

Prosocial Resource Allocation and Generosity in Preschool Children

Ali Solhi

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Mount Saint Vincent University

Halifax, Nova Scotia

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Abstract

This thesis provides a comprehensive review of the literature surrounding preschool children's prosocial resource allocation and generosity. It was hypothesized that affective experience, perspective-taking, affiliation, competition, social comparison and relative wealth are some of the influences that impact children's decision-making in regard to sharing and generosity. The purpose was to find the most appropriate parenting and teaching styles that can influence preschool children's prosocial development in a positive way, and shed light on some of the influences that can be altered to promote prosocial behavior in preschool children.

Based on the literature reviewed, it was indicated that children who can sympathize or empathize with others and capable of taking other's emotions into consideration with high perspective-taking and theory of mind abilities are more prone to share and act generously. Children are more inclined to share with friends, familiar others, and members of their in-group rather than their out-group or strangers. Children also share more in collaborative settings with collaborators and with those who have similar or shared interests with them, even if recipients are out-group members or strangers. Children are less likely to share and act generously in competitive settings that provoke social comparison or a sense of envy, and with those who they perceive to have more material wealth than they do.

It is recommended that parents and day care professionals encourage children to empathize and sympathize with others and take others emotion and perspectives into account through role-play and pretend play activities. It is also helpful to ask children to talk about or to identify any similarities or shared interests that they might have in relation to an out-group member or an unfamiliar other. Finally, it is important to provide collaborative settings rather than competitive settings in preschool children's day-to-day activities.

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Chapter 1: Introduction

Engaging in prosocial behavior is a common aspect of human social life (Henrich et al., 2005), which has its evolutionary roots in a concern for the wellbeing of those with whom one is interdependent (Hepach, Vaish & Tomasello, 2013). Prosocial behavior is an integral part of human life to the extent that people willingly incur costs and risks to themselves in order to act in ways that benefit others (Becker & Eagly, 2004). This affects both the individual and society, in a broader sense. For the benefit of both, it is important to foster this behavior from an early age in order to encourage a society that is cooperative and interdependent. Therefore, the literature surrounding the concept of prosocial behavior in relation to preschool children's sharing and generosity will be explored.

Prosocial behavior

To understand the concept of prosocial behavior, it should be noted that this term refers to proactive and reactive responses to the needs of others that is meant to promote the wellbeing of others (Hastings, Utendale, & Sullivan, 2007). It is also important to note that prosocial behavior encompasses a large class of voluntary behaviors that share the common intention to benefit another (Dunfield & Kuhlmeier, 2013) and can be categorized into three distinct types: helping, sharing, and comforting (Dunfield 2014).

Throughout the literature, the terms prosociality and altruism are often used interchangeably. As a result, it is necessary to distinguish between the two terms. Although prosocial and altruistic behaviors share certain characteristics, altruism is defined as sacrificing one's own gain in order to promote another's well-being, whereas prosocial behavior does not necessarily require self-sacrifice (Hastings et al., 2007). In other words, any altruistic act is inherently prosocial, but not all prosocial acts are altruistic.

Both prosociality and altruism begin as early as the end of infancy in human development (Eisenberg & Fabes, 1998; Warneken & Tomasello, 2006). Most analyses of prosocial characteristics indicate that they increase with age, with fairly rapid increases in the maturity and frequency of prosocial behavior in the toddler and preschooler period, and slower but continued increases thereafter, at least into early adulthood (Eisenberg & Fabes, 1998; Pratt, Skoe, & Arnold, 2004).

Although prosocial behavior in children is intrinsically motivated by a concern for others' welfare (Hepach et al., 2013), there are different mechanisms that influence this behavior (Paulus, 2014a). More specifically Eisenberg and Fabes (1998) extensively reviewed the empirical data supporting the idea that biological, cultural, socialization, cognitive ability, emotional responding, and situational factors interact to determine prosocial behavior. The following is a presentation of some of the factors that may influence the development of prosocial behavior in children. Subsequently, the influences that can be controlled to promote the development of prosocial behavior in preschool children will be discussed.

Gender

There is controversy surrounding the role of gender in prosocial behavior. Maccoby and Jacklin (1974) in their classic review of the literature on sex differences concluded that there was relatively little evidence for psychological sex differences under the age of two. Even when older children are studied, gender differences are not always evident in experimental or observational data. For example, Yarrow et al. (1976) did not find any gender differences in the comparison of children between the ages of three and seven-and-a-half years. However, Zahn-Waxler, Robinson & Emde (1992) in their study of twins, indicated that, by 14 months of age, girls show greater empathy and prosocial responses to another's distress than boys do. In another series of studies, teachers and peers

of preschool to elementary school age children described girls as more prosocial than boys (Côté, Tremblay, Nagin, Zoccolillo, & Vitaro, 2002; Hastings, Zahn-Waxler, Robinson, Usher, & Bridges, 2000). One possible explanation for these findings may be a culturally shared belief that girls should be caring, kind and pay attention to other people's feelings and needs. Instead, observational techniques provide less consistent evidence of sex differences in prosocial characteristics in children (Bouchard et al., 2015; Eisenberg & Fabes, 1998; Hastings, Rubin, & DeRose, 2005). Together, these contrary findings suggest that there is not substantial evidence in the literature indicating the role of gender in children's prosocial behavior.

Siblings

Research has shown that sibling relationships have an important role to play in the development of moral reasoning skills (Ross, 1996) and social and emotional understanding (Dunn, 1988). There is some evidence to indicate that having siblings facilitates the development of prosocial behavior. This might be due to experiences of play and the need to mediate one's behavior to another person, who not only has different desires and perceptions but, is also less skilled and knowledgeable. For example, Dunn and Munn (1986) studied toddler-age and preschool-age siblings for over 6 months and found that one sibling's greater prosocial behavior during interactions predicted more prosocial behavior from the other sibling subsequently. Research has indicated that children with older siblings are less likely to share with peers, and more likely to respond negatively to a peer's distress (Demetriou & Hay, 2004). However, in stark contrast, a recent study conducted by White, Ensor, Marks, Jacobs and Hughes (2014) found that older siblings display significantly more spontaneous sharing behaviors, which influences their younger siblings desire to share with others. Given that the literature has provided inconsistent findings regarding sibling relationships, and that these familial relationships cannot be controlled for, they will not be the focus of this paper.

Culture

Different cultures have different normative rules and expectations of their children in terms of prosocial and cooperative behavior. Several researchers have suggested that children and youth in collectivistic cultures are more empathic, altruistic, helpful, or cooperative than children in individualist cultures (e.g., Knight, Kagan, & Buriel, 1982; Zaff, Moore, Papillo, & Williams, 2003). This might be due in part to collectivist cultures' emphasis on the needs of the broader community, as well as the promotion of children's involvement in other-oriented activities rather than individuals needs or goals (e.g., Whiting & Whiting, 1975). Overall, little is known about the impact of cross-cultural differences on prosocial actions directed toward those who are not part of the child's family or community (Eisenberg, Fabes, & Spinard, 2006).

The influences noted above, although conflicting, have a place in the discourse surrounding the development of prosocial behavior in children. However, since children's gender, siblings, and culture cannot be controlled for or altered as a means of encouraging prosociality in children on an individual basis, the focus of this paper will instead be on some psychological influences that can be used to engage children to act generously when they have an opportunity to share. In this regard, this paper will focus on preschoolers' prosocial resource allocation, and review theories and empirical studies regarding the psychological influences of how young children make decisions about the allocation of resources between the self and others. The aim is to shed light on some of the influences that can be altered to promote prosocial behavior in preschool children. As such, this paper will further explore children's sharing and resource allocation decision-making.

Sharing is defined as a voluntary distribution of resources (Kostelnik, 2012), and is considered to be a prosocial action (Paulus & Moore, 2012; Dunfield, 2014). Although there is substantial evidence showing that children will share, little is known about the mechanisms

underlying such prosocial behavior (Hepach et al., 2013). Even in the preschool years, spontaneous sharing of valued resources remains difficult for children and occurs relatively rarely, especially in contrast to helping and cooperating (Eisenberg, 2005; Grusec, 1991). Young children might be more likely to share under no-cost conditions and they appear to operate on the basis of self-concern only, without considering the desires or needs of the other person (Brownell, Svetlova, & Nichols, 2009). By five years of age children are highly likely to share even if there is a cost to sharing (Thompson, Barresi, & Moore, 1997).

Research shows that infants begin to recognize unequal distributions, and prefer equal distributions, early in their second year of life. Specifically, infants show greater attention to unfair or unequal as opposed to fair or equal distributions, suggesting that they expect resources to be divided fairly (Sloane, Baillargeon & Premack, 2012). When implicit measures such as affective behavior are used, children as young as three years of age recognize and respond negatively to unfair distribution of resources (LoBue, Nishida, Chiong, DeLoache & Haidt, 2011). These findings suggest that the ability to represent, and negatively evaluate unequal access to resources emerges over the course of the second year of life.

Although children can recognize unequal distributions of resources and react to unfair distributions, it is not clear that this is a sufficient element in and of itself to account for sharing behavior. Research suggests that recognition of an unequal/unfair distribution alone is not sufficient for effective sharing, especially when the solution is unclear, or if the motivation is weak (Dunfield, 2014). However, there are a number of situational factors that influence whether children will apply their recognition of unequal outcomes to resolve an unfair situation. For example, Moore (2009) indicated that when the cost of sharing is low, and the recipient is familiar, children are willing to

share more. Brownell et al. (2009) also showed that sharing in children under the age of three can be increased when others make their desires explicit.

Two of the most frequently used measures to evaluate sharing behaviors and generosity throughout the literature, are the Dictator Game (DG) and the Ultimatum Game (UG). The dictator game was developed to measure people's altruism and fairness (Forsythe, Horowitz, Savin, & Sefton, 1994; Kahneman, Knetsch, Thaler, 1986). In the simplest version of the dictator game, one player, known as the proposer, is given a sum of money that he/she can – but do not have to – share with another anonymous person, known as the receiver. The receiver does not have the opportunity to reject any offer given by the proposer, nor can they reciprocate or punish the proposer's chosen action. The proposer faces no negative consequences by choosing to be selfish and keeping the money and choosing to share has arguably, no tangible social gains. In contrast, the ultimatum game is a two-player game in which one player, referred to as the *proposer*, receives a sum of money and makes a proposal to the other player, referred to as the responder. The proposal indicates how that player believes the money should be divided. If the responder accepts the proposer's offer, the deal moves ahead. However, if the responder rejects the proposal both players receive nothing. In both the dictator game and the ultimatum game, there is an inherent assumption that people are only concerned with maximizing their own monetary payoffs (Güth, Schmittberger, and Schwarze, 1982).

Furthermore, advantageous inequity (AI) and disadvantageous inequity (DI) are two of the most commonly used methodologies in resource allocation tasks by researchers (e.g., Fehr, Bernhard, & Rockenbach, 2008). In situations of AI, such as sharing, the child can choose to keep more resources for themselves, or to split resources equally between themselves and a partner. However, in DI situations, the child can choose whether or not to withhold resources from their

partner to ensure they receive the same number of resources as themselves, or they can choose to give the extra resources to their partner.

The proposed work will discuss some of the influential factors that are believed to alter children's sharing, such as: affective experience (Paulus, & Moore, 2016; Vaish, Carpenter, & Tomasello, 2009; Williams, O'Driscoll, & Moore, 2014), perspective-taking (Oswald, 1996; Weil, Hayes, & Capurro, 2011), affiliation (Fehr et al., 2008; Moore, 2009; Sparks, Schinkel, & Moore, submitted), social comparison (Steinbeis, & Singer, 2013; Williams & Moore, 2014), and relative wealth (Kraus, Piff & Keltner, 2011; Paulus, Gillis, & Moore, 2013; Piff, Kraus, Cote, & Keltner, 2010). This review of the literature will aid in determining how these factors may impact generosity in young children and thereby increase understanding of the psychological bases of resource allocation and sharing during the preschool years. The following is a brief summary of each psychological process that is hypothesized to influence resource allocation decision-making in preschool aged children, and in the upcoming chapters each mechanism will be investigated in detail.

Affective experience

Affective experience, in the context of this paper, refers to any experience that involves emotions and feelings. Research with preschool children has shown that inducing empathic concern for others leads to prosocial resource allocation in young children (Williams et al., 2014). Paulus and Moore (2015) also indicated that children's generosity can be promoted by their awareness of a recipient's negative emotions when not being shared with. These findings suggest that there is a correlation between children's emotional state or affective experience and prosocial behavior.

Affective perspective-taking

Perspective-taking has been conceived as a multidimensional construct that can be organized into three categories: perceptual, cognitive, and affective (Underwood & Moore, 1982). Research shows that affective perspective-taking plays a greater role in empathic arousal and altruistic responding than other forms of perspective-taking (Oswald, 1996). Affective perspective-taking is defined as the ability to identify and understand how another person is feeling (Enright & Lapsley, 1980). Understanding others' affective states may be an important step in children's processing of information that leads to a decision to behave prosocially (Underwood & Moore, 1982).

Affiliation

Affiliation in this context refers to the level of connectedness the child has toward the person with whom they are interacting. There are several lines of research indicating that children's resource allocation decisions depend on their relationship with the recipient (Fehr et al., 2008; Moore, 2009). Research suggests that children prefer to share more with friends (Moore, 2009; Olson & Spelke, 2008; Paulus & Moore, 2014) and members of their in-group (Fehr et al., 2008).

Competition, social comparison and relative wealth

Competition refers to situations that places a child in opposition to another person, which can induce social comparison or envy. Research shows that social comparison can lead to feelings of jealousy and envy among peers and that people are less likely to desire a rival's friendship (e.g., Salovey & Rodin, 1984). These influences are important because on a daily basis children are encouraged to be competitive in order to be what society perceives as successful. However, these influences may impact children's prosocial resource allocation negatively. Furthermore, relative wealth refers to the resources that someone has in comparison to another person. Research has

shown that children's motivation to engage in costly sharing is partly dependent on their evaluation of the relative wealth of the involved individuals (Paulus, et al., 2013). However, little is known regarding the extent of the impact of relative wealth on children's resource allocation decision-making.

Overall, based on existing literature, it is hypothesized that affective experience, perspective-taking, and affiliation impact children's sharing and generosity positively. On the other hand, social comparison and relative wealth are influences that appear to have a negative impact on these aspects of prosocial behavior. In the subsequent chapters it will be investigated exactly how these influences can impact preschool children's resource allocation decision-making.

Finally, the aim here is to find the most appropriate parenting and teaching styles that can influence preschool children's prosocial development in a positive way, and shed light on some of the influences that can be altered to promote prosocial behavior in preschool children. The overall findings of this scholarly review will be used to develop evidence-based advice that will assist parents, caregivers, and teachers of young children to guide them towards more prosocial behavior and towards acting generously with others.

Chapter 2: Affective experience

The aim of this chapter is to explore the influence of affective experience on preschool children's prosocial sharing and generosity. In the context of this chapter affective experience is defined as any internal or external experience that involves emotions and feelings. This includes but is not limited to, sympathy, empathy, moral emotions and a wide range of emotional responses (happiness, sadness, anger, etc.). However, before affective experience can be explored it is first necessary to understand what is meant by the key terms that are going to be used in this chapter, such as sympathy, empathy, empathic concern, personal distress and moral emotions,

Throughout the bulk of the literature, *sympathy* is defined as an other-oriented concern and a desire to reduce another's distress. Sympathy is characterized by negative feelings of sorrow and concern for others in need (Eisenberg, Eggum, & Di Giunta, 2010; Ongley, & Malti, 2014; Zuffianò, Colasante, Peplak, & Malti, 2015). In contrast, *empathy* is made up of a cognitive dimension involving the capacity to see things from the perspective of others and an affective dimension that involves sharing other people's emotions. (Ornaghi, Brockmeier, & Grazzani, 2014; Davis, 1983). In other words, empathy is defined as taking part in the suffering of other people (Hoffman, 2000). In this way, sympathy entails a degree of distancing between the self and the other that is not present in empathy (Eisenberg, 2000). Research has shown that children's empathic behavior, in both its affective and cognitive components, emerges and develops during the preschool years (Eisenberg et al., 1990; Radke-Yarrow, Zahn-Waxler & Chapman, 1983). The cognitive components of empathy will be further explored in the third chapter of this paper. While the literature often uses the terms, empathy and sympathy interchangeably, it is important to distinguish that unlike empathy, sympathy primarily entails other-oriented concern and is not the experience of the same or similar emotion as that of the other (Ongley & Malti, 2014).

