

**PARENTAL ATTITUDES AND CHILDREN'S SHARING BEHAVIOR:  
HOW SOCIALIZATION RELATES TO EARLY PROSOCIAL DEVELOPMENT**

by

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Parents are always trying to influence what their child becomes. One way to study that is to examine what aspects of parental behavior and attitude are related to the child's behavior. The current study examined the relationship of the following variables with young children's prosocial behavior: age, sibling status, family income, and parental education, parental altruistic behavior, parental affiliative tendency, and parental socialization goals. The "family experience" variables were collected using *The Family Experiences Questionnaire* which was adapted from the work of Keller (2007), Mehrabian (1972), and Smith (2005). Children's prosocial behavior was assessed through a series of in-lab sharing tasks, involving "low-cost" sharing, in which the child could give just one item out of a group of items to share with a distressed adult who had nothing to play with. Results indicated the following: 1) As age increased, children were more likely to share toys and food, and they also shared their toys and food sooner in a sequence of communicative cues; 2) there were no significant differences in sharing between children with and children without siblings; 3) as family income rose, younger children were less likely to share food; 4) as parent education rose, all children shared toys more frequently but not food; 5) as parental altruism rose, younger children shared food more frequently; 6) as parental affiliative tendency rose, older children shared both toys and food less frequently; 7) as parental other-orientation socialization goals rose, older children shared food immediately at higher rates (very strong positive correlation); 8) as parental obedience goals rose, younger children shared food less frequently. Together, the results show that there are multiple family-based correlates of early prosocial behavior and that those vary by the child's age and what must be shared.

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## 1.0 INTRODUCTION

In today's parenting world, styles and strategies are based on the age-old question of nature vs. nurture. If parents cannot affect the "nature" side of the equation that is their children's genetic inheritance, then they will try to affect the "nurture" part by changing the way they raise their children in order to increase their children's chances of succeeding in society. Parents are always trying to find new ways and techniques to build the type of adult they want to see their child become. They want their children to be successful, caring, and accepted by society. Programs from *Baby Einstein* to *Hooked on Phonics* and other educational toys are bought by the thousands for children ranging from newborns to first-graders. Why do parents go to such lengths to make sure their children learn certain lessons right out of the womb? Perhaps it is because many parents believe that to succeed in society certain values and behaviors must be introduced to offspring in a timely manner. The more time a child has to spend learning a concept, perhaps the better s/he will remember and practice it, and the better off s/he will be in the future.

One of the core societal values that parents try to teach their children early on is altruism (Eisenberg, 1983). Children are often encouraged to share toys with siblings and playmates and share food with their parents during mealtimes. Altruistic behavior must be an intentional and voluntary action meant to benefit another being without obtaining any potential self-benefit (Eisenberg, 1983). Altruism is defined by most psychologists as behavior that is not motivated

by any external or internal reward. Prosocial behavior, by contrast, is simply behavior that benefits another being whether the motive is selfish or altruistic/selfless (Eisenberg, 1983). Most parents would like to encourage the type of prosocial behavior that is purely altruistic in their child. However, simply getting a child to behave prosocially is challenge enough.

Research in prosocial development has often times passed over the toddler years due to the evident lack of other-orientation displayed in children at that age. Their conversations are limited to their own thoughts and preoccupations, never seeming to take in what the other toddler is saying. Infants have a reduced ability to comprehend another's point of view and therefore a deficiency in understanding the needs of other people (Eisenberg, Fabes, & Spinrad, 2006), which is a key to altruistic action (Meyer & Hobson, 2004; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). Yet some young children are sometimes prosocial, cooperative (Warneken, Hare, Melis, Hanus, & Tomasello, 2007), helpful (Svetlova, Nichols, & Brownell, In press; Warneken, et al., 2007), and comforting (Zahn-Waxler, Radke-Yarrow, & King, 1979). The proposed research addresses how prosocial behavior changes during the toddler years, and how parents' socioeconomic status, socialization goals, altruistic behaviors, and affiliative tendencies are associated with individual differences in their young children's prosocial behavior.

## **1.1 EARLY DEVELOPMENT OF ALTRUISM**

Recent studies have shown that altruistic behavior can be observed in infants as young as 18-months (Svetlova, et al., In press; Warneken & Tomasello, 2007). Warneken, Hare, Melis, Hanus and Tomasello (2007) found that 18-month old infants helped an unfamiliar adult with or without

a reward. In the experiment, an object was placed close to the infant but out of reach of the experimenter. The experimenter would either reach for the object or do nothing and either reward or not reward the infant for giving the object to the experimenter. These conditions were manipulated to evaluate the underlying motivations of the infant's actions. It was hypothesized that if the infant was helping in response to the experimenter's desire or goal, then the infant would give the object more frequently in the reaching versus non-reaching condition. On the other hand, if infants were helping for their own benefit, they would help more in the reward versus no-reward condition. Warneken et al. (2007) found that infants helped more in the reaching versus non-reaching condition and that the reward/no-reward condition had no effect. In this study, the 18-month-olds helped the experimenter achieve her/his goal especially when it was emphasized (reaching) and regardless of self-benefit, displaying altruistic motivations. In study by Svetlova, Nichols, and Brownell (in press), children showed altruistic behavior by giving up their own possessions to help a distressed adult, and this tendency increased significantly between 18 and 30 months of age (Svetlova et al., in press).

Altruistic behaviors intrinsically involve the notion of self-other differentiation. Self-other differentiation is the concept that other people exist with their own minds, motivations, and feelings, and that others have desires and needs too. It requires the recognition of the self as an independent individual with thoughts that are not those of another person (Zahn-Waxler, et al., 1992). For most, self-other awareness starts to develop in the beginning of the second year of life. At this age, toddlers also begin to perform prosocial behaviors such as patting, embracing, and helping adults accomplish physical tasks (Zahn-Waxler & Radke-Yarrow, 1982). Without self-other differentiation, purely altruistic activities would not exist because prosocial behaviors would be done solely to fulfill the needs of the self.

Another key ingredient for fostering altruistic behavior is empathy (Piliavin & Charng, 1990; Smith, 2005; Toi & Batson, 1982). Empathy, the ability to feel another's emotions as being like one's own, provides people with the basis to respond to another person's emotional behavior (Eisenberg, 1983). Through empathy a person can assess what another person requires in order to be comforted (if the emotion is negative) or confirmed (if the emotion is positive) by comparing it to what they themselves would need in a similar situation. Empathy can be viewed as an extension of self-other understanding in which a person recognizes the other as a separate being and reacts vicariously to the other's emotions (Mehrabian & Norman, 1972). For altruistic action, a person must first be able to distinguish the emotions and needs of another and then provide assistance toward fulfilling that need.

While empathy is a major component of altruistic behavior, it also relates to the construct of affiliative tendency. Affiliative tendency is "generalized positive expectations in social relationships," such as having positive thoughts about strangers, liking people, and being comfortable in crowded surroundings (Mehrabian, 1994). People who are considered affiliative are usually friendly, adept at social communication, and tend not to dwell on lonely feelings (Mehrabian, 1994). Mehrabian (1976) found a significant correlation between empathy and affiliative tendency, indicating that affiliative individuals, who have a strong desire to be around and liked by others, may be more inclined to empathize with other people.

With an inclination toward empathy, more affiliative individuals may also have a greater tendency to act in an altruistic manner – they may care more about others and their emotions and well-being. In a study by Over and Carpenter (2009), infants primed with affiliation cues had increased rates of helping. 18-month-olds were shown a series of pictures with household items. In the non-affiliation condition, the pictures included background images that showed either one

wooden doll, two wooden dolls facing away from each other, or wooden blocks. In the affiliation condition, the background images showed either two wooden dolls side by side, two wooden dolls facing each other, or two wooden dolls facing and almost in contact with each other. After the infants viewed the pictures, an experimenter dropped a bundle of sticks by “accident,” and the infants’ subsequent behavior was recorded. Infants primed with affiliation images (two wooden dolls side by side, facing each other, and facing and almost in contact with each other) were three times more likely to help the experimenter than infants primed with non-affiliation images (one wooden doll, two wooden dolls facing away from each other, and two wooden blocks). Furthermore, the infants who were primed with the image of two wooden dolls facing away from each other were just as likely to help as those primed with wooden blocks, suggesting that it was the “affiliative relationship” between the dolls that accounted for the difference in helping behavior and not just the presence of people or faces (Over & Carpenter, 2009). Thus, as in adults, it is possible that toddlers who are more affiliative and/or empathic are also more altruistic; at the very least, they appear to be more prosocial.

## **1.2 SOCIALIZATION OF ALTRUISM**

But how does altruism develop? Several decades of research have produced findings implicating socialization as a major component in the development of altruism (Eisenberg, et al., 2006; Piliavin & Charng, 1990). Socialization is the process by which children learn the norms, values, and customs of their society, culture, and family. It is also the process by which parents ensure that cultural models of behavior necessary for adulthood are passed on to the child through their child-rearing practices (Quinn, 2003). These practices are essential for the child to learn in the

early stages of life to ensure that these lessons, which cannot be learned without cultural teaching, endure into adulthood.

At the family level, socialization can take the form of various parenting activities, such as talking to children about parental values. In a study by Rowe and Casillas (under review), parents were interviewed about their future goals for their 30-month-old children and then observed in a natural setting for the topics they conversed about with their children. Rowe and Casillas found that parents' future goals expressed during the interview correlated with the messages they communicated to their children even at this early age. For instance, if parents indicated that their child's future academic success was important to them, they would speak more often to their 30-month-old about academics (Rowe & Casillas, Under review). Parents start the process of socialization early by relaying their own socialization goals to their young children through verbal communication.

