

## Summary

# Early Development of Different Forms of Altruism: Sharing, Helping and Donating

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A review of recent studies of early childhood altruism reveals very rapid development of a new perspective which emphasizes precursors of altruistic behavior beginning in the first year of life, with rapid development through the second and third years.

Far from earlier conceptions, which pictured young children as lacking a “superego” (Freud, 1923/1961), or as “pre-moral” in their reasoning (Kohlberg, 1969), these recent studies portray young children, even infants, as having the beginnings of a sense of right and wrong and a preference for agents of the good (e.g., Geraci & Surian, 2011; Hamlin, Wynn, & Bloom, 2007; Sommerville, Schmidt, Yun, & Burns, 2013; Thompson & Newton, 2013), as well as having an early understanding of normativeness (Rakoczy & Schmidt, 2013). Further, children younger than two years have been shown to demonstrate an accurate grasp of others’ intentions and needs, to coordinate their own intentions with the perceived intentions of others, and offer help to adults who appear to need it (e.g., Warneken, Hare, Melis, Hanus, & Tomasello, 2007; Warneken & Tomasello, 2006). These early signs of altruism and moral concern are thought to be underwritten at least partially by empathy as well as cognitive processes (Davidov, Zahn-Waxler, Roth-Hanania, & Knafo, 2013; Eisenberg 1989; Hoffman, 2000.)

On the other hand, a number of studies have indicated that preschool children’s altruistic behavior is unreliable, not reaching a stable level of predictability until around school age (6-7 years of age) (Bar-Tal, Raviv, & Goldberg, 1982; Benenson, Pascoe, & Radmore, 2007; Blake & Rand, 2010; Brownell, Svetlova, & Nichols, 2009; Buckley, Siegel, & Ness, 1979; Eisenberg & Fabes, 1998; Eisenberg-Berg & Hand, 1979; Fehr, Bernhard, & Rockenbach, 2008; Froming, Allen, & Jensen, 1985; Gummerum, Hanoch, & Keller, 2008; Gummerum, Hanoch, Keller, Parsons, & Hummel, 2010; Iannotti, 1985; Moore, 2009; Persson, 2005; Radke-Yarrow,

Scott, & Zahn-Waxler, 1973; Radke-Yarrow & Zahn-Waxler, 1976; Thompson, Barresi, & Moore, 1997).

However, these observations do not imply that development in altruistic behavior does not take place during the preschool years (ages 3-5). It seems very likely that the developments beginning in the first two years would continue throughout the next three years. The dual challenge is to determine whether age-related changes in altruistic behaviors occur during this period, and to identify the cognitive, affective, and motivational developments that may underlie these changes. The present study is designed to reveal age-related changes in peer-oriented sharing, helping, and donating in a naturalistic setting in 3 to 5 year old children.

Suggestions regarding the underlying developments are also put forward. In particular, the understanding of the other person’s need and the self’s ability to meet that need are suggested to depend on cognitive abilities such as perspective-taking and theory of mind, while motivation for altruistic acts is suggested to depend on factors such as empathy and socialization experiences. Evidence for development of these abilities through the preschool years is briefly reviewed.

On a number of bases, then – maturation, experience in social interaction, exposure to a social environment where altruism and reciprocal relations are valued, increased competence in cognitive functions, empathic and perspective taking abilities, and moral reasoning – older preschool children may be expected to perform altruistic behaviors more frequently compared to younger children.

Part of the failure to find steady developmental progress during the preschool years may stem from different operational definitions of altruism used in previous studies. Different types of altruistic acts (sharing, helping, or donation) may present different cognitive, affective or motivational challenges, and the situations in

which the needs of another come to the child's attention may also vary. We expect that different types of altruistic behavior will show different developmental trajectories depending on the complexity of the situation.

### Hypotheses

1. All of the age groups (3, 4, and 5 years) will exhibit some nonzero level of altruism.

2. (a) The number of preschool children who display each of the altruistic acts (helping, sharing and donation) will increase with age; (b) likewise the number of altruistic acts per child will increase with age.

3. Considering the cognitive and empathic demands of the contexts calling for different kinds of altruistic behaviors, sharing in a face-to-face situation will be displayed by more children and will be observed earlier than either helping behavior or donation behavior; likewise helping behavior will be observed more frequently and earlier than donation behavior.

## Method

### Participants

One hundred seventy eight preschool children were observed in pairs matched for age and sex, with 28-30 pairs in each age group (3, 4, and 5 years).

### Procedure

Children were videotaped in a room in their own nursery school while interacting in an age-appropriate, structured altruism task in which opportunities to help and share arose in the natural flow of events. Specifically, one child in the pair was asked to bring a puzzle from a small cabinet near their table. When the cabinet door was opened, rolls of paper tape spilled out. Whether or not the target child helped in any way was coded. After the puzzle play was finished, the target child was asked to open a cookie box, but inside there was only one large cookie. Whether or not s/he shared the cookie was coded. At each of these decision points the experimenter was absent from the room. Finally, each child was given a set of stickers, and then asked whether s/he would like to donate some of them to children in another school who had no stickers. The donation decision was also made in the experimenter's absence.

## Results

**Hypothesis 1.** 75.3% of the children shared their cookies and almost half of them helped their peers (49.4%) and donated stickers to unknown others (46.6%). 25% of 3-year-olds helped, 53.6% shared and 15% donated. At age 4, 73.3% shared, 53.3% helped, and 50.8% donated. At age 5, 96.8% shared, 67.7% helped,

and 62.9% donated. The hypothesis was supported.