Two other concepts that have been explored within the literature regarding empathy and sympathy are empathic concern and personal distress. *Empathic concern* has been referred to as an other-oriented emotional response congruent with the perceived welfare of someone in need. On the other hand, *Personal distress* is a self-focused reaction to the expression of another's negative emotion, often leading to avoidance behavior (Decety & Svetlova, 2012).

Moral emotions are another concept that has been focused on by researchers regarding the impact of emotions on prosocial behavior. Haidt (2003) defined moral emotions as those emotions "that are linked to the interests or welfare either of society as a whole or at least of persons other than the judge or agent" (p. 276). Moral emotions are categorized as positively or negatively valenced emotions, when comparing one's own behavior to a moral standard (Tangney, Stuewig, & Mashek, 2007). They function as a motivational force to encourage the individual to do good and to avoid doing bad (Kroll & Egan 2004). Research on moral emotions has typically focused on two negatively valenced, self-conscious emotions: shame and guilt (Keltner, 1996; Tangney, 1992). According to Lewis (1971), shame involves a negative evaluation of the self, whereas guilt involves a negative evaluation of a specific behavior. However, before these concepts can be explored in greater depth, it is first necessary to provide greater context to the two most commonly discussed forms of affective experience: empathy and sympathy.

Eisenberg, Spinrad and Sadovsky (2006) demonstrated that between 14 and 18 months, children show more varied and other-directed empathic and sympathetic responses to others' distress as they become more able to differentiate the self from the other. This age cohort demonstrates the early age of onset for empathic and sympathetic responding. Numerous theorists and researchers have suggested that empathy and sympathetic concern often motivate prosocial behaviors such as altruism (e.g., Batson, 1991; Eisenberg, 1986; Hoffman, 1975). It has been shown that the

experience of empathy motivates certain prosocial behaviors, such as volunteering and donations to charities (Dovidio, Piliavin, Schroeder & Penner, 2006; Brooks, 2006). However, while much is known about the behavioral outcome when people are empathic, the physiological mechanisms of empathy are not well understood (Dovidio, et al, 2006; Eisenberg & Miller, 1987).

Research has shown that the neurohormone oxytocin (OT) is part of the brain architecture that produces experienced empathy. OT has been identified as a mechanism that causes human beings to respond to the affective states of others (Barraza & Zak, 2009). Recent studies have also revealed that OT promotes prosocial behaviors in humans, including trust, reciprocity, and generosity (Kosfeld, et al., 2005; Zak, 2005; Zak, Kurzban, & Matzner, 2004; Zak, Kurzban, & Matzner, 2005; Zak, Stanton, & Ahmadi, 2007).

The importance of empathy in increasing generous behavior should not be underestimated. However, this is not the only behavior that empathy has been found to affect. Foundational research has also indicated that feeling empathy for a person in need is an important motivator of helping (Aderman & Berkowitz, 1970; Coke, Batson, & McDavis, 1978; Krebs, 1975). There is also substantial evidence showing that empathic emotion leads to altruistic motivation (Hoffman, 1975; Krebs, 1975; Batson, Duncan, Ackerman, Buckley, & Birch, 1981). Research has also demonstrated that there is a relationship between empathic distress, or experiencing concern for others, and prosocial behaviors, such as generosity, in children (e.g., Eisenberg, McCreath & Ahn, 1988; Malti, Gummerum, Keller, & Buchmann, 2009; Vaish et al., 2009).

A classic study conducted by Barnett, King and Howard (1979) explored the differential effects of self- and other-directed affect on subsequent generosity in children. Eighty-five children between seven and twelve years old were asked to discuss happy, sad, or affectively neutral incidents that they themselves had experienced, or were experienced by another child. Following the

inducement of affect, the children were given the opportunity to share their experimental earnings with some less fortunate children. Children who showed empathic concern when relating sad experiences encountered by another individual shared significantly more than children exhibiting personal distress when describing incidences of their own sad experiences. They also found that older children were more generous than their younger counterparts in sharing their experimental earnings, age was not found to interact with the other experimental variables.

While the literature mentioned up to this point has focused on empathy, this is not to say that sympathy does not have an important role to play in developing prosocial behaviors in children. Sympathy has been posited by theorists to be an important motive of morally relevant, prosocial behavior (Eisenberg, 1986) and perhaps an antecedent of sharing resources with anonymous others (Knafo, Zahn-Waxler, Van Hulle, Robinson & Hyun Rhee, 2008).

Malti, Gummerum, Keller, Chaparro and Buchmann (2012) focused on two socio-emotional antecedents of sharing: sympathy and social acceptance. The study examined 175 six-year-old Swiss children, their primary caregivers, and their teachers over a three-year period. The children were assessed at six years of age, seven years of age, and nine years of age with the Dictator Game. Children were presented with identical stickers and were asked to distribute them, in any way they wanted among themselves and an anonymous child of the same age and gender. Their findings showed that sharing valuable resources strongly increases in children from six to nine years of age, providing evidence that being socially accepted by others at the kindergarten age leads to increased willingness to share valuable resources with others at the elementary-school age. These results indicate that human sharing strongly increases in middle childhood and that this increase is associated with sympathy towards anonymous others and with feelings of social acceptance.

Several lines of research have been concerned with the impact of emotions in motivating early sharing and resource allocation decisions. The results of many studies have confirmed that affect sharing and empathic concern and distress play a significant role in early sharing (Eisenberg et al., 1988; Malti et al., 2009; Miller, Eisenberg, Fabes, & Shell, 1996; Roberts & Strayer, 1996; Svetlova, Nichols, & Brownell, 2010; Vaish et al., 2009; Williams et al., 2014).

A recent study conducted by Williams et al., (2014) examined the role of empathic distress on young children's decisions to allocate resources to another person. They conducted the study for two distinct age groups of three-year-olds and five- to six-year-olds who took part in advantageous inequality (AI) and disadvantageous inequality (DI) trials. Since three-year-olds had difficulty understanding DI trials due to their young age, they only took part in AI trials. In order to explore whether inducing a negative emotion, leading to empathetic distress, increases children's prosocial behavior in a choice based resource allocation task, children were randomly assigned to watch either a sadness inducing video of a young girl upset that her dog had gone missing, or a neutral control video of the same girl preparing for a yard sale. They asked children to rate their own emotion, as well as the emotion of the young girl in the video to ensure that the emotion induction was inducing empathic distress, and also to explore if prosocial behavior was more strongly tied to either the empathic concern or personal distress aspect of empathy. The five- to six-year-old children rated the emotional state of the girl in the video and the self more negatively, while exhibiting more prosocial behavior. Results revealed that three-year-olds showed increased prosocial behavior, though they were unable to differentiate between their own emotions and the emotions of the other. Five- and six-year-olds showed decreased non-prosocial behavior toward their partner suggesting that empathic concern for others leads to prosocial resource allocation in young children. Their findings

also suggest that empathic concern rather than personal distress was the primary influence on prosocial behavior.

Research conducted by Batson et al., (1981) and Eisenberg et al., (1989) found that personal distress and outward expressions of empathic concern differ in terms of their relation to prosociality – specifically that prosocial intentions and behavior are linked to empathic concern, but not personal distress. Over the years, research has primarily focused on the emotions of the giver, demonstrating that empathy (e.g., Williams et al., 2014) and moral emotions (e.g., Malti & Krettenauer, 2013; Ongley & Malti, 2014) play an important role in children’s prosocial responding. One limitation of the research up to this point is that little is known about whether children’s understanding of the consequences of their sharing behavior for the recipient affects their behavior.

In considering this shortcoming, Paulus and Moore (2016) explored the relationship between sharing and happiness among 64 three- to six-year-old German preschool children. They examined whether individual differences in children's beliefs about the emotional consequences of sharing or not sharing with another child would predict their actual sharing decisions. The results of their study indicated that preschool aged children understand the emotional consequences of their generous sharing behaviors. In fact, their findings suggested that sharing makes children far happier than not sharing. Interestingly, children’s emotion ratings had a direct impact on their future sharing behaviors. When children predicted that their emotions would be positively impacted by sharing, they gave more generously in a subsequent sharing task. It was also found that children gave more generously after they rated their emotions negatively from not sharing with other children. This suggests that understanding the emotional consequences of sharing affects children’s actual sharing behaviors.

As was mentioned earlier, the concept of moral emotions is another affective experience that impacts children's prosocial behavior and resource allocation decision-making (Ongley & Malti, 2014). The literature surrounding the concept of moral emotions has typically focused on two negatively valenced, self-conscious emotions: shame and guilt. Shame and guilt are differentially related to empathy. Shame has the potential to disrupt the individual's ability to form empathic connection with others, while guilt is directly connected to other-oriented empathy (Tangney et al., 2007). Research has shown that people convey greater empathy for others when describing personal experiences of guilt rather than when describing shame experiences (Leith & Baumeister 1998, Tangney, Marschall, Rosenberg, Barlow, & Wagner, 1994). Shame shifts the focus of the individual toward the negative self, making it difficult to focus the cognitive and emotional attention on the harmed other. In contrast, guilt specifically focuses on the bad behavior, highlighting the negative consequences experienced by the harmed other. This fosters an empathic response, motivating people to correct their wrongdoings. Overall, guilt but not shame is most effective in motivating prosocial tendencies in people (Tangney et al., 2007).

Hoffman (2000) found that a situation of moral injustice may elicit a sense of personal responsibility in the observer, which could turn into a feeling of guilt over inaction. As a result, empathy can be viewed as a precondition for the development of justice belief systems, moral judgment, and altruistic behavior in children (Eisenberg, 1986). Research on the development and expression of empathy (Aderman & Berkowitz, 1970; Coke et al., 1978; Hoffman, 1976) would suggest that prosocial behaviors are likely to be enhanced in children and adults who are experiencing the negative affect of another individual, since empathizing serves to make the feelings and needs of others generally more salient.

Miller et al. (1996) examined the relations between vicarious emotional responding and moral reasoning on prosocial behavior in 74, four- and five-year-old Euro-American children. They obtained children's self-reported emotional responses and facial reactions to two peer distress films and two adult distress simulations. After each simulation, they measured prosocial behavior and moral reasoning through either a helping or a donation moral dilemma. Their findings suggest that self- and other-oriented affective processes may be linked with cognitive processes in preschool children and that they are associated in expected directions with prosocial behavior toward peers and adults. Vicarious emotional responding was associated with peer- and adult-directed prosocial behavior, whereas moral reasoning was associated solely with peer-directed prosocial behavior. They also found that children high in other-oriented moral reasoning (i.e., needs-oriented reasoning) and sympathetic affect (i.e., reports of feeling sorry for the peers) were highly likely to act prosocially toward peers.

In another line of research, Ongley and Malti (2014) investigated the development of sharing behavior in an ethnically diverse sample of 244 four, eight, and twelve-year-old children by examining the role of moral emotions in the motivation of sharing. They investigated the relationship between sharing and self- and caregiver- reported sympathy and the anticipation of negatively and positively valenced moral emotions (NVME, PVME). Their findings suggested that there may be two compensatory emotional pathways to sharing: one via sympathy and one via NVME (i.e., feeling guilty, sad, or bad). More specifically their results showed that NVME anticipated in prosocial contexts significantly predict sharing. Most importantly, high levels of NVME were predictive of sharing when children's level of self-reported sympathy was low. This suggests that NVME may compensate for a lack of sympathy in motivating children and adolescents to share valuable resources. However, children with high levels of other-oriented concern (i.e.,

sympathy) were motivated to share independently of their level of anticipated self-evaluative moral emotions to reduce distress in others. The study also found that PVME (i.e., feeling proud, happy, or good) in contrast to NVME did not predict sharing.

Malti, Gummerum, and Buchmann (2007) also found that moral emotions correlated significantly with mother-rated prosocial behavior in six-year-old boys. Moral emotions appear to be well established by middle childhood and have implications for moral behavior for years to come (Tangney & Dearing 2002).

Zuffian et al. (2015) examined links between sharing, respect for moral others, and sympathy in an ethnically diverse sample of 146 seven- and fifteen-year-olds. The study used the dictator game to assess sharing behavior through resource allocation tasks. Respect for moral others was evaluated through children's ratings of hypothetical characters performing moral acts. Sympathy was also evaluated through caregiver and child reports. The results of the study indicated that increases in respect were associated with increases in observed sharing for children with low caregiver-reported sympathy. Their findings suggest that positive feelings of respect towards moral others may compensate for a lack of sympathetic concern in sustaining sharing.

One final piece for consideration is the role that moral emotions have to play in a dictator game scenario involving preschool aged children. A study conducted by Gummerum, Hanoch, Keller, Parsons, and Hummel (2010) investigated 77, three- to five-year-old preschool children's understanding of moral emotions and its relation to their resource allocation behavior in the dictator game. They assessed children's moral emotion attributions via two happy victimizer tasks: a stealing story and a helping story. In each story children were asked to attribute emotions and judgments of moral violations perpetrated by the protagonist. They then measured children's generosity through the allocation of stickers in the dictator game. The results of the study showed that the understanding

of how one would feel after a moral violation is a strong predictor of preschool children's offers in the dictator game, above and beyond the effects of age and gender. In other words, children who understood the emotional consequences of moral violations, at least to themselves, allocated resources more generously in the dictator game.

Discussion

In this chapter the importance of affective experience on children's generosity and resource allocation decision-making was discussed. It was shown that affective experience has multiple dimensions, including empathy, sympathy, empathic concern, personal distress, moral emotions and feelings of sadness and happiness.

As it was shown from the literature, feelings of empathy and sympathy play an important role in children's resource allocation decision-making (e.g., Knafo et al., 2008; Malti et al., 2012). Furthermore, several lines of research indicated that empathic concern can lead to acts of helping and sharing, whereas personal distress can lead to self-directed behaviors (Batson et al., 1981; Eisenberg et al., 1989).

It was also argued that when preschool children are aware of the consequences of sharing or not sharing with others this can affect their sharing behavior. In fact, it was revealed that children feel far happier when sharing rather than not sharing and such a feeling of happiness increases their generosity towards others (Paulus & Moore, 2016).

Beyond the influence of empathy and sympathy, moral emotions also play a significant role in preschool children's sharing and generosity (Gummerum et al., 2010; Ongley & Malti, 2014). As was discussed, in the absence of sympathetic concern, moral emotions have a great impact on children's generosity and sharing behavior. More specifically, NVME have been shown to increase

children's prosociality and sharing, whereas PVME had no impact on children's prosocial sharing (Ongley & Malti, 2014).

It was also indicated that children's anticipation of moral others in the absence of sympathy predicted their sharing behavior and made them more willing to share with moral others (Zuffian et al., 2015). Furthermore, preschool children's understanding of the emotional consequences of moral violations, to themselves and others, predicted their sharing behavior. In fact, children understand the emotional consequences of not sharing, and as a result, they tend to share more to avoid provoking any negative feelings for themselves and others (Gummerum et al., 2010).

Overall, the results of each study presented within this chapter revealed that sympathy, empathy, and moral emotions all play an important role in motivating children's resource allocation and generosity. It was found that when sympathy is low, moral emotions can be used to motivate children's sharing behavior (Ongley & Malti, 2014).

In order to motivate children to act generously and share their resources with others, it is recommended that parents and daycare professionals encourage children to empathize or sympathize with others. This can be done by asking the child to consider how they would feel if they were in the same situation of another child in need. In doing so, it is also important to make children aware of the consequences of their sharing behavior, both on others and their own feelings and emotions. Furthermore, asking children to consider the emotional consequences of violating moral standards or not sharing can make them act more generously toward others.