Perhaps parents believe that by discussing socialization goals or by acting in a manner consistent with their goals, their children will internalize those goals and behavior for themselves in the future. Previous research suggests that this is in fact the case. Hoffman (1975) interviewed elementary-age children along with their parents about their altruistic behavior and values. Children's altruistic behavior was also evaluated by peer reputation. The results indicated that altruistic behaviors in children were directly related to the communication of altruistic values and behaviors by at least one parent (Hoffman, 1975). Clary and Miller (1986) studied sustained altruistic behavior in response to adult participants' socialization histories. Participants were volunteers for a crisis counseling agency hotline. They were interviewed beforehand about their socialization history which included to what degree their parents exhibited altruistic behavior. Participants' own altruistic behavior was measured during a volunteering scenario involving the



crisis hotline. Participants with parents who modeled altruistic behavior to a higher degree were termed “autonomous altruists” and those with parents who modeled altruism to a lesser degree were termed “normative altruists.” It was found that “autonomous altruists” were more altruistic during the volunteering scenario. In addition, before the volunteering experience, half of the participants were also trained in a “highly cohesive training group” meant to increase sustained altruistic behavior. During the volunteering scenario, altruistic behavior in normative altruists who were trained increased to the level of autonomous altruists, while altruistic behavior in the normative participants who were not trained remained low. However, the training did not affect the already high level of altruistic behavior in the autonomous participants (Clary & Miller, 1986), suggesting that they had internalized their parents’ socialization of altruistic behaviors.

More recent research has also highlighted the role of socialization across cultural boundaries and its potential effects on self-other differentiation (Keller, Kartner, Borke, Yovsi, & Kleis, 2005). Cultural models of child-rearing often differ in the types of emotion-arousing techniques used to teach a child a cultural value. For instance, in many Chinese parenting models, shaming is used as a technique by which the morality of a past experience is taught to the child, while in many American households, private discipline techniques are used to socialize children as to what is right and wrong (Quinn, 2003). There is evidence that cultural values may be passed on even in infancy through nonverbal communication styles of the parent. In one study, 18 to 20-month-old children of Cameroonian Nso farmers were compared to middle-class German families in a mirror self-recognition task. Keller et al. (2005) found that German toddlers, who were raised in a culture which values more individualistic or autonomous ideals (greater self-orientation), recognized themselves more frequently in the mirror than did their Cameroonian Nso counterparts, who were raised in a society which values more collective or

relational ideals (greater other-orientation). These findings suggest that through socialization, parents' goals for their children as well as their own behaviors and belief systems act as a scaffold on which children build their own values and actions (Rowe & Casillas, Under review).

Children's altruism seems to increase not only when parents possess more altruistic socialization goals but also with age. Altruistic behavior such as generosity and selfless assistance tend to increase, especially around adolescence. This increase in altruism may be due to developmental increases in empathy and cognitive and moral reasoning capacities (Piliavin & Charng, 1990), processes which start in infants and toddlers.

### **1.3 SIBLING STATUS**

Another family characteristic that may contribute to the socialization of prosocial behavior is the presence of siblings. Dunn and Munn (1986a) examined the prosocial behavior of 18- and 24-months-old children with older siblings and found that at 18 months, children were already showing such behaviors as sharing, helping, and comforting. Dunn and Munn (1986b) studied the conflict behavior of children both with and without siblings. Here, sibling status correlated with higher rates of conciliation and references to social norms (Dunn & Munn, 1986b), indicating a possibility for increased prosocial behavior such as sharing when children have siblings.

## 1.4 ALTRUISM AND SOCIOECONOMIC STATUS

Recent research has also shown that altruistic and prosocial behavior can be a function of family socioeconomic status (SES) because people of different classes often possess different cultural models of what child-rearing and socialization should be (Quinn, 2003).

In one study, adolescents from families with varying SES were interviewed about their attitudes toward prosocial values such as affiliation and community feeling, as well as the positive societal value of self-acceptance. Results indicated that adolescents who were raised in lower income communities prized material possessions more than prosocial values compared to their more privileged counterparts (Kasser, Ryan, Zax, & Sameroff, 1995). Benenson, Pascoe, and Radmore (2007) inspected the relationship between altruism and SES in children ages 4, 6, and 9 during a game where children were given stickers as a “prized resource.” Children from higher SES backgrounds and older children displayed more altruistic behaviors, which included sharing stickers with other children, than their younger and more disadvantaged counterparts (Benenson, et al., 2007). Such findings implicate the effect of socio-environmental conditions on the development of altruistic behavior.

One way in which socioeconomic status may affect children’s sharing behavior is through parental values and parenting styles. American middle-class parental values often differ from those in the working class due to the conditions in which they live (Kohn, 1963). Middle-class parents value self-direction and independence for the types of professions they pursue often require such skills. Working class parents tend to value conformity and respect for authority, resulting from the conditions of working class professions (Kohn, 1963). Therefore, working class parents often use more constraint-oriented parenting styles heavy on obedience while middle-class parents react to the intent of a child’s transgression rather than the actual

transgression itself (Kohn, 1963). In middle-class families there is an emphasis on the child's point of view and own opinion whereas working class families focus on a strict boundary between parents and children (Kohn, 1963). This difference in values and parental interaction may affect children's early self-other differentiation, which may in turn affect children's prosocial behaviors.

In regard to parenting style, higher SES middle-class American families tend to create an atmosphere of "concerted cultivation" for their children by structuring their afterschool life with multiple extracurricular activities (Lareau, 2003), such as piano lessons, sports, or afterschool participation in volunteering clubs. These activities are used by middle-class parents to give their children marketable skills that are not learned inside the classroom, which will increase their ability to succeed in white collar jobs in the future (Lareau, 2003). Middle-class Americans also tend to concentrate more on the individual aspects of the child (Quinn, 2003). For instance it is common in suburban schools to keep portfolios on children's work at school, whether it is finger paintings or writing practice, from a very early age. Individualism, a classic American value, in middle-class families is interpreted through child-rearing as a way to create a unique individual. Middle-class parenting stresses interaction with the child rather than obedience, allowing children to form their own opinions with parents creating a more communicative atmosphere (Lareau, 2003). Middle-class parents also tend to engage their children in critical thinking regarding philosophical and moral questions more often than their lower income counterparts to help create a stronger family support structure and encourage their children to take part in the middle-class moral crown jewel of behaviors: altruism (Lareau, 2003). Exhibiting the societal value of altruism also plays into the middle-class view of "niceness" as a type of cultural capital

that allows for certain institutional advantages such as more positive reviews from teachers as well as being given the benefit of the doubt during a troublesome situation (Low, 2009).

In the American working class family, individualism is seen as the creation of a self-reliant adult in the future, which means allowing the child to “do what kids do best” and participate in unstructured afterschool time filled with child-initiated play (Lareau, 2003). Low SES families tend to encourage this pattern of “natural growth,” where children are left to their own devices during this free time and obedience is heavily stressed during other times (Lareau, 2003). This parenting style is often not a choice, however, due to the greater financial constraints on a low SES household, where mothers and fathers may be working multiple jobs which leaves less time to supervise and teach children (Lareau, 2003). In addition, the parenting model often stressed by schools is that of “concerted cultivation,” leaving low income families out of synch with the institution, leading working class parents and children to become more distanced and distrustful of such institutions and their values, including school-sponsored exhibits of altruism (Lareau, 2003).

## **1.5 CURRENT STUDY**

Although links between altruism and socialization have been shown in school-aged children and adolescents (Eisenberg, et al., 2006; Kelly, 2006), little research has examined how parental socialization relates to the prosocial behavior of very young children. In this study, we will examine how parents’ socialization goals and their own altruistic behavior and affiliative tendencies may relate to their young children’s prosocial behavior.

Parents will be asked to fill out *The Family Experiences Questionnaire* (Appendix A), which was designed to measure the parent's own affiliative tendency, inclination toward altruism, and socialization goals for their children, and basic demographic information such as family SES. *The Family Experiences Questionnaire* was adapted from the cross-cultural work on parental socialization goals of Keller (2007), the Measure of Affiliative Tendency of Mehrabian (1972), and questions from the General Social Surveys of the National Opinion Research Center (Smith, 2005). Keller's (2007) work focused on the socialization of children with respect to autonomous versus relational socialization goals where autonomous goals emphasize more self-oriented behavior and relational goals emphasize more other-oriented behavior, such as altruism. Mehrabian's *MAFF* tests to what extent a participant self-reports as having a general positive attitude toward interacting with and being around other people. The more affiliative participants are, the more likely they are to be empathetic, and so the more likely they and their children may be to perform prosocial or altruistic behaviors. Finally, the questions from the General Social Survey are an indication of how frequently the participant performs certain altruistic actions, providing a picture of how altruistically inclined a participant may be.

To assess their prosocial behavior, children were asked to participate in a series of sharing tasks. These tasks were adapted from the work of Svetlova et al. (in press) and Brownell, Svetlova, and Nichols (2009) to study the early development of "low-cost" sharing. In the study by Brownell et al. (2009), toddlers were observed during "no-cost" sharing tasks where the child would lose nothing for sharing a snack with an adult who had none. In the current study, the child was involved in a "low-cost" sharing task in which the child could give just one item out of a group of items to share with a distressed adult who had nothing to play with. In the study by Svetlova et al. (in press) on the empathic helping behaviors of toddlers, tasks were included in

which a distressed adult gave progressively explicit cues to the child to indicate that she was distressed and how the child could help her and alleviate her distress. In the current study, the adult gave similar successively explicit cues to indicate that she needed one of the items the child had to be able to play.

