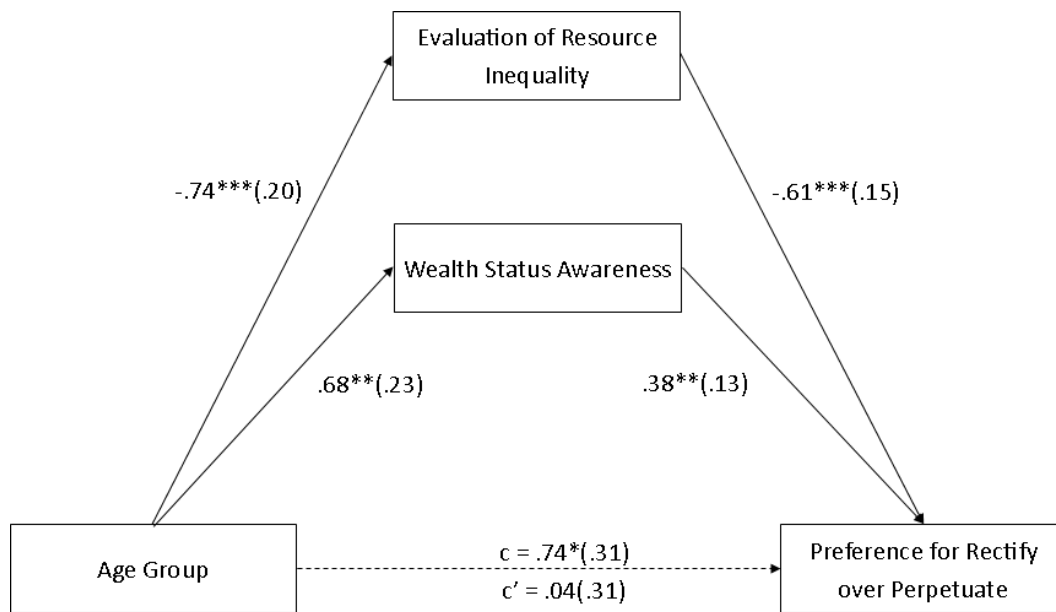
Table 1

*Summary of Favorability Judgments of Group Deviants*

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		<b>Group Identity Factor</b>	
		<b>In-group (Gender)</b>	<b>Outgroup (Gender)</b>
<b>Equality Factor</b>	<b>Supporting Equal (equal resources for ingroup and outgroup)</b>	Highly favorable but favorability declined in support with age	Highly favorable across age groups
	<b>Supporting Unequal (more resources for the ingroup than for the outgroup)</b>	Unfavorable but favorability increased with age	Highly unfavorable across all age groups

Note: Group deviants were individuals who challenged their group's norm about equal or unequal allocation of resources between the in-group and outgroup. Source: (39).



**Figure 2. African-American hospitals disadvantaged:** Mediation model for the indirect effect of age group on preference for the rectify allocation strategy over the perpetuate allocation strategy through evaluation of resource inequality and wealth status awareness, controlling for race.

Note: Unstandardized regression coefficients and SEs are provided. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Source: (41).