Chapter 3: Affective perspective-taking

As was discussed in the context of the previous chapter, empathy is comprised of both affective and cognitive components (Davis, 1983). The affective component explores the experience of another's emotions (Mehrabian, & Epstein, 1972), while the cognitive component examines the ability to understand another's perspective in emotional situations (Hogan, 1969). Eisenberg (1991) argued that empathy and altruistic behavior often stem from perspective-taking activities, both affective and cognitive. A significant number of studies have highlighted the fundamental role of perspective-taking as a prerequisite for the development of prosocial behavior (Baron-Cohen, 2001; Eisenberg & Fabes, 1998; Jenkins & Astington, 2000; Oswald, 1996; Roberts & Strayer, 1996; Weil et al., 2011). The literature has also shown that children start developing perspective-taking abilities during the preschool years (Carlo, Knight, Eisenberg, & Rotenberg, 1991; Cigala, Mori & Fangareggi, 2015; Denham, 1986; Knafo, Steinber, & Goldner, 2011; Vaish et al., 2009). The aim of this chapter is to explore the role of perspective-taking in regards to preschool children's prosocial sharing and generosity.

Batson, Early and Salvarani (1997) argued that there are two different ways of perceiving the other's situation. The first is imagining how another feels (imagine other) and the second is imagining how you would feel (imagine self). They argued that imagining how a person in need feels evokes relatively pure empathic emotion, which further evokes altruistic motivation. On the other hand, imagining how you would feel in that person's situation evokes a more complex mix of other-oriented empathy and self-oriented personal distress, which can evoke a mix of altruistic and egoistic motivation. Understanding the role of the self and the other plays a significant role in developing prosocial and affective perspective-taking abilities.

Underwood & Moore (1982) found that understanding others' affective states is an important step in preschool-aged children's processing of information that leads to prosocial behavior. For example, preschoolers' performance on role-taking tasks within the context of the study was significantly correlated with altruistic behavior in the classroom and with teachers' ratings of prosocial behavior and cooperativeness in a naturalistic setting (Krebs & Sturupp, 1974). Numerous studies have shown that people who possess the ability to see things from another's perspective, otherwise known as perspective takers, are better able to understand others' emotions and to act prosocially (Baron-Cohen, 2001; Jenkins & Astington, 2000; Roberts & Strayer, 1996; Weil et al., 2011).

Perspective-taking

Perspective-taking comprises the ability to assume another's perspective, which allows one to infer the thoughts, emotions and perceptions of others (Cigala, Mori & Fangareggi, 2015; Sullivan, Bennett, Carpenter, & Lewis, 2008), can be organized into three categories: perceptual, cognitive, and affective (Krebs & Russell, 1981; Shantz, 1975; Underwood & Moore, 1982). Perceptual perspective-taking refers to the ability to infer how an object is seen from a different position in a space (Moll & Meltzoff, 2011; Moll & Tomasello, 2006; Vogeley & Fink, 2003). Cognitive perspective-taking refers to the ability to infer other people's thoughts, motivations and intentions (Baron-Cohen, 2001; Eisenberg, Zhou, & Koller, 2001). Affective perspective-taking consists of the ability to understand and identify how another person is feeling (Enright & Lapsley, 1980; Fireman & Kose, 2010; Harwood & Farrar, 2006; Hinnant & O'Brien, 2007).

Significant research has suggested that affective perspective-taking plays a greater role in empathic arousal and altruistic responding than do other forms of perspective-taking (Carlo et al., 1991; Denham, 1986; Hoffman, 1984; Knafo et al., 2011; Oswald, 1996; Rushton, 1980; Staub,

1978). In a classic study, Buckley, Siegel, and Ness (1979) reported that children who had higher altruism scores performed better on affective perspective-taking tasks than did non-altruists. In a similar line of research, Carlo and colleagues (1991) investigated the relationship among affective attributions, cognitive perspective-taking measures and prosocial behavior among eighty nine preschool through second grade children. They were given the opportunity to help another same-sex child obtain toys following the administration of an affective attribution task and a cognitive perspective-taking task. They found that measures of social cognition are related to helping scores primarily when helping is expected to be facilitated by the specific form of social cognition. Furthermore, their results showed that attributions and reasoning about affect is positively related to helping that requires the assessment of another's emotional state, whereas a cognitive perspective-taking task that does not focus on affective cues is unrelated to helping that required processing of affective cues.

Continuing this line of study, Oswald (1996) explored the impact of cognitive and affective perspective-taking on altruistic helping among 65 ethnically diverse working American adults. The results indicated that participants who focused on understanding the feelings of another and who engaged in affective perspective-taking, offered more help than those who took a cognitive perspective focus. In addition, the results demonstrate that affective perspective-taking leads to greater altruistic helping than cognitive perspective-taking, and that both forms of perspective-taking lead to greater altruistic helping than no perspective-taking at all. For this reason, the primary focus of this chapter is on affective perspective-taking in relation to prosocial behavior and resource allocation in preschool aged children.

Denham (1986) investigated the relations between affective perspective-taking, expression of emotions and prosocial responses among 27 two-three year olds. In this study, preschool children

were asked to predict the emotional state of a puppet in situations where the puppet's emotion were either the same as or different from the child's expected emotional response to the same situation. The results indicated a positive correlation between affective perspective-taking and emotionality with prosocial behavior. It was also indicated that prosocial behavior is more likely when affect is positive or emotional needs of the child are met. In fact, children who showed predominantly negative emotions, whether sad or angry or hurt, showed varying deficits in social cognitive or prosocial domains.

Knafo et al., (2011) assessed affective perspective-taking abilities in relation to self-initiated prosocial behavior in 83 Jewish Israeli children between 36 and 72 months old through their reactions to affectively loaded story situations. Children were categorized as low in affective perspective-taking abilities if they were especially low relative to children of their age in correctly attributing affective states to a story character. They found that children with low affective perspective-taking abilities were less likely to infer the need for pro-social action from relatively subtle social cues. Furthermore, their results suggest that interventions aimed at increasing prosocial behavior that goes beyond compliance with open requests should consider incorporating training for affective perspective-taking skills.

In considering this need to incorporate training to develop affective perspective-taking skills, Cigala et al., (2015) investigated whether perspective-taking abilities could positively influence prosocial behaviors among 60 three to five-year-old children. They used an ecological training approach to promote children's perspective-taking abilities. Their results showed that children who displayed an improvement in the ability of perspective-taking, showed a significant increase in the behaviors of helping and sharing. Therefore, it is possible to conclude that children with a greater

ability of perspective-taking are also more inclined to behave in a prosocial way during peer interactions.

In another line of research, Vaish and colleagues (2009) examined the relationship between children's sympathy and prosocial behavior by assessing children's affective perspective-taking skills in the absence of emotional cues. They showed 32 eighteen to twenty-five-month-olds an adult either harming another adult by destroying or taking away her possessions (harm condition), or doing something similar that did not harm her (neutral condition). The adult experiencing the harm or neutral condition expressed no emotions. Their results indicated that children showed more concern and subsequent prosocial behavior toward the victim in the harm condition, demonstrating that as early as 18-months-old, children show concern for an adult stranger who is in a hurtful situation but shows no emotion. Overall, this study found that young children can sympathize with a victim even in the absence of overt emotional cues, situational cues can be used to sympathize with another person by some form of affective perspective-taking.

Emotion understanding

Although Vaish et al., (2009) showed that children by two-years of age are capable of showing concern for others in a harm situation despite the absence of emotional cues, research has found that children at such a young age lack the ability to understand the emotional state of another. Belacchi and Farina (2012) argued that the understanding of different external features of emotion (i.e., facial expressions, situational causes), referred to as emotion understanding, does not emerge until around four–five years of age. Emotion understanding is the ability to understand the emotional state of the self and the other, which is a core component of sociocognitive comprehension. It allows children to adopt others' perspectives, comprising their desires, beliefs, intentions, and emotions (de Rosnay & Hughes, 2006).

From a cognitive point of view, the awareness of aspects featuring emotional experiences is crucial in order to promote empathic responses to emotional events. Strayer (1989), in her analysis of empathic behavior from infancy to late adolescence, found that individuals' abilities to mentally represent emotion eliciting events or people's internal states have a crucial impact on their empathic responses. This is also supported by research on children's empathy in relation to prosocial behavior (Eisenberg and Fabes, 1998; Hoffman, 2000).

In a recent study, Paulus and Moore (2015) investigated how preschoolers' anticipation of recipients' emotions impacted their resource allocation decisions. They examined 82 preschool children between the ages of three and six in one of three conditions: other, self or control. In particular, they assessed children's ratings of the emotions associated with receiving or not receiving something. They wanted to know whether individual differences in these emotion predictions would relate to the children's actual resource allocation behavior. In the Other condition, children were led to think about another person's emotions when being shared with or not being shared with. In the Self-condition, children were led to think about their own emotional state when being shared with or not being shared with. In the control condition, children were asked to think about another person's knowledge state. Their results demonstrated that young preschool children are aware of the emotional consequences that prosocial actions have for others. Their results also provide evidence that preschoolers' generosity is related to their anticipations of others' negative emotions when not being shared with. They indicated that asking children to reflect about the affective consequences of sharing for recipients led to an increase in subsequent generosity.

Theory of mind (ToM)

The ability to reflect on, or understand the needs and emotions of others may be manifested in theory of mind understanding, which is to say, attributing mental states such as desires, intentions,

beliefs, and needs to oneself and others (Premack & Woodruff, 1978). Sharing increases dramatically in preschoolers (Benenson, Pascoe, & Radmore, 2007; Blake & Rand, 2010; Fehr et al., 2008; Rochat et al., 2009) at the same time that ToM understanding is also undergoing significant developmental changes (Wellman, Fang, Liu, Zhu, & Liu, 2006; Wellman & Liu, 2004). With the development of the ability to monitor and understand each other's intentions, desires, beliefs, emotions, and other mental states, one may become progressively better at taking others' perspectives into account and regulating one's activities in concert with others' activities. As a result, one may grow to be more concerned with others' welfare (Fehr et al., 2008; Tomasello & Carpenter, 2007).

Research has found a positive correlation between theory of mind and affective perspective-taking abilities (Cutting, & Dunn, 1999; Hughes, & Dunn, 1998). More broadly, Cutting and Dunn (1999) suggest that these abilities may be two distinct forms of social cognition with different developmental trajectories. It is important to note that they are not identical skills. Affective perspective-taking requires understanding the causes of emotion, whereas theory of mind performance requires understanding the influence of belief on an individual's thoughts or behavior. However, both require an understanding of different or conflicting perspectives (Harwood, & Farrar, 2006). In fact, many affective perspective tasks require the understanding that there can be conflicting representations between one's own emotional response to a situation and someone else's response. Theory of mind understanding should be related to affective perspective-taking ability because both require children to consider conflicting representations, either beliefs or emotions, between themselves and others (Harwood, & Farrar, 2006).

In this regard, Harwood and Farrar (2006) further explored the relation between theory of mind and affective perspective-taking in a study with 42 three- to five-year-old participants.

Significant positive correlations existed between overall affective perspective-taking and theory of mind performance. The results provide support for the main hypothesis that the ability to understand other people's beliefs and to understand their emotions is related. Furthermore, this relation is particularly salient for children's ability to predict another person's emotion when it differs from their own. The results from this study support the idea that affective perspective-taking and theory of mind are associated aspects of social cognitive development.

Preliminary relations between perspective-taking and distributive justice indicate that children's theory of mind development should coincide with greater expression of altruism or sharing. Takagishi, Kameshima, Schug, Koizumi, and Yamagishi (2010), in a study of children's distributive justice in a bargaining game, found that preschoolers with theory of mind abilities tended to offer more resources than those with less mature theory of mind abilities.

In a similar line of research, Cassidy, Werner, Rourke, Zubernis and Balaraman (2003) investigated the relationship between theory of mind and prosocial behavior in 67 children, ranging from three- to five-years-of-age. Theory of mind was divided into understanding of mind (cognitive states like beliefs and desires) and understanding of emotions (emotional sensitivity to others). Children were given measures of mental state understanding and emotion understanding. They measured prosocial behavior through classroom observations, teacher reports and peer ratings. Their results suggested that emotion understanding is an important indicator in getting others to help, comfort, share, and cooperate. Interestingly, their results found that receiving is positively related to affective perspective-taking, suggesting that children who can readily infer others' emotions are more likely to receive help, comfort, sharing, and cooperation from their peers. Several general cognitive capacities have been proposed to facilitate increased sharing in young children including theory of mind and perspective-taking (Damon, 1975; Smith, Blake & Harris, 2013; Takagishi et al.,

2010). As children begin to take others' perspectives, they will recognize others' desires for resources and subsequently be motivated to engage in sharing with another (Cowell, Samek, List, & Decety, 2015).

Furthering this argument, Wu and Su (2014) examined the development of resource sharing in preschoolers and its relationship with children's theory of mind understanding. They conducted the study with 74 two- to four- year-old Chinese children in three sharing tasks with toys that could be shared with a puppet. In each sharing task, the puppet communicated her desire for children's items with a series of progressively more explicit cues. Their results revealed that two-and three-year-olds relied on more explicit communicative cues to share resources with others, whereas four-year-olds shared more spontaneously. They also found a positive correlation between children's ToM understanding and their sharing behavior independent of their age, and children with more advanced ToM understanding shared more spontaneously, shared more quickly, and shared more items than children with less advanced ToM understanding. Specifically, children who understood that people could have different beliefs about the same thing and that people were ignorant if they had not seen the fact shared more spontaneously and shared more items than children who had not acquired these two abilities. Based on their findings they concluded that sharing behavior may be more likely to occur when the partner makes his or her wants, needs, desires, and emotions more apparent.

However, a recent study conducted by Cowell and colleagues (2015) examined the role of Theory of Mind and perspective-taking in facilitating sharing in a sample of 98, three-five year-old children. They used a false belief task, which is a change of location task that aims to see if a child can see things from another's perspective, to assess children's ToM abilities and the Dictator Game as a measure of sharing and generosity. Unlike previous studies they found that children who passed

a standard false belief paradigm, shared significantly less resources with their peers than did children who failed a standard false-belief, even after accounting for age-related differences. They also indicated that perspective-taking abilities in preschool age children were negatively related to sharing, and children who engaged in perspective-taking actually shared less with peers than those who did not. This reinforces classic research conducted by Hoffman (1975), which suggested that a child's knowledge of another's inner state might be used in a deceptive and hurtful manner. They argued that a child who displays high affective perspective-taking abilities but also demonstrates a low-empathic disposition might be more egocentric in their dealings with others.

Barnett and Thompson (1985) investigated 117 fourth- and fifth-grade children's empathic disposition and affective perspective-taking ability in relation to prosocial behavior, and motives for acting in a helpful or unhelpful manner. Their results suggest that children demonstrating a high level of empathy and affective perspective-taking skills were more helpful than other peers when the need of the other was less apparent and had to be inferred. Children demonstrating low empathy and high perspective-taking skills were highly egocentric and cited self-oriented reasons for helping more frequently than other similarly aged children. They also displayed a heightened awareness to the feelings of others but were especially egocentric in their interactions due to a lack of sensitivity regarding the others feelings. Interestingly, their results showed that children who are particularly insightful about the feelings of others may be inclined to act in an unhelpful manner unless that insightfulness is tempered with emotional sensitivity and compassion.

Discussion

Throughout this chapter, it was shown that the adoption of another's perspective is a necessary precondition to altruistic and prosocial behavior (Batson, 1991). In this regard, a definition of perspective-taking and three different subcategories (perceptual, cognitive and affective) was

provided. It was argued that affective perspective-taking plays a more significant role in empathic arousal and prosocial behavior than cognitive and perceptual perspective-taking do (Carlo et al., 1991; Denham, 1986; Knafo et al., 2011; Oswald, 1996). Several studies found that there is a positive correlation between affective perspective-taking and prosocial behavior (Cigala et al., 2015; Denham, 1986; Knafo et al., 2011).