We expect that with increased age, children will be more likely to share due to greater empathy and more mature self-other differentiation. We also hypothesize that children with siblings will be more likely to share due to the more frequent exposure to situational and daily sharing behavior in the family and to parents' more frequent communications about the need to share. We expect that children with parents who are more affiliative and more altruistic and those whose parents have more other-orientation socialization goals will be more likely to share. Finally, we hypothesize that children with higher family SES will be more likely to share.

## **2.0 METHOD**

### **2.1 PARTICIPANTS**

The participants in the sharing portion of the study included 40 healthy and normally developing children (20 male and 20 female; 20 18-month-olds, 19 24-month-olds, and 1 27-month-old) from the city of Pittsburgh, Pennsylvania, and surrounding areas. Out of the 40 children, 32 were Caucasian, 3 were African-American, and 5 were biracial. Less than half of the children had siblings ( $N = 19$ , range = 0 - 3). The average number of siblings was 1.37 for those who had siblings. The participants in *The Family Experiences Questionnaire* were 30 of the adult parents of those children who participated in the sharing task study (29 female, 1 male) and who returned the completed questionnaire.

### **2.2 GENERAL PROCEDURES**

Children participated in a set of 6 naturalistic sharing tasks which lasted from 5-10 minutes each. Each task consisted of play-based interactions with an assistant experimenter designed to measure the child's ability to understand the emotions and desires of others and to generate prosocial sharing behaviors. Children's behavior was video-recorded from behind a one-way mirror at one end of the playroom.



Each parent was re-contacted following the sharing sessions by mail and phone and asked to complete *The Family Experiences Questionnaire* (Appendix A), which was designed to measure the parent's own affiliative tendency, inclination toward altruism, and socialization goals for their children along with basic demographic information.

### 2.3 SHARING TASKS

In the beginning of each session, each child had a ten-minute warm up period to become familiar with the playroom, toys to be used during the tasks, and the experimenters. The assistant experimenter playfully interacted with the child as a peer while the lead experimenter explained the study and consent forms to the parent(s), who were in the room at all times. During the study, the parent(s) were advised not to influence the child's behaviors in regard to the sharing procedure.

The lead experimenter (E) administered each of six naturalistic sharing tasks in counterbalanced order. The first five tasks involved sharing different sets of toys with the assistant experimenter (AE) while the last task involved sharing a small snack. All tasks were administered as follows. The child and AE were brought over to a set of two small adjacent tables. The child was provided a small chair to sit at one table while the AE sat beside the child at the adjacent table on his/her knees to keep the height difference between the two at a minimum. The minimization of the height difference allowed AE to seem more peer-like and therefore less like an authority figure. AE and the child were facing in the same direction as each other for the initial "parallel play" portion of each task (Figure 1). During this phase both had enough toys to play with.



**Figure 1.** Parallel Play Position

E then brought out two sets of either a one-part toy or a two-part toy. The two-part toys were shape sorters, ring stackers, or houses with plastic people (Figure 2). Each two-part toy consisted of a “base” and “pieces.” The base was the larger unit of the toy, such as the stacker in the ring stacker, which was not to be shared. The focus of the sharing task was the pieces, the smaller units of the toy, with which both the child and AE played. The one-part toys included a small group of plastic animals, toy cars, and several crackers (Figure 3).



**Figure 2.** Two-Part Toys



**Figure 3.** One-Part Toys

For the two-part toys E put one set of toys in front of the child and one set in front of AE. For the one-part toys, E dumped the “pieces” (plastic animals/cars) in the middle of the two tables. Before and during the parallel play portion of the task, E vocally attempted to bring ownership and self-other awareness to the attention of the child. For instance, while putting the toys on the table E said, “I have two [shape sorters/ring stackers/houses]! This one is for [child’s name], and this one is for [AE’s name]! Here, [AE’s name], this one is for you!” AE also emphasized the ownership of the toys (“This is **mine!**”). E then demonstrated how to use the toy

to the child. At this point, E moved away from the table and allowed the child and AE to play with their toys individually and side by side for approximately 30 seconds. During this time, AE continued to vocalize the ownership of each toy (“I am putting the shapes in **my** toy. You are putting the shapes in **your** toy.”).

After the parallel play period, E gathered *all* of the pieces from the child and AE and placed them on only the child’s table. While E transferred the pieces to the child, AE moved to the far side of the two tables, perpendicular to the child (Figure 4). This movement allowed for greater distance between the child and AE to emphasize that AE was now out-of-reach of the pieces. E then stepped away from the table for the sharing portion of the task to begin.



**Figure 4.** Out-of-Reach Position

After E stepped away, AE produced a series of increasingly explicit cues attempting to bring the attention of the child to the fact that AE had no pieces. Each cue lasted from 5-7 seconds with the entire sharing portion of the task lasting for approximately 30 seconds. The first cue was nonverbal: AE looked from the child to the toy with a sad facial expression while sighing audibly. During the second cue (verbal), AE verbally expressed that s/he did not have any pieces and that s/he desired some (“I don’t have any rings. I need some rings so I can play too. I want some rings!”). The third cue consisted of a physical gesture indicating that AE

desired to have some of the pieces that were in the child's possession. Here, AE reached out her/his arm across the table toward the pieces. The fourth cue consisted of a verbal request, where AE asked the child for some pieces directly and with eye contact ("Amanda, could I have some rings too?"). If the child did not share at this point, then E initiated the final cue and gave AE a piece from the child's side of the table along with verbal acknowledgement ("Oh, [AE's name], doesn't have any rings. I'll give [AE's name] a ring too so she can play!"). If the child shared her/his pieces with AE during any one of the cues, then the cues were stopped, and AE thanked the child and commented on the piece ("Thank you! I like rings!). After about ten seconds, a second trial was administered identical to the first.

For sharing crackers, the child and AE used only one table. The child was provided a small chair to sit in while AE sat across from the child on the floor (Figure 5). E provided the child and AE with one small dish each. E then poured a cup full of crackers onto the child's plate and verbally emphasized that AE's plate was empty to AE ("Sorry, [AE's name], I don't have any more for you."). AE then provided the series of successively more explicit cues with the snacks.



**Figure 5.** Naturalistic Snack Sharing Position

## **2.4 FAMILY EXPERIENCES QUESTIONNAIRE**

Parents were re-contacted by mail and asked to complete *The Family Experiences Questionnaire* online, on the phone, or through the mail. First, a description of the study, an addendum consent, and *The Family Experiences Questionnaire* was sent to the parent's address from the current participant database. The parent had the option of filling out the questionnaire by hand or calling to request another method. After two weeks, a follow-up phone call was made to parents who had not yet responded to determine if the parent was willing to complete the questionnaire. At this point, the parent had the option of answering the questionnaire directly over the phone. If the parent desired to complete the questionnaire online, an ID number and link was assigned to

enable the parent to fill out a web-based addendum consent (Appendix B) and the questionnaire. Twenty-two parents filled out the questionnaire by mail, 2 by phone, and 6 online.

## 2.5 CODING AND MEASURES

*The Family Experiences Questionnaire* was coded for demographic information including education and household income, Altruistic Behavior score, Affiliative Tendency score, self/other-orientation Socialization Goals score, and obedience Socialization Goals score. Education was scored from 1-7 according to the following categories (in increasing order): less than high school, high school, some college, associate's degree, bachelor's degree, master's degree, and doctoral degree (MD, PhD, EDD, JD, etc.) for both parents. Parents' education scores were combined by averaging the two scores. Total annual household income was scored from 1-3 according to the following categories (in increasing order): less than \$50,000, \$50,000-\$100,000, and more than \$100,000. For Altruistic Behavior, the scores for each question indicate how frequently the parent participated in a given action. The possible total scores for Altruistic Behavior range from 0 to 45. The Affiliative Tendency responses indicate to what degree parents agree that the statements describe them. The section was scored by subtracting the average of the scores of the negatively worded items (e.g. "When I'm introduced to someone new, I don't make much effort to be liked.") from the average of the scores of the positively worded items (e.g. "If I had to choose, I would rather have strong attachments with my friends than have them regard me as witty and clever.") to create a total Affiliative Tendency score. Possible scores ranged from -104 to 104, with higher scores indicating stronger proclivity to affiliation. Finally, the Socialization Goals items indicate to what degree parents agree that children should display a

certain behavior by the age of three. Three subsections are included: self-oriented goals, other-oriented goals, and obedience. A total score for the first two subsections was calculated by subtracting the average of the scores for the self-oriented items from the average of the scores of other-oriented items. The 6-point Likert scale used in this section set 1 as “very strongly agree” and 6 “as very strongly disagree, causing the total score to range from -5 to 5, with higher scores indicating a higher proportion of other-oriented socialization goals. A second score for obedience was coded by averaging scores of the obedience questions to range from 1 to 6.

Sharing behaviors were coded from the 6 sharing tasks for the cue on which the child shared. The possible sharing cue score ranges from 5 to 0 for each trial, with lower scores indicating sharing at later and more explicit cues, and with zero indicating that the child did not share. Measures were limited to the first trial in order to avoid practice and carry over effects. The measures included the proportion of tasks on which the child shared at any cue, the proportion of tasks during which the child shared before the request cue, the proportion of trials during which the child shared on the first cue (immediately), and the average sharing cue score.