**Hypothesis 2a.** Separate  $\chi^2$  analyses for sharing, helping, and donation each showed a significant effect of age on the frequency of the altruistic act: sharing:  $\chi^2_{89} = 14.85, p = .001$ , Cramer's  $\Phi^2 = .17$ ; helping:  $\chi^2_{89} = 11.03, p = .001$ , Cramer's  $\Phi^2 = .12$ ; donating:  $\chi^2_{89} = 23.10, p = .001$ , Cramer's  $\Phi^2 = .14$ . The hypothesis was fully supported.

**Hypothesis 2b.** 57.1% of 3-year-olds exhibited at least one kind of altruistic behavior, but none displayed all three types of altruistic behaviors together; at age 4, 87% of the children showed at least one type of altruistic behavior, and 26.7% displayed all three types; and at the age of 5, 96.8% of children showed at least one altruistic act (only one 5-year-old showed none), and 48.4% exhibited all three kinds of altruistic behavior (see Figure 3). The hypothesis was supported.

**Hypothesis 3.** As predicted, face-to-face sharing was shown earlier and more frequently than either helping or donation (see Table 2 and Figure 1), but the predicted difference between helping and donation was not found. More than half of three-year-olds and all but one (96.8%) of the five-year olds shared the cookie with their partners, while helping ranged from 25% at age 3 to 68% at age 5 and donation ranged from 15% at age 3 to 62.9% at age 5, with intermediate percentages at age 4. Helping and donation appear to follow very similar trajectories, suggesting that these tasks posed a similar degree of challenge to the children's developing cognitive and empathic abilities.

**Other.** No significant sex differences were found at any age level, and there were no interactions between age and sex.

## Discussion

### Altruism is Multidimensional

In line with some previous investigations (such as Brownell et al., 2009; Caplan & Hay, 1989; Dunfield et al., 2011; Iannotti, 1985; Olson & Spelke, 2008; Smetana, Rote, Jambon, Tasopoulos-Chan, Villalobos, & Comer, 2012), the present study demonstrates that "altruism" is not a single entity, trait, motivation or behavior. Rather, it appears to be a congeries of motivations – to help, to share, to assure fairness, to comfort – that may be elicited (or not) by various but specifiable social cues and that may be acted upon (or not) depending on the complexity of the cognitive and empathic demands of the situation, the behavioral repertoire of the child, the competing incentives, and alternative means of bringing about the desired result (e.g., getting an adult to help or to distribute resources, etc.). Although the motivations that favor helping and fairness, and the beginnings of empathy and affective perspective taking

seem to appear very early in life (Hoffman, 2000; Vaish, Carpenter, & Tomasello, 2009), their implementation in social life would seem to depend on cognitive, empathic, and physical development throughout the period of early childhood.

Multidimensionality has serious implications for how altruism should be investigated, particularly in early childhood. As demonstrated in the present study, different altruistic acts may have different motivational roots (helping to reduce the other's distress versus sharing to assure a fair distribution, for example), and the different motives and their associated acts may develop on different trajectories throughout early childhood, with some kinds of altruistic behaviors being observed earlier and more frequently than others, while those that require more advanced cognitive, social and empathic maturation may develop later. The various types of altruism may require different kinds and levels of cognitive and empathic abilities (Bar-Tal, Raviv, & Goldberg, 1982), so that not only age differences but differences attributable to specific contexts should be expected until the motives and abilities attain their mature form. While it may be convenient for some purposes to group altruistic acts into a single category, the inconsistencies and contradictions among studies will not be remedied until this multidimensionality is recognized and accounted for in research designs.

#### ***Structured Altruism Task as a Method of Observing Altruism in Young Children***

One aim of this study was to construct a task that would allow systematic observation of different types of altruism in early childhood, taking into consideration young children's cognitive, emotional and behavioral limits as well as considerations of both internal and external validity. Overall, the task performed as expected, yielding spontaneous altruistic behavior toward peers by a large majority of the children. This structured task allowed three different types of altruistic behavior to be

investigated and compared simultaneously, enabling us to capture multiple meanings of altruism and to examine its multidimensional nature, while at the same time comparing performance across age groups.

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

The major limitations of the study are (1) its cross-sectional design; (2) related to this, its lack of information about individual differences and (3) lack of direct measurement of differing levels of cognitive and empathic abilities.

Future studies, in addition to avoiding these limitations, should specify clearly which aspects of altruism they are investigating, what kinds of cognitive and empathic demands are being made of the children, and what aspects of their procedures serve as cues that elicit or inhibit altruistic motivations and actions.

#### **Conclusion**

This study aimed to extend earlier work on altruism in early childhood by using a structured observational altruism task. The results, including the observation of pervasive altruistic behavior in 3- to 5-year-olds, support other recent research suggesting very early foundations of altruism and concerns with fairness. In addition, in contrast to many studies suggesting that altruistic behavior appears reliably only after age 6, strong evidence was found for development of increasing competence in altruistic behavior over the preschool years. Varying developmental trajectories for different altruistic behaviors (helping, sharing, and donating) suggest that altruism is multidimensional, deriving from more than one motive, being directed toward more than one goal, and being facilitated by development in various cognitive and empathic abilities. Future studies will need to take into account the essential multiplicity of altruistic action, as well its developmental pathways, its individual variations, and its social supports.