The development of prosocial behaviors has been attributed to the advances in the understanding of others' desires and emotions (Eisenberg, 2005; Mascolo & Fischer, 2010). Before children can behave in a positive manner, they have to perceive another's needs and feelings, then interpret them correctly, then decide in what ways the person can be interacted with, and finally must feel competent enough to engage in that interaction. In addition, children who do possess the requisite knowledge and skills may not be inclined to use them in a positive manner (Cassidy et al., 2003). As children become more proficient in taking other people's feelings and emotions, as well as their beliefs and desires into consideration they become more cooperative and act in prosocial ways.

The importance of affective perspective-taking and emotion understanding were highlighted as important factors in the development of prosociality and sharing (Cassidy et al., 2003). For example, Peterson (1982) suggested that children with advanced perspective-taking abilities may have an advantage over peers with poorer role-taking skills in identifying another's need for help when that need is less overt. Furthermore, Brownell, Svetlova and Nichols (2009) indicated that if a child attends only to his or her own desires and emotions and has no understanding of the others' desires and emotions, sharing processes are not likely to be activated. As a result, in those instances where the need of the other is less obvious, children who are highly empathic and who display higher affective perspective-taking abilities might be expected to offer more comfort and assistance than highly empathic children with relatively poor perspective-taking skills. Previous studies have

also shown that making the needs and the desires of the self more apparent to the other by verbally or gesturally requesting an item dramatically increases young children's sharing behavior (Brownell, Iesue, Nichols & Svetlova, 2013; Brownell et al., 2009).

Not only is the knowledge state of the self and the other important, but also, the understanding of the emotions of the self and the other is a key element for taking any prosocial action. Paulus and Moore's (2015) findings also indicated that children's resource allocation behavior can be fostered by having them reflect on the emotional consequences of their sharing behavior for another person. This implies that resource allocation decisions can partially be motivated by the anticipations of the consequences of one's own behavior for another's emotional state, and the wish to avoid these consequences.

It was indicated that there is a relationship between children's theory of mind (ToM) and perspective-taking abilities. Both of these abilities can help the child to act prosocially and share more with others. Numerous authors have suggested that the child's ability to take the role, or perspective, of another individual is central to the enactment of prosocial behaviors (Baron-Cohen, 2001; Carlo et al., 1991; Denham, 1986; Knafo et al., 2011). However, knowledge of the thoughts and feelings of another in need is likely to be insufficient, in and of itself, to motivate a child to engage in a prosocial act (Barnett, & Thompson, 1985). A few studies argued that high perspective-taking and theory of mind abilities might lead to egocentric behaviors if they are not mediated by feelings of compassion and empathic concern toward other people (Barnett, & Thompson, 1985; Cowell et al., 2015). For example, Sutton, Smith, and Swettenham (1999) demonstrated that children who engage in bullying behaviors, process social information incredibly accurately and use this information to their advantage in social situations. Therefore, it can be argued that perspective-taking, and more specifically, affective perspective-taking ability, although not sufficient in and of

itself, is a necessary factor in promoting children's prosocial sharing and generosity. Whenever these abilities are matched with empathy and compassion, they can be highly effective to motivate children to act prosocially and share with others.

There are a few ways to promote children's perspective-taking through training practices and parent-child conversations. Dunn and colleagues conducted several studies, which suggest that there is a relationship between children's conversations about their everyday experiences and advances in their understanding of mind and emotion. These studies have shown that children's conversations about internal states with parents and siblings are related to later measures of affective perspective-taking (Dunn & Brown, 1993) and emotion recognition (Dunn, Brown, & Beardsall, 1991). This internal state discourse is also positively related to the rate and spontaneity of children's sharing (Brownell, Svetlova, Anderson, Nichols, & Drummond, 2013). These results suggest that prosocial behavior is associated with the ability to infer the mental states of others. Wu and Su's (2014) findings further support this hypothesis by showing that more advanced ToM ability was positively associated with children's spontaneous sharing and the amount of items shared with others.

In order to develop children's affective perspective-taking abilities, it is recommended that parents and daycare professionals engage children in conversations about their everyday experiences. They can encourage children to see things from the perspective of others by asking them questions about the experiences of others in their everyday lives. This can help a child to better understand their own feelings and experiences, as well as the feeling and experiences of others.

Chapter 4: Affiliation

The aim of this chapter is to explore how affiliation and social relationships can affect preschoolers' generosity and resource allocation decision-making. Research has shown that children's generosity in deciding when and with whom to share becomes more selective over the course of the preschool years (Hay & Cook, 2007) and depends on the social relationship with the recipient (Paulus, Becker, Scheub & König, 2016). For example, there is substantial evidence that over the course of three to six years of age, preschool children share more with friends than with disliked peers (Moore, 2009; Olson & Spelke, 2008; Paulus & Moore, 2014). Foundational research has also indicated that people tend to be more attracted to those who are similar to themselves in physical appearance (Walster, Walster, Berscheid, & Dion, 1971), in attitudes and beliefs (Miller, 1972), in social and cultural background (Buss & Barnes, 1986), and in personality (Botwin, Buss, & Shackelford, 1997; Klohnen & Luo, 2003). These characteristics connect children to the social world around them by shaping a sense of affiliation toward similar others.

One form of affiliation comes through friendship which is defined by various behavioral measures, such as playing in close proximity, interacting socially, and sharing positive affect consistently with a particular peer (Fawcett & Markson, 2010). As a result of this, young children have been found to have at least one friend by the time they are 16 months old and to have 5 or 6 friends by the time they are three (Howes & Phillipsen, 1992). Paulus and Moore (2014) showed that by five years of age children have clear expectations of the behaviors associated with friendship. This indicates that they have acquired a clear understanding of how friends behave toward each other and as a result have a differentiated understanding of the various interpersonal relationships in their social world. Moreover, three- to nine-year-old children who are able to establish common

ground activities and explore each other's similarities and differences are more likely to become friends (Gottman & Graziano, 1983).

In this regard, Fawcett and Markson (2010) explored how the recognition of interpersonal similarity affects three-year-old children's initial liking of same-gender peers. They presented children with pairs of childlike puppets who were either similar or dissimilar to them on a specified dimension and then asked children to choose one of the puppets to play with as a measure of liking. Children selected the puppet whose food preferences or physical appearance matched their own. They found that children prefer to play with a peer who shares their toy preferences. Overall, their findings suggest that from a young age, children use similarity as a cue to the likelihood of friendship. This indicates that children tend to select peers who are similar to them when choosing with whom to play. They also argued that children express varying degrees of affiliation toward strangers with the strength of those feelings being influenced by a range of cues. For example, children as young as three years of age display biased attitudes towards others who share trivial attributes with them, such as a randomly assigned T-shirt color (Bigler, Brown, & Markell, 2001; Bigler, Jones, & Lobliner, 1997; Patterson & Bigler, 2006). Shared interests and preferences are among the factors that contribute to children's feelings of affiliation toward others. This can be seen as early as 11 months of age, with infants preferring those who share their food preferences over those who do not (Mahajan & Wynn, 2012). By age six, children would rather be friends with unknown peers who share their preferences than those who have different ones (Heiphetz, Spelke, & Banaji, 2014).

Another affiliative factor that affects children's social relationships appears to be the groups with whom they associate. For example, Mahajan and Wynn (2012) investigated the developmental origins of in-group and out-group biases among 11-month-old infants. Their findings demonstrate

that infants in their first year assess others on the basis of similarity to self and prefer more-similar others to those less similar. Their findings suggest that the phenomena of in-group bias and enhanced interpersonal attraction toward those who resemble ourselves, may be rooted in an inherent preference for similarity to self. Interestingly, they found that infants preferred an individual who made the same choice they themselves made, which indicates that infants identify similarity not only in terms of appearance and social cues, but also in terms of choices.

In a similar line of research, Over and Carpenter (2009) explored the connection between a sense of group affiliation and prosocial behavior in 60 eighteen-month-old infants. They primed 18-month-old infants with photographs evoking affiliation (two small dolls standing next to each other in the background of photographs of other objects) and measured the influence of the primes on infants' tendency to be helpful. Their results showed that 18-month-old infants helped a person in need more often, and more spontaneously, when primed with photographs evoking affiliation than when primed with photographs evoking individuality. Overall, they found that there is a subconscious connection between affiliation and helping behavior in infants, which suggests that even a mere hint of affiliation is sufficient to increase helping and prosocial behaviors.

In a classic study, Birch and Billman (1986) investigated 57 three- to five-year-old children's sharing of preferred and nonpreferred food with same-sex peers in dyadic interactions between friends and acquaintances. Their results indicated that active elicitation contributed to the majority of sharing on the part of the recipients and did not occur spontaneously or passively. They also noted twice as much sharing among friends as with acquaintances, owing to the fact that friends could evoke sharing far better than acquaintances could. Furthermore, they found that the type of previous experience as a recipient influenced subsequent sharing behavior. Children who had positive

experiences as recipients were more likely to share than were children who had negative experiences as recipients.

A study by Moore (2009) clearly demonstrates that affiliation affects recipient-dependent sharing. He explored 66 four-and-a-half to six-year-old children's recipient-dependent sharing behavior in cost or no cost situations. He presented three different recipients to the children (a familiar friend, a familiar non-friend, and a stranger) in two different choice situations. In the first choice situation, referred to as the prosocial choice, children chose one item for themselves that they received immediately or one item for themselves and a recipient that would be received at a later time. In the second choice, referred to as the sharing choice, children chose either two items for themselves that they would receive immediately, or one item for themselves and one item for the recipient at a later time. The results of the study indicated that children as young as four to five years of age show interest in sharing with a friend even when there is a cost to themselves. In fact, children chose to share with their friends regardless of cost to themselves. However, children were less likely to act prosocially and to share with a familiar non-friend than with a familiar friend. Interestingly, when there was no cost to sharing, children were equally generous toward strangers as they were to their friends. This indicates that children's generosity is not wholly limited to those with whom they have prior relationships.

In a similar line of research, Paulus and Moore (2014) explored preschool children's developmental changes, sharing expectations and recipient-dependent sharing when sharing either with a friend or a disliked peer in a cost or no cost scenario. They examined 18 three-year-old children, 17 four-year-old children and 19 five- to six-year-old children in two tasks: an active sharing task and a sharing expectation task. In the active sharing task, children could distribute valuable items between themselves and a friend or a disliked peer. In the sharing expectation task,

children were asked to predict how another child would distribute valuable items between themselves and a friend or a disliked peer. Their results indicate that children of all three age groups expected someone to share less when sharing was costly, and expected someone to share more when there was no cost. Moreover, their findings showed that by three years of age children showed a general disposition to expect that someone will share with others, irrespective of the relationship between protagonist and recipient. Their study showed that in situations without situational constraints, three-year-old children share with friends and disliked peers to the same extent. In contrast, by the time children are four- and five -years -old, they have acquired a specific understanding that someone is more likely to share with a friend than with a disliked peer and also display this recipient-dependency in their own sharing behavior.

Building on this premise, Olson and Spelke (2008) examined three-and-a-half-year-old children's sharing behaviors in a cooperative setting. Children were asked to help a protagonist distribute resources between pairs of different potential recipients. The results showed that the children guided the protagonist to give more resources to friends and siblings than to strangers. They showed that, when urged by situational constraints, children think that someone should give items to a friend rather than to a stranger.

Several studies in this field have also shown that three-and-a-half-year-olds support their collaborative partners by helping and waiting for them (Gräfenhain, Carpenter, & Tomasello, 2013) and by sharing the resources gained from collaborative activity equally (Hamann, Warneken, Greenberg, & Tomasello, 2011; Warneken, Lohse, Melis, & Tomasello, 2011). For example, Hamann et al. (2011) compared two- and three-year-olds' tendency to correct inequality following collaboration, parallel individual work, and windfall. They found that three-year-olds shared one reward piece significantly more often than the two-year-olds, restoring equality in the collaboration

condition. Their findings suggest that three-year-olds are sensitive to outcomes produced in collaborative interactions and that this influences their sharing behavior. Research has shown that children continue to collaborate with their partner to ensure that they obtain a reward even if the initial child has already obtained their own reward (Hamann, Warneken, & Tomasello, 2012). This finding provides evidence that young children have a tendency to behave prosocially toward their collaborative partners, at least within the collaborative activity itself.

Conversely, Melis, Altrichter and Tomasello (2013) showed that when one child refuses to participate in the collaborative activity, the collaborating partner tends to share less equally with that child. They investigated 63 three-year-olds' sharing behavior with a collaborating partner and a free-riding partner who explicitly expressed her preference not to collaborate. They compared three-year-olds' sharing behavior with a collaborating partner (puppet) who contributed to the acquisition of rewards and with a free-riding partner who intentionally expressed a preference for doing something else while the child acquired the rewards alone. Their study suggests that three-year-olds have a strong tendency to divide collaboratively earned resources equally and that they are sensitive to others' lack of participation in a collaborative task. This indicates that children as young as three are inclined to distribute resources equally.

McCillicuddy-De Lisi, Watkins, and Vinchur (1994) explored the relationship between children's distributive justice decisions and social affiliation (i.e., friends vs. strangers) in 96 kindergarten, third grade, and sixth grade children. They found that kindergartners' allocations and fairness ratings did not vary with relationship. Their results also indicated that between third and sixth grade there appears to be a shift in children's ability to spontaneously consider the difference in the social relationships among recipients and resource allocation behaviors. Overall, their findings

suggest that the nature of social relationships is an important factor that gradually comes to affect children's reasoning about positive justice.

Although the literature has shown that a child's sense of friendship and collaboration towards other peers is predictive of their sharing behaviors, there is substantial evidence that a child's affiliation to social groups is another factor that influences their generosity (Engelmann, Over, Herrmann & Tomasello, 2013; Plötner, Over, Carpenter, & Tomasello, 2015; Sparks et al., submitted; Weller & Lagattuta, 2013). Previous research has also shown that children identify with the social groups to which they are assigned very quickly and early on in development (Nesdale, 2008). Findings also reveal that children derive at least some of their sense of self-worth from their group memberships (Verkuyten, 2007). Group membership and preference for in-group compared to out-group members emerges at a very young age and has a subsequent effect on children's sharing behaviors (Fehr et al., 2008). Considering this, Dunham and Emory (2014) suggested that between three and six years of age, children undergo a sociocentric shift. They proposed that although by around three years of age children are able to encode group membership correctly, only older children are more sensitive to the importance of group membership and are more likely to see groups as socially meaningful. Research has revealed that, certainly by school age, children seek to be members of social groups, and that they tend to like, and see themselves as similar to, in-group when compared with out-group members (Bigler, 1995; Bigler et al., 1997; Nesdale, Durkin, Maass, & Griffiths, 2004, 2005).

Young children are also sensitive to group norms, and to the consensus of a group. For example, Haun and Tomasello (2011) demonstrated that children as young as four years of age are subject to peer pressure, indicating sensitivity to peers as a primary social reference group already

during the preschool years. This indicates that at an early age children begin to show conformist tendencies as a result of their sensitivity to peer pressure.

There is also evidence that children reveal a strong bias towards their in-group when they are required to make choices, indicate preferences, or allocate rewards between the in-group and an out-group, and that they display in-group positivity versus out-group negativity in their trait attributions (Nesdale, 2007). For instance, Dunham and Emory (2014) found that six-year-old children demonstrated implicit positive associations with in-group members, and were less likely to assign fault to in-group members in an ambiguous situation.

Other research has shown that preferences for in-group members are apparent in minimal groups created within the laboratory (Plötner et al., 2015). The minimal group paradigm, as described by Dunham, Baron and Carey (2011), is a method of experimentally establishing in-group membership, which aims to create a basic form of identification with a group, free of potentially biasing variables. Participants are assigned to groups of equal status, which are based on arbitrary, value-neutral factors. In order to minimize potential bias, participants do not encounter members of either group through their interactions.