## **3.0 RESULTS**

### **3.1 DESCRIPTIVES AND PRELIMINARY ANALYSES**

Means and standard deviations for the sharing task measures are shown in Table 1, where bolded items indicate a difference between the means at a significance level of  $p < .05$ , and bolded and italicized items indicate a difference between the means at a significance level of  $.05 < p < .10$ . This formatting convention is followed in all subsequent tables.

**Table 1.** Means and Standard Deviations for the Sharing Task Measures

	<b>18 months old</b>	<b>24+ months old</b>	<b>Male</b>	<b>Female</b>	<b>No Siblings</b>	<b>Siblings</b>	<b>Entire Sample</b>
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Toy Share Any Type <sup>a</sup>	<b>.49</b> (.30)	<b>.78</b> (.31)	.58 (.36)	.69 (.31)	.56 (.37)	.71 (.28)	.63 (.34)
Toy Share Before Request <sup>a</sup>	<b>.31</b> (.30)	<b>.71</b> (.32)	.44 (.36)	.56 (.37)	.49 (.38)	.50 (.36)	.49 (.37)
Toy Share Immediately <sup>a</sup>	<b>.09</b> (.12)	<b>.35</b> (.30)	.15 (.23)	.30 (.28)	.24 (.28)	.19 (.24)	.22 (.26)
Toy Share Average Score <sup>a</sup>	<b>1.59</b> (1.13)	<b>3.17</b> (1.41)	2.01 (1.42)	2.72 (1.51)	2.25 (1.63)	2.45 (1.33)	2.34 (1.49)
Food Share Any Type Trials 1 & 2	<b>.50</b> (.47)	<b>.83</b> (.37)	.55 (.49)	.71 (.42)	.67 (.44)	.56 (.48)	.62 (.46)
Food Share Any Type <sup>b</sup>	<b>.55</b> (.51)	<b>.80</b> (.41)	.50 (.51)	.75 (.44)	.68 (.48)	.53 (.51)	.61 (.49)
Food Share Before Request <sup>b</sup>	<b>.15</b> (.37)	<b>.60</b> (.50)	.33 (.48)	.35 (.49)	.32 (.48)	.37 (.50)	.34 (.48)
Food Share Immediately <sup>b</sup>	.10 (.31)	.25 (.44)	.21 (.41)	.10 (.31)	.16 (.37)	.16 (.37)	.16 (.37)
Food Share Average Score	<b>1.45</b> (1.67)	<b>3.00</b> (1.86)	1.83 (2.14)	2.25 (1.68)	2.12 (1.88)	1.89 (2.05)	2.02 (1.93)

<sup>a</sup> proportion of toy sharing tasks on which children shared

<sup>b</sup> proportion of food sharing tasks on which children shared

No sex differences were expected on the sharing task measures. Preliminary independent sample t-tests indicated that there was a marginally significant sex difference for the proportion of tasks on which children shared immediately, where females shared more ( $M = .30$ ) than males ( $M = .15$ ),  $t(42) = -1.93$ ,  $p = .06$ . There was also a marginally significant sex difference in the proportion of food-sharing tasks on which sharing occurred at any cue, where females shared more ( $M = .75$ ) than males, ( $M = .50$ ),  $t(42) = -1.71$ ,  $p = .09$ . However, because no other dependent measures displayed a sex difference and because the differences found were marginal, sex was not considered as a factor in subsequent analyses.

No differences for the child's sex, age, or sibling status were expected on the parental prosocial behavior and socialization variables from *The Family Experiences Questionnaire* (affiliative tendency, altruistic behavior, self-other socialization goals, and obedience socialization goals). Preliminary independent sample t-tests did not show significant differences on any of these parental characteristics (see Table 2 for means and standard deviations below).

**Table 2.** Means and Standard Deviations for the Family Experience Variables

	<b>18 months old</b>	<b>24+ months old</b>	<b>Male</b>	<b>Female</b>	<b>No Siblings</b>	<b>Siblings</b>	<b>Entire Sample</b>
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Average Parental Education	4.70 (1.21)	5.32 (1.37)	4.97 (1.14)	5.04 (1.50)	<b>4.56</b> <b>(1.38)</b>	<b>5.67</b> <b>(.75)</b>	5.00 (1.28)
Annual Household Income	1.85 (.80)	2.43 (.65)	2.36 (.75)	1.92 (.76)	<b>1.94</b> <b>(.83)</b>	<b>2.45</b> <b>(.52)</b>	2.14 (.76)
Parental Altruism	1.41 (.56)	1.41 (.45)	1.51 (.46)	1.31 (.54)	1.38 (.53)	1.38 (.54)	1.38 (.52)
Parental Affiliative Tendency	2.24 (1.41)	2.39 (1.64)	2.22 (1.40)	2.41 (1.64)	2.19 (1.66)	2.49 (1.18)	2.31 (1.47)
Self-Other Socialization Goals	-.10 (.64)	.05 (.32)	.04 (.57)	-.11 (.44)	.11 (.52)	-.17 (.51)	.00 (.53)
Obedience Socialization Goals	2.29 (.58)	2.15 (.56)	2.22 (.55)	2.23 (.60)	2.14 (.62)	2.37 (.43)	2.23 (.55)

Interestingly, for demographic variables (parental education, income, and number of siblings), there was a significant difference for sibling status on average parental education. Children with siblings had parents with higher education ( $M = 5.67$ ) than children without siblings ( $M = 4.56$ ),  $t(28) = -2.54$ ,  $p = .02$ . There was also a marginally significant difference for siblings status on annual household income, where children with siblings had parents with higher annual household income ( $M = 2.45$ ) than those without siblings ( $M = 1.94$ ),  $t(26) = -1.83$ ,  $p = .08$ . These findings may indicate that families with higher socioeconomic status were able to financially support more children.

Finally, Pearson correlation analyses were conducted to examine associations among *The Family Experiences Questionnaire* variables themselves, as shown in Table 3 below.

**Table 3.** Pearson Correlation Coefficients between Questionnaire Variables (N = 28 – 30)

	<b>Average Parental Education</b>	<b>Annual Household Income</b>	<b>Parental Altruism</b>	<b>Parental Affiliative Tendency</b>	<b>Self-Other Socialization Goals</b>	<b>Obedience Socialization Goals</b>
	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)
Average Parental Education		<b>.667</b> <b>(.000)</b>	-.188 (.319)	.204 (.280)	.056 (.767)	.117 (.540)
Annual Household Income			.103 (.601)	.079 (.690)	-.034 (.864)	-.074 (.708)
Parental Altruism				<b>.351</b> <b>(.057)</b>	<b>-.313</b> <b>(.093)</b>	<b>-.554</b> <b>(.001)</b>
Parental Affiliative Tendency					-.154 (.416)	<b>-.367</b> <b>(.046)</b>
Self-Other Socialization Goals						.055 (.771)
Obedience Socialization Goals						

Although some measures were moderately or even fairly strongly related (e.g. income and education), they were analyzed separately in relation to children’s sharing in order to examine which individual variables may have contributed more strongly than others.

## 3.2 SUBSTANTIVE ANALYSIS

Independent sample t-tests were conducted to examine age and sibling status differences in the children's sharing frequency and average sharing score. Pearson's correlations were conducted to examine relationships between sharing and the family experience variables, which included family demographics and parental altruism, affiliative tendency, and socialization goals.

First, mean differences among the sharing task measures for age and sibling status are reported. Then, correlations between the sharing task measures and the family experience variables are reported for the whole sample (Table 3), followed by 18-month-olds (Table 4) and then 24-month-olds separately (Table 5). Results for toy- and food-sharing tasks are reported separately within each section.

## 3.3 AGE DIFFERENCES IN CHILDREN'S SHARING

It was hypothesized that prosocial behavior in very young children would increase with age. For toy sharing, significant differences in sharing between the two age groups appeared for every dependent measure, with older children sharing more frequently and at earlier cues than younger children. When sharing at any cue was considered, older children shared toys more frequently ( $M = .78$ ) than younger ones ( $M = .49$ ),  $t(38) = -3.02$ ,  $p < .01$ . When considering sharing only at cues before the request cue, older children also shared more frequently ( $M = .71$ ) than younger ones ( $M = .31$ ),  $t(38) = -4.05$ ,  $p < .01$ . Finally, when sharing at only the nonverbal first cue was considered, older children again shared toys at a higher proportion ( $M = .35$ ) than younger children ( $M = .09$ ),  $t(38) = -3.50$ ,  $p < .01$ . The average sharing score, that is, the average cue at

which the child shared across all tasks, occurred earlier for older children ( $M = 3.17$ ) than younger children ( $M = 1.59$ ) indicating that older children shared based on less explicit cues,  $t(38) = 2.80, p < .01$ . Therefore, the hypothesis that prosocial behavior would increase with age was confirmed when considering how children shared toys.

When considering food sharing, significant differences between the two age groups appeared for almost every dependent measure, with older children sharing more frequently and at earlier cues than younger children. When sharing at any cue was considered over first trials only, older children shared food more frequently ( $M = .80$ ) than younger ones ( $M = .55$ ) although this difference was only marginally significant,  $t(38) = -1.71, p < .10$ . However, if sharing at any cue was considered over both the first and second trials (which would increase the opportunities for a child to share food), this difference becomes significant, with older children sharing more often ( $M = .83$ ) than younger ones ( $M = .50$ ),  $t(35) = -2.35, p = .02$ . When considering sharing only at cues before the request cue, older children also shared food more frequently ( $M = .60$ ) than younger ones ( $M = .15$ ),  $t(38) = -3.24, p < .01$ . Finally, when sharing at only the nonverbal first cue was considered, older children ( $M = .25$ ) did not differ significantly from younger children ( $M = .10$ ),  $t(38) = -1.24, p = .22$ . As with toys, older children shared food at earlier, less explicit cues ( $M = 3.00$ ) than younger children ( $M = 1.45$ ),  $t(38) = 2.77, p < .01$ . Therefore, the hypothesis that prosocial behavior would increase with age was confirmed when considering children's food sharing and their toy sharing.