Research has shown that children are highly sensitive to minimal cues to group membership from at least five years of age and show an in-group bias on a variety of measures, such as behavioral attribution and resource allocation (Dunham et al., 2011). For instance, Dunham et al., (2011) found that mere membership in minimal social groups is enough to elicit intergroup bias and in-group favoritism in five-year-olds. Their results indicate that categorization into in-groups and out-groups among five-year-olds produces in-group-favoring biases. These biases emerge quickly, do not require any supporting social information and have widespread effects on in-group favoritism. Further, children were more likely to attribute positive behaviors to in-group members and expect in-

group children to act more generously toward them. They also differentially processed information, evidenced by the fact that they remembered positive behaviors conducted by in-group members more often than positive behaviors conducted by out-group members.

In a similar line of study, Nesdale, Lawson, Durkin, and Duffy (2010) assessed whether children's intergroup attitudes during middle childhood are moderated by additional information about in-group and out-group members. To examine this, 159 six-, eight-, and ten-year-old Australian children were assigned, and received information, or no information, about the interests and activities of the in-group and out-group members. Their results indicated that the in-group was always rated more positively than the out-group, and that the in-group's ratings were unaffected by either the in-group or out-group information. In contrast, out-group ratings were affected by out-group information, but only when there was no information available about the in-group. In other words, shared interests increased ratings of the out-group member when children were given no information about the in-group member, which suggests that shared interests reduced, but did not fully eliminate, children's in-group preference. The results indicate that children's intergroup attitudes are determined more by their membership in, and identification with, a particular group.

Schug, Shusterman, Barth, and Patalano (2013) assessed 80 five- and six-year-old children's group bias prior to any experience with an artificial in-group and out-group, and their responses following positive and negative experiences with each group. They showed children 12 brief video clips of in-group and out-group individuals (puppets) sharing resources in an egalitarian or in an ungenerous manner. They found that affiliation with a minimal group affects how children respond to observations of egalitarian and ungenerous behaviors by group members. Specifically, when the in-group was egalitarian and the out-group was ungenerous, children's liking of the out-group decreased and their liking of the in-group did not change. In contrast, when the in-group was

ungenerous and the out-group was egalitarian, no changes in liking towards either group were observed. This finding suggests that children process the same experiences with in-group and out-group members differently.

Another factor that can affect a child's likability in an in-group or out-group setting is their reputation. To explore this, Engelmann et al. (2013) examined 48 five-year-old children's reputation sensitivity toward group membership in a resource allocation task. The aim of the study was to see if children showed increased concern for their reputation when observed by an in-group member compared to an out-group member. Children were given stickers and asked to divide them between themselves and an anonymous and absent recipient. While they did this, they were watched by an unknown peer observer, and the value of this peer observer to the participant was manipulated in two ways. They found that five-year-old children shared significantly more stickers with an absent child when they were observed by someone who belonged to the same group compared to someone who belonged to a different group. Their results indicated that children are highly sensitive to situations in which they might benefit from creating an image as a fair person. In addition, they are willing to make costly donations in order to secure that image, thereby exhibiting a strong motivation to invest in their reputation.

As children grow older, they appear to exhibit greater altruism toward the in-group and less altruism toward the out-group (Fehr et al., 2008). For example, Fehr and colleagues (2008) found that children between three and eight years of age were significantly more likely to act generously and share candies with in-group members compared to out-group members.

Furthering this argument, Weller and Lagattuta (2013) examined 76 five- to thirteen year-old children's judgments in regards to affiliation and group membership following acts of altruism. Their results indicated that children of all ages favored the in-group when rating how happy one

would feel helping or not helping and in how willing one was to make costly choices to benefit others. Children of all age groups judged that focal characters presented in a number of situations were more obligated to help in-group versus out group members, would feel happier helping in-group versus out-group members, and would feel worse ignoring the needs of in-group versus out-group members. Overall, their study indicated that children as young as five-years of age show in-group favoritism when faced with altruistic and prosocial decisions.

Although group membership is a significant indicator of children's resource allocation decision-making, it should be noted that affiliation is about more than just group membership. There is clear variability in how children feel about different members of their social groups. In a recent study, Cooley and Killen (2015) investigated 73 three-and-a-half- to six-year-old children's evaluations of peer group members who deviated from group norms about equal and unequal allocation of resources. Their results showed that children three-and-a-half to six-years-old gave priority to fairness norms about equal allocation rather than to group loyalty. Their findings suggested that resource allocation knowledge in early childhood demonstrates that children differentiate group preferences from fairness judgments. In fact, when a member of the in-group or out-group challenged the group by distributing resources unequally, children viewed this act as unfair. As a result, five- to six-year-olds did not expect groups to like members who distributed resources unequally.

Overall, as was argued earlier, collaboration and minimal group membership have direct impacts on children's sharing and generosity. In this regard, a recent study conducted by Plötner et al. (2015) investigated the effects of previous collaboration and shared minimal group membership in 72 three-and-a-half-year-old and 72 five-year-old children. The study was divided into two conditions: a collaboration condition and a minimal-group condition. In the collaboration condition,

children were asked to solve a collaborative task with one puppet (collaborator) while another puppet (non-collaborator) was said to be collaborating with someone else. In the minimal-group condition, children were assigned to one of two minimal groups based on color and then were presented with one puppet wearing the same (in-group) group markers and one puppet wearing different (out-group) group markers. Children in both conditions were presented with five forced-choice tests that comprised a broad selection of positive prosocial behaviors and social preferences including helping, resource allocation, trust, liking, and affiliation. They found that three-and-a-half-year-olds did not show a strong preference for minimal in-group members and tended to prefer collaborators. Three-and-a-half-year-olds showed prosocial tendencies only within the immediate context of collaboration, whereas five-year-olds showed preferences for both collaborators and minimal in-group members. Five-year-olds preferentially helped, trusted, and liked their collaborators, and they showed a tendency to affiliate more with them. They showed that preferences evoked by collaboration can extend to situations outside of the immediate collaborative interaction. The five-year-olds also preferred minimal in-group members to minimal out-group members overall, and in particular they helped in-group members more and showed a tendency to affiliate more with them. Overall, their study indicated that both collaboration and minimal group membership are similarly effective in their influence on children's prosocial behaviors and social preferences.

A recent study conducted by Sparks et al. (submitted) focused on two distinct affiliative cues: minimal group membership and shared interests. Their aim was to explore the impact of affiliation on four- to six-year-old children's sharing behavior and generosity. In minimal group membership, children were randomly assigned to groups of unbiased equal status. However, in a shared interest design, children associated with one another based on a specific common ground, such as a favorite toy or food. Four- to six-year-old children completed a resource allocation task, making forced

choice decisions as to how to distribute stickers between themselves and others. Their results indicated that minimal group membership and shared interests promoted feelings of affiliation toward strangers. Children made more generous resource allocations toward in-group members and recipients with shared interests than out-group members and recipients with differing interests. In fact, when children learned that another child disliked their favorite thing they became less willing to share with that child. This suggests that children's sharing behavior toward strangers is recipient-dependent, and is more affected by differing opinions of an interest than by a shared interest.

Discussion

As was mentioned previously, children from a young age show a preference for friends and familiar others in their social interactions. This is also true in the case of children's resource allocations and generosity. They prefer to share more with friends (Birch & Billman, 1986; Moore, 2009; Olson & Spelke, 2008; Paulus & Moore, 2014) and members of their in-group (Dunham et al., 2011; Fehr et al., 2008), more with individuals who have similar or shared interests (Mahajan & Wynn, 2012; Sparks et al., submitted) and more with those who collaborate with them within the context of certain activities (Gräfenhain et al., 2013; Hamann et al., 2011; Melis et al., 2013; Warneken et al., 2011).

Although these preferences exist in the context of preschoolers' sharing behavior, there are several ways that caregivers might encourage children to share with the members of an out-group or with unfamiliar others. In fact, despite certain biases that children might have toward members of their in-group in comparison to the members of the out-group, several studies have demonstrated that certain factors, such as collaboration and shared interests, can eliminate or at least reduce children's biases when it comes to sharing with others (e.g., Nesdale et al., 2010; Plötner et al., 2015, Sparks et al., submitted). For instance, creating a collaborative setting between a child and an

unfamiliar collaborator can create cooperation towards a certain activity and increase the possibility of sharing and generosity towards the collaborative partner. On the other hand, research has shown that school norms promoting inclusion have a positive effect on out-group attitudes (Nesdale & Lawson, 2011). In other words, emphasizing children's similarities and shared interests rather than focusing on their differences within the contexts of in-group and out-group membership can encourage children to be more generous towards unfamiliar others and members of the out-group.

It should be noted that sharing can be nurtured as a gradual process within young children. While sharing often has associated costs to children, it is possible to place children in situations where they are willing to give more to in-group and out-group members over time. For example, several studies demonstrated that children treated an out-group stranger equally to friends and nonfriends, at least in situations that had no cost to them (Moore, 2009; Paulus & Moore, 2014). This suggests that children are open to sharing when there is little to no associated cost with their actions. However, while children may initially only be willing to share more in situations with little to no cost, they can be open to gradually sharing more with others over time. In order to do this, it is recommended that parents and daycare professionals create collaborative environments that emphasize on children's similarities and shared interests, rather than their differences. This can encourage sharing and generosity towards unfamiliar others and members of their out-group.

Chapter 5: Competition, social comparison and relative wealth

It was revealed in the previous chapter that affiliation and social relationships predict preschool children's resource allocation decision-making and generosity to a certain extent. However, within the context of social relations, children sometimes compare themselves with their peers. This tendency of comparing oneself to others can manifest itself in several ways, such as competition and antecedents of envy and jealousy, which occurs in two distinct forms: upward and downward social comparison (Wood, 1989). Buunk & Gibbons (2007) identified upward comparison as a comparative situation where the target of comparison is someone who is better than an individual on some construct or has outperformed the individual in some form of competitive activity or task. In contrast, downward comparison refers to a comparative situation where the target is inferior to the individual.

One study that explored the influence of upward and downward social comparison on prosocial behavior toward comparison targets was conducted by Yip and Kelly (2013). They assigned 123 undergraduate students to one of three groups: upward social comparison, downward social comparison or a control group. Their results indicated that both the upward and downward comparison groups engaged in significantly less prosocial behavior than the control group and that empathy toward their peers mediated this effect. Their findings suggest that upward or downward comparison can make people feel less empathic and less inclined to act prosocially toward comparison targets. Fiske (2010) also found that upward and downward social comparison can cause feelings of envy or scorn respectively—neither of which leads an individual to feel particularly empathic toward their comparison targets.

In another line of study, Williams and Moore (2014) found a relationship between social comparison and envy on four- and six-year-old children's resource allocation decisions. They

presented children with resource allocation choices where one option delivered a greater benefit to a friend, and the other option was egalitarian. Their findings suggested that between four- and six-years-old children become more concerned with the social comparison between self and other when allocating resources in potentially disadvantageous inequality situations. Overall, they found that children are sensitive to the social comparison and associated feelings of envy by the time they are six-years-old, which creates an increased desire for equality in relation to the possible size of the negative comparison, even if there is a cost.

Furthermore, Steinbeis and Singer (2013) examined how emotions associated with social comparison, such as envy and *schadenfreude* (i.e., gloating or taking delight in someone else's misfortune), change through development in seven- to thirteen-year-old children. Children participated in a speeded reaction time task and were either rewarded or punished in a trial-by-trial evaluation of their performance. After each trial, feedback was given for their own and a competitor's performance. Children then rated how they felt about the outcome. Children's ratings indicated that when they won, they felt better if the competitor lost instead of winning (i.e., *schadenfreude*). However, when children lost, they felt worse if the competitor won instead of also losing (i.e., envy). Interestingly, they found that children's levels of envy and *schadenfreude* decrease as they become older.

In a different line of study, Shaw, DeScioli and Olson (2012) found a relationship between social comparison and competition on children's sharing. Six- to eight-year-old children were asked to identify whether they liked a fair resource distributor or a non-fair resource distributor. Interestingly, in situations of competition children preferred the distributor that favored them, whereas in non-competitive situations children showed no preference between the fair distributor

and the one that favored them. Overall, their research demonstrated that creating a competitive context reduces children's preference for a fair allocation of resources.

In a recent study, Pappert, Williams and Moore (2016) further examined how competition influences resource allocation in preschool children. 50 four- to six-year-old children, were assigned to one of two conditions: an experimental and a control condition. In the experimental condition they asked children to color a picture for a coloring contest. In the control condition they asked children to color a picture to decorate a wall. Subsequently, they presented all children with a resource allocation task where another child was introduced as either a participant in the coloring contest or as a participant who would be coloring a picture to decorate the wall. They found that children in the competition condition were less generous toward the other child compared to the children in the control condition. Their results showed that competition has a clear effect on children's prosocial behavior, with the competitive context resulting in less sharing of competitive resources and in less willingness to make a costly choice to allow the other to gain an advantage. Overall, their findings suggest that competition decreases prosocial behavior and also decreases children's generosity when provided with an unrelated resource allocation opportunity.

Although much of the literature has focused on the individual's resource allocation decision-making in regards to social comparison and competition, the role of relative wealth in preschool children's resource allocation decision-making should not be overlooked. In this regard, Paulus et al., (2013) explored the role of relative wealth in the development of sharing in a triadic context among three-and-a-half to five-year-old children. Children were presented with unequal sharing situations in two experiments where one agent had no resources (the poor player) and the child participant and another player (the third party) had unequal resources. They examined children's tendency to share their resources with the poor player and their inclination to involve the third party

(the rich player) in the resource allocation situation. Their findings indicated that five-year-olds' inclination to involve a third party was modulated by the relative wealth of the participants. It was also found that five-year-olds' referred to the third party's amount of resources more often when the third party was the richest player in the situation. They found that preschoolers are more inclined to share with others if they are the richest individual but are less inclined when another present individual is wealthier. This suggests that children's motivation to engage in costly sharing is partly dependent on their evaluation of the relative wealth of the involved individuals.

In a similar line of research, Paulus (2014b) examined whether three- to five-year-old children consider others' material needs in their sharing behavior. Children were either assigned to a sharing task or a resource allocation paradigm. The sharing task assessed preschoolers' sharing with poor and wealthy recipients, while the resource allocation paradigm investigated children's inclination to distribute resources between poor and rich recipients. The results of this study showed that three-year-old children's sharing behavior was not significantly affected by the others' wealth. He found that five-year-old children take others' indigence into account when sharing resources with different recipients or when allocating resources between recipients. Overall, the results showed that five-year-old children were inclined to give more to the poor individual rather than distributing the resources equally. This finding demonstrates that their desire to support the poor individual overrides the dominant inclination to share resources equally.

Discussion

As it was argued in the context of this chapter, social comparison and competition can influence preschool children's resource allocation decision-making behaviors. It was shown that children become less willing to share with a competitor or someone who might trigger a sense of envy and jealousy in them (Fiske, 2010; Salovey & Rodin, 1984; Steinbeis & Singer, 2013; Williams

& Moore, 2014). Furthermore, some studies indicated that children are sensitive to the relative or material wealth of the recipient, leading them to prefer sharing with someone who has less than them, as opposed to sharing with a wealthier partner (Paulus et al., 2013; Paulus, 2014b). Overall, the primary finding of the studies covered in this chapter indicate that preschool children's sharing is influenced by feelings of jealousy and envy, especially in competitive contexts.

As it was discussed in previous chapters, empathy plays a significant role in children's resource allocation decision-making. However, when children are in competitive contexts they show less empathy towards their rivals, which makes them less empathic and less likely to act prosocially towards their competitors (e.g., Fiske, 2010; Yip & Kelly, 2013).

It is highly important not to underestimate the influence of empathy on children's prosocial behavior and sharing in situations of social comparison and competition. For example, Brandstätter (2000) suggested that having a positive relationship with the target of a social comparison can cause empathic feelings toward the target, as opposed to feelings of *schadenfreude* and envy. Furthermore, Fiske (2010) argued that one way to offset the negative effects of envy and scorn in relationships is to be empathic toward the targets of a social comparison.

Overall, it is recommended for parents and daycare professionals to establish settings of cooperation rather than competition in preschool children's day-to-day activities. This can be done by creating situations of cooperative play, which is to say that children cannot win or lose within the context of the game or activity. Moreover, emphasizing on equality and fair distribution of resources with their peers can reduce the likelihood of feeling envious toward others. This can provide children with better opportunities to share and empathize with their peers, regardless of their relative wealth.