### **3.4 SIBLING STATUS AND CHILDREN'S SHARING**

It was hypothesized that prosocial behavior in very young children would be greater if they had siblings. To address this hypothesis, independent-sample t-tests were conducted between children with siblings and those without siblings on the sharing measures. No significant differences appeared for any dependent measure (Table 2). Therefore, the hypothesis that prosocial behavior would be greater among children with siblings was not confirmed.

Overall, there were few sex differences in children's prosocial behavior but sharing increased with age when considering both toys and food. Finally, the hypothesis that sharing would be greater among children with siblings was not confirmed.

### **3.5 CORRELATIONS BETWEEN FAMILY EXPERIENCE VARIABLES AND CHILDREN'S SHARING**

Pearson correlation coefficients between the sharing task measures and the family experience variables are reported below for the entire sample (Table 4), 18-month-olds (Table 5), and 24-month-olds (Table 6). Age-specific correlations were conducted because parents' socialization goals may be communicated differently at different ages and because children may be affected by parents' altruistic and/or affiliative behavior differently at different ages.



**Table 4.** Pearson Correlation Coefficients between Family Experience Variables and Sharing Task

Measures for All Children

<u>Sharing Task Measures</u>	<b>Toy Share Any Type<sup>a</sup></b>	<b>Toy Share Before Request<sup>a</sup></b>	<b>Toy Share Immed.<sup>a</sup></b>	<b>Toy Share Average Score<sup>a</sup></b>	<b>Food Share Any Type Trials 1 &amp; 2</b>	<b>Food Share Any Type<sup>b</sup></b>	<b>Food Share Before Request<sup>b</sup></b>	<b>Food Share Immed.<sup>b</sup></b>	<b>Food Share Average Score</b>
<u>Family Experience Variables</u>	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)
Average Parental Education	<b>.337</b> (.074)	<b>.375</b> (.045)	<b>.470</b> (.010)	<b>.402</b> (.031)	-.085 (.674)	-.030 (.877)	-.139 (.473)	-.036 (.854)	-.118 (.541)
Annual Household Income	.123 (.541)	.252 (.205)	.226 (.257)	.196 (.328)	-.039 (.854)	-.249 (.210)	.037 (.855)	-.093 (.643)	-.164 (.414)
Parental Altruism	-.124 (.520)	-.134 (.487)	-.082 (.671)	-.140 (.468)	.236 (.236)	.118 (.543)	.096 (.619)	.131 (.498)	.091 (.637)
Parental Affiliative Tendency	-.098 (.614)	-.155 (.423)	.071 (.716)	-.109 (.575)	.015 (.939)	-.079 (.684)	-.301 (.112)	-.097 (.617)	-.246 (.198)
Self-Other Socialization Goals	-.107 (.582)	.204 (.287)	.233 (.223)	.095 (.623)	-.008 (.967)	-.007 (.969)	.285 (.134)	<b>.332</b> (.079)	.240 (.210)
Obedience Socialization Goals	-.099 (.611)	-.090 (.641)	.035 (.858)	-.081 (.677)	<b>-.364</b> (.062)	-.188 (.329)	-.101 (.602)	.072 (.709)	-.120 (.536)

<sup>a</sup> proportion of toy sharing tasks on which children shared

<sup>b</sup> proportion of food sharing tasks on which children shared

### **3.6 PARENTAL EDUCATION AND CHILDREN'S SHARING**

It was hypothesized that prosocial behavior would be positively associated with parental education. Across the entire sample, parental education was significantly positively correlated with the proportion of toy-sharing tasks on which children shared before the request cue ( $r = .38$ ,  $p = .05$ ), and after the nonverbal first cue ( $r = .47$ ,  $p = .01$ ), as well as with the average toy-sharing score ( $r = .40$ ,  $p = .03$ ), each to a moderate degree. There was also a marginally significant, low positive correlation between parental education and the proportion of toy-sharing tasks on which sharing occurred at any cue ( $r = .34$ ,  $p = .07$ ). There was no significant correlation with parental education for any of the food-sharing tasks.

When broken down by age, no significant correlations appeared between any of the sharing task measures for either 18-month-olds or 24-month-olds, although two of the correlations trended toward significance: the average toy sharing score at 18 months ( $r = .45$ ,  $p = .09$ ) and immediate toy sharing at 24 months ( $r = .45$ ,  $p = .11$ ). The hypothesis that prosocial behavior would be greater in children with higher parental education levels was confirmed for toy-sharing across the entire sample, but was less evident with each age separately, possibly because of the reduced sample sizes.

### **3.7 ANNUAL HOUSEHOLD INCOME AND CHILDREN'S SHARING**

It was hypothesized that prosocial behavior in very young children would be positively associated with household income. Across the entire sample, household income level did not significantly correlate with any of the sharing task measures. When considering only 18-month-

olds, however, household income was moderately negatively correlated with the proportion of food-sharing first trials on which the child shared at any cue ( $r = -.58, p = .04$ ), and the average sharing score for the first food trial ( $r = -.60, p = .03$ ). These results indicate that 18-month-old children in families with higher household income were less likely to share their food and shared at later cues than their lower income counterparts. However, the number of 18-month-olds whose parents answered the question about income level was small ( $N = 13$ ), so the results may not be as representative. When considering only 24-month-olds, no significant correlations between any of the sharing task measures and household income appeared. Therefore, the hypothesis that prosocial behavior would be greater among children with larger household income levels was only partially confirmed.

**Table 5.** Pearson Correlation Coefficients between Family Experience Variables and Sharing Task

Measures for 18-month-olds (N = 13 - 20)

<u>Sharing Task Measures</u>	<u>Toy Share Any Type<sup>a</sup></u>	<u>Toy Share Before Request<sup>a</sup></u>	<u>Toy Share Immed.<sup>a</sup></u>	<u>Toy Share Average Score<sup>a</sup></u>	<u>Food Share Any Type Trials 1 &amp; 2</u>	<u>Food Share Any Type<sup>b</sup></u>	<u>Food Share Before Request<sup>b</sup></u>	<u>Food Share Immed.<sup>b</sup></u>	<u>Food Share Average Score</u>
<u>Family Experience Variables</u>	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)
Average Parental Education	.398 (.141)	.435 (.105)	.412 (.127)	<b>.453</b> <b>(.090)</b>	-.276 (.362)	-.182 (.516)	-.372 (.173)	-.151 (.590)	-.354 (.196)
Annual Household Income	-.196 (.521)	-.124 (.686)	-.210 (.490)	-.234 (.442)	-.300 (.370)	<b>-.584</b> <b>(.036)</b>	-.365 (.220)	-.192 (.530)	<b>-.601</b> <b>(.030)</b>
Parental Altruism	-.043 (.880)	-.082 (.771)	-.243 (.384)	-.118 (.675)	<b>.550</b> <b>(.051)</b>	<b>.453</b> <b>(.090)</b>	.334 (.224)	<b>.462</b> <b>(.083)</b>	<b>.464</b> <b>(.082)</b>
Parental Affiliative Tendency	.249 (.370)	.140 (.618)	.301 (.276)	.218 (.435)	<b>.515</b> <b>(.072)</b>	.435 (.105)	-.096 (.733)	.032 (.910)	.144 (.608)
Self-Other Socialization Goals	-.216 (.440)	.229 (.411)	.213 (.446)	.030 (.917)	-.237 (.436)	-.111 (.693)	.352 (.199)	.066 (.816)	.133 (.637)
Obedience Socialization Goals	-.087 (.757)	.078 (.782)	.075 (.790)	.006 (.982)	<b>-.635</b> <b>(.020)</b>	<b>-.475</b> <b>(.074)</b>	-.301 (.276)	-.317 (.250)	<b>-.448</b> <b>(.094)</b>

<sup>a</sup> proportion of toy sharing tasks on which children shared<sup>b</sup> proportion of food sharing tasks on which children shared

### 3.8 PARENTAL ALTRUISM AND CHILDREN'S SHARING

It was hypothesized that prosocial behavior in very young children would be positively associated with parental altruistic behavior. Across the entire sample, parental altruism scores did not correlate significantly with any of the sharing task measures. When considering only 18-month-olds, however, parental altruism positively correlated with several of the food-sharing measures, although at only marginal levels (Table 4). Specifically, parental altruism was associated with the proportion of all food-sharing tasks (trials 1 and 2) on which the child shared at any cue ( $r = .55, p < .06$ ), the proportion of food-sharing tasks on which the child shared at any cue during the first trial only ( $r = .45, p = .09$ ), the proportion of food-sharing tasks on which the child shared at the nonverbal first cue ( $r = .46, p = .08$ ), and the first trial food-sharing task score ( $r = .46, p = .08$ ). These results seem to indicate that 18-month-old children with more altruistic parents were more likely to share their food and shared at earlier cues than children with less altruistic parents. However, the numbers of 18-month-olds whose parents answered the altruism section of *The Family Experiences Questionnaire* was small ( $N = 15$ ). It should also be noted that the parental altruism scores were quite small in magnitude perhaps limiting the potential for detecting associations with sharing. When considering only 24-month-olds, no significant correlations between any of the sharing task measures and parental altruism score appeared. Therefore, the hypothesis that prosocial behavior would be greater in children with parents were more altruistic themselves was confirmed for 18-month-olds during the food-sharing tasks only.