Chapter 6: General Discussion

As it was discussed in chapter 1, the focus of this thesis was on a number of psychological and situational influences that can impact preschool children's generosity and sharing. A few other influences, such as age, gender, siblings, culture, ethnicity, etc., that cannot be manipulated, were not part of the focus within this thesis. Here, the aim was to formulate recommendations based on the literature and empirical studies reviewed in this thesis that will help parents and daycare professionals to promote and encourage preschool children's resource allocation and generosity.

Within the context of previous chapters, it was shown that children's affective experience, perspective-taking, affiliation, social comparison, and relative wealth can influence and predict their resource allocation and generosity toward others. More specifically, it was indicated that empathy, sympathy, and moral emotions influence children's generosity and prosocial sharing. On the other hand, it was revealed that affective perspective-taking, emotion understanding, and theory of mind (ToM) can also predict children's sharing behavior. Moreover, children's social relationships as well as their affiliation to social groups, was shown to be influential in their prosocial sharing behavior. Finally, situations that provoke a sense of social comparison or envy due to competition, as well as children's perception of relative wealth, were found to be predictive of children's sharing and generosity.

To begin with, it is worth highlighting a few characteristics of children who are generous and who share more with others, as well as certain influences that can impact their sharing and generosity, positively or negatively:

- ❖ Children who can sympathize or empathize with others are more prone to share and act generously. In fact, children who can take others emotions and feelings into consideration and show an empathic concern toward them are more likely to share their resources and

- act generously. On the other hand, children who focus on the emotions of the self rather than the other are more prone to exhibit feelings of personal distress that can lead to avoidance and egocentric behaviors.
- ❖ Children who are capable of taking other's emotions into consideration with high perspective-taking and theory of mind abilities are more likely to share their resources and act generously toward others.
 - ❖ Children are more inclined to share with friends, familiar others, and members of their in-group rather than their out-group or strangers. They also share more in collaborative settings with collaborators and with those have similar or shared interests with them, even if the recipient is an out-group member or a stranger.
 - ❖ Children, in competitive settings that can provoke social comparison or a sense of envy, are less likely to share and act generously toward their social comparison targets. They are also less likely to share with those who they perceive to have more material wealth than themselves.

Keeping these characteristics and situational influences in mind, the following recommendations are presented for parents and daycare professionals to foster preschool children's prosocial sharing and generosity towards others.

- ❖ It is highly important to encourage children to empathize or sympathize with others and take their emotions and feelings into consideration. In doing so, it can be beneficial to ask the child to put themselves into the situation of another to help them see how they would feel if they were in the same situation (i.e., 'how would you feel if you were in that situation?'). In doing so, it is also important to make children aware of the consequences of their sharing behavior, both on others and their own feelings and emotions. This can be

done by asking the child to reflect on the feelings of themselves and the recipient when deciding whether or not to share. This allows children to better understand the feelings and emotions of the other's experience. The implications for such an approach are that it will promote empathizing and sympathizing with others, as well as encourage the development of affective perspective-taking abilities.

- ❖ Providing settings that can engage children in role play or pretend play is another technique that can strengthen empathy and perspective taking in preschool children. Parents and care givers can ask the child to pretend they are in need of a favorite toy that another child has and ask them about their emotions and feelings if the other child does not share their toy with them.
- ❖ Another way to develop children's affective perspective-taking abilities is through parent-child conversations about their everyday experiences (for example, 'what did you do today?' and 'how did that make you feel?'). In fact, children's conversations about their internal states and feelings with parents and siblings allows them to reflect on their day-to-day experiences with others. Parents can encourage children to see things from others perspectives, by asking them questions about the experiences of others in their everyday lives. This ability to reflect can help a child to better understand their own feelings and experiences, as well as the feeling and experiences of others.
- ❖ As was discussed earlier, children's biases toward familiar and unfamiliar others can influence their resource allocation decision-making and makes them more likely to share with those with whom they feel affiliated and less likely to share with strangers and out-group members. However, as it was indicated, children are more likely to share with out-group members and unfamiliar others in situations of collaboration or when they see

similarities or shared interests with the recipients of their sharing. As such, it is recommended to create collaborative settings that will encourage the child to take part in a collaborative activity with an unfamiliar other or with an out-group member.

Collaboration helps create a sense of teamwork among children, which can lead them to trust their collaborative partners and to work with them to achieve a common goal, even if they do not have a prior relationship of affiliation with them. It is also helpful to ask children to talk about or to identify any similarities or shared interests that they might have in relation to an out-group member or an unfamiliar other. This can be done by highlighting very simple similarities such as the colour of a t-shirt, their favourite food, their favourite toy, their favourite cartoon characters, etc.

It is important to avoid competitive settings and situations among preschool aged children as this can reduce the chances of sharing and acting generously toward a competitor or a social comparison target. This can be done by establishing settings of cooperation rather than competition in preschool children's day-to-day activities. It is also helpful to encourage children to empathize with the targets of social comparison to reduce feelings of envy and jealousy. In order to do so, parents and daycare professionals can emphasize on the equal and fair distribution of resources among children and their peers which can reduce the likelihood of feeling envious toward others. This can provide children with better opportunities to empathize with their social comparison targets.

Overall, sharing can be nurtured as a gradual process within preschool aged children. While sharing often has associated costs to children, research has suggested that children are open to sharing when there is little to no associated cost with their actions (Moore, 2009). However, while children may initially only be willing to share more in situations with little to no cost, they can be open to gradually sharing more with others over time. In order to establish and develop sharing

attitudes and generosity in preschool aged children, it is important to start with situations that will infer little to no cost to the child. Once sharing attitudes have been established, children can be encouraged to incur more of a cost to themselves over time. Gradually, children become more willing to share their valuable resources with others, even if there is a personal cost.

References

- Aderman, D., & Berkowitz, L. (1970). Observational set, empathy, and helping. *Journal of Personality and Social Psychology, 14*(2), 141-148.
- Barnett, M., King, L., Howard, J., & Odom, R.D. (1979). Inducing affect about self or other: Effects on generosity in children. *Developmental Psychology, 15*(2), 164-167.
- Barnett, M., & Thompson, S. (1985). The Role of Perspective Taking and Empathy in Children's Machiavellianism, Prosocial Behavior, and Motive for Helping. *The Journal of Genetic Psychology, 146*(3), 295-305.
- Baron-Cohen, S. (2001). Theory of mind in normal development and autism. *Prisme, 34*, 174-183.
- Barraza, J. A., & Zak, P. J. (2009). Empathy toward strangers triggers oxytocin release and subsequent generosity. *Annals of the New York Academy of Sciences, 1167*(1), 182-189.
- Batson, C.D., Duncan, B., Ackerman, P., Buckley, T., Birch, K., & Steiner, Ivan D. (1981). Is empathic emotion a source of altruistic motivation? *Journal of Personality and Social Psychology, 40*(2), 290-302.
- Batson, C.D. (1991). *The altruism question: Toward a social-psychological answer*. Hillsdale, NJ: Erlbaum.
- Batson, C. D., Early, S., & Salvarani, G. (1997). Perspective Taking: Imagining How Another Feels Versus Imagining How You Would Feel. *Personality and Social Psychology Bulletin, 23* (7), 751-758.
- Becker, S. W., & Eagly, A. H. (2004). The heroism of women and men. *American Psychologist, 59*(3), 163-178. doi:10.1037/0003-066X.59.3.163

- Belacchi, C., & Farina, E. (2012). Feeling and thinking of others: Affective and cognitive empathy and emotion comprehension in prosocial/hostile preschoolers. *Aggressive Behavior, 38*(2), 150-65.
- Benenson, J. F., Pascoe, J., & Radmore, N. (2007). Children's altruistic behavior in the Dictator Game. *Evolution and Human Behavior, 28*, 168-175.
- Bigler, R. S. (1995). The role of classification skill in moderating environmental influences on children's gender stereotyping: A study of the functional use of gender in the classroom. *Child Development, 66*, 1072-1087.
- Bigler, R. S., Jones, L. C., & Lobliner, D. B. (1997). Social categorisation and the formation of intergroup attitudes in children. *Child Development, 68*(3), 530-543.
- Bigler, R. S., Brown, C. S., & Markell, M. (2001). When groups are not created equal: Effects of group status on the formation of intergroup attitudes in children. *Child Development, 72*(4), 1151-1162.
- Birch, L., & Billman, J. (1986). Preschool Children's Food Sharing with Friends and Acquaintances. *Child Development, 57*(2), 387-395.
- Blake, P. R., & Rand, D. G. (2010). Currency value moderates equity preference among young children. *Evolution and Human Behavior, 31*, 210-218.
- Botwin, M. D., Buss, D. M., & Shackelford, T. K. (1997). Personality and mate preferences: Five factors in mate selection and marital satisfaction. *Journal of Personality, 65*(1), 107-136.
- Bouchard, C., Coutu, S., Bigras, N., Lemay, L., Cantin, G., Bouchard, M-C., & Duval, S. (2015). Perceived, expressed and observed prosociality among 4 year-old girls and boys in childcare centres. *Early Child Development and Care, 185* (1), 44-65, DOI : 10.1080/03004430.2014.903940.

- Brandstätter, E. (2000). Comparison based satisfaction: Contrast and empathy. *European Journal of Social Psychology, 30*, 673–703.
- Brooks, A.C. (2006). *Who Really Cares*. Basic Books. New York, NY.
- Brownell, C., Svetlova, M., & Nichols, S. (2009). To share or not to share: When do toddlers respond to another's needs? *Infancy, 14*(1), 117-130. doi:10.1080/1525000080256986
- Brownell, C., Svetlova, M., & Nichols, S. (2009). To share or not to share: When do toddlers respond to another's needs? *Infancy, 14*(1), 117-130. doi:10.1080/1525000080256986
- Brownell, C. A., Iesue, S. S., Nichols, S. R., & Svetlova, M. (2013). Mine or yours? Development of sharing in toddlers in relation to ownership understanding. *Child Development, 84*, 906–920.
- Brownell, C. A., Svetlova, M., Anderson, R., Nichols, S. R., & Drummond, J. (2013). Socialization of early prosocial behavior: Parents' talk about emotions is associated with sharing and helping in toddlers. *Infancy, 18*, 91–119.
- Buckley, N., Siegel, L., & Ness, S. (1979). Egocentrism, empathy, and altruistic behavior in young children. *Developmental Psychology, 15*, 329-330.
- Buss, D. M., & Barnes, M. (1986). Preferences in human mate selection. *Journal of Personality and Social Psychology, 50*(3), 559–570.
- Buunk, B.P., & Gibbons, F.X. (2007). Social comparison: The end of a theory and the emergence of a field. *Organizational Behavior and Human Decision Processes, 102*, 3–21.
- Carlo, G., Knight, G., Eisenberg, N., & Rotenberg (1991). Cognitive Processes and Prosocial Behaviors Among Children: The Role of Affective Attributions and Reconciliations. *Developmental Psychology, 27*(3), 456-461.

- Cassidy, K., Werner, R., Rourke, M., Zubernis, L., & Balaraman, G. (2003). The Relationship Between Psychological Understanding and Positive Social Behaviors. *Social Development, 12*(2), 198-221.
- Cigala, A., Mori, A., & Fangareggi, F. (2015). Learning Others' Point of View: Perspective Taking and Prosocial Behaviour in Preschoolers. *Early Child Development and Care, 185*(8), 1199-1215.
- Coke, J. S., Batson, C. D., & McDavis, K. (1978). Empathic mediation of helping: A two-stage model. *Journal of Personality and Social Psychology, 36*, 752-766.
- Cooley, S., & Killen, M. (2015). Children's Evaluations of Resource Allocation in the Context of Group Norms. *Developmental Psychology, 51*(4), 554-563.
- Cowell, J., Samek, A., List, J., & Decety, J. (2015). The curious relation between theory of mind and sharing in preschool age children. *PloS One, 10*(2), E0117947.
- Côté, S., Tremblay, R. E., Nagin, D., Zoccolillo, M., & Vitaro, F. (2002). The development of impulsivity, fearfulness, and helpfulness during childhood: Patterns of consistency and change in trajectories of boys and girls. *Journal of Child Psychology and Psychiatry, 43*, 609–618.
- Cutting, A. L., & Dunn, J. (1999). Theory of mind, emotion understanding, language, and family background: Individual differences and interrelations. *Child Development, 70*, 853–865.
- Damon, W. (1975) Early conceptions of positive justice as related to the development of logical operations. *Child Development, 46*, 301–312.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology, 44*(1), 113-126.
- Decety, J., & Svetlova, M., (2012). Putting together phylogenetic and ontogenetic perspectives on empathy. *Developmental Cognitive Neuroscience, 2*(1), 1–24.

- Demetriou, Helen, & Hay, Dale F. (2004). Toddlers' Reactions to the Distress of Familiar Peers: The Importance of Context. *Infancy*, 6(2), 299-318.
- Denham, S. A. (1986). Social cognition, prosocial behavior, and emotion in preschoolers: Contextual validation. *Child Development*, 57(1), 194-201.
- de Rosnay M., & Hughes C. (2006). Conversation and theory of mind: Do children talk their way to sociocognitive understanding? *British Journal of Developmental Psychology*, 24(1) 7–37.
- Dovidio J.F., Piliavin, J.A., Schroeder, D.A., Penner, L.A. (2006). *The Social Psychology of Prosocial Behavior*. Lawrence Erlbaum. Hillsdale, NY.
- Dunfield, K. (2014). A construct divided: Prosocial behavior as helping, sharing, and comforting subtypes. *Frontiers In Psychology*, 5, 2.
- Dunfield, K., & Kuhlmeier, V. (2013). Classifying Prosocial Behavior: Children's Responses to Instrumental Need, Emotional Distress, and Material Desire. *Child Development*, 84(5), 1766-1776.
- Dunham, Y., Baron, A. S., & Carey, S. (2011). Consequences of “minimal” group affiliations in children. *Child Development*, 82, 793–811.
- Dunham, Y., & Emory, J. (2014). Of affect and ambiguity: The emergence of preference for arbitrary ingroups. *Journal of Social Issues*, 70, 81–98.
- Dunn, J., & Munn, P. (1986). Siblings and the development of prosocial behaviour. *International Journal of Behavioral Development*, 9, 265–284.
- Dunn, J. (1988) *The beginnings of social understanding*. Cambridge, MA: Harvard University Press.
- Dunn, J., Brown, J., & Beardsall, L. (1991). Family talk about feeling states and children’s later understanding of others’ emotions. *Developmental Psychology*, 27, 448–455.

- Dunn, J. & Brown, J. R. (1993). Early conversations about causality: Content, pragmatics, and developmental change. *British Journal of Developmental Psychology*, *11*, 107–123.
- Eisenberg, N. (1986). *Altruistic emotion, cognition, and behavior*. Hillsdale, N.J: Erlbaum.
- Eisenberg, N. & Miller, P. (1987). The relation of empathy to prosocial and related behaviors. *Psychological Bulletin*, *101*(1), 91–119.
- Eisenberg, N., McCreath, H., & Ahn, R. (1988). Vicarious emotional responsiveness and prosocial behavior: Their interrelations in young children. *Personality and Social Psychology Bulletin*, *14*, 298–311. doi:10.1177/0146167288142008.
- Eisenberg, N., Fabes, R., Miller, P., Fultz, J., Shell, R., Mathy, R.,...Reno, R. (1989). Relation of sympathy and personal distress to prosocial behaviour: a multimethod study. *Journal of Personality and Social Psychology*, *57*, 55–66. doi: 10.1037/0022-3514.57.1.55
- Eisenberg, N., Fabes, R., Miller, P., Shell, R., Shea, C., May-Plumlee T. (1990). Preschoolers' vicarious emotional responding and their situational and dispositional prosocial behaviour. *Merrill-Palmer Quart* *36*, 507–529.
- Eisenberg, N. (1991). Meta-analytic contributions to the literature on prosocial behavior. *Personality and Social Psychology Bulletin*, *17*, 273-282.
- Eisenberg, N., & Fabes, R. A. (1998). Prosocial development. In N. Eisenberg & W. Damon (Eds.), *Handbook of child psychology: Social, emotional, and personality development, Vol. 3.* (5th ed., pp. 701– 778) New York: Wiley.
- Eisenberg, N., Zhou, Q., & Koller, S. (2001). Brazilian adolescents' prosocial moral judgment and behavior: Relations to sympathy, perspective taking, gender-role orientation, and demographic characteristics. *Child Development*, *72*, 518–534.

- Eisenberg, N. (2000). Emotion, regulation, and moral development. *Annual Review of Psychology, 51*, 665-97.
- Eisenberg, N. (2005). The development of empathy-related responding. *Nebraska Symposium on Motivation, 51*, 73–117.
- Eisenberg, N., Fabes, R. A., and Spinrad, T. L. (2006). Prosocial development. In N. Eisenberg (Eds.), *Handbook of Child Psychology: Social, Emotional, and Personality Development, Vol.3* (6th ed. pp.646–718). New York: Wiley.
- Eisenberg, N., Eggum, N., & Di Giunta, L. (2010). Empathy-Related Responding: Associations with Prosocial Behavior, Aggression, and Intergroup Relations. *Social Issues and Policy Review, 4*(1), 143-180.
- Eisenberg, N., Spinrad, T. L., & Sadovsky, A. (2006). Empathy-related responding in children. In M. Killen & J. G. Smetana (Eds.), *Handbook of moral development*. (pp. 517-549). Mahwah, NJ US: Lawrence Erlbaum Associates Publishers.
- Engelmann, J., Over, H., Herrmann, E., & Tomasello, M. (2013). Young children care more about their reputation with ingroup members and potential reciprocators. *Developmental Science, 16*(6), 952-958.
- Enright, R. .. & Lapsley, D. (1980). Social role-taking: A review of the constructs, measures, and measurement properties. *Review of Educational Research, 50*(4), 647-674.
- Fawcett, C. A., & Markson, L. (2010). Similarity predicts liking in 3-year-old children. *Journal of Experimental Child Psychology, 105*(4), 345–358. doi:10.1016/j.jecp.2009.12.002
- Fehr, E., Bernhard, H., & Rockenbach, B. (2008). Egalitarianism in children. *Nature, 454*, 1079–1083. doi:10.1038/nature07155

- Fireman, G. D., & Kose, G. (2010). Perspective taking. In E. H. Sandberg & B. L. Spritz (Eds.), *A clinician's guide to normal cognitive development in childhood* (pp. 85–100). New York: Routledge.
- Fiske, S. T. (2010). Envy up, scorn down: How comparison divides us. *American Psychologist*, *65*, 698–706.
- Forsythe, R., Horowitz, J. L., Savin, N. E., & Sefton, M. (1994). Fairness in simple bargaining experiments. *Games and Economic Behavior*, *6*, 347–369.
- Gottman, J. M., & Graziano, W. G. (1983). How children become friends. *Monographs of the Society for Research in Child Development*, *48*(3), 1–86.
- Gräfenhain, M., Carpenter, M., & Tomasello, M. (2013). Three-year-olds' understanding of the consequences of joint commitments. *PLoS One*, *8*(9).
- Grusec, J. (1991). Socializing concern for others in the home. *Developmental Psychology*, *27*, 338–342.
- Gummerum, M., Hanoch, Y., Keller, M., Parsons, K., & Hummel, A. (2010). Preschoolers' allocations in the dictator game: The role of moral emotions. *Journal of Economic Psychology*, *31*(1), 25–34.
- Güth, W., Schmittberger, R., and Schwarze, B. (1982). An experimental analysis of ultimatum bargaining. *Journal of Economic Behavior and Organization*, *3*(4), 367–388.
- Haidt, J. (2003). Elevation and the positive psychology of morality. In: Keyes, CL.; Haidt, J., (Eds.), *Flourishing: Positive Psychology and the Life Well-Lived*. Washington, DC: Am. Psychol. Assoc. p. 275–289.
- Hamann, K., Warneken, F., Greenberg, J. R., & Tomasello, M. (2011). Collaboration encourages equal sharing in children but not in chimpanzees. *Nature*, *476*, 328–331.

- Hamann, K., Warneken, F., & Tomasello, M. (2012). Children's developing commitments to joint goals. *Child Development, 83*, 137–145.
- Harwood, M., & Farrar, M. (2006). Conflicting emotions: The connection between affective perspective taking and theory of mind. *British Journal of Developmental Psychology, 24*(2), 401-418.
- Hastings, P. D., Zahn-Waxler, C., Robinson, J., Usher, B., & Bridges, D. (2000). The development of concern for others in children with behavior problems. *Developmental Psychology, 36*, 531–546.
- Hastings, P. D., Rubin, K. H., & DeRose, L. (2005). Links among gender, inhibition, and parental socialization in the development of prosocial behavior. *Merrill-Palmer Quarterly, 51*, 501–527.
- Hastings, P.D., Utendale, W.T., & Sullivan, C. (2007) The socialization of prosocial development. In Grusec, J., & Hastings, P.D. (Eds.), *Handbook of socialization : Theory and research* (pp. 638-659). New York: Guilford Press.
- Haun, D., & Tomasello, M. (2011). Conformity to Peer Pressure in Preschool Children. *Child Development, 82*(6), 1759-1767.
- Hay, D. F., & Cook, K. V. (2007). The transformation of prosocial behavior from infancy to childhood. In C. A. Brownell & C. B. Kopp (Eds.), *Transitions in early socioemotional development: The toddler years* (pp. 100–131). New York, NY: Guilford Press.
- Heiphetz, L., Spelke, E. S. E., & Banaji, M. M. R. (2014). The formation of belief-based social preferences. *Social Cognition, 32*(1), 22–47. doi:10.1521/soco.2014.32.1.22

Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., ... & Tracer, D. (2005).

“Economic man” in cross-cultural perspective: Behavioral experiments in 15 small-scale societies. *Behavioral and Brain Sciences*, 28(6), 795-855.

Hepach, R., Vaish, A., & Tomasello, M. (2013). A New Look at Children’s Prosocial Motivation.

Infancy, 18(1), 67-90.

Hinnant, J. B., & O’Brien, M. (2007). Cognitive and emotional control and perspective taking and

their relations to empathy in 5-year-old children. *Journal of Genetic Psychology*, 168, 301–322.

Hoffman, M. L. (1975). Developmental synthesis of affect and cognition and its implication for

altruistic motivation. *Developmental Psychology*, 11, 607-622.

Hoffman, M. L. (1976). Empathy, role taking, guilt, and development of altruistic motives. In T.

Lickona (Ed.), *Moral development and behavior: Theory, research, and social issues*. New York: Holt, Rinehart & Winston.

Hoffman, M. L. (1984). Interaction of affect and cognition in empathy. In C. E. Izard, J. Kagan, &

R. B. Zajonc (Eds.), *Emotion, cognition, and behavior* (pp. 103–131). Cambridge, England: Cambridge University Press.

Hoffman, M. L. (2000). *Empathy and moral development: Implications for caring and justice*.

Cambridge, UK: Cambridge University Press.

Hogan R. (1969). Development of an empathy scale. *Journal of Consulting and Clinical Psychology*,

33(3) 307–316.

Howes, C., & Phillipsen, L. (1992). Gender and friendship: Relationships within peer groups of

young children. *Social Development*, 1, 230–242.

- Hughes, C., & Dunn, J. (1998). Understanding mind and emotion: Longitudinal associations with mental state talk between young friends. *Developmental Psychology, 34*, 1026–1037.
- Jenkins, J. M., & Astington, J. W. (2000). Theory of mind and social behavior: Causal models tested in a longitudinal study. *Merrill-Palmer Quarterly, 46*, 203–220.
- Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1986). Fairness and the assumptions of economics. *Journal of Business, 59*, 285–300.
- Keltner, D. (1996). Evidence for the Distinctness of Embarrassment, Shame, and Guilt: A Study of Recalled Antecedents and Facial Expressions of Emotion. *Cognition & Emotion, 10*(2), 155–172.
- Klohnen, E. C., & Luo, S. (2003). Interpersonal attraction and personality: What is attractive – self similarity, ideal similarity, complementarity, or attachment security? *Journal of Personality and Social Psychology, 85*(4), 709–722.
- Knafo, A., Steinberg, T., Goldner, I. (2011). Children's Low Affective Perspective-Taking Ability Is Associated With Low Self-Initiated Pro-sociality. *Emotion, 11*(1), 194–198.
- Knafo, A., Zahn-Waxler, C., Van Hulle, C., Robinson J.L., Hyun R.S. (2008). The developmental origins of a disposition toward empathy: Genetic and environmental contributions. *Emotion, 8*, 737–752.
- Knight, G. P., Kagan, A., & Buriel, R. (1982). Perceived parental practices and prosocial development. *Journal of Genetic Psychology, 141*, 57–65.
- Kosfeld, M. et al. (2005). Oxytocin increases trust in humans. *Nature, 435*, 673–676.
- Kostelnik, M. (2012). *Guiding children's social development and learning* (7th ed.). Belmont, CA: Wadsworth/Cengage Learning.

- Kraus MW, Piff PK, Keltner D (2011) Social class as culture: The convergence of resources and rank in the social realm. *Current Directions in Psychological Science*, 20, 246–250.
- Krebs. D .. & Sturupp. B. (1974). Role-taking ability and altruistic behavior in elementary school children. *Personality and Social Psychology Bulletin*, 1, 407-409.
- Krebs, D. L. (1975). Empathy and altruism. *Journal of Personality and Social Psychology*, 32, 1134-1146.
- Krebs. D .. & Russell. C. (1981). Role-taking and altruism: When you put yourself in the shoes of another. will they take you to their owner's aid" In J. Rushton & R. Sorrentino (Eds.). *Altruism and helping behavior: Social, personality, and developmental perspectives* (pp. 137-165). Hillsdale. NJ: Erlbaum.
- Kroll, J., Egan, E. (2004). Psychiatry, moral worry, and moral emotions. *Journal of Psychiatry Practice*, 10, 352–360.
- Leith, K., & Baumeister, R. (1998). Empathy, Shame, Guilt, and Narratives of Interpersonal Conflicts: Guilt-Prone People Are Better at Perspective Taking. *Journal of Personality*, 66(1), 1-37.
- Lewis, HB (1971). *Shame and Guilt in Neurosis*. New York: Int. Univ. Press.
- LoBue, V., Nishida, T., Chiong, C., DeLoache, J.S., & Haidt, J. (2011). When Getting Something Good Is Bad: Even Three-Year-Olds React to Inequality. *Social Development*, 20(1), 154-170.
- Maccoby, E., & Jacklin, C. (1974). *The psychology of sex differences*. Stanford, Calif.: Stanford University Press.
- Mahajan, N., & Wynn, K. (2012). Origins of “us” versus “them”: Prelinguistic infants prefer similar others. *Cognition*, 124(2), 227–233. doi:10.1016/j.cognition.2012.05.003

- Malti, T., Gummerum, M., & Buchmann, M. (2007). Contemporaneous and one-year longitudinal prediction of children's prosocial behavior from sympathy and moral motivation. *Journal of Genetic Psychology, 168*, 277–299.
- Malti, T., Gummerum, M., Keller, M., & Buchmann, M. (2009). Children's moral motivation, sympathy, and prosocial behavior. *Child Development, 80*, 442–460, doi:10.1111/j.1467-8624.2009.01271.x.
- Malti, T., Gummerum, M., Keller, M., Chaparro, M.P., Buchmann, M. (2012) Early Sympathy and Social Acceptance Predict the Development of Sharing in Children. *PLoS ONE 7*(12), e52017. doi:10.1371/journal.pone.0052017
- Malti, T., & Krettenauer, T. (2013). The relation of moral emotion attributions to prosocial and antisocial behavior: A meta-analysis. *Child Development, 84*, 397–412. doi:10.1111/j.1467-8624.2012.01851.x.
- Mascolo, M., & Fischer, K. W. (2010). The co-development of self and socio-moral emotions during the toddler years. In C. A. Brownell & C. B. Kopp (Eds.), *Socioemotional development in the toddler years: Transitions and transformations* (pp. 66–99). New York: Guilford.
- McGillicuddy-De Lisi, Ann V., & Others. (1994). The Effect of Relationship on Children's Distributive Justice Reasoning. *Child Development, 65*(6), 1694-1700.
- Mehrabian, A., & Epstein, N. (1972). A measure of emotional empathy. *Journal of Personality, 40*(4), 525-543.
- Melis, Alicia P., Altrichter, Kristin, & Tomasello, Michael. (2013). Allocation of Resources to Collaborators and Free-Riders in 3-Year-Olds. *Journal of Experimental Child Psychology, 114*(2), 364-370.

- Miller, A. G. (1972). Effect of attitude similarity-dissimilarity on the utilization of additional stimulus inputs in judgments of interpersonal attraction. *Psychonomic Science*, 26(4), 199–203.
- Miller, P., Eisenberg, N., Shell, R., Fabes, R., & Zahn-Waxler, C. (1996). Relations of Moral Reasoning and Vicarious Emotion to Young Children's Prosocial Behavior Toward Peers and Adults. *Developmental Psychology*, 32(2), 210-219. doi:10.1037/0012-1649.32.2.210.
- Moll, H., & Tomasello, M. (2006). Level 1 perspective-taking at 24 months of age. *British Journal of Developmental Psychology*, 24, 603–613.
- Moll, H., & Meltzoff, A. N. (2011). How does it look? Level 2 perspective-taking at 36 months of age. *Child Development*, 82, 661–673.
- Moore, C. (2009). Fairness in children's resource allocation depends on the recipient. *Psychological Science*, 20, 944–948. doi:10.1111/j.1467-9280.2009.02378.x
- Nesdale, D., Durkin, K., Maass, A., & Griffiths, J. (2004). Group status, out-group ethnicity and children's ethnic attitudes. *Journal of Applied Developmental Psychology*, 25, 237-251.
- Nesdale, D., Durkin, K., Maass, A., & Griffiths, J. (2005). Threat, group identification and children's ethnic prejudice. *Social Development*, 14, 189-205.
- Nesdale, D. (2007). The development of ethnic prejudice in early childhood: Theories and research. In O. Saracho & B. Spodek (Eds.), *Contemporary perspectives on social learning in early childhood education* (pp. 213-240). Charlotte, NC: Information Age Publishing.
- Nesdale, D. (2008). Peer group rejection and children's intergroup prejudice. In S. Levy & M. Killen (Eds.), *Intergroup attitudes and relations in childhood through adulthood* (pp. 32–46). Oxford, UK: Oxford University Press.

- Nesdale, D., Lawson, M. J., Durkin, K., & Duffy, A. (2010). Effects of information about group members on young children's attitudes towards the in-group and out-group. *British Journal of Developmental Psychology*, *28*(2), 467–482. doi:10.1348/026151009X433321
- Nesdale, D., & Lawson, M. J. (2011). Social groups and children's intergroup attitudes: Can school norms moderate the effects of social group norms? *Child Development*, *82*, 1594–1606. <http://dx.doi.org/10.1111/j.1467-8624.2011.01637.x>
- Ongley, S. F., & Malti, T. (2014). The role of moral emotions in the development of children's sharing behavior. *Developmental Psychology*, *50*, 1148–1159, doi:10.1037/a0035191.
- Ornaghi, V., Brockmeier, J., & Grazzani, I. (2014). Enhancing social cognition by training children in emotion understanding: A primary school study. *Journal of Experimental Child Psychology*, *119*, 26-39.
- Oswald, P. (1996). The Effects of Cognitive and Affective Perspective Taking on Empathic Concern and Altruistic Helping. *The Journal of Social Psychology*, *136*(5), 613-623.
- Olson, K. R., & Spelke, E. S. (2008). Foundations of cooperation in young children. *Cognition*, *108*, 222–231. doi:10.1016/j.cognition.2007.12.003
- Over, H., & Carpenter, M. (2009). Eighteen-month-old infants show increased helping following priming with affiliation. *Psychological Science*, *20*(10), 1189-93.
- Pappert, A.T., Williams, A., Moore, C., (2016) The influence of Competition on Resource Allocation in Preschool Children. *Social Development Vol 00 No. 00, 00–00* doi: 10.1111/sode.12202
- Patterson, M. M., & Bigler, R. S. (2006). Preschool children's attention to environmental messages about groups: Social categorization and the origins of intergroup bias. *Child Development*, *77*, 847–860.

- Paulus, M., & Moore, C (2012). Understanding and producing prosocial acts in early childhood. In J.B. Benson (Ed.), *Advances in child development and behavior*, 42, 271-305.
- Paulus, M., Gillis, S., & Moore, C. (2013). Preschool children involve a third party in a dyadic sharing situation based on fairness. *Journal of Experimental Child Psychology*, 116(1), 78-85.
- Paulus, M. (2014a). The Emergence of Prosocial Behavior: Why Do Infants and Toddlers Help, Comfort, and Share? *Child Development Perspectives*, 8(2), 77-81.
- Paulus, M. (2014b). The early origins of human charity: developmental changes in preschoolers' sharing with poor and wealthy individuals. *Frontiers in Psychology*, 5, 344.
<http://doi.org/10.3389/fpsyg.2014.00344>
- Paulus, M., Moore, C., (2014). The Development of Recipient-Dependent Sharing Behavior and Sharing Expectations in Preschool Children. *Developmental Psychology*, 50(3), 914-921.
- Paulus, M., & Moore, C. (2015). Preschool Children's Anticipation of Recipients' Emotions Affects Their Resource Allocation. *Social Development*, 24(4), 852-867.
- Paulus, M., Becker, E., Scheub, A., & König, L. (2016). Preschool children's attachment security is associated with their sharing with others. *Attachment & Human Development*, 18(1), 1-15.
- Paulus, M., & Moore, C. (2016) Preschoolers' generosity increases with understanding of the affective benefits of sharing. *Developmental Science*, 1-9. DOI: 10.1111/desc.12417
- Peterson, L. (1982). Altruism and the development of internal control: An integrative model. *Merrill-Palmer Quarterly*, 28, 197-222.
- Piff PK, Kraus MW, Côté S, Cheng BH, Keltner D (2010) Having less, giving more: The influence of social class on prosocial behavior. *Journal of Personality and Social Psychology*, 99, 771-784.

- Plötner, M., Over, H., Carpenter, M., & Tomasello, M. (2015). The effects of collaboration and minimal-group membership on children's prosocial behavior, liking, affiliation, and trust. *Journal of Experimental Child Psychology, 139*, 161–173. doi:10.1016/j.jecp.2015.05.008
- Pratt, M.W., Skoe, E. E., & Arnold, M. L. (2004). Care reasoning development and family socialisation patterns in later adolescence: A longitudinal analysis. *International Journal of Behavioral Development, 28*, 139–147.
- Premack, D., & Woodruff, G. (1978). Does the chimpanzee have a theory of mind? *Behavioral and Brain Sciences, 1*, 515–526.
- Radke-Yarrow M, Zahn-Waxler C, Chapman M. (1983). Prosocial dispositions and behaviour. In: Mussen P (ed.), *Manual of Child Psychology: Vol. 4. Socialization, Personality, and Social Development*. New York: Wiley, pp 469–545.
- Roberts, W., & Strayer, J. (1996). Empathy, emotional expressiveness, and prosocial behavior. *Child Development, 67*, 449–470, doi:10.1111/j.1467-8624.1996.tb01745.x.
- Rochat, P., Dias, M. D. G., Liping, G., Broesch, T., Passos-Ferreira, C., Winning, A., & Berg, B. (2009). Fairness in distributive justice by 3- and 5-year-olds across seven cultures. *Journal of Cross-Cultural Psychology, 40*, 416–442.
- Ross, H.S. (1996). Negotiating Principles of Entitlement in Sibling Property Disputes. *Developmental Psychology, 32*(1), 90-101.
- Rushton. J. (1980). *Altruism, socialization, and society*. Englewood Cliffs, NJ: Prentice-Hall.
- Saarni C. (1999). *The Development of Emotional Competence*. New York: Guilford Press.
- Salovey, P., Rodin, J. (1984). Some antecedents and consequences of social-comparison jealousy. *Journal of Personality and Social Psychology, 47*(4), 780-792.

- Schug, M. G., Shusterman, A., Barth, H., & Patalano, A. L. (2013). Minimal-group membership influences children's responses to novel experience with group members. *Developmental Science*, *16*(1), 47–55. doi:10.1111/j.1467-7687.2012.01193.x
- Shantz, C U. (1975). The development of social cognition. In E. M. Hetherington (Ed.), *Review of child development research* (Vol. 5, pp. 257-323). Chicago: University of Chicago Press.
- Shaw, A., Descioli, P., & Olson, K. (2012). Fairness versus favoritism in children. *Evolution And Human Behavior*, *33*(6), 736-745.
- Sloane, S., Baillargeon, R., & Premack, D. (2012). Do Infants Have a Sense of Fairness? *Psychological Science*, *23*(2), 196-204. doi: 10.1177/0956797611422072
- Smith CE, Blake PR, Harris PL (2013) I should but I won't: why young children endorse norms of fair sharing but do not follow them. *PLoS One* *8*, e59510. doi: 10.1371/journal.pone.0059510
PMID: 23527210
- Sparks, E., Schinkel, M.G., Moore, C. (Submitted). Affiliation affects generosity in young children: The roles of minimal group membership and shared interests. *Journal of Experimental Child Psychology*.
- Staub. E. (1978). *Positive social behavior and morality: Social and personal influences* (Vol.1). San Diego: Academic Press.
- Steinbeis, N., & Singer, T. (2013). The effects of social comparison on social emotions and behavior during childhood: The ontogeny of envy and schadenfreude predicts developmental changes in equity-related decisions. *Journal of Experimental Child Psychology*, *115*(1), 198-209.
- Strayer J. (1989). What children know and feel in response to witnessing affective events. In: Saarni C, Harris P (Eds.), *Children's Understanding of Emotion*. New York: Cambridge University Press, pp 259–292.

- Svetlova, M., Nichols, S., & Brownell, C. (2010). Toddlers' prosocial behavior: From instrumental to empathic to altruistic helping. *Child Development, 81*, 1814–1827, doi:10.1111/j.1467-8624.2010.01512.x.
- Sullivan, M. W., Bennett, D. S., Carpenter, K., & Lewis, M. (2008). Emotion knowledge in young neglected children. *Child Maltreatment, 13*, 301–306.
- Sutton, J., Smith, P. K., & Swettenham, J. (1999). Social cognition and bullying: Social inadequacy or skilled manipulation. *British Journal of Developmental Psychology, 17*, 435–450.
- Takagishi H, Kameshima S, Schug J, Koizumi M, Yamagishi T (2010) Theory of mind enhances preference for fairness. *Journal of Experimental Psychology, 105*, 130–137. doi: 10.1016/j.jecp.2009.09.005 PMID: 19857876
- Tangney, J.P. (1992). Situational determinants of shame and guilt in young adulthood. *Personality and Social Psychology Bulletin, 18*, 199–206.
- Tangney, J. P., & Dearing, R. (2002). *Shame and guilt in interpersonal relationships*. New York: Guilford Press.
- Tangney, J.P., Marschall, D.E., Rosenberg, K., Barlow, D.H., Wagner, P.E. (1994). *Children's and Adults' Autobiographical Accounts of Shame, Guilt and Pride Experiences: An Analysis of Situational Determinants and Interpersonal Concerns*. Unpublished manuscript, George Mason University, Fairfax, VA.
- Tangney, J. P., Stuewig, J., & Mashek, D. J. (2007). Moral Emotions and Moral Behavior. *Annual Review of Psychology, 58*, 345–372. doi.org/10.1146/annurev.psych.56.091103.070145
- Thompson, C., Barresi, J., & Moore, C. (1997). The Development of Future Oriented Prudence and Altruism in Preschoolers. *Cognitive Development, 12*(2), 199-212.
- Tomasello, M., & Carpenter, M. (2007). Shared intentionality. *Developmental Science, 10*, 121–125.

- Underwood, B., & Moore, B. (1982). Perspective-taking and altruism. *Psychological Bulletin*, *91*, 143–173.
- Vaish, A., Carpenter, M., & Tomasello, M. (2009). Sympathy through affective perspective-taking and its relation to prosocial behavior in toddlers. *Developmental Psychology*, *45*, 534–543, doi:10.1037/a0014322.
- Verkuyten, M. (2007). Ethnic in-group favoritism among minority and majority groups: Testing the self-esteem hypothesis among pre-adolescents. *Journal of Applied Social Psychology*, *37*, 486–500.
- Vogeley, K., & Fink, G. R. (2003). Neural correlates of the first-person perspective. *Trends in Cognitive Sciences*, *7*, 38–42.
- Walster, E. G., Walster, W., Berscheid, E., & Dion, K. (1971). Physical attractiveness and dating choice. A test of the matching hypothesis. *Journal of Experimental Social Psychology*, *7*, 173–189.
- Warneken, F., & Tomasello, M. (2006). Altruistic helping in human infants and young chimpanzees. *Science*, *311*, 1301–1303.
- Warneken, F., Lohse, K., Melis, A. P., & Tomasello, M. (2011). Young children share the spoils after collaboration. *Psychological Science*, *22*, 267–273.
- Weil, M., Hayes, S. C., & Capurro, P. (2011). Establishing a deictic relational repertoire in young children. *The Psychological Record*, *61*, 371–390.
- Weller, D., & Lagattuta, K.H. (2013). Helping the In-Group Feels Better: Children's Judgments and Emotion Attributions in Response to Prosocial Dilemmas. *Child Development*, *84*(1), 253–268.
- Wellman, H. M., & Liu, D. (2004). Scaling of theory-of-mind tasks. *Child Development*, *75*, 523–541.

- Wellman, H. M., Fang, F., Liu, D., Zhu, L., & Liu, G. (2006). Scaling of theory-of-mind understandings in Chinese children. *Psychological Science, 17*, 1075–1081.
- White, N., Ensor, R., Marks, A., Jacobs, L., & Hughes, C. (2014). “It's Mine!” Does Sharing with Siblings at Age 3 Predict Sharing with Siblings, Friends, and Unfamiliar Peers at Age 6? *Early Education and Development, 25*(2), 185-201.
- Whiting, B. B., & Whiting, J.W. (1975). *Children of six cultures: A psycho-cultural analysis*. Oxford, UK: Harvard University Press.
- Williams, A., & Moore, C. (2014). Exploring disadvantageous inequality aversion in children: how cost and discrepancy influence decision-making. *Frontiers in Psychology, 5*, 1088.
doi:10.3389/fpsyg.2014.01088
- Williams, A., O'Driscoll, K., & Moore, C. (2014). The influence of empathic concern on prosocial behavior in children. *Frontiers in Psychology 5*, 425, doi:10.3389/ fpsyg.2014.00425.
- Wood, J. V. (1989). Theory and research concerning social comparisons of personal attributes. *Psychological Bulletin, 106*, 231–248.
- Wu, Z., & Su, Y. (2014). How do preschoolers' sharing behaviors relate to their theory of mind understanding? *Journal of Experimental Child Psychology, 120*, 73-86.
- Yarrow, M., Waxler, C., Barrett, D., Darby, J., King, R., Pickett, M., & Smith, J. (1976). Dimensions and Correlates of Prosocial Behavior in Young Children. *Child Development, 47*(1), 118-125.
- Yip, J., & Kelly, A. (2013). Upward and downward social comparisons can decrease prosocial behavior. *Journal of Applied Social Psychology, 43*(3), 591-602.

- Zaff, J. F., Moore, K. A., Papillo, A. R., & Williams, S. (2003). Implications of extracurricular activity participation during adolescence on positive outcomes. *Journal of Adolescent Research, 18*, 599–630.
- Zahn-Waxler, C., Robinson, J., & Emde, R.N. (1992). The Development of Empathy in Twins. *Developmental Psychology, 28*(6), 1038-1047.
- Zak, P., Kurzban, R., & Matzner, W. (2004). The Neurobiology of Trust. *Annals of the New York Academy of Sciences, 1032*(1), 224-227.
- Zak, P. (2005). Trust: A temporary human attachment facilitated by oxytocin. *Behavioral and Brain Sciences, 28*(3), 368-369.
- Zak, P., Kurzban, R., & Matzner, W. (2005). Oxytocin is associated with human trustworthiness. *Hormones and Behavior, 48*(5), 522-527.
- Zak, P.J., A. Stanton & S. Ahmadi. (2007). Oxytocin increases generosity in humans. *PLoS ONE, 2*, e1128.
- Zuffianò, A., Colasante, T., Peplak, J., & Malti, T. (2015). Sharing without caring? Respect for moral others compensates for low sympathy in children's sharing. *British Journal of Developmental Psychology, 33*(2), 252-258.

Appendix A- Knowledge mobilization brochure

How to encourage children's prosocial sharing and generosity?

- * Provide settings that can engage children in role play or pretend play. This can be done by encouraging children to act out a variety of scenarios where they are the recipient of someone's sharing or vice versa. This can help the child to put themselves in someone else's situation and see things from other's perspective.
- * Ask children to talk about their similarities and shared interests with unfamiliar others such as children from other classrooms or outgroup circles.
- * Engage children in collaborative activities and plays that requires active sharing with their partners. This allows the child to practice sharing as part of the rules of the play activity.

* Avoid competitive situations that provokes jealousy and envy toward others.

* Asking children to empathize with their competitors, allows the child to reduce feelings of envy and jealousy and helps them to be more generous toward their peers.



Image 5

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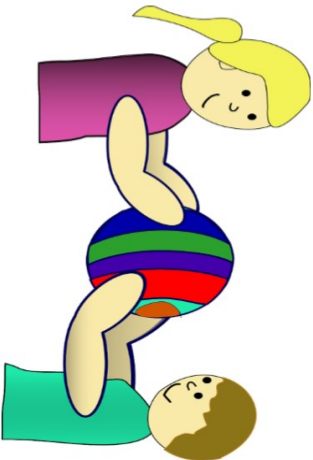
Prosocial Sharing and Generosity in Preschool Children



Ali Solhi

October 2016

Image 1



What is sharing and why is it important?

Sharing is a voluntary distribution of resources and is considered to be a prosocial action. Children need to share in order to be able to make friends and play cooperatively. It is important to foster sharing and generosity from an early age in order to encourage a society that is cooperative and interdependent. This also allows the child to develop their social skills and act pro socially toward others.

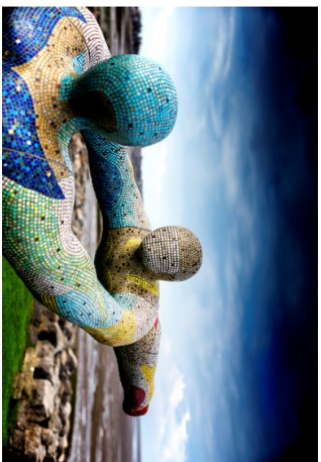


Image 2

Children share more:

- ◊ When the cost of sharing is low.
- ◊ When they can empathize or sympathize with the target of their sharing.
- ◊ When they can take others emotions and desires into consideration.

- ◊ When they can take on other's perspectives and emotions.
- ◊ With close friends and those who they feel affiliated to.
- ◊ With those who have similar interests as they do.
- ◊ With their collaborative partners in cooperative situations.



Image 3

Children share less:

- ◊ When the cost of sharing is high.
- ◊ With strangers and unfamiliar others.
- ◊ In competitive settings that can provoke jealousy and envy.

How to encourage children's prosocial sharing and generosity?

* Start off with encouraging the child to share in small quantities that bares little to no cost to them. Sharing with generosity becomes a habit when it is learned gradually. Once the behavior has been established children can be encouraged to share even if the cost of sharing is high.

* Have daily conversations about their emotions and feelings as well as the emotions and feelings of their playmates. Conversations about their internal states and feelings allows them to reflect on their day-to-day experiences with others, which strengthens their ability to take others perspective and emotions into account.



Image 4