**Table 6.** Pearson Correlation Coefficients between Family Experience Variables and Sharing Task

Measures for 24+-month-olds (N = 14 – 24)

<u>Sharing Task Measures</u>	<u>Toy Share Any Type<sup>a</sup></u>	<u>Toy Share Before Request<sup>a</sup></u>	<u>Toy Share Immed.<sup>a</sup></u>	<u>Toy Share Average Score<sup>a</sup></u>	<u>Food Share Any Type Trials 1 &amp; 2</u>	<u>Food Share Any Type<sup>b</sup></u>	<u>Food Share Before Request<sup>b</sup></u>	<u>Food Share Immed.<sup>b</sup></u>	<u>Food Share Average Score</u>
<u>Family Experience Variables</u>	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)	<i>r</i> (sig.)
Average Parental Education	.114 (.697)	.162 (.580)	.449 (.108)	.226 (.437)	-.067 (.819)	.061 (.835)	-.172 (.556)	.137 (.641)	-.071 (.810)
Annual Household Income	.097 (.742)	.217 (.456)	.151 (.605)	.165 (.573)	.023 (.938)	.080 (.786)	.132 (.652)	-.080 (.786)	.054 (.853)
Parental Altruism	-.288 (.318)	-.281 (.330)	-.033 (.910)	-.242 (.405)	-.214 (.462)	-.394 (.164)	-.137 (.641)	-.229 (.432)	-.359 (.208)
Parental Affiliative Tendency	<b>-.546 (.043)</b>	<b>-.585 (.028)</b>	-.046 (.875)	<b>-.501 (.068)</b>	<b>-.497 (.071)</b>	<b>-.642 (.013)</b>	<b>-.537 (.048)</b>	-.207 (.479)	<b>-.632 (.015)</b>
Self-Other Socialization Goals	-.218 (.454)	-.023 (.937)	.266 (.359)	-.034 (.907)	.186 (.523)	.177 (.546)	.135 (.645)	<b>.870 (.000)</b>	.401 (.155)
Obedience Socialization Goals	.013 (.965)	-.128 (.662)	.164 (.576)	-.020 (.945)	.025 (.933)	.207 (.477)	.160 (.585)	.458 (.100)	.283 (.327)

<sup>a</sup> proportion of toy sharing tasks on which children shared

<sup>b</sup> proportion of food sharing tasks on which children shared

### 3.9 PARENTAL AFFILIATIVE TENDENCY AND CHILDREN'S SHARING

It was hypothesized that prosocial behavior in very young children would be positively associated with parental affiliative tendency. Across the entire sample, there were no significant correlations between any of the sharing task measures and parental affiliative tendency. When considering only 18-month-olds, parental affiliative tendency positively correlated with the proportion of both food-sharing trials on which the child shared at any cue ( $r = .52, p = .07$ ) to a moderate degree, although the result was only marginally significant. No other sharing task measure showed any significant correlation with affiliative tendency for 18-month-olds. However, for 24-month-olds, several of the sharing task measures displayed significant, moderately negative correlations with affiliative tendency. Specifically, parental affiliative tendency was negatively associated with the proportion of toy-sharing tasks on which the child shared at any cue ( $r = -.54, p = .03$ ), and before the request cue ( $r = -.59, p = .03$ ). Children's average sharing score was also negatively correlated with parental affiliative tendency although this was only marginally significant ( $r = -.50, p = .07$ ). Parental affiliative tendency was also negatively correlated with the food-sharing task measures, specifically the proportion of food-sharing first trials on which the child shared at any cue ( $r = -.64, p = .01$ ) and before the request cue ( $r = -.54, p = .05$ ), and the first trial food-sharing task score ( $r = -.63, p = .02$ ). The proportion of both food-sharing trials on which the child shared at any cue was also negatively correlated with affiliative tendency although this result was only marginally significant ( $r = -.50, p = .07$ ). These results indicate that 2-year-old children with more affiliative parents were less likely to share their toys or food and shared at later cues than those children with less affiliative parents. However, the number of respondents was small ( $N = 14$ ), and the parental affiliative tendency scores were small in magnitude. The hypothesis that prosocial behavior would increase

in children with more affiliative parents was not confirmed; in fact, the data seem to indicate the opposite relationship between affiliation and prosocial behavior, especially in older children.

### **3.10 SELF/OTHER-ORIENTED SOCIALIZATION GOALS AND CHILDREN'S SHARING**

It was hypothesized that prosocial behavior in very young children would be associated with other-orientated parental socialization goals. Across the entire sample, other-oriented socialization goals were positively correlated with the proportion of food-sharing first trials on which the child shared on the nonverbal first cue ( $r = .33, p = .08$ ) although this was marginally significant. When considering 18-month-olds alone, no significant correlations occurred between the self/other-oriented socialization goals score and any of the sharing task measures. However, for 24-month-olds, a very strong positive correlation occurred between other-orientation goals and the proportion of food-sharing first trials on which the child shared immediately on the nonverbal first cue ( $r = .87, p < .001$ ). These results indicate that older children whose parents endorsed more other-oriented socialization goals were more likely to share their food and to do so more quickly than children whose parents endorsed more self-oriented socialization goals. However, the number of respondents was small ( $N = 14$ ), and the difference between self- and other-oriented scores were near zero, on average. The hypothesis that prosocial behavior would increase in children whose parents had more other-oriented socialization goals was partially confirmed.



### 3.11 ROLE OF OBEDIENCE SOCIALIZATION GOALS

Interestingly, obedience socialization goals were associated with some of the sharing task measures for 18-month-olds but not 24-month-olds. Across the entire sample, a moderate negative correlation occurred between obedience socialization goals and the proportion of both food-sharing trials on which the child shared at any cue ( $r = -.36, p = .06$ ), but it was only marginally significant. When broken down by age, there were no significant correlations between obedience socialization and sharing for 24-month-olds. However, for 18-month-olds, obedience goals were significantly negatively correlated with the proportion of both food-sharing trials on which the child shared at any cue ( $r = -.64, p = .02$ ) and the average food-sharing score ( $r = -.60, p = .03$ ). One marginally significant correlation also occurred between obedience goals and the proportion of food-sharing *first* trials on which the child shares at any cue ( $r = -.48, p = .07$ ). These results indicate that at least for 18-month-olds, children whose parents endorse more obedience-related socialization goals tend to share less than children whose parents may be less obedience-oriented in their socialization goals. Again, however, the number of respondents was small ( $N = 15$ ).

## 4.0 DISCUSSION

The purpose of this study was to examine the relationship between parents' own altruistic behavior, affiliative tendencies, socialization goals, parental income, and education and their young children's developing prosocial behavior. It was expected that with increased age, children would be more likely to share, and the results confirmed the expectations. Older children were more likely to share toys and food than younger children were, and they shared their toys and food sooner, with less explicit communicative cues than the younger children. These age-related increases in prosocial behavior are consistent with other studies on prosocial behavior in young children. In one study, Zahn-Waxler et al. (1992) examined 1 to 2-year-old children and their responses to distressed individuals in a natural setting, where mothers were trained to observe and report on the interactions, and in the laboratory setting, where female experimenters simulated distress. They found that prosocial behaviors such as helping, sharing, and comforting increased in frequency from 1 to 2 years of age at home as well as expressions of concern in the lab and at home (Zahn-Waxler, et al., 1992). This increase in sharing may be due to the greater empathy and more mature self-other differentiation that begin to develop in the second year of life (Zahn-Waxler & Radke-Yarrow, 1982).

Another explanation for the increase in sharing with age may be an assistant experimenter communication bias. As an assistant experimenter, it was very easy to tell the difference between an 18-month-old's and a 24-month-old's ability to communicate and interact

with the assistant experimenter. Because of this notable difference in ability to communicate, assistant experimenters may have acted differently toward each age group while giving the cues. One way to examine if there is experimenter bias is to create a blind rating system for the assistant experimenter's administration of the cues, where the assistant experimenter is the only one being recorded.

It was also hypothesized that children with siblings would be more likely to share due to more daily exposure to sharing behavior in the family and to parents' more frequent speech about the need to share. The results show, however, that there were no significant differences in sharing between children with and without siblings. Similarly, in a study examining the effect of quality of family interaction and sibling status on the cognitive development of 5-year-olds, there were no significant effects of sibling status (Freijo, et al., 2006). However, some studies involving older children indicate that sibling status may have an influence on the prosocial behavior of the younger sibling (Bryant & Crockenberg, 1980). Research also suggests that having siblings is associated with more advanced understanding of others' emotions and beliefs (Perner, Ruffman, & Leekam, 1994).

Interestingly, children with siblings in the current study had parents with higher education levels and higher annual household incomes than children without siblings. These findings may indicate that of the families that participated in the study, those with higher socioeconomic status were able to financially support more children. However, contrary to expectations, there was no difference in sharing among children with higher family incomes. The results showed that younger children (18-month-olds) actually showed a lower tendency to share food as family income level rose, but the number of respondents was small, and the family income was relatively high and homogenous, so the results may not be representative. Older

children, on the other hand, showed no difference in sharing in relation to family income. These results are inconsistent with an observational study involving elementary-school children, wherein children with lower SES backgrounds behaved more prosocially toward their peers than their higher SES counterparts (Belgrave & Allison, 2010). However, several studies involving infants and toddlers show no systematic pattern of influence of SES on prosocial behavior (Eisenberg & Mussen, 1989). It is possible that family income may not affect children's social understanding or prosocial development until later ages when language and self-other differentiation are more developed and parents are putting more of an emphasis on teaching their children social norms common to their value system and subculture. It is also possible that the sample used in this study did not have a wide enough income range to detect any effects.

As with income, it was expected that prosocial behavior in very young children would increase with parental education. Across the entire sample, the results showed that children of more educated parents shared toys but not food more frequently. Parents with higher education may use more "concerted cultivation" parenting techniques, where they engage and are more interactive with children in contrast to parents with less education who may use techniques of "natural growth" (Lareau, 2003), where distinct communication boundaries exist between parents and children. Children who are used to more parental involvement and interaction, such as those raised under "concerted cultivation" have been shown to exhibit higher levels of prosocial behavior (Lareau, 2003; Zahn-Waxler, et al., 1979). Of course, the parents in the current sample are relatively well-educated and toddler-aged children may not yet experience these particular parenting styles. Moreover, neither education nor income was significantly associated with parents' altruism, affiliative tendency, or socialization goals. In addition, it is unclear why toy-sharing but not food-sharing should be associated with parental education.

Because parental modeling may increase prosocial behavior, the relationship between parental altruistic behavior and children's prosocial behavior was examined in this study. The results showed that younger children shared food more frequently when their parents were more altruistic, e.g. donated blood more frequently or gave money more frequently to the homeless. However, older children's sharing did not relate to their parents' altruism. This finding may reflect the early modeling of sharing food games that parents often use with their very young children at home on a daily basis (Hay, Caplan, Castle, & Stimson, 1991). Even though parental altruistic behavior was relatively low frequency, perhaps parents who engage in reciprocal helping with others are more likely to do so with their young children as well. Such food-sharing games may be less likely with older children who are beginning to be socialized for normative table manners and eating behavior.

Younger children not only showed greater food-sharing behavior with more altruistic parents, but their food-sharing also related to parental affiliation, although the results were of marginal significance. Unlike with parental altruism, however, an unexpected strong negative association occurred between older children's sharing and parental affiliation. Older children shared both toys and food less frequently as parental affiliative tendency increased. One explanation may be that more affiliative parents, who also tend to be more empathetic (Mehrabian, 1972), may transfer their empathetic ability to their children who in turn are better able to recognize the desires and needs of others. If children better understand that another wants something of theirs by recognizing facial and verbal cues, they may also recognize this desire as a threat to their ownership of the toys. Therefore, the child is perhaps less likely to share due to enhanced ability to understand the desires of others. Hay et al. (1991) examined the sharing behavior of 1- and 2-year-olds in response to scarce resources. They found that 2-year-olds

shared less with increased expressions of interest from peers in their possessions (Hay, et al., 1991). These findings may explain the results of the current study in regard to parental affiliative tendency, where greater parental affiliative tendency may relate to older children's ability to recognize peer interest in their own possessions which leads them to refuse to share.

While parental affiliation relates to lower prosocial behavior in older children, parental socialization goals seem to play the opposite role. The results showed a very strong positive correlation ( $r = .87, p < .001$ ) between the parental other-oriented socialization goals (e.g. "Children should learn to share with their siblings or friends.") and immediate food-sharing for older children. This result may indicate the increased ability of older children to understand the desires and needs of their own parents due to more frequent parental interaction than with other adults or peers. In addition, they may understand the goals that their parents have for them to a better extent than 18-month-olds whose language development is not as advanced. The results for socialization goals are consistent with previous research. When Hoffman (1975), interviewed children and parents about their altruistic values, and the children's altruistic behavior was evaluated, the findings showed that children's prosocial behavior was directly related to the parental communication of altruistic values to the child (Hoffman, 1975). Although direct socialization was not addressed in the current study, it seems reasonable to assume that socialization goals would be reflected in how parents behave toward their children. In this case, other-oriented goals include emphasis on sharing with and caring for others. Perhaps one of the best ways to encourage prosocial behavior at young ages is for parents to encourage their children directly.

The prosocial behavior of young children seems not only to relate to other-oriented socialization goals but also to parental obedience socialization goals. The results showed that

parental obedience goals related more to sharing in younger children than in older ones and more to food-sharing than to toy-sharing. Younger children with parents who endorsed more obedience goals tend to share less than children whose parents were less obedience-oriented. These findings are consistent with those in previous studies. For instance, in a study with older children, Janssens and Dekovic (1997), assessed parenting style along with children's prosocial behavior. They found that prosocial moral reasoning as well as the actual prosocial behavior of the child increased with a less restrictive child-rearing style (Janssens & Dekovic, 1997). In another study, parental attitudes about adult control over children were examined along with the children's prosocial behavior. While not significant, the children with the lowest levels of prosocial behavior were also the ones whose parents scored highest on need for control (Sparks, Thornburg, Ispa, & Gray, 1984). Notably, obedience goals in the current study were negatively related to parents' own affiliative tendency and altruism. So perhaps parents who focus on obedience are less focused on their own or their children's prosocial tendencies.

Two other general patterns should be noted. First, food-sharing was more often associated with parents' own prosocial tendencies and socialization goals than was toy-sharing. Second, more such associations emerged for 18-month-olds than for 24-month-olds. These tendencies may be due the fact that at early ages the first type of prosocial games parents play with their children involve food. In addition, older children may be more exposed to prosocial behaviors with not only food but a variety of toys as well. With self-other differentiation increasing with age, older children may also be more cognizant of the repercussions of giving someone else food, i.e. that they will not be able to eat the food given and that there will be less for them.

In this study, we found that parental attitudes and behaviors relate in a variety of ways to how children behave prosocially even at very young ages. Parental altruism and self-other socialization goals relate positively with children's prosocial behavior while, interestingly and unexpectedly, parental affiliation relates negatively with children's prosocial behavior toward others. Perhaps, then, modeling and talking about altruistic behavior is important as children become better at recognizing the needs of other people. Parents are always trying to find new ways and techniques to build the type of adult they want to see their child become. By modeling and communicating altruistic goals, perhaps parents can encourage their children not to see those needs of others as threats to their own needs or possessions but as opportunities to demonstrate good will.



## APPENDIX A

### FAMILY EXPERIENCES QUESTIONNAIRE

#### Family Background

Please circle the number next to each question below about your child's family background.  
Please circle only one number for each question.

Your sex:

1. Female
2. Male

Mother's current age: \_\_\_\_\_ years

Father's current age: \_\_\_\_\_ years

Highest education level completed (mother):

1. Less than high school
2. High school
3. Some college
4. Associate's Degree
5. Bachelor's Degree
6. Master's Degree
7. Doctoral Degree (MD, PhD, EDD, JD, etc.)

Highest education level completed (father):

1. Less than high school
2. High school
3. Some college
4. Associate's Degree
5. Bachelor's Degree
6. Master's Degree
7. Doctoral Degree (MD, PhD, EDD, JD, etc.)

Total annual household income range from all sources:

1. Less than \$50,000
2. \$50,000-\$100,000
3. More than \$100,000

Residential area classification:

1. Rural
2. Suburban
3. Urban

Activities for others

During the past 12 months, how often have you done each of the following things?  
Please check only one of the boxes for each situation.

	Never	Once	At least 2-3 times	About once a month	About once a week	More than once a week
Given money to charity	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Done volunteer work for an agency outside of your work organization (school, church, community, charity, etc.)	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Donated blood	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Given food or money to a homeless person	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Offered your seat on a bus or in a public place to a stranger who was standing	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Returned money to a cashier after getting too much change	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Allowed a stranger to go ahead of you in line	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Looked after a person's plants, mail, or pets while they were away	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Carried a stranger's belongings, like groceries, a suitcase, or shopping bag	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Activities with others

Using the following scale, rate your agreement or disagreement about how well each statement describes you. Please check only one of the boxes for each statement.

	Very Strongly Agree	Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree	Very Strongly Disagree
When I'm introduced to someone new, I don't make much effort to be liked.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
I prefer a leader who is friendly and easy to talk to over one who is more aloof and respected by his followers.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
When I'm not feeling well, I would rather be with others than alone.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
If I had to choose between the two, I would rather be considered intelligent than sociable.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
Having friends is very important to me.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
I would rather express open appreciation to others most of the time than reserve such feelings for very special occasions.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4

	Very Strongly Agree	Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree	Very Strongly Disagree
I enjoy a good movie more than a big party.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
I like to make as many friends as I can.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
I would rather travel abroad starting my trip alone than with one or two friends.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
After I meet someone I did not get along with, I spend time thinking about arranging another, more pleasant friendship.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
I think that fame is more rewarding than friendship.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
I prefer independent work to cooperative effort.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
I think that any experience is more significant when shared with a friend.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
When I see someone walking down the street, I am usually the first one to say hello.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4

	Very Strongly Agree	Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree	Very Strongly Disagree
I prefer the independence which comes from lack of attachments to the good and warm feelings associated with close ties.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
I join clubs because it is such a good way of making friends.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
I would rather serve in a position to which my friends had nominated me than be appointed to an office by a distant national headquarters.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
I don't believe in showing overt affection toward friends.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
I would rather go right to sleep at night than talk to someone else about the day's activities.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
I have very few close friends.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
When I'm with people I don't know, it doesn't matter much to me if they like me or not.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4

	Very Strongly Agree	Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree	Very Strongly Disagree
If I had to choose, I would rather have strong attachments with my friends than have them regard me as witty and clever.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
I prefer individual activities such as crossword puzzles to group ones such as board games or card games.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
I am much more attracted to warm, open people than I am to standoffish ones.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
I would rather read an interesting book or go to the movies than spend time with friends.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
When traveling, I prefer meeting people to simply enjoying the scenery or going places alone.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4

Children's Social Skills

Using the following scale, rate your agreement or disagreement with each statement about children. Please check only one of the boxes for each statement.

**By the age of three years:**

	Very Strongly Agree	Strongly Agree	Agree	Disagree	Strongly Disagree	Very Strongly Disagree
Children should learn to obey elderly persons. (O)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should develop self-confidence. (S)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should learn to help themselves and do things on their own. (S)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should develop pride in their accomplishments. (S)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should learn to share with their siblings or friends. (O)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should learn to obey their parents. (Ob)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should learn to help others. (O)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should learn to not talk back to their elders. (Ob)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should develop a sense of self-esteem. (S)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should learn to be polite to others. (Ob)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should learn to care for the well-being of others. (O)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6



Children should learn to pay attention and listen to parents and other adults. (Ob)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should learn to cheer others up. (O)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should develop assertiveness. (S)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should learn to help or comfort others when others are upset. (O)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should learn to respect authority. (Ob)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should learn to be kind to others. (O)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
Children should develop a sense of self (recognize who they are). (S)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

**Thank you very much for taking the time to help with this addition  
to our Early Sharing Study!**

**The Early Social Development Lab**

Adapted from Smith, 2005; Mehrabian, 1972; and Keller, 2007.

## APPENDIX B

### WEB-BASED CONSENT FORM (BOTTOM OF THE WEBPAGE)

The screenshot shows a Windows Internet Explorer browser window titled "Family Experiences Questionnaire Consent". The address bar displays the URL "http://www.pitt.edu/~toddlers/ESDL/family%20experiences%20". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The toolbar contains various icons for navigation and utility, including a search bar with the Google logo, a search button, a plus sign, a minus sign, a star for bookmarks, a checkmark for a spell checker, and a "Sign In" button. The main content area of the browser displays the following text:

**VOLUNTARY CONSENT:** I certify that I have read the entire consent form and I understand its contents. Also, the researcher has answered any questions I have about the research project. I understand that I am encouraged to ask questions about any aspect of this research study during the course of the study, and that such future questions will be answered by Sara Nichols at (412) 624-1387 or Dr. Celia Brownell at (412) 624-4510. Any questions I have concerning my rights as a research participant will be answered by the Human Subject Protection Advocate of the IRB Office at the University of Pittsburgh (1-866-212-2668).

**Do you voluntarily consent to participation in the Family Experiences Questionnaire?**

If **NO**, thank you for your time. Please, exit the page now.

If **YES**, please enter your preassigned ID number below and press "continue" to be directed to the *Family Experiences Questionnaire*.

ID number : \*

  
  
E-mail Address: \*  
  
 

\* Required [Contact form by myContactForm.com](#)

The browser's status bar at the bottom shows "Done" on the left, "Internet" in the center, and "100%" zoom level on the right.

## BIBLIOGRAPHY

- Belgrave, F. Z., & Allison, K. W. (2010). *African American psychology: From Africa to America*. Thousand Oaks, CA: Sage Publications.
- Benenson, J. F., Pascoe, J., & Radmore, N. (2007). Children's altruistic behavior in the dictator game. *Evolution and Human Behavior, 28*(3), 168-175.
- Brownell, C. A., Svetlova, M., & Nichols, S. R. (2009). To share or not to share: When do toddlers respond to another's needs? *Infancy, 14*(1), 117-130.
- Bryant, B. K., & Crockenberg, S. B. (1980). Correlates and dimensions of prosocial behavior: A study of female siblings with their mothers. *Child Development, 51*(2), 529-544.
- Clary, E. G., & Miller, J. (1986). Socialization and situational influences on sustained altruism. *Child Development, 57*(6), 1358-1369.
- Dunn, J., & Munn, P. (1986a). Siblings and the development of prosocial behavior. *International Journal of Behavioral Development, 9*(3), 265-284.
- Dunn, J., & Munn, P. (1986b). Siblings quarrels and maternal intervention: Individual differences in understanding and aggression. *Journal of Child Psychology and Psychiatry, 27*(5), 583-595.
- Eisenberg, N. (1983). *The socialization and development of empathy and prosocial behavior (Special report)*. East Haddam, CT: The National Association for Humane and Environmental Education.
- Eisenberg, N., Fabes, R. A., & Spinrad, T. L. (2006). Prosocial development. In N. Eisenberg & R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (6 ed., pp. 646-718). Hoboken, NJ: Wiley.
- Eisenberg, N., & Mussen, P. H. (1989). *The roots of prosocial behavior in children*. Cambridge: Cambridge University Press.
- Freijo, E. A., Olivia, A., Olabarrieta, F., Martin, J. L., Manzano, A., & Richards, M. P. M. (2006). Quality of family context or sibling status? Influences on cognitive development. *Early Childhood Development and Care, 178*(2), 153-164.

- Hay, D. F., Caplan, M., Castle, J., & Stimson, C. A. (1991). Does sharing become increasingly “rational” in the second year of life? *Developmental Psychology*, 27(6), 987-993.
- Hoffman, M. L. (1975). Altruistic behavior and the parent-child relationship. *Journal of Personality and Social Psychology*, 31(5), 937-943.
- Janssens, J. M. A. M., & Dekovic, M. (1997). Child rearing, prosocial moral reasoning, and prosocial behaviour. *International Journal of Behavioral Development*, 20(3), 509-527.
- Kasser, T., Ryan, R. M., Zax, M., & Sameroff, A. J. (1995). The relations of maternal and social environments to late adolescents' materialistic and prosocial values. *Developmental Psychology*, 31(6), 907-914.
- Keller, H. (2007). *Cultures of infancy*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Keller, H., Kartner, J., Borke, J., Yovsi, R., & Kleis, A. (2005). Parenting styles and the development of the categorical self: A longitudinal study on mirror self-recognition in Cameroonian Nso and German families. *International Journal of Behavioral Development*, 29(6), 496-504.
- Kelly, D. C. (2006). Parents' influence on youths' civic behaviors: The civic context of the caregiving environment. *Families in Society*, 87(3), 447-455.
- Kohn, M. L. (1963). Social class and parent-child relationships: An interpretation. *The American Journal of Sociology*, 68(4), 471-480.
- Lareau, A. (2003). *Unequal childhoods : class, race, and family life*. Berkeley: University of California Press.
- Low, S. (2009). Maintaining whiteness: The fear of others and niceness. *Transforming Anthropology*, 17(2), 79-92.
- Mehrabian, A. (1972). *Nonverbal communication*. Chicago: Aldine-Atherton.
- Mehrabian, A. (1976). Questionnaire measures of affiliative tendency and sensitivity to rejection. *Psychological Reports*, 38, 199-209.
- Mehrabian, A. (1994). Evidence bearing on the affiliative tendency (MAFF) and sensitivity to rejection (MSR) scales. *Current Psychology*, 13(2), 97-117.
- Mehrabian, A., & Norman, E. (1972). A measure of emotional empathy. *Journal of Personality*, 40(4), 525-543.
- Meyer, J. A., & Hobson, R. P. (2004). Orientation in relation to self and other: the case of autism. *Interaction Studies*, 5(2), 221-244.

- Over, H., & Carpenter, M. (2009). Eighteen-month-old infants show increased helping following priming with affiliation. *Psychological Science, 20*(10), 1189-1193.
- Perner, J., Ruffman, T., & Leekam, S. R. (1994). Theory of mind is contagious: You catch it from your sibs. *Child Development, 65*(4), 1228-1238.
- Piliavin, J. A., & Charng, H.-W. (1990). Altruism: A review of recent theory and research. *Annual Review of Sociology, 16*, 27-65.
- Quinn, N. (2003). Cultural selves. *Annals of the New York Academy of Sciences, 1001*, 145-176.
- Rowe, M. L., & Casillas, A. (Under review). Parental goals and talk with toddlers.
- Smith, T. W. (2005). *Age differences in social, civic, and media variables, 1974-2004*. College Park, MD: Center for Information and Research on Civic Learning and Engagement, University of Maryland.
- Sparks, A. D., Thornburg, K. R., Ispa, J. M., & Gray, M. M. (1984). Prosocial behaviors of young children related to parental childrearing attitudes. *Early Childhood Development and Care, 15*(4), 291-297.
- Svetlova, M., Nichols, S. R., & Brownell, C. A. (In press). Toddlers' prosocial behavior: From instrumental to empathic to altruistic helping. *Child Development*.
- Toi, M., & Batson, C. D. (1982). More evidence that empathy is a source of altruistic motivation. *Journal of Personality and Social Psychology, 43*(2), 281-292.
- Warneken, F., Hare, B., Melis, A., Hanus, D., & Tomasello, M. (2007). Spontaneous altruism by chimpanzees and young children. *PLoS Biology, 5*, 1414-1420.
- Warneken, F., & Tomasello, M. (2007). Helping and cooperation at 14 months of age. *Infancy, 11*, 271-294.
- Zahn-Waxler, C., & Radke-Yarrow, M. (1982). The development of altruism: Alternative research strategies. In N. Eisenberg (Ed.), *The development of prosocial behavior* (pp. 109-137). New York: Academic Press.
- Zahn-Waxler, C., Radke-Yarrow, M., & King, R. A. (1979). Child rearing and children's prosocial initiations toward victims of distress. *Child Development, 50*, 319-330.
- Zahn-Waxler, C., Radke-Yarrow, M., Wagner, E., & Chapman, M. (1992). Development of concern for others. *Developmental Psychology, 28*(1), 126